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JA-ZENCHU-CENTRAL UNION OF AGRICULTURAL COOPERATIVES-JAPAN
MINISTRY OF COOPERATIVES AND SMALL ENTERPRISES DEVELOPMENT
GOVERNMENT OF THE REPUBLIC OF INDONESIA

STUDY ON
INTEGRATED DEVELOPMENT OF RURAL
COOPERATIVES-KUD
IN THE REPUBLIC OF INDONESIA
1996-1997

**ECONOMIC BUSINESS OF KUD
INCLUDING AGRO-PROCESSING SECTOR**

VOLUME II OF 2

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conducted by

Daman Prakash

Senior Technical Consultant of the Team

and

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Training Project for Asia and the Pacific)

ICA Regional Office, New Delhi, India

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Prepared by

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01 NORTH SUMATRA

I. SUMMARY OF FINDINGS AGRO-PROCESSING, DISTRIBUTION AND KUD SITUATION

AGRO-PROCESSING & DISTRIBUTION

Major farm products of North Sumatra have been: rice, oil palm, rubber, maize, cassava, potato, cabbage, some seasonal fruits and vegetables, cloves, coffee and rattan etc. Paddy production has been in the region of 3.0 million tons (1994) and 3.1 million tons (1995), 101.7% of 1994. A comparison of the production levels of 1994 and 1995 is as follows: Oil palm-Bunches 142.0% of 1994, maize 119.2%, cassava 81.9%, soybean 89.2%, cucumber 59.0%, potato 167.1%, cabbage 119.7%, tomato 79.9%, rambutan 85.7%, durian 45.8%, oranges 58.6%, banana 95.5%, pineapple 35.2%, jackfruit 315.2%, rubber 414.2%, coffee 80.5%, cloves 72.9%, vanilla 172.2% and rattan 130.6%. North Sumatra is basically an estate-crop province with large oil palm, rubber and coconut plantations. Other important crops of the province are groundnut, green vegetables, seasonal fruits and vanilla. It is rich in natural resources e.g., coal, oil, timber and have strong tourism potentials.

A majority of KUD are also engaged in paddy/rice procurement and distribution business. A part of the rice goes to the Bulog, the remaining is sold in the open market and a part is retained by the farmers for their own needs. In the case of other crops, if there is a procurement drive by the government for any specific crops, then the distribution takes place accordingly. Otherwise, the farmers are assisted by the KUD to sell their produce.

Major rice processing takes place at the KUD level which own small and medium-size rice milling units, drying floors, polishers, dryers and small warehouses. Large-size rice mills are in the private sector catering to the needs of the open market. In 1995 there were 7,067 paddy processors, 1,221 corn processors and 4,910 cassava processors in the province. There were 799 rice milling units, out of which 61 were in the KUD sector. There were 824 warehouses with drying floors and 72 rice drying units. The facilities with the KUD are of low capacity and quality. While the technical level of agro-processing for plantation crops is high, that of rice processing remains traditional. Because of their poor quality production, they often fail to meet with the quality requirements of the Bulog.

Fresh vegetables, especially the bananas and durian are sold in the open market. Some of the horticulture products are sold to the traders from Medan, the provincial capital, for shipment to Java and Singapore. There are no vegetables and fruits processing units within the cooperative sector. Major agro-processing is in the hands of State-owned factories and private

enterprises for palm oil, rubber, sugarcane and coconut. Coffee and vanilla crops are semi-processed and also sold as raw. A small quantity of vanilla is semi-processed before it is shipped out to the KJUB in Klaten in Central Java - intended for exports to the United States. The Puskud is engaged in the procurement of vanilla and coffee through their affiliated KUD and private channels.

Milk production in the province is insignificant, and whatever is produced is consumed locally.

Clove is procured by the Puskud through the KUD network for the national clove buffer stock maintained by the Inkud. 100% of the production clove goes to the buffer stock.

The province has some poultry activity. There are no major facilities in the province for their grading, processing, packaging and shipment. The facilities are traditional. The following table shows the number of broilers, local chicken, ducks and eggs and the meat production during the years 1994 and 1995:

Commodity		Population	Meat/kg	Eggs/kg
Egg Layers	'94	3,985,140	1,972,613	29,302,641
	'95	4,468,608	1,978,701	34,728,042
	%	112.1	100.3	118.5
Broilers	'94	6,942,690	6,141,963	--
	'95	8,020,874	32,203,807	--
	%	115.5	626.2	--
Local Chicks	'94	15,585,280	20,039,311	10,682,877
	'95	17,059,686	30,260,864	12,171,888
	%	109.4	151.0	113.9
Ducks	'94	1,980,574	2,212,678	10,113,878
	'95	2,019,900	1,042,720	11,980,740
	%	101.9	47.1	118.4

Source: North Sumatra in Figures 1994 and 1995, Medan

In respect of egg layers, compared with the figures of 1994 with 1995, the population increased by 112.1%, meat production by 100.3% and eggs by 118.5%; in respect of broilers the population increased by 115.5%, and meat production by 626.2%; in respect of local chicken the population increased by 109.4%, meat production by 151.0% and eggs production by 113.9%; and in respect of ducks, the population increased by 101.9%, meat production was only 47.1%, and the eggs production 118.4%.

Livestock, vegetables and fruits processing facilities are traditional and insignificant. The livestock situation during 1993 and 1995 is given in the table below:

Commodity		Population	No. Slaughtered	Meat/kg
Beef-Cattle	'93	221,509	32,471	5,695,542
	'95	250,569	48,465	7,579,926
	%	113.1	149.2	133.0
Buffalo	'93	228,836	39,054	6,286,570
	'95	247,947	43,558	7,000,480
	%	108.3	111.5	111.3
Horse	'93	9,451	1,015	116,375
	'95	7,300	1,031	128,975
	%	77.2	101.5	111.2
Pigs	'93	2268,725	559,058	27,887,550
	'95	920,998	599,526	29,924,460
	%	40.5	107.2	107.3

Source: North Sumatra in Figures 1993, Medan, and Director of Livestock Development, North Sumatra 1996.

An analysis of figures of 1993 and 1995 shows that the beef-cattle population increased by 113.1% in 1995, number slaughtered increased by 149.2% and the meat production by 133.0%; in respect of buffalo the population increased by 108.3%, number slaughtered by 111.5% and meat production by 111.3%; in respect of sheep-goat the population was 121.4%, number slaughtered 132.4%, and the meat production 134.4%; in respect of horses the population was 77.2% of 1993, number slaughtered 101.5%, and meat production 111.2%; and in respect of pigs the number slaughtered was 107.2% and meat production rose to 107.3% in 1995 of the year 1993.

Slaughterhouses are operated by the government and private enterprises. The facilities are traditional. In 1992 a small quantity of pigs was exported to Singapore.

In view of a sizeable number of poultry and livestock population, there are some cattle-feed manufacturing units in the province. They make an extensive use of locally available raw material e.g., cassava, oil palm waste.

There were, in 1995, 8 cattle-feed mills which produce a total of 270,000 tons of concentrate annually. Four of them are located in the provincial capital, Medan, itself e.g., Charon Pokpan, Gold Coin Co., Gunung Windu Co., and Malabar Co. There is no dairy activity in the province.

OVERVIEW OF KUD SITUATION: Economic Business

To meet the needs of the farmer-members, the KUD network has satisfied their consumer and farm input needs to some extent. The government-supported programmes, which have been assigned to the KUD, further reinforce their business operations.

The total turnover of KUD in North Sumatra during 1992 was Rp 88,524 million which rose to Rp 271,119 million in 1995 (306.2%). Similarly, the total surplus (SHU) which in 1992 was Rp 674 million rose to Rp 2,369 million in 1995 (351.4%).

In addition to paddy/rice procurement and marketing, fertiliser distribution is one of the major economic business of KUD in the province. Chemical fertilisers are produced by several State-owned fertiliser companies but the distribution is coordinated by one of them, the PT Pusri. The fertiliser is distributed through various channels e.g., the Puskuds, KUD, Persero Niaga, private channels and PT Pertani. The allocations made during 1992-93 were: 0.1% through the Puskuds, 80.3% through the KUD, 3.2% through Persero Niaga and 8.8% through the PT Pertani. PT Pertani handles fertiliser distribution for the estate crops. During the year 1993, 162 KUD had distributed a total of 308,837 tons of all types of chemical fertilisers against a total of about 7 million tons of fertiliser distributed by 3,461 KUD - 4.40% of the national distribution. While in 1990, 205 KUD had distributed 152,153 tons of fertiliser, the figures for 1995 were 159 KUD distributing 310,914 tons (204.3%). The prices of urea are determined by the government from time to time. For the purchase of urea for paddy cultivation, the government provides credit channels to the farmers through the KUD network. The KUD receive a fee for the distribution of fertiliser/farm credit, which, in fact, forms a substantial portion of their working capital.

The distribution of farm chemicals is undertaken by the KUD purely on individual basis since these are now available in the open market. While the main concentrates of farm chemicals are imported, the formulations are done in the country by various companies according to the local requirements. In 1990, these chemicals were distributed by 102 KUD, in 1993 there were only 61 KUD (59.8%).

Fertiliser and farm chemical distribution form a major portion of marketing business of KUD in the province. On an average, fertiliser business formed 65.6% of the total turnover of the KUD. An analysis of fertiliser and farm chemicals marketing as compared with the total turnover of 5 surveyed KUD during 1995 was as follows: KUD Citama - fertiliser 68.8%, farm chemicals 13.8%; KUD Muara Mulia - fertiliser 77.6% and farm chemicals 1.3%; KUD Lau Simalen - fertiliser 100.6%; KUD Singalor Lau - fertiliser 81.9% and farm chemicals 4.6%. An analysis of commissions earned by the 5 KUD from sales over purchases during the year 1995 is as follows: KUD Citama - fertiliser 5.0% and farm chemicals 16.4%; KUD Muara Mulia - fertiliser 0.6% and farm chemicals 8.1%; KUD Simalen - fertiliser 13.6%; and KUD Singalor Lau - fertiliser 2.3% and farm chemicals 7.5%. The Puskud is not engaged in the distribution of fertiliser, except for transporting the material from PT Pusri's warehouses to the KUD/TPK. It receives transportation fee for this service.

Distribution of seeds is open, except for paddy seeds. According to the Seeds Certification Centre in Medan, only 20-30% of the

farmers use certified seeds. Some of the progressive farmers undertake seeds multiplication activities - no KUD is involved in this programme. An analysis of quantity of seeds distributed by the number of KUD during 1990-1993 indicates that less and less number of KUD are supplying less and less seeds e.g., while in 1990, 34 KUD supplied 186,734 kg of paddy seeds, only 14 KUD (41.1%) had supplied in 1993, a total of 58,525 kg (31.3%) of paddy seeds. Similar is the case with corn and other varieties of seeds.

The KUD help procure paddy/rice from the members for the national food stock. They try to fill the target set for each season. The members supply the maximum which they can but still the preference of the farmers remains to sell the produce in the open market at a higher price than the procurement price fixed by the government. The procurement price is determined by the government every season.

The KUD get credit from the government to purchase rice. While during 1988-89, 39 KUD procured a total of 3,559 tons of rice, in 1994-95, 36 KUD had procured 4,454 tons (125.1%). In 1988-89 only 3 KUD had sold a total of 600 tons of rice to the Bulog. An analysis of paddy/rice marketing activities in 1995 of the 5 surveyed KUD reveal that this business formed only 7.7% of their total turnover - KUD Citama 20.3%, and KUD Muara Mulia 18.6%. The commission earned by these KUD from sales over purchases during 1995 was as follows: KUD Citama 2.8%, and KUD Muara Mulia 0.8%. Rice marketing business formed 9.5% of the total turnover of the Puskud in 1995.

KUD in the province are not actively involved in the procurement of cloves. The Puskud has been a major procurement agency using private channels. This business formed 67.0% of its total turnover in 1995.

For distribution of consumer goods and farm inputs, the KUD in the province operate TPK and retail outlets (waserdas). In 1995, there were 442 waserdas owned by 594 KUD. The total working capital of waserdas in 1995 was Rp 6,953 million, and the turnover Rp 24,811 million. The business performance of waserdas of the 5 surveyed KUD in 1995 was as follows: KUD Citama 2.3 of its total turnover, Muara Mulia 1.3%, and Singalor Lau 0.6%. The level of commission earned from sales over purchases by the KUD was as follows: Citama 2.1%, and Muara Mulia 9.0%.

KUD are not engaged in the export of farm products. Some of the agricultural products of the province exported in 1993 by government and private companies were as follows: Rubber US\$ 427.6 million, Palm Oil US\$ 424.4 million, Copra US\$ 3.3 million, Coffee US\$ 392.8 million and vegetables US\$ 300.7 million. Some vegetables were exported by a few KUD to Singapore market in the past. The business has not developed further. One KUD, KUD Citama, was reported to be engaged in coal mining contracting business. North Sumatra has coal deposits.

The business federation of 383 KUD and non-KUD, Puskud, undertakes distribution of sugar, wheat flour, coffee in the province and undertakes supply of cloves and coffee to the Inkud for national buffer stock and exports. Its total turnover in 1995 was Rp 3,479.8 million, surplus Rp 150.0 million and its own capital Rp 1,623.0 million. The percentage of its marketing activities in 1995 over its total turnover for various commodities was as follows: rice distribution 9.5%, sugar distribution 14.6%, wheat flour 0.1%, coffee 3.8%, cloves 67.0%, and, transportation fee received 8.2%.

The sources of funds for operating economic and utilisation business include: i) credit from government for procurement of paddy/rice, corn, cloves and the service charges received for disbursement of such credit; ii) service fee for handling telephone and electricity bills; iii) credit from enterprises for purchase of trucks and farm machines; and iv) surplus generated from business.

Since a majority of business operate within the government-supported programmes, the element of competition with private dealers does not exist. Rice procurement, clove procurement, fertiliser distribution, are all government-regulated and are consequently a secure business leaving not much room for competition.

HAMPERING FACTORS:

Economic Business

Although a majority of KUD are engaged in the procurement, processing and supply of paddy/rice, yet the grading, processing and marketing has neither been upgraded nor diversified. Similar situation exists even for fruits and vegetables as well as for livestock and poultry. KUD have been sustaining mainly on the fees and commissions received by them in implementing government supported programmes e.g., paddy/rice procurement, fertiliser distribution and procurement of cloves. The concepts, which can help members to market their produce better, e.g., joint marketing, joint purchasing, joint-use facilities and joint use of capital, have neither been understood nor applied. This is mainly due to lack of initiative on the part of KUD leaders and members and lack of information and training of managers. KUD have been operating on their own without any back-up and business collaboration and support from other KUD and their business federations/partners. No significant joint ventures have been established. Lack of flow of business information, lack of guidance in farm management, planning, better-living and internal staff training are some other factors.

These can be summed up as follows: lack of investment/working capital; insufficient ability to market members' produce; lack of marketing facilities; lack of understanding and application of joint marketing, joint purchasing, joint-use facilities and joint-use of capital concepts; lack of business information; lack of member accounts' settlement procedures; insufficient guidance on farm management, planning and better-living; lack of service

to members; and lack of business relations with business enterprises; low technology in rice handling and processing; lack of livestock development and manufacture of quality cattle-feed; lack of training and development of KUD leaders and managers; and inadequate member education.

POSSIBILITIES:

Economic Business

In order to increase the income levels of farmer-members, KUD need to further develop their own economic business. For this, the following possibilities exist: Introduce basic concepts of joint marketing, joint purchasing, joint-use facilities and joint-use of capital; mobilise capital through joint ventures and collection centres; strengthen business linkages with KUD and secondary level business federations/enterprises; introduce market/business information systems; introduce members' accounts settlement systems; encourage local production/ processing of local material e.g., home-made pork; establish vegetable grading and packing facilities including cold stores and warehouses; enhance shipment facilities; strengthen producers' groups; computerisation of accounts; establish cattle-feed production facilities by using local raw material e.g., cassava, oil palm wastes; improve supplies for waserdas and TPK through joint procurement; strengthen training of KUD leaders and employees; and member education to secure their higher business participation in their KUD.

KUD ACTIVATION MASTER PLAN:

Economic Business

Recognising the vast potentials of the KUD in North Sumatra in sectors like rice production, fertiliser consumption, production of cash crops like oil palm, rubber, coconut, coffee, cloves and rattan, several of their business activities could be further expanded and improved to provide higher economic returns for the farmer-members. The province has also strong potentials for livestock development, especially beef-cattle and hogs. Vegetables and fruits are widely grown but are put to very little economic use due to absence of market access, processing facilities and shipment. Distances also make business difficult and expensive.

The province is also closer to strong consumption markets of Singapore, Malaysia and Thailand. Taking advantage of the current positive support from the government for the development of the province as a major economic unit, KUD business can be activated further.

The activation plan could emphasise on the following factors: Development of collection and processing facilities for rice, cash crops, fruits and vegetables, poultry and livestock through technological inputs and up-gradation of existing facilities; vegetable grading and packaging facilities; expanding and improvement of farm machines and transportation equipment including their servicing facilities at KUD/District levels;

cattle-feed manufacture using local material e.g., corn, cassava and oil palm wastes; development of local pork into a home industry; expansion of cold storage and warehousing capacities; intensification of management training of KUD leaders and employees; and member education activities to secure their higher participation in KUD business.

II . MAIN FINDINGS

AGRICULTURAL PRODUCTION

Distribution of Farm Input Materials

Farm input materials include chemical and bio-fertilisers, farm chemicals e.g., insecticides, pesticides, rodenticide, fungicides and herbicides etc. and the supply of improved and quality seeds generally for key crops e.g., paddy, maize, soybeans etc. Chemical fertilizer is produced by several state-owned companies but the distribution of urea is coordinated by PT Pusri. The fertilizer is distributed from company-owned warehouses which are located at kecamatan level. This network is available throughout the country. The KUD pick up their requirements from these distribution points. The KUD, in turn, distribute the fertilizer from their own warehouses or through the TPK on the basis of pre-arranged delivery schedules.

The distribution of farm chemicals is through KUD or private channels. The main producers of these farm chemicals are Bayers, Ciba, PT Petrokemia Kayaku and others. While the main concentrates are imported, the formulations are done in Indonesia according to the local conditions and requirements.

The distribution of farm inputs by KUD in North Sumatra was as follows:

Farm Inputs	Year 1990		Year 1993	
	National	N.Sumatra	National	N.Sumatra
FERTILISER				
No. of KUD	3,550	205	3,461	162
Urea (Tons)	1706,547	53,748	3737,760	83,788
All others (Tons)*	1341,910	98,748	2293,965	114,112
PPC & ZPT (lt)	-	-	928,811	107,164
Others (Tons)	33,224	182	56,503	3,773
FARM CHEMICALS				
No. of KUD	1,647	102	934	61
Insec Lqd ('000lt)	6,782	552	361,155	5,629
-"-not lqd (Tons)	3,992	241	2588,977	13,553
Rodenticide (Tons)	2,496	120	9,001	3,490
Fungicides (Tons)	827	512	100,363	2,371
Herbicides (Tons)	243	124	15,869	749

*includes: TSP, DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

The KUD in North Sumatra distributed 2.2% of urea (83,788 tons) in 1993 as compared with the figure of national distribution (3737,760 tons). It was, however, 155% of the distribution done

in 1990 by the KUD in the province. Because of the extensive cultivation of paddy, palawija and other cash crops in North Sumatra, the farmers have been using bio-fertilizer as well.

The distribution of seeds by KUD in North Sumatra during the years 1990 and 1993 has been as follows:

Type of Seeds	Year 1990		Year 1993	
	National	N.Sumatra	National	N.Sumatra
No. of KUD	980	34	545	14
Paddy (kg)	26,351,795	186,734	5336,522	58,525
Corn (kg)	635,324	222,433	479,911	591
Soybeans (kg)	610,344	-	1442,920	19
Others (kg)	3,290,037	77,285	1068,673	38

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

In North Sumatra the KUD distributed 58,525 kg of paddy seeds (1.1%) of the national distribution in 1993. It was only 31.5% of the paddy seeds distributed against the figure of 1990. Seeds of paddy are developed and distributed by PT Sanghianseri, a state-owned company using KUD channels. Seeds for palawija and horticulture crops are obtained by the farmers from the open market. The government, however, operates several seeds certification stations, as to certify their quality.

Dissemination of Farm Machinery

Because of the extensive areas cultivated, over the years the use of farm machinery in the province has increased significantly. The following table indicates the availability of farm machinery in North Sumatra in the years 1984, 1993 and 1994.

Type of Farm Machinery	1984	1993	1994	% of 1993
2-Wheel Tractors	118	2,266	3,478	153.4
Tractors/all types	526	965	939	97.3
Hand Sprayers	43,887	131,016	135,128	103.1
Threshers	378	8,364	8,088	96.7
Paddy Processors	5,347	7,642	8,047	105.2
(out of which, RMU)	--	(800)	(791)	(98.8)
Water Pumps	--	457	314	68.7

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

The increase in numbers of 2-wheel tractors, hand sprayers and threshers has been significant. A majority of farm machines are within the KUD sector, mostly owned by farm households. Some of the equipment has been imported, and some have been locally assembled. Nearly all the KUD owned paddy drying platforms and small godowns to hold paddy and rice. Several of the KUD owned transportation vehicles. Cooperatives do not have any cold storage and warehousing facilities and agro-processing units.

**AGRO-PROCESSING AND
DISTRIBUTION OF FARM PRODUCTS**

Demands of Major Farm Products

Items, Form of Processing and Consumption

Major items of agricultural production in North Sumatra have been the following:

Commodity/Tons	1994	1995	Percent
Paddy/Rice	3079,960	3134,533	101.7
Maize	311,918	371,578	119.2
Cassava	454,693	373,350	81.9
Sweet Potato	139,462	117,336	84.1
Groundnut	28,134	32,115	114.2
Soybeans	56,497	49,655	89.2
Red Onion	34,321	30,363	88.2
Potato	136,961	228,927	167.1
Cabbage	212,572	255,093	119.7
Chilies	92,564	52,948	56.9
Tomato	153,772	119,859	79.9
Cucumber	44,240	25,761	59.0
Avocado	6,814	3,451	50.6
Mango	9,634	5,224	54.2
Rambutan	13,603	12,401	85.7
Oranges	8,663	5,081	58.6
Durian	85,486	38,790	45.8
Papaya	22,714	16,860	73.9
Banana	112,980	108,431	95.5
Markisa	8,244	9,231	111.9
Pineapple	135,643	47,760	35.2
Jackfruit	1,499	4,726	315.2
Rubber	455,520	1889,148	414.2
Palmoil (Bunch)	3776,508	5364,460	142.0
Coffee	35,784	29,282	80.5
Coconut	93,669	90,527	96.8
Cloves	1,382	1,008	72.9
Vanilla	173	298	172.2
Rattan	150,015	196,132	130.6

Source: North Sumatra in Figures 1994 and 1995.

The distribution of rice is done in two ways: a part of it goes to the Bulog, while the remaining is disposed of in the local market and retained by the farmers for their own use. In the case of other crops, if there is a procurement drive by the government for specific crops, then the distribution takes place accordingly. Otherwise, the farmers are assisted by the KUD to sell their products.

Fresh vegetables and some fresh fruits, especially banana are sold in the open market. Fruits like durian, pineapple, rambutan are purchased by the traders for shipment to Jakarta and other destinations.

Except for handling some cash and estate crops there are no fruits and vegetables processing industries in the province. The province has a high production of rubber and palmoil. There are a number of government and private companies which undertake the processing of these crops. Coffee and vanilla crops are semi-processed and also sold as raw. Clove is procured by the Puskud through the KUD network for the national clove buffer stock maintained by the Inkud. 100% of the production goes to the buffer stock.

Technical Level of Major Agro-Processing

The technical level of agro-processing is fairly developed as far as palm oil, coffee, coconut and rubber is concerned. Rice processing is traditional. These facilities are poor in quality and too low in capacity, as a result they often fail to meet with the quality requirements of the Bulog. There is no other processing activity for other agricultural products.

Major Agro-Processing Entity, Volume of Production, Facilities

There were 799 rice milling units (0.5 to 1 ton/hour capacity) in the province. The facilities with the KUD are low. Other major processing entities are: palmoil, coconut, rubber, and some sugarcane processing - all in the government and private sector.

In the sector of poultry, vegetables and livestock, the agro-processing facilities remain insignificant. There are 8 cattle-feed mills which produce 270,000 tons of concentrates annually - four of them are located in Medan itself (Charon Pokpan, Gold Coin Co., Gunung Windu Co., and Malabar Co.). There is no dairy activity in the province.

Major Shipping Areas, Distribution System and Facilities by Commodities

For agricultural products e.g., vegetables, fruits and some cash crops, the major destinations for shipping are the wholesale markets on Java. The destination for paddy/rice is government and the general market.

The farm households or the KUD have not established any joint handling, joint marketing or joint shipment facilities except for the provision of some transport and/or negotiating the deals.

Business Customs, Pricing, Accounts Settlement

In most cases the business is transacted between the farmer and the agents of the traders. The transactions are highly cash-oriented. The word of mouth remains supreme in the first

negotiations which do not involve very high values or expensive assets e.g., lands and buildings. In the case of agricultural products, the agents of the traders keep on tracking the producers of the required commodities.

In the context of farmers' dealing with the KUD, the transactions are mostly on cash basis (around 50-60%), the remaining being on credit basis generally in respect of purchase of fertilisers, and other requirements. While dealing with the agents and traders, the cash advances are reduced at the time of settlement of final accounts. Advances received by the farmer appears advantageous and look attractive in the initial stages but at the time of the final settlement the farmer tends to lose because of the disadvantageous prices at which he had sold his crop. Since cash is needed always by the farmer, a small disadvantage does not seem to harm him.

The pricing of agricultural produce is determined by various factors e.g., the cost of inputs, labour inputs, and a reasonable margin of profit. This is true of horticulture, poultry and livestock products. The prices of urea are determined by the government. Other fertilisers are available in the open market.

The accounts are settled based on the conditions laid down by the KUD and agreed upon between the KUD and the members. In the case of agricultural producers of North Sumatra, the members can purchase their requirements from the KUD on credit basis which are settled against the supplies received by them from the KUD. The system of accounts settlement is generally the same all over the province and is acceptable to both - the members and the KUD.

Others

Distribution of agricultural products and items of dairy use is also carried out through a network of retail shops (waserdas) in North Sumatra, although the number of such shops and the merchandise range is hopelessly low.

The provincial federation of the KUD - the Puskud - undertakes some business activities with the KUD e.g., procurement of clove, coffee and vanilla. The business relationship between the two is not active. The Puskud could provide market information to its affiliates in the province.

BUSINESS MANAGEMENT OF KUD AND RELATING LEGAL SYSTEM

Situation of Business

-Purchasing and Marketing Business

Purchasing Business System, Commodities and Turnover

To meet the needs of the farmer-members, the KUD network has met the input needs to some extent in the province. The government programmes which have been assigned to the KUD further reinforce their business operations. The government programmes include:

distribution of chemical fertilisers, agricultural credit, distribution of essential commodities e.g., sugar, rice, soybeans, wheat flour, kerosene oil etc. The members, therefore, not only purchase their input needs through the KUD but also their consumption needs.

Fertiliser Distribution: In North Sumatra, PT Pusri distributes chemical fertiliser through various channels from their own warehouses located at harbour points and even down at the kabupaten levels. The distribution of fertiliser in the province during 1990-1995 is given in the following table:

Particulars	1990	1994	1995	% of 1990
No. of KUD	205	162	159	77.5
Fertiliser (Tons)	152,153	76,843	310,914	204.3

Source: Department of Cooperatives-RI, Jakarta

During the year 1990-1993, the fertiliser was distributed in the country as seen in the following table:

Particulars	1990-91	1992-93
Total National distribution (Tons)	2,810,539	3,031,971
Allocated by PT Pusri for distribution by:		
-Puskud	0.2%	0.1%
-KUD	80.9%	80.3%
-Persero Niaga	1.6%	3.2%
-PT Pertani	11.6%	8.8%

Fertiliser is produced by several government companies including the PT Pusri, but the distribution is coordinated by PT Pusri. PT Pusri, in turn, allocates quota for distribution among various agencies including the Puskuds. PT Pertani, a government company, distributes fertiliser for the plantations. Farmers obtain their farm chemicals either from the KUD and from the open market.

Seeds Distribution: Distribution of seeds is open, except for paddy seeds. Paddy seeds are produced by a government company, PT Sanghianseri, and several authorised private enterprises. Seeds are certified by government Seeds Certification Centres as to their quality. During 1990-93 the following quantities of seeds were distributed through the KUD network:

1990	34 KUD	Paddy	...	186,734 kg
		Corn	...	222,433 kg
		Others	...	77,285 kg
1993	14 KUD	Paddy	...	58,525 kg
		Corn	...	591 kg
		Others	...	38 kg

The distribution of seeds was deregulated after 1990-91. The farmers were able to purchase their requirements from the open market, hence the sudden drop during 1993. According to the Seeds Certification Centre in Medan, only 20-30% of the farmers use certified seeds. Some of the progressive farmers in the province also undertake seeds multiplication activity.

Farm Machines and Agricultural Implements: Because of the relatively low levels of farm income, the use of farm machines in the province is limited. Only traditional implements, hand tractors, and farm cattle are used. The table below shows the availability of various farm machines in the province:

Type of Farm Machines	1994	1995	%	In Good Order	Percent of 1995
2-Wheel Tractors	3,478	3,406	97.9	3,388	99.4
4-Wheel Tractors	939	1,065	113.4	1,058	99.3
Hand Sprayers	135,128	145,630	107.7	145,408	99.8
Threshers	8,088	7,481	92.4	7,185	96.0
Paddy Processors	8,047	7,067	87.8	6,832	96.6
(out of which, RMU)	(791)	(799)	101.0	752	94.1
Water Pumps	314	1,406	447.7	1,208	85.9
Corn Processors	931	1,221	131.1	1,108	90.7
Cassava Processors	3,986	4,910	123.1	4,658	94.8

Source: Statistik Indonesia-Year Book 1994, BPS-Jakarta, and Department of Agriculture, North Sumatra, Medan 1995

A majority of farm machines are within the KUD sector. Some of the farm machines, especially the paddy processors, have been obtained under various technical assistance programmes. Some of the equipment are of Japanese origin and some have been fabricated locally in Indonesia. Nearly all the KUD owned paddy drying floors and small godowns to hold paddy and rice. Many of the existing facilities are fairly old and need replacement or the facilities need to be enhanced substantially. Cooperatives are not reported to own any cold stores or any other agro-processing units except for drying floors for coffee beans and vanilla pods. Some KUD possess facilities for cleaning and storing facilities for cloves and copra.

Retail Outlets (Waserda) and TPK (kiosks): Farmers purchase their farm inputs and consumer needs from the waserdas and TPK. Each KUD operates on an average 3-4 TPK located close to the farm operational areas. The number of such TPK is very low. Some of the TPK are operated by the farmer-members as their private enterprises but selling farm inputs only.

The position of retail outlets in 1994 and 1995 in the province was as follows:

Particulars	1994	1995	Percent
No. of KUD	-	594	-
No. of Waserda	413	442	107.0
Working Capital (M.Rp)	5,935.0	6,953.0	117.1
Turnover (M.Rp)	19,468.0	24,811.1	127.4

Source: Department of Cooperatives-RI, Jakarta 1996

Turnover: The total turnover of KUD in North Sumatra during the years 1992 and 1995 is given below:

Particulars	1992 (M.Rp)	1994 (M.Rp)	1995 (M.Rp)	Percent of 1992
N.Sumatra KUD	88,524	150,073	271,119	306.2
National KUD	3,807,639	4,837,683	5,669,411	148.8

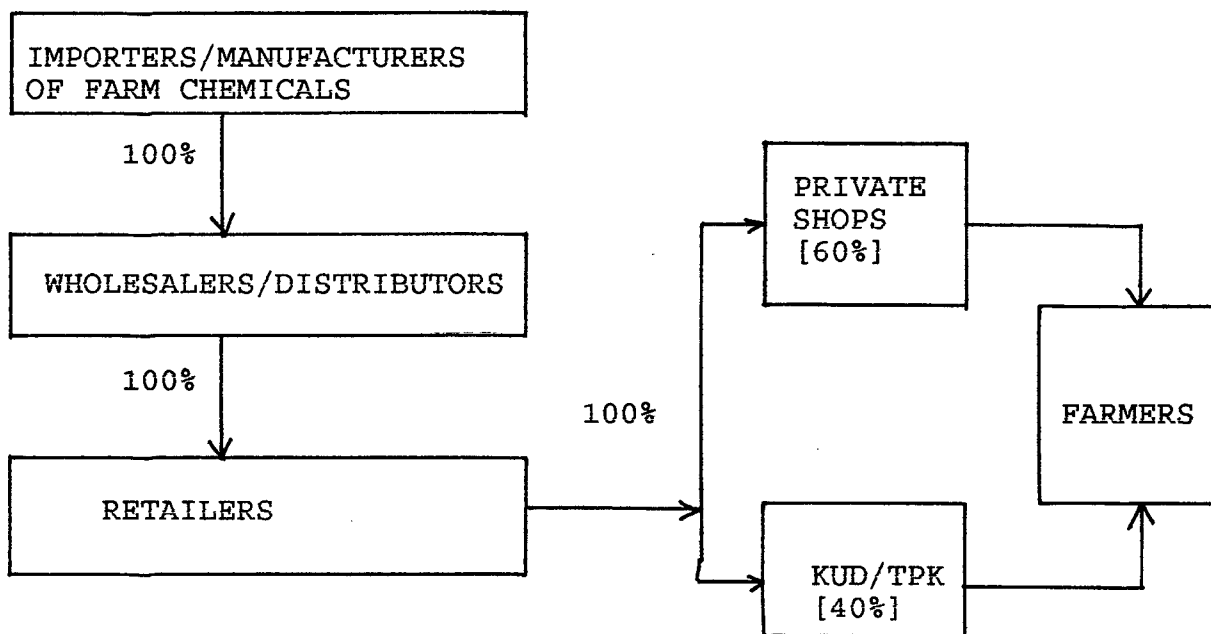
Source: Department of Cooperatives-RI, Jakarta 1996

Major Source of Procurement of Commodities

Distribution of chemical fertilisers, particularly, urea is coordinated by the PT Pusri, a government-owned company, which has its warehouses located throughout the country, and even at the kecamatan level from where the KUD pick up their supplies against the delivery note issued by the Puskud. The transportation of urea is handled by the Puskud in the province from the Pusri warehouse to the KUD delivery point. A detailed note on the production and distribution of urea and a **Flow Chart** on the supply of urea is given elsewhere in this Report. The government provide credit to the farmers through the KUD for the purchase of urea. Other chemical fertiliser formulations are available in the open market. Distribution of chemical fertiliser for estates and plantations is coordinated by PT Pertani, a state-owned company. This company also received urea bulk supplies from the PT Pusri.

Similarly, bio-fertilisers, farm chemicals are obtained from the open market. The main producers are Bayers, Ciba, PT Petrokemia Kayaku and others. While the main concentrates are imported, the formulations are done in Indonesia according to the local requirements. The distribution of farm chemicals is undertaken by the KUD purely on individual basis. Some of the KUD do not involve themselves in the supply of these chemicals.

A **Flow Chart** on the distribution of farm chemicals in North Sumatra is given below:



Seeds, except for paddy, are procured from the open market. Paddy seedlings are produced and distributed by PT Sanghianseri, a government-owned company. The company has its own seeds multiplication farms spread throughout the country. The company also encourages private enterprises also to produce foundation seeds. The company also imports foundation seeds. The government also operates a number of Seeds Certification Centres throughout the country in order to ensure seeds quality.

Merchandise for sale through the TPK and the retail outlets is obtained from the open market. There is no wholesale cooperative agency which sells or coordinates the supply of consumer goods.

Marketing Business System by Commodities and Turnover

This consists of marketing the produce of farmers with their KUD. Major marketing activities in the province have been: Paddy, rice, maize, soybeans, palmoil, coffee, rubber and others. The KUD help procure paddy/rice from its members for the national food stock and try to fill the target set for it. The members supply the maximum which they can but still the preference of the farmer remains to sell the produce in the open market at a higher price than fixed by the government. The procurement price of paddy/rice is determined by the government every season. KUD gets credit from the government to purchase rice.

The marketing of paddy/rice by the members in North Sumatra during 1988-1989 and 1994-1995 is given in the table below:

Particulars	1988-89		1994-95	
	National	N.Sumatra	National	N.Sumatra
Paddy/Rice Procured				
By KUD (Nos)	2,018	39	1,993	36
Procured (Tons)	1096,212	3,559	786,066	4,454
Sold to Bulog				
By KUD (Nos)	2,120	3	1,133	0
Sold (Tons)	2023,952	600	509,919	0

Source: Department of Cooperatives-RI, Jakarta 1996

It is noticed from the above that the procurement and supply of rice has gone down in the province considerably over the years mainly because the farmers are increasingly taking to other crops, and the Bulog has also restricted its own purchases as rice trade has been partly made open.

The total business volume and the total surplus of the KUD in the province in 1992-1995 was as follows:

Particulars	1992	1995	% of 1992
Total Turnover (M.Rp)	88,524	271,119	306.2
Total Surplus-SHU (M.Rp)	674	2,369	351.4

Major Market Area, Buyers

Major market areas for the produce of the farmer-members in North Sumatra are the government (Dolog/Bulog), private processors and procurement agencies (e.g., Soybeans to Koptis, rattan, coffee, vanilla to private collectors, and cloves and coffee to Puskud). There are no processors of farm produce in the province. Fresh vegetables and fruits are consumed locally, and part of the produce is purchased by the private traders for shipment to Jakarta and other destinations. Coconut, rubber and palmoil is locally processed by private and government processing companies. Other cash crops like vanilla, coffee go to Java for further processing and export. A part of coffee collected by KUD is exported from North Sumatra itself.

Procurement of Funds for Economic and Utilisation Business

Capital for operating economic and utilisation business is available from various sources:

- Credit from government for procurement of paddy/rice, corn, Soybeans, cloves and the service charges the government pays to the KUD for disbursement of such credit;
- Service fee for handling telephone and electricity bills;

- Credit/fee from private enterprises for procurement of vanilla, coffee, rattan etc.
- Surplus earned from the business of the KUD.

The level and variety of such credits is very low in the province. KUD have very low financial strength and so have the farmer-members. Open market credit is very expensive.

Holding and Utilisation of Kiosks, Storage, Processing Facilities

Retail shops and warehouses are operated by the KUD as a service to the members. In 1995, the situation in the KUD sector in North Sumatra was as follows:

Total of Retail shops/waserdas	...	442
Warehouses with drying floors	...	824
Rice milling units	...	61
Rice drying units	...	72

Competition with Private Dealers

The KUD are neither integrated horizontally nor vertically. Each unit works on its own and develops its own business with the funds raised through its own efforts. Since a majority of business units of KUD are operating within the government-supported system, the element of competition with the private dealers does not exist. Procurement of rice and clove, distribution of fertiliser, sugar, wheat flour, maize etc. are all regulated by the government and are consequently a secure business, leaving not much scope for competition.

ORGANISATION, MANAGEMENT & BUSINESS OF PUSKUD

Situation of Business

[The Puskud-North Sumatra is a business secondary level federation of KUD and non-KUD in the province. It was organised in 1984 and registered vide No. 3422-B/BH/III dated 12 March 1984. Its present Registration No. 04/PAD/KWK.2/1995 dated 6 February 1995. In 1984 its membership was 199 KUD, and in 1996 its membership was 383 (366 KUD and 17 non-KUD). Its general Members Meeting which meets once a year elects a 5-member Board of Directors, a 3-member Board of Supervision and a 13-member Board of Guidance all for a period of 5 years.

[The Puskud is a member of a national federation, Inkud. The main aim objectives of Puskud are, besides carrying out business, follow cooperative ideology, improve the income of the members and the general public, and increase the income and production of farmers. The business activities include: procurement and supply of paddy/rice, distribution of fertiliser, sugar/other essential commodities, collection of vanilla, coffee, cloves and other farm products, and distribution of consumer goods among the affiliates. The Puskud has its office at Medan. The Puskud has 33 full-time employees including a general manager.]

Purchasing Business Methods, Commodities, Turnover

The Puskud, the provincial federation of KUD and non-KUD, a member of the Inkud, participates in business ventures sponsored or proposed by the Inkud, besides supporting the business development of the KUD at the primary level in the province. The Puskud is a federation of 383 KUD and non-KUD in the province with headquarters in Medan.

In commodities like cloves, coffee and vanilla, the Inkud assigns the Puskud fulfil a specific trader order for home use or for exports. The indent specifying the quantity and quality and the time frame is passed on the Puskud for execution. The Puskud, in turn, contacts the relevant KUD and asks them to supply the required items within a specific time. Upon receipt of raw material, and after some semi-processing, the items are exported or delivered.

The Puskud also coordinates the procurement of commodities either for national food stock or for distribution in the open market. Methods adopted are negotiated with the relevant agencies/suppliers, and are either on a fee basis or on a commission basis. Procurement prices of rice and cloves are regulated by the government.

During 1995, the Puskud purchased the following commodities:

Commodities	Purchases (M.Rp)	% of Turnover
TOTAL TURNOVER 1995		Rp 3479.8M
-Rice	322.3	9.2%
-Sugar	485.5	13.9%
-Wheat flour	5.7	0.1%
-Coffee	137.4	3.9%
-Cloves	2016.0	57.9%
-Transportation	280.0	8.0%

The Puskud does not purchase fertiliser but serves as a coordinator for distribution in the province from the warehouses of PT Pusri. For transportation of fertiliser, the Puskud collects a fee from the government. The Puskud has also undertaken the sale of charcoal, although it is a small business.

Major Suppliers and Buyers (KUD and non-KUD)

The major suppliers of the Puskud have been the private enterprises and the State-owned chemical fertiliser company, PT Pusri. It obtains its supplies of sugar, wheat flour and soybeans from the Bulog. Farm products e.g., paddy/rice, coffee, clove, vanilla, soybean is procured through the KUD network. Its main buyers are the KUD, clove holding agency through the Inkud, farm produce processing factories.

Marketing Business Methods, Commodities, Turnover

The marketing business methods include negotiations by the KUD and the basic level farmers with the Puskud, as well as the requirements of the national food stock.

The main commodities which the members of the Puskud sell to the federation are: cloves, paddy/rice, coffee beans, vanilla. The marketing business (sales by Puskud) of the Puskud during 1995 was as follows:

Commodities	Sales (M.Rp)	% of Turnover
TOTAL TURNOVER-1995		Rp 3479.8M
-Rice	330.7	9.5%
-Sugar	509.5	14.6%
-Wheat flour	6.0	0.1%
-Coffee	134.1	3.8%
-Cloves	2,335.4	67.0%
-Transportation	287.1	8.2%

The Puskud has been able to collect 187,205 kg of vanilla from the farmers. After semi-processing it was supplied to the KJUB in Central Java for Rp 32 million. Its final destination was the USA. Coffee exported to the US on the order of the Inkud was worth Rp 134 million. The other services sold by the Puskud were: transportation, warehousing, vegetables, and supply of coal.

Funds for Economic Business and Operation of Joint Use Facilities

The situation of economic business of the Puskud is given below:

Particulars	Year 1994	Year 1995	Percent
Total Purchases (M.Rp)	1,761.9	3,106.6	176.3%
Total Sales	1,828.2	3,344.3	182.9%
Total Turnover	2,218.9	3,479.8	156.8%
Total Surplus-SHU	64.3	150.0	234.3%
Total Assets	3,093.0	3,490.6	112.8%
Own Capital	1,489.7	1,623.0	108.9%

The Puskud owns several warehouses and rice milling units spread out throughout the province. The Puskud gets a handsome collection of fertiliser transportation fee (Rp 287.1 million in 1995).

Situation of Operation of Kiosks, Collection Centres, Processing Facilities

The Puskud does not operate any kiosks and collection centres. It has its own warehouses, trucks (3 units) and vanilla, cloves

and coffee processing units. KUD are its collection centres and sales points.

Competition with Private Traders

Except for enjoying monopoly status in the procurement of cloves and distribution of sugar and wheat flour, the Puskud finds it difficult to compete with the private trade. It has recently tried to develop its business in association with KJUB - cooperative business organisation at kecamatan/kabupaten level.

RELATING LEGAL SYSTEM AND STRUCTURE

Policy for Improvement of Distribution and Processing of Farm Products and Price Support

In accordance with the declared National Policy to increase agricultural production and boost export, the government is committed to support farmers and provide them with the needed infrastructure. The government has established a number of institutions and services aimed at providing farm inputs, extension services and post-harvest technology. Also, consequently, the government aims at giving support to agro-processing activities through its own system and with the support of private enterprises. As a result, the country is witnessing the growth in agro-processing activities. More and more private companies are entering agro-processing business.

With a view to guarantee better economic returns from farm operations, the role of government agencies like the Bulog is being reviewed so that the farmers are sure to get proper prices for the farm products, especially, rice, soybeans, corn and other cash crops. Clove procurement agency, coconut development board, coffee board are some examples. For every harvesting season the government announces floor prices for key commodities.

The KUD are used increasingly by the government to procure food items for national food stocks and distribute essential commodities in the country. The KUD are also used to disburse agricultural credit among the farmers. The Puskuds through the Inkud are planned to serve as gross distributors of consumer items through the Waserdās and TPK.

Taking advantage of the fertile land, estates and plantations, vast natural resources, and farming potentials, the provincial government has aimed at achieving "Diversified agricultural production" through intensive farming. "The implementation of cooperative development in the province will be carried out through: an increase of share and access to the market; expansion of access to capital sources, strengthening of capital structure, and improvement of ability to utilise the capital; an increase of the cooperatives' organisational and management capabilities; an increase of access to technology and the ability to use it; and an establishment of business partnership." KUD and non-KUD are seen by the government to stabilise prices and assist in processing, distribution and export of farm products.

**FINDINGS THE DETAILED FIELD SURVEY
[OF 5 KUD IN THE PROVINCE]**

Purchasing and Marketing Business

**Situation of Establishment
of Commodity-wise Groups**

The KUD surveyed in North Sumatra were: KUD Naga Dolok (CMI), KUD Citama (MI), and KUD Muara Mulia (M) in Simalungan district, and KUD Laubahing Simalen (M), and KUD Singalor Lau (M) in Karo district. The KUD are located in the plains and hilly areas in the midst of paddy fields and forests. The economic condition of the farmer-members is rather poor. Average land holding is 2.5 ha.

The main activities of KUD have been: purchasing and marketing of paddy/rice, distribution of fertiliser, sugar, kerosene oil and other farm inputs, and operating services like wartel, waserda, electricity bills handling and savings and loans. The farmers have been organised into Kelompok Tani (KT), members groups, women and youth groups, and commodity groups. The number of members and KT is given in the table below:

Cooperatives/ Category	Popula- tion	Farmers	Members	KT	Villages covered	TPK
Naga Dolok	21,729	4,058	170	12	5	8
Citama	8,000	3,625	1451	16	2	4
Muara Mulia	9,770	3,529	787	16	3	3
Laub.Simalen	5,335	1,082	128	11	5	9
Singalor Lau	13,904	9,660	1141	48	15	20

The membership of KUD is open to all residents in rural areas. In most of the KUD in North Sumatra individuals have been the members. The percentage of membership in the KUD as compared with the population has been as follows:

KUD Naga Dolok	...	...	0.7%
KUD Citama	...	...	18.1%
KUD Muara Mulia	...	...	8.0%
KUD Laubahing Simalen	...	...	2.3%
KUD Singalor Lau	...	...	8.2%
Average	...	...	7.4%

With a view to provide services and distribute farm inputs and credit, farmers' groups (KT) have been organised who also serve as commodity groups. Most of the government extension programmes have been carried out through these groups. The needs of the farmer-members are met through the network of TPK in which the KT are actively involved. These groups form an integral component of the KUD organisation at the village level.

**Purchasing Business Methods, Commodities
Handled, Turnover and Commissions**

While the members purchase their requirements e.g., farm inputs, from their KUD, the KUD also purchase their requirements from external sources in order to sell the final products to the members after some processing. The purchasing business of the KUD, therefore, covers the procurement and transportation of fertiliser, paddy, farm implements/equipment, seeds, sugar, cattle-feed, and groceries for waserda and TPK. KUD do not show separately in their accounts the commissions received or paid. They do, however, show the service fees received or paid by them.

The table below shows the commodities purchased from various sources by the 5 surveyed KUD during 1995:

KUD/Purchasing Business Items	Total Purchases (M.Rp) 1995	% of KUD Turnover of 1995
<u>KUD NAGA DOLOK</u>	No Business Transacted	-
<u>KUD CITAMA</u>		Rp 983.8M
-Fertiliser	644.5	65.5%
-Farm Chemicals	116.9	11.8%
-Paddy/Rice	194.2	19.7%
-Seeds	5.1	0.5%
-Charcoal	3.5	0.4%
-Waserda	22.9	2.3%
<u>KUD MUARA MULIA</u>		Rp 942.0M
-Fertiliser	726.4	77.0%
-Farm Chemicals	12.2	1.2%
-Paddy/Rice	174.2	18.4%
-Waserda	12.1	1.2%
<u>KUD LAUBAHING SIMALEN</u>		Rp 7.5M
-Fertiliser	6.6	88.0%
<u>KUD SINGALOR LAU</u>		Rp 1792.5M
-Fertiliser	1436.0	80.0%
-Farm Chemicals	77.2	4.2%
-Waserda	1.8	0.1%
-Cloves	50.6	2.8%

Fertiliser, farm chemicals distribution and waserda have been the main business of the KUD. Percentage of purchasing business of major commodities in 1995 is as follows:

Name of KUD	Fertiliser	Farm Chem	Waserda	Paddy/Rice
KUD Naga Dolok	-	-	-	-
KUD Citama	65.5	11.8	2.3	19.7
KUD Muara Mulia	77.0	1.2	1.2	18.4
KUD Lau Simalen	88.0	-	-	-
KUD Singalor Lau	80.0	4.2	0.1	-
Average	62.1	3.4	0.7	7.6

Major Suppliers of Goods and Patronage of Federations

Major suppliers of goods to the KUD have been the private traders in district headquarters or in Medan, the provincial capital. Fertiliser is obtained from the PT Pusri through the Puskud, and sugar from the Dolog. Groceries for the retail shops and TPK is obtained from the wholesalers.

Marketing Business Methods, Commodities Handled, Turnover and Commissions

The KUD market their products e.g., paddy, with their members and the processing industry or in the open market. The marketing is done as per negotiations reached between the KUD and the buyers. In many cases, the KUD acts as coordinating bodies e.g., agents of the government for rice procurement. The table below shows the marketing business of the 5 KUD surveyed in North Sumatra:

KUD/Marketing Business Items	Total Marketing (M.Rp) 1995	% of KUD Turnover of Year 1995
<u>KUD NAGA DOLOK</u>	No Business Transacted	-
<u>KUD CITAMA</u>		Rp 983.8M
-Fertiliser	677.2	68.8%
-Farm Chemicals	136.1	13.8%
-Paddy/Rice	199.8	20.3%
-Seeds	4.8	0.5%
-Charcoal	1.9	0.2%
-Waserda	23.4	2.3%
<u>KUD MUARA MULIA</u>		Rp 942.0M
-Fertiliser	731.4	77.6%
-Farm Chemicals	13.2	1.3%
-Paddy/Rice	175.6	18.6%
-Waserda	13.2	1.3%
<u>KUD LAUBAHING SIMALEN</u>		Rp 7.5M
-Fertiliser	7.5	100.0%
<u>KUD SINGALOR LAU</u>		Rp 1792.5M
-Fertiliser	1469.7	81.9%
-Farm Chemicals	83.0	4.6%
-Waserda	11.2	0.6%
-Cloves	55.0	3.0%

Fertiliser, farm chemicals distribution and waserda have been the main business of the KUD. Percentage of marketing business of major commodities in 1995 is as follows:

Name of KUD	Fertiliser	Farm Chem	Waserda	Paddy/Rice
KUD Naga Dolok	-	-	-	-
KUD Citama	68.8	13.8	2.3	20.3
KUD Muara Mulia	77.6	1.3	1.3	18.6
KUD Lau Simalen	100.0	-	-	-
KUD Singalor Lau	81.9	4.6	0.6	-
Average	65.6	3.9	0.8	7.7

KUD accounts do not show separately the commissions received or paid. They do, however, show the service fees received or paid by them.

Given below is a summary of marketing and purchasing business of the KUD showing the commissions received by them. From the commissions received, the KUD cover their overhead and handling expenses:

KUD/Items 1995	Purchase Value/M.Rp	Sales Value/M.Rp	Commission Received	Percent
<u>KUD NAGA DOLOK</u>	No business transacted			
<u>KUD CITAMA</u>				
-Fertiliser	644.5	677.2	32.7	5.0%
-Farm Chemicals	116.9	136.1	19.2	16.4%
-Paddy/Rice	194.2	199.8	5.6	2.8%
-Seeds	5.1	4.8	(-0.3)	-5.8%
-Charcoal	3.5	1.9	(-1.6)	-45.7%
-Waserda	22.9	23.4	0.5	2.1%
<u>KUD MUARA MULIA</u>				
-Fertiliser	726.4	731.4	5.0	0.6%
-Farm Chemicals	12.2	13.2	1.0	8.1%
-Paddy/Rice	174.2	175.6	1.4	0.8%
-Waserda	12.1	13.2	1.1	9.0%
<u>KUD LAUBAHING SIMALEN</u>				
-Fertiliser	6.6	7.5	0.9	13.6%
<u>KUD SINGALOR LAU</u>				
-Fertiliser	1436.0	1469.7	33.7	2.3%
-Farm Chemicals	77.2	83.0	5.8	7.5%
-Waserda	1.8	11.2	9.4	522.2%
-Cloves	50.6	55.0	4.4	8.6%

Major Buyers, Use of Federations and Demand for Federations

Major buyers of products of KUD are the processing factories located in the province. Paddy/rice is sold to the Dolog as well as in the open market.

Puskud's role is limited to the transportation of fertiliser and sugar. None of the 5 KUD had any business with the Puskud. The KUD, however, expressed a strong desire that the Puskud needs to be more active in providing sales and purchase opportunities to them. It was, however, mentioned at the Puskud as well as at some of the KUD that the Goro networking with the Puskud would create a demand and supply of consumer and farm goods among the KUD.

Necessary Operation Fund for Economic and Utilisation Business and its Procurement

For executing government programmes e.g., distribution of fertiliser, procurement of rice, handling a variety of KUT, handling electricity bills and telephone kiosks, the KUD get a fee or a discount.

KUD have very limited choice or range of credit lines from financial institutions. Utilisation of rice milling units, warehouses, farm machines is very low in the area because these facilities are either too old or have become unserviceable.

The Utilisation and Operation of Kiosks, Collection/Storage Facilities and Processing Facilities

A majority of warehouses owned by the KUD are old and of poor quality. These are used for holding paddy, rice and fertiliser and other material e.g., sacks, farm implements etc. The facilities in the area are the barest minimum. There is no processing of any kind of farm produce in the area. The locations are of long distances. Transportation is limited and difficult. Farm implements and transportation facilities are inadequate.

The Situation of Competition with Private Traders

The KUD are in no position to compete with private dealers due to their very weak financial and operational condition. Except for KUD Singalor Lau, KUD Citama and KUD Muara Mulia rest of others are at a mere surviving level. The KUD Naga Dolok, although designated as Mandiri Inti, has not been undertaking any business.

FINDINGS OF THE COMMISSIONED SURVEY-I

Agricultural Production

Distribution of Agricultural Input Material such as Makers and Dealers of Chemical, Vinyl, Feed-stuff

While the production of most of the agricultural inputs e.g., urea, other chemical fertiliser and paddy seeds remains in the hands of the government-owned companies, the majority of distribution is channelled through the KUD system. Farm inputs for plantation/estate crops is done through the PT Pertani.

Farm chemicals, vinyl sheets, feed-stuff are brought in from Java. There are few producers of cattle-feed, mainly for swine, beef-cattle, fish and poultry. A total of 270,000 tons of cattle-

feed is manufacturers in the province by 8 cattle-feed mills - four of them i) Charon Pokan, ii) Gold Coin Co, iii) Gunung Windu Co, and iv) Malabar Co. are located in Medan itself. The main ingredients used are maize and cassava. The distribution of these products is done through the private trade and, in a limited way, through the KUD network.

Description of Farm Machinery (Makers and Dealers)

The following table shows the availability of farm machinery in the province during 1994 and 1995:

Type of Farm Machines	1994	1995	Percent
2-wheel tractors	3,478	3,406	97.9
4-wheel tractors	939	1,065	113.4
Hand Sprayers	135,128	145,630	107.7
Threshers	8,088	7,481	92.4
Paddy Processors	8,047	7,067	87.8
(out of which, RMU)	(791)	(799)	(101.0)
Water Pumps	314	1,406	447.7
Corn Processors	931	1,221	131.1
Cassava Processors	3,986	4,910	123.1

Source: Statistik Indonesia-Year Book 1994, BPS-Jakarta, and Department of Agriculture, North Sumatra, Medan 1995.

Most of the machines are of Japanese origin while some were locally produced. Part of the machines were made available under government and external grants.

Agro-Processing and Its Distribution

Demand of Major Farm Products

(Commodities, Form of Processing, Consumption)

Production of major commodities of North Sumatra and the share of two districts - Karo and Simalungun - in 1994 and 1995 has been as follows:

Commodity (Tons)	1994	1995	Percentage
PADDY			
Province Total	3079,960	3134,533	-
-Karo	-	110,450	3.5%
-Simalungun	-	403,457	12.8%
CORN			
Province Total	311,918	371,578	-
-Karo	-	138,812	37.3%
-Simalungun	-	104,558	28.1%
CASSAVA			
Province Total	454,693	373,350	-
-Karo	-	183	-
-Simalungun	-	72,326	19.3%

SWEET POTATO			
Province Total	139,462	117,336	-
-Karo	-	3,007	2.5%
-Simalungun	-	15,718	13.3%
GROUNDNUT			
Province Total	28,134	32,115	-
-Karo	-	1,524	4.7%
-Simalungun	-	8,202	25.5%
SOYBEANS			
Province Total	56,497	49,655	-
-Karo	-	1,167	2.3%
-Simalungun	-	982	1.9%
CLOVES			
Province Total	1,382	1,008	-
-Karo	-	105	10.4%
-Simalungun	-	101	10.0%
VANILLA			
Province Total	173	298	-
-Karo	-	225	75.5%
-Simalungun	-	2	0.6%

Source: North Sumatra in Figures 1994 and 1995, BPS-Medan.

Other important products of the province have been: fruits and vegetables, rubber, palm oil, coffee, copra, and rattan. There are several large-size palm oil, rubber, coconut processing factories in the province.

Some of the agricultural products of the province were exported. The situation of exports during 1992 and 1993 was as follows:

Commodity	Volume Exported (T)		Value Exported (US\$)	
	1992	1993	1992	1993
Rubber	495,682	479,181	443.6m	427.6m
Palm Oil	882,281	1196,030	335.0m	424.4m
Copra	15,646	29,985	9.5m	3.3m
Coffee	27,841	26,370	358.6m	392.8m
Vegetables	158,233	207,389	230.6m	300.7m

Other agricultural commodities exported from the province included: vanilla and rattan.

Rice is the major farm product followed by vegetables and cash crops. Rice is distributed in the open market and to the national food stock (Bulog/Dolog). Vegetables are consumed in the local market. Some fruits like Durian and Rambutan are shipped to Jakarta and other destinations in Java. There is no major agro-processing industry within the cooperative sector. A small quantity of vanilla is semi-processed before it is shipped out to the KJUB in Klaten in Central Java - intended for exports to the United States. Milk production in the province is insignificant, and whatever is produced is consumed locally.

The province has some poultry activity. The following table shows the number of broilers and local chicken in the province:

Commodity		Population	Meat/kg	Eggs/kg
Egg Layers	'94	3,985,140	1,972,613	29,302,641
	'95	4,468,608	1,978,701	34,728,042
	%	112.1%	100.3%	118.5%
Broilers	'94	6,942,690	5,141,963	-
	'95	8,020,874	32,203,807	-
	%	115.5%	626.2%	-
Local Chicks	'94	15,585,280	20,039,311	10,682,877
	'95	17,059,686	30,260,864	12,171,888
	%	109.4%	151.0%	113.9%
Ducks	'94	1,980,574	2,212,678	10,113,878
	'95	2,019,900	1,042,720	11,980,740
	%	101.9%	47.1%	118.4%

Source: North Sumatra in Figures 1994 and 1995, Medan

There are no processing facilities in the province for grading, packing and shipment except for some traditional facilities.

Similarly in the sector of livestock, vegetables and fruits processing, the facilities remain traditional and insignificant. The livestock situation and processing facilities in the province are as under:

Commodity		Population	No.Slaughtered	Meat/kg
Beef cattle	'93	221,509	32,471	5,695,542
	'95	250,569	48,465	7,579,926
	%	113.1%	149.2%	133.0%
Buffalo	'93	228,836	39,054	6,286,570
	'95	247,947	43,558	7,000,480
	%	108.3%	111.5%	111.3%
Sheep/Goat	'93	647,223	193,787	1,914,470
	'95	786,019	257,454	2,574,460
	%	121.4%	132.4%	134.4%
Horse	'93	9,451	1,015	116,375
	'95	7,300	1,031	128,875
	%	77.2%	101.5%	111.2%
Pigs	'93	2268,725	559,058	27,887,550
	'95	920,998	599,526	29,924,460
	%	40.5%	107.2%	107.3%

Source: North Sumatra in Figures 1993, Medan, and Director of Livestock Development, North Sumatra, 1996

Slaughter houses in the province are operated by the government and private enterprises. Most of the slaughtering is traditional. In 1992 a quantity of pigs was exported to Singapore.

Technical Level of Major Agro-Processing Farm Products by Commodities

The technical level of agro-processing in the province still remains to be developed. The only major agro-processing is paddy milling in view of the demand for clean rice from Bulog as well as from the open market. Rice milling units are too small and ineffective to produce quality rice.

Major Agro-Processing Business Entities, Volume of Production and Facilities

In 1995 there were 7,067 paddy processors, 1,221 corn processors and 4,910 cassava processors in the province. There were 799 rice milling units, out of which 61 were in the KUD sector. There were 824 warehouses and drying floors and 72 rice drying units. The capacity of rice processors is very small (0.5 to 1 ton/hour). The larger units are in the private sector.

Marketing Area of Major Farm Products, Distribution System

For agricultural products e.g., vegetables, fruits and some cash crops, the major destinations for shipping are the wholesale markets in Java, as well as within the province itself.

The farm household or the KUD have not established any joint handling, joint marketing or joint shipment facilities except for the provision of some transport and/or negotiating the deals.

Business Customs and Its Practice (Pricing, Accounts Settlement)

These practices are more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability and perishability. The terms are generally cash-upon-delivery of goods. However, for larger values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be enumerated as under:

a) **Rice:** The procurement is under the government programme. The procurement price is fixed by the government. The farmers sell their paddy/rice to the KUD against fixed price. The KUD pays the farmers in cash and rarely through their accounts in the cooperative. The surplus paddy is sold by the farmer in the open market, generally to the trader who comes to his house first with cash in hand. In this case the terms are cash, and in many cases, a token advance payment is also made to the farmers for the next crop.

b) Vegetables: The transactions are usually cash-and-carry from the road-head.

c) Cash crops: Except for clove, all transactions are on cash-and-carry basis. The price for clove procurement is fixed by the government. Payments to the farmers are made through the KUD.

d) Poultry: Generally terms are cash-upon-collection from the producer. The middleman, in turn, either sells the commodity on cash terms to the retailer or on payment-after-sale basis.

FINDINGS OF COMMISSIONED SURVEY-II ACTUAL SITUATION OF AGRICULTURISTS AND THEIR DEMANDS

Situation of Holding of Farm Machinery and Facilities

The survey covered 60 farm households from the area of operation of three KUD in North Sumatra (KUD Singalor Lau, KUD Citama and KUD NASA Dolok) Major production of the area has been: rice followed by some cash crops. On an average the annual gross agricultural income of the farmers has been Rp 7,600,000. The income is derived from various sources e.g., rice (58.6%), cash crops (14.6%), vegetables and fruits (11.3%), livestock and dairying (1.3%), and 14% from other sources. Farmers have invested in some simple and traditional farm machines and agricultural implements. These were: hand sprayers 21, hand tractors 2, mist blowers 10, power sprayers 8, 1 thresher, 2 portable pumps, 2 sprinklers, containers.

The farmers also owned some other farm related facilities e.g., farm produce storage 12,612m² (one farmers had 10,000m² of farm storage facility), farm equipment garage 144m², cattle shed 9m², and poultry house 256m². The farm machines and equipments have been rather traditional, and are minimum required for cultivation.

Measures for Obtaining Production/Consumer Goods (Situation of Using KUD)

On an average the gross agricultural income of the household constitutes 89% of the annual total income. 43% is spent on production-related expenses. The breakdown of the agricultural income of a farm household is as follows: 58.7% is derived from paddy/rice cultivation, 14.7% from cash crops, 11.3% from vegetables and fruits, 1.3% from dairying and 14% from other sources. (see table below).

**Break-Up (Percentage) of Agricultural Income of
Farm Households : 3 KUD Areas in North Sumatra**

Source of Income	SINGALOR	CITAMA	NASA DOLOK	Average%
Rice	32.0	86.0	58.0	58.7
Livestock/Dairy	3.0	1.0	--	1.3
Fruits and Veg.	28.0	--	6.0	11.3
Cash Crops	9.0	--	35.0	14.7
Other income	28.0	13.0	1.0	14.0

The highest income-generating sector has been paddy/rice cultivation followed by some cash crops and other income.

The break-up of household expenses has been as follows: food (41%), 25.3% education, 10% clothing, 9.6% ceremonies, 6.3% towards housing, and 8% is spent on other household related expenses. (see table below).

Break-Up (Percentage) of Household Expenses

Expenses	SINGALOR	CITAMA	NASA DOLOK	Av.%
Food	35.0	38.0	50.0	41.0
Clothing	11.0	8.0	11.0	10.0
Housing	13.0	5.0	0.2	6.3
Education	19.0	29.0	28.0	25.3
Ceremonies	16.0	6.0	7.0	9.6
Other expenses	6.0	14.0	4.0	8.0

Food and education are the heavy items of expenses for the farm household.

Households have been making use of their KUD to some extent, to procure their production and consumer needs as well as for sale of their products. 91.5% of farm household purchased their fertilizer requirements from their KUD. 26 members had purchased their 100% requirements of fertilisers from their cooperatives. 88.3% members purchased their insecticides and pesticides, and 35% of farm machine requirements from their cooperatives. Paddy seeds were purchased by 56.6% of farm households.

Other purchases made by the members from their cooperatives included: rice (by 13.5%), fish by 3 members, clothing (by 25%), and 16.6% members purchased their other foodstuffs. Households suggested further development of retail shops. 31.5% felt these were too far and 43.3% felt these were too small. The prices were lower than the open market (26%). Items handled by them were too few (60%).

The KUD-owned retail shops (waserdas) were used by the members to purchase their daily household necessities, food items, some simple farm equipment, clothing etc.

Merchandise Ratio and Marketing Methods of Farm Products (Situation of Using KUD)

Not all the farm households use their KUD to market all their farm products. 63% farmers sold their paddy/rice to the KUD, and 6.6% their fruits e.g., bananas, durian, rambutans, avocados, mangoes, and citrus. Other produce marketed through their KUD included: eggs, poultry, fresh milk, fish, maize and vegetables. A majority of cash crops e.g., coconut, rubber, palm, were sold by the members by themselves directly in the open market.

None of the households or any of their KUD possessed any grading, packaging and cold storage/warehousing facilities. The KUD, however, operate outlets (kiosks) from which the farmers can purchase agricultural inputs and implements, but the range has been limited. Members have suggested their renovations and expansion.

Intention to Introduce Farm Machinery and Facilities

The households have indicated their intention to mechanise certain farming operations as follows: 56.6% threshing, 41.6% tilling, 38% drying operations, 35% harvesting, 21.6% rice transplanting, 15% feeding machines, and 10% transportation. 38% households said that rice milling was not available thereby indicating that rice milling facilities need to be installed or enhanced. (see table below).

Farm Households' Intention to Mechanise Farm Operations

Intention to Mechanise	SANGALOR	CITAMA	NASA	Responses Received	Av. %
Tilling	8	3	14	25/60	41.6
Rice Transplanting	9	2	2	13/60	21.6
Harvesting	18	3	10	31/60	51.6
Threshing	15	11	8	34/60	56.6
Drying	19	--	4	23/60	38.0
Transportation	4	--	2	06/60	10.0
Feeding Machines	4	2	3	09/60	15.0
Milking	--	--	--	--	--
Others	--	--	--	--	--

At present no transportation and shipping facilities were available.

Evaluation and Demand for Business Activities (Purchasing, marketing, processing, joint shipment, joint use facilities, terms of loan, farm guidance, better-living guidance and others)

The farm households have said that purchasing and marketing facilities, equipment including the rice milling facilities were either inadequate or needed renovation or upgrading. Kiosks and waserdas (TPK and retail shops) were either too small, too far located or too old to be effective (31 - 65%). 60% wanted an

expansion of range of items maintained by these two outlets. 76.6% households wanted the promotion of joint marketing, joint purchasing and joint-use facilities to their advantage. While a number of them expressed satisfaction with the current level of loans, 71.6% wanted the current maximum credit limited be expanded and 52% wanted a larger number of variety of loans. On farm management guidance, the farmer-members suggested more of guidance on farm production (38.3%), guidance on fertilizer use (31%), and guidance on grading and packaging (7%). The farmers also felt that warehousing and assembly hall facilities were too inadequate and needed expansion (46% and 60.0%).

The table given below summarises the expectations of the farmer-members:

Expectation of the Farm Households from their KUD

Expectations	Average %
-Upgrading Kiosks and Waserda	31.6
-Kiosks: Expansion of Items Range	35.8
-Waserda: Expansion of Items Range	65.0
-Establishing Joint Purchasing	31.6
-Establishing Joint Marketing	76.6
-Establishing Joint-Use Facilities	42.3
-Renovate and Expand Rice Milling Facilities	26.3
-Improve/Expand Warehousing Capacity	46.0
-Improve/Expand Assembly Hall	60.0
-Expand Loan Variety	52.0
-Increase Existing Credit Limits	71.6
-Increase Farm Production Guidance	38.3
-Increase Fertilizer Guidance	31.3
-Increase Better-Living Guidance	38.3

No regular or formal better-living activities are being carried out for the farmer-members by any of the three cooperatives. These services are solicited from various government and voluntary agencies from time to time.

HAMPERING FACTORS AND POSSIBILITIES FOR AN INTEGRATED DEVELOPMENT OF KUD

Hampering Factors: Marketing Business

The following hampering factors were observed:

- 01 Lack of understanding and acceptance of joint marketing system among the KUD and secondary level organisations;
- 02 KUD are not engaged in the marketing business of the prime commodities of the area e.g., hog-raising, feed for hogs, and vegetables;
- 03 Serious lack of capital;

- 04 Serious lack of warehousing, transportation and other utilisation facilities;
- 05 Farm planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-charge of farm guidance;
- 06 Due to outdated and low capacity rice milling units, KUD often fail to meet the Bulog quality standards for rice procurement;
- 07 Disadvantageous location of KUD limiting access to market;
- 08 Lack of business relations among the KUD and secondary organisations;
- 09 Lack of market information and communication facilities.

**Hampering Factors:
Purchasing Business**

The following hampering factors have been noticed:

- 01 Lack of business relations among the KUD and the secondary organisations;
- 02 Lack of understanding and acceptance of joint purchasing system;
- 03 Lack of capital;
- 04 Due to inadequate space and lack of capital, supply of inputs and consumer goods at waserdas and Cooperative Service Place (TPK/kiosks), are often low;
- 05 Farm production planning is not adequately supported by KUD infrastructure;
- 06 The entire hog-feed manufacturing is in the private sector. KUD are not engaged in the supply of feed;
- 07 Inadequate supply of quality seeds, fertilizer and farm chemicals. KUD do not engage in compost/bio-fertilizer supplies;
- 08 Economic returns to the members are low due to the small scale of hog-raising business and often lack infrastructure facilities e.g., hog-sheds, etc.;
- 09 Members' or KT's' views are not taken into consideration while ordering or stocking merchandise in retail shops/TPK;

**Possibilities:
Marketing Business**

In order to assist the farmer-members to obtain higher incomes

from their marketing with their KUD, the following possibilities exist:

- 01 Farmers in the province are engaged in hog-raising, horticulture (flowers), a variety of fruits and vegetables besides production of paddy/rice. Except for paddy/rice, KUD are not engaged in other businesses. It is possible for the KUD to undertake other businesses e.g., collecting hogs, raising hogs, marketing of hog, hog slaughtering, flowers, vegetables and fruits;
- 02 With a view to generate additional demands for quality products, it is possible to establish joint marketing and joint-use facilities e.g., hog/poultry handling, grading, processing and shipment facilities for pork, flowers, fruits and vegetables;
- 03 To add value to members' products, it is possible for the KUD to provide opportunities for conversion of members' produce into products of local use e.g., home-made sausages, corn crushing;
- 04 KUD to encourage members to diversify range of farm products e.g., fruits and vegetables, in addition to hog-raising;
- 05 With a view to further develop marketing activities, it is possible to enhance orientation and trading of handling managers and key members in handling specific products e.g., rice, hog, corn, coffee, rubber, with leading concerned industry to understand the needs of the processors and to conform to their requirements;
- 06 With a view to overcome the shortage of capital, it is possible for the KUD to enter into joint venture arrangements with private enterprises and to adopt joint marketing strategies;
- 07 It is possible for the Puskud-North Sumatra to establish a reliable market information system.

Possibilities:

Purchasing Business

In order to satisfy the purchasing needs of the farmer-members and to increase the purchasing business of the KUD in North Sumatra, the following possibilities exist:

- 01 With a view to encourage the members to raise more hogs and earn additional income, it is possible for the KUD to supply corn compound feed by setting up corn crushers;
- 02 In view of the corn grown widely in the area, it is possible to increase the processing of corn and supply not only within the province but outside the province;

- 03 KUD maintain several sales points e.g., waserdas and TPK. The number and range of merchandise is low. It is possible to expand purchasing business by increasing their number and merchandise range e.g., farm machines, implements, and consumer goods;
- 04 To continuously obtain supplies and inputs it is possible to develop a business network and system of information and communication with secondary level organisation, wholesalers and manufacturers by adopting a joint purchasing system;
- 05 It is possible for the KUD to arrangement training of KUD employees and key members in the methods and techniques of joint purchasing at district and provincial levels;
- 06 It is possible to tap various sources (external/domestic) to obtain higher credit and financial support for the members (interest-free/low interest loan) to obtain timely and sufficient quantities of inputs.

OUTLINE OF THE MASTER PLAN

Suggested Directions to Expand KUD Business

Purchasing Business

Establishment of Purchasing Business Method such as Joint Procurement

- 01 In order to maintain a steady and timely supply of farm inputs, and at reasonable prices, it is necessary that a joint procurement system is established by the KUD at the district level and by the Puskud at the provincial level.
- 02 A comprehensive farm production plan be developed by the farmer-members with the full involvement of the KUD and the KTs with the following objectives in view:
 - estimated production of each commodity (corn, hog-raising, horticulture, poultry);
 - estimated farm inputs (quantity/quality) with a time frame;
 - estimated credit required.
- 03 KUD jointly establish a joint procurement system to obtain the inputs together with neighbouring KUD and other business cooperatives.
- 04 A business information and communication system be developed by KUD and the secondary level organisations.
- 05 KUD to establish members' accounts settlement system.

Improvement of Purchasing Outlets

KUD to increase the number of TPK/waserda, and quality and range of merchandise and services e.g., farm machines, implements, repairs and maintenance services.

Obtaining Contracted Buyers

- 01 KUD to enter into long-term agreements and joint ventures with private processors to ensure marketing of members' produce;
- 02 KUD to establish facilities for feed and corn processing;

Marketing Business

Organizing Producers' Groups (including adoption of new commodities to be promoted)

- 01 Increase the quality of farmers' produce, special farmers groups e.g., hog-raising, corn-growing, vegetables, fruits and flower groups be organised;
- 02 Lay emphasis on handling hog-raising in a more hygienic and scientific manner;
- 03 Processing of vegetables can be introduced to overcome the problem of perishability;

Establishment of Marketing Business System such as Shipment Control, Pooling Calculations

- 01 In view of perishability of pork, flowers and vegetables there is a need to create holding facilities such as: cold stores, cooling stations and transportation facilities to consumption destinations;
- 02 Setting up sorting, grading and packaging facilities before shipment of members produce;
- 03 KUD to encourage joint marketing of members' produce to negotiate with the traders and settle accounts based on pooling calculations.

Provision of Information on Price to Members

KUD in association with Mandiri Inti and Puskud to develop a market information system by using radio broadcasts.

Obtaining Contracted Buyers

Long-term contracts/joint business agreements be developed with local processors to ensure a constant marketing of farmers' produce e.g., pork, vegetables, flowers, fruits (oranges).

Agro-Processing Business

Improvement of Agro-Processing Technology in Highland Areas of North Sumatra

- 01 Establish feed-mixing plants for production of improved corn-based feed for hog-raising;
- 02 Create pork (home-made/farm sausages), vegetable and fruit (oranges, markisa and rambutan) processing facilities to achieve a higher 'value addition' for the farmer-producers;

Improvement of Storage and Processing Technology of Farm Products and Practices

KUDs which handle fresh vegetables, flowers, fruits do not own any processing or holding facilities. It is necessary to:

- 01 provide financial and technical assistance to such KUD in setting up sorting, packaging, storing and shipment facilities;
- 02 overcome the shortage of funds, adoption of joint capital concept by a few neighbouring KUD with the assistance and experience of other KUD secondary cooperatives;
- 03 provide guidance to farmers in improving the quality and quantity of their produce, especially rice, corn, livestock.

Rationalization of Management of Relating Facilities

- 01 Establish systems for management of corn-feed mixing plants, hog-raising units and vegetable handling activities by creating training facilities at district and KUD levels;
- 02 KUD to provide better-living and farm management extension;
- 03 Constant training of KUD employees and key members in business management.

Obtaining Contracted Buyers

KUD to seek joint business ventures with private industry to improve their business performance.

III. GENERAL REVIEW OF THE PROVINCIAL SITUATION [NORTH SUMATRA]

1. Social Life in Rural Area

The population in the Province of North Sumatra is 10,981,100 according to the North Sumatra in Figures 1995. Approximately 61% of the population, namely 6,669,177 inhabitants, live in rural areas, while the urban population is 4,311,923.

Most of the population lives in the villages with relatively lower income, education and healthy circumstance. They are mostly farmers, fisheries, livestock farmers and plantation workers.

The population can be classified into 8 ethnic groups with their local languages, namely 1) Toba, 2) Tapsel, 3) Karo, 4) Simalungun, 5) Melayu, 6) Fak-fak, 7) Nias and 8) Pesisir. Their ethnic customs and religious traditions strongly influence their social and economic life. In some districts, some traditional ceremonies can be found in connection with harvest such as yearly ceremony in Karo, Nias and Simalungun.

The population consists of multi-ethnic groups which have different customs, religious traditions and local languages. The composition of population based on religion in the province can be grouped as follows:

1. Moslems	6,944,449	or 63.24%
2. Protestant	3,079,100	or 28.04%
3. Catholic	550,153	or 5.01%
4. Hindu	20,864	or 0.19%
5. Buddha	365,670	or 3.33%
6. Others	20,864	or 0.19%

However, the difference of religion and customs does not create any conflict or disharmony among the inhabitants. The difference of religion and custom can be managed well by well-known institutions and customs which is called "Dalihan Natolu". "Dalihan Natolu" is always able to meet the societies even though they are of different religions. This custom style could be an advantage especially in the villages to develop rural society because the society relationship has been automatically managed by their traditional customs.

The quality of human resources in North Sumatra is kept generally well because there is a custom particularly among the Toba, Tapsel, Simalungun, Karo ethnics that "Anakhon hi do hamoraon diahu" translated as "My son is my richness". This custom is used automatically to create the societies in educating their sons. The success of son is the success of family.

Thanks to abundant resources duly supported by strategically geographic location in international trade and infrastructure of

harbour, domestic and international airport. North Sumatra could have on access and high opportunity in increasing export without gas and oil commodity.

2. Legal Bases for Handling of Farm Products

Generally speaking, almost economic activities are being allowed in the province. The Table below shows about various types of commodities and its legal bases in the province.

Commodities	Organisation to Handle	Legal Bases
1. Paddy/Rice	KUD	Presidential decree
2. Fertilizer	KUD	Distributor license
3. Cloves	KUD	Private company License
4. Maize	KUD & private	Presidential decree
5. Fruits	KUD & private	Local government
6. Sugar cane intensification	KUD	Ministry decree
7. Fish	KUD	Local government
8. Vegetables	KUD & private	Law
9. Nuts	KUD & private	Local government
10. Palm oil	KUD & private	Law
11. Rubber	KUD & private	Local government & Law

Paddy/rice commodity distribution channel is decided by Bulog. KUD is selected by the Ministry of Cooperatives for the procurement of paddy/rice for the National Food Stock. To ensure success of this programme, the government provides a special credit which is called "Food Credit".

Fertilizer commodity is handled by the government through PT Pupuk Sriwijaya (PT PUSRI) as the State Company which regulates the price and its distribution system. KUD is the single distributor from PT Pupuk Sriwijaya to farmers.

Clove commodity marketing system is arranged by the government in the national level. The government has designated KUD as the only buyer from farmers, and KUD must sell those cloves to BPPC. The entire procurement of clove is coordinated by the Inkud through the network of Puskuds and KUD. The KUD receive a fee to cover the collection and handling charges.

Maize commodity marketing was formerly regulated by the government with fixed floor price and ceiling price. Recently, the marketing of maize is in free market depending upon the balance between supply and demand side.

Fruits commodity marketing is also dependant on the structure of market, supply and demand side. When harvest is over, the price will normally decrease. There is no need for the involvement of the government to manage fruit marketing.

Sugarcane intensification has been carried out in the estate sector in which farmers belong as cooperative members. The marketing and pricing of sugarcane is arranged by the government through the Ministry of Cooperatives and the Ministry of Agriculture.

Marketing of fish, vegetables, nuts, palm oil and rubber commodities are generally carried out in competition in the open market. Every commodity has its specific market channel and a different market system.

3. Distribution of Commodity for Agricultural Production

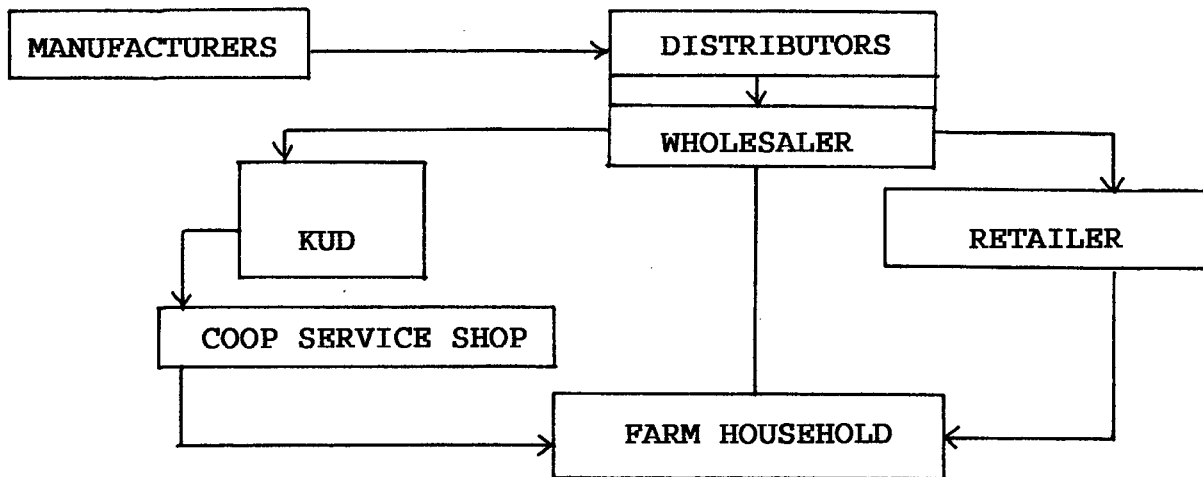
Agricultural Chemicals: The main producers of farm chemicals are Bayer, Ciba, PT. Petrokemia Kayaku and others. The following Table shows quantities of farm chemicals distributed in the province.

Farm Inputs	Year 1990		Year 1993	
	National	N.Sumatra	National	N.Sumatra
<u>FERTILISER</u>				
No. of KUD	3,550	205	3,461	162
Urea (Tons)	1706,547	53,748	3737,760	83,788
All others (Tons)*	1341,910	98,748	2293,965	114,112
PPC & ZPT (lt)	-	-	928,811	107,164
Others (Tons)	33,224	182	56,503	3,773
<u>FARM CHEMICALS</u>				
No. of KUD	1,647	102	934	61
Insec Lqd ('000lt)	6,782	552	361,155	5,629
-"-not lqd (Tons)	3,992	241	2588,977	13,553
Rodenticide (Tons)	2,496	120	9,001	3,490
Fungicides (Tons)	827	512	100,363	2,371
Herbicides (Tons)	243	124	15,869	749

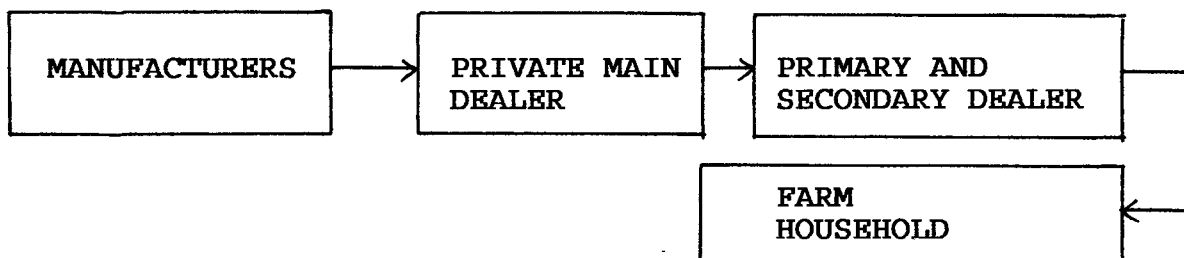
*includes: TSP, DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

The distribution channel is shown in the Table below.

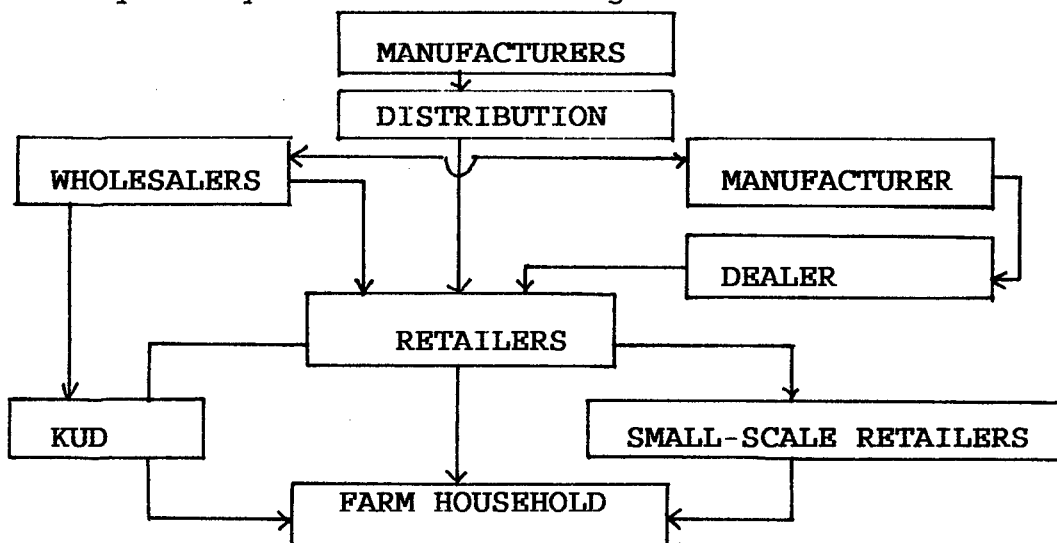


Vinyl Sheet/Plastics: The distribution channel is shown in the following Table, although the data on the quantity is not available.



Cattle-feed: The population of swine in the province is the biggest in the country. There is also some amount of beef cattle in the province. There is fairly large demand for cattle-feed. At present, a total of 270,000 tons of cattle-feed is manufactured in the province by 8 cattle-feed mills. Four of them are: 1) Charan Pokan, 2) Gold Coin Co, 3) Gunung Windu Co, and 4) Malabar Company. These feed mills are located in Medan.

The distribution channel is shown in the Table below. Very limited quantity is marketed through KUD channel.



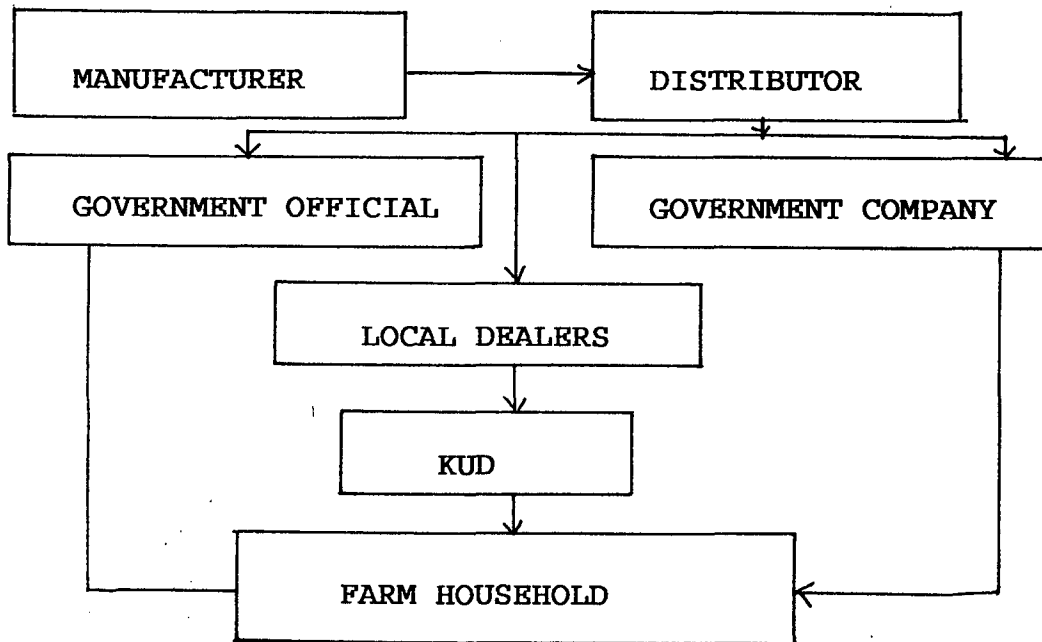
4. Distribution of Farm Machineries

The following Table shows the availability of farm machinery in the province. Most of the machineries are of Japanese origin while some were locally manufactured.

Type of Farm Machinery	1984	1993	1994	% of 1993
2-Wheel Tractors	118	2,266	3,478	153.4
Tractors/all types	526	965	939	97.3
Hand Sprayers	43,887	131,016	135,128	103.1
Threshers	378	8,364	8,088	96.7
Paddy Processors	5,347	7,642	8,047	105.2
(out of which, RMU)	--	(800)	(791)	(98.8)
Water Pumps	--	457	314	68.7

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

The distribution pattern is shown below:



5. Production and Demand of Major Farm Products

Production of major commodities of North Sumatra and the share of two kabupatens - Karo and Simalungun - are shown in the Table below.

Commodity/Tons	1994	1995	Percent
Paddy/Rice	3079,960	3134,533	101.7
Maize	311,918	371,578	119.2
Cassava	454,693	373,350	81.9
Sweet Potato	139,462	117,336	84.1
Groundnut	28,134	32,115	114.2
Soybeans	56,497	49,655	89.2
Red Onion	34,321	30,363	88.2
Potato	136,961	228,927	167.1
Cabbage	212,572	255,093	119.7
Chilies	92,564	52,948	56.9
Tomato	153,772	119,859	79.9
Cucumber	44,240	25,761	59.0
Avocado	6,814	3,451	50.6
Mango	9,634	5,224	54.2
Rambutan	13,603	12,401	85.7
Oranges	8,663	5,081	58.6
Durian	85,486	38,790	45.8
Papaya	22,714	16,860	73.9
Banana	112,980	108,431	95.5
Markisa	8,244	9,231	111.9
Pineapple	135,643	47,760	35.2
Jackfruit	1,499	4,726	315.2
Rubber	455,520	1889,148	414.2
Palmoil (Bunch)	3776,508	5364,460	142.0
Coffee	35,784	29,282	80.5
Coconut	93,669	90,527	96.8
Cloves	1,382	1,008	72.9
Vanilla	173	298	172.2
Rattan	150,015	196,132	130.6

Source: North Sumatra in Figures 1994 and 1995.

Other important products of the province are: fruits, vegetables, rubber, palm oil, coffee, copra and rattan. Some of these products were exported from the province. The situation of exports during 1992 and 1993 is shown in the following Table.

Commodity	Volume Exported (T)		Value Exported (US\$)	
	1992	1993	1992	1993
Rubber	495,682	479,181	443.6m	427.6m
Palm Oil	882,281	1196,030	335.0m	424.4m
Copra	15,646	29,985	9.5m	3.3m
Coffee	27,841	26,370	358.6m	392.8m
Vegetables	158,233	207,389	230.6m	300.7m

There is some activity on livestock husbandry in the province. Among them, the population of swine is the biggest which occupies 26.6% share in the whole country. The two tables given below show population of each livestock.

Commodity		Population	Meat/kg	Eggs/kg
Egg Layers	'94	3,985,140	1,972,613	29,302,641
	'95	4,468,608	1,978,701	34,728,042
	%	112.1%	100.3%	118.5%
Broilers	'94	6,942,690	5,141,963	-
	'95	8,020,874	32,203,807	-
	%	115.5%	626.2%	-
Local Chicks	'94	15,585,280	20,039,311	10,682,877
	'95	17,059,686	30,260,864	12,171,888
	%	109.4%	151.0%	113.9%
Ducks	'94	1,980,574	2,212,678	10,113,878
	'95	2,019,900	1,042,720	11,980,740
	%	101.9%	47.1%	118.4%

Source: North Sumatra in Figures 1994 and 1995, Medan

Commodity		Population	No. Slaughtered	Meat/kg
Beef cattle	'93	221,509	32,471	5,695,542
	'95	250,569	48,465	7,579,926
	%	113.1%	149.2%	133.0%
Buffalo	'93	228,836	39,054	6,286,570
	'95	247,947	43,558	7,000,480
	%	108.3%	111.5%	111.3%
Sheep/Goat	'93	647,223	193,787	1,914,470
	'95	786,019	257,454	2,574,460
	%	121.4%	132.4%	134.4%
Horse	'93	9,451	1,015	116,375
	'95	7,300	1,031	128,875
	%	77.2%	101.5%	111.2%
Pigs	'93	2268,725	559,058	27,887,550
	'95	NA	599,526	29,924,460
	%	NA	107.2%	107.3%

Source: North Sumatra in Figures 1993, Medan, and Director of Livestock Development, North Sumatra, 1996

6. Agro-processing Activities

Paddy Processor and Other Processors: In 1995 there were 7,067 paddy processors, 1,221 corn processors and 4,910 cassava processors in the province. There were 799 rice milling units, out of which 61 were in KUD sector. There were 824 warehouses and drying floors and 72 rice drying units. The capacity of rice processors is very small (0.5 to 1 ton/hour). The larger units are in the private sector.

Other Agro-processing Industry: There is no major agro-processing industry within the cooperative sector. A small quantity of vanilla is semi-processed before it is shipped out to the KJUB in Klaten in Central Java - intended for export to the United States.

There are several large-size palm oil, rubber, coconut processing factories in the province.

Slaughter houses in the province are operated by the government and private enterprises. Most of the slaughtering is traditional. Fairly large quantity of swine is being exported to Singapore. Milk production is not significant, and whatever is produced is consumed locally.

7. Business Transaction for Agricultural Products

The practices are more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability and perishability. The terms are generally cash-upon-delivery of goods. However, for larger values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be summarized as follows:

Rice: The procurement is under the government programme. The procurement price is fixed by the government from season to season. The farmers sell their paddy/rice to KUD against fixed price. KUD pays the farmers generally through their account in the cooperative. The surplus paddy is sold by the farmer in the open market, generally to the trader who comes to his house with cash in hand. In this case the terms are cash, and in many cases, a token advance payment is also made to the farmers for the next crop.

Vegetables and Fruits: The transaction are usually cash-and-carry from the road-head.

Cash Crops: Except for clove, all transaction are on cash-and-carry basis. The price for clove procurement is fixed by the government. Payments to the farmers are made through KUD.

Poultry: Generally terms are cash-upon-collection from the producer. The middleman, in turn, either sells the commodity on cash terms to the retailer or on payment-after-sale basis.

JICA-JAPAN INTERNATIONAL COOPERATION AGENCY
JA/ZENCHU-CENTRAL UNION OF AGRICULTURAL COOPERATIVES-JAPAN
MINISTRY OF COOPERATIVES AND SMALL ENTERPRISES DEVELOPMENT
GOVERNMENT OF THE REPUBLIC OF INDONESIA

**STUDY ON INTEGRATED DEVELOPMENT OF RURAL COOPERATIVES-KUD
IN THE REPUBLIC OF INDONESIA 1996-1997**

ECONOMIC BUSINESS OF KUD INCLUDING AGRO-PROCESSING SECTOR

02 LAMPUNG

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02 LAMPUNG

I. SUMMARY OF FINDINGS AGRO-PROCESSING, DISTRIBUTION AND KUD SITUATION

AGRO-PROCESSING & DISTRIBUTION

Major farm products of Lampung have been: paddy/rice, corn, soybean, cassava, fresh vegetables, fruits and some cash crops like sugarcane, rubber, cloves and oil palm. Paddy/rice production has been in the region of 1.08 million tons in 1992 and 1.76 million tons in 1994. A comparison of production levels of 1992 and 1994 of various commodities of the province is as follows: cassava 80.7%, maize 106.2%, soybean 61.4%, chilies 109.0%, cucumber 73.5%, banana 149.3%, sugarcane 112.7%, rubber 72.9%, and cloves 43.6%.

A majority of KUD are engaged in the procurement and distribution of paddy/rice. After milling, a major portion is handed over to the Bulog for the national food stock, the remaining is disposed of in the open market and part of its retained for home use. While during 1988-89, a total of 45 KUD had procured a total of 21,848 paddy/rice from the members, only 20 KUD (44.4%) in 1994-95 had procured a total of 12,494 tons (57.1%) from the members. This was 0.16% of the national procurement. In 1988-89, a total of 47 KUD supplied a total of 34,164 tons of rice to the Bulog, whereas in 1994-95 only 20 KUD (42.5%) had supplied a total of 4,710 tons (13.7%) to the Bulog. However, almost the entire production of 1.7m tons of paddy/rice in 1994 was distributed within the province itself. It appears that the rice trade has been carried out through private channels. Less and less KUD are procuring the produce from the member-farmers and supplying less and less quantities of rice to the Bulog.

A part of the rice processing takes place at the KUD level at their small and medium size rice milling units. Large size rice mills are in the private sector catering to the needs of the open market. In 1994 there were 112 KUD which owned rice milling units of 0.5 ton/hour capacity each. There were 10 other private enterprises engaged in rice milling. In 1994 there were a total of 1,631 rice milling units (all types) in the KUD and non-KUD sectors in the province.

Although cassava is widely grown in the province - 2.3 million tons in 1994 - its processing is done entirely by private enterprises. It is used for conversion into chips and manufacture of cattle-feed. Almost 73.3% of its total production was consumed/processed in the province itself. Similarly, almost 60.8% of the total production of corn (843,151 tons in 1994) is used in the province itself. Only 14.7% of the total production

of soybean - 204,978 tons in 1994 - is used in the province, the remaining is distributed outside the province.

Fresh vegetables, especially onion, cucumber, chilies and bananas are sold in the open market. Private traders from nearby Jakarta/West Java take the produce for wholesale markets and processing. The distribution of these commodities in 1994 was as follows: all vegetables - only 44.4% was distributed in the province; onion - 37.1%; cucumber - the entire production; chilies - 81.4%, bananas - 21.8% distributed in the province. There are no agro-processing facilities in the province in the KUD sector to handle these products. Private enterprises do, however, process sugarcane, coconut, oil palm and pineapple. Pineapple waste is known to have been used for the manufacture of cattle-feed by some private processors.

There is no significant production and processing of milk in the province.

In 1994, Lampung had a traditional slaughtering capacity of 19,026 heads per year and it was 100% utilised. Part of the produce was shipped to Jakarta through private traders. The production of meat in 1994 increased by 103.3% over 1992. There was substantial increase in the production of eggs and chicken during the period 1992-1994: eggs 21,368 tons (increase of 150%), and chicken (all types) 16.7 million birds in 1994 (an increase of 121.4%). There are no grading, processing and shipment facilities within the KUD sector. The entire trade is in the hands of private traders intended for West Java markets.

In 1994, a total of 991 tons of compound-feed was produced by 10 private formulators using a variety of ingredients e.g., banana chips, bakery, fish and shrimp flour, cassava, pineapple waste and corn. The additional requirements are imported from outside. A few KUD have their own small-size cattle-feed mixing plants, but their production is insignificant and poor in quality.

OVERVIEW OF KUD SITUATION: Economic Business

The province was covered under the transmigration programme of the government. As a result, with the support of the government, residents have organised themselves in KUD and progressively opened up the forests converting them into vast paddy lands and plantations. The government has created supporting infrastructure e.g., town planning, irrigation, farm extension, education, health and communication facilities. The main activities of KUD have been: production, processing and distribution of paddy, maize, cassava, sugarcane, rubber plantation, fruits and vegetable besides raising some livestock and poultry. KUD have provided marketing and purchasing services to the farmer-members in various commodities e.g., fertiliser, farm chemicals, seeds, cloves, credit disbursement, essential commodities distribution, cattle-feed through a network of waserdas and TPK. Due to the weak economic condition of the farmer-members, the economic situation of their KUD is also weak.

The total turnover of KUD during 1992 was Rp 131,965 million and in 1995 it was Rp 122,085 million (92.5%). The total surplus in 1992 was Rp 610 million and in 1995 it went up to Rp 1,153 million (189.0%). Over these years, the number of KUD had also increased.

Chemical fertiliser distribution is one of the major economic business of KUD in the province. The urea distributed in 1993 through the KUD network was 83,640 tons, 2.2% of the national distribution of 3.7 million tons. The distribution in 1993 was higher (247%) of 1990. Chemical fertilisers are produced by several State-owned companies but the distribution is coordination by one of them, the PT Pusri. The fertiliser is distributed through various channels e.g., the Puskud, KUD, Persero Niaga, private channels and PT Pertani. The allocations for fertiliser supplies to the province is made according to a formula. While in 1992 a total of 78,028 tons of all types of fertiliser was supplied by 77 KUD, the supplies in 1995 was 155,014 tons (198%) by 86 KUD (111.6%).

The Puskud organises transportation of fertiliser from the warehouses of PT Pusri up to the KUD/TPK points and receives a service fee for this. The price of urea are determined by the government from time to time. For the purchase of urea for paddy cultivation, the government provides credit channels to the farmers through the KUD network. The KUD receive a fee for the disbursement of fertiliser and farm credit which, in fact, forms a substantial portion of their working capital.

Farm Chemicals are available in the open market. In 1990, 47 had distributed farm chemicals and in 1993 their number was 30 (63.8%).

For marketing of fertiliser by surveyed KUD indicates that this business has been a prominent one. The percentage of marketing of fertiliser as compared with the total turnover of the KUD, on an average, was 54.0% in 1995. In the case of KUD Kencana Jaya it was 18.9% of its 1995 total turnover, KUD Usaha Bersama 75.3%, KUD Karya Maju 82.2%, KUD Tri Widodo 56.8%, and Karya Tani 36.9%. The rate of commissions earned by the KUD from sales over purchase of fertiliser were as follows: Kencana Jaya 1.7%, Usaha Bersama 5.5%, Karya Maju 3.4%, Triwidodo 3.8% and Karya Tani 2.4%.

Distribution of seeds is open. Paddy seeds are produced by a government company and several authorised private enterprises. No KUD are reportedly engaged in seeds multiplication business. In 1990-91 out of a total of 8.4 million kg paddy seeds distributed in the province, KUD had distributed 4.9 million kg (57.9%). In 1992-93 the KUD had supplied only 5.9% of the total seeds distributed. Only 20-25% of the farmers use certified seeds in the province. Farmers in the province use corn and soybeans certified or recommended seeds. No recommended cassava seeds are used. Stem-multiplication method is widely practised.

While during 1988-89, a total of 45 KUD had procured a total of 21,848 tons of paddy/rice from the members, only 20 KUD (44.4%) in 1994-95 had procured a total of 12,494 tons (57.1%) from the members. This was 0.16% of the national procurement by the KUD. In 1988-89, a total of 47 KUD had supplied a total of 34,164 tons of rice to the Bulog, whereas in 1994-95 only 20 KUD (42.5%) had supplied a total of 4,710 tons (13.7%) to the Bulog. However, almost the entire production of 1.7 million tons of paddy/rice in 1994 was distributed within the province itself, obviously through the private channels. The percentage of paddy/rice marketing business as compared with their total turnover for 1995 was as follows: KUD Tri Widodo 18.6% and KUD Karya Tani 63.9%. The percentage of rate of commission earned by them was: Triwidodo 3.0% and Karya Tani, 0.9%. Low participation of KUD in rice business can be attributed to: i) undeveloped land for paddy cultivation, ii) emphasis on plantation crops; and iii) lack of infrastructure support in handling and processing paddy.

Involvement of KUD in other economic business was as follows: KUD Kencana Jaya - rubber collection 32.5% of its total turnover of 1995, sugar distribution 0.2% and groceries (retail shop) 0.2%; KUD Usaha Bersama - retail shop (handling consumer goods and farm input materials) 17.0%; KUD Triwidodo - sugar 8.1% and retail shop 3.1%. The rate of commissions earned by them from sales over purchases for the year 1995: KUD Kencana Jaya - 18.6% for rubber business, 0.8% for retail shop; KUD Usaha Bersama - 357.3% on farm chemicals, 3.3% on retail shop; KUD Triwidodo - sugar 5.0% and retail shop 9.4%. As for Puskud, the distribution of sugar business formed 51.3% of its total turnover for 1995, and 19.9% for distribution of wheat flour.

KUD are not engaged in poultry and livestock business. Some of the KUD, however, produce small quantities of cattle-feed. KUD Karya Tani undertakes livestock and cattle-feed manufacturing business. Percentage of livestock development as compared with its total turnover for 1995 was 10.5% and for cattle-feed it was 1.3%.

Main business of Puskud has been: fertiliser transportation, distribution of wheat flour and sugar, kerosene oil, soybeans, various brans, and coffee processing. Prior to 1994, the Puskud was passing through economic difficulties. It also collects cloves on behalf of the Inkud. Its economic performance in 1995, as compared with the year 1994, was as follows: total sales of goods increased by 102.0%, total fees received increased by 697%, income from sales 451.7%, net surplus 3287.5%. The Puskud plans to enter into processing, livestock development and manufacturing business in a big way

HAMPERING FACTORS: Economic Business

Due to low level of economic conditions of the farmer-members, the financial and operational conditions of their KUD have been weak. The province has been opened for transmigration programmes. Consequently there is a severe lack of infrastructure facilities

e.g., electricity, roads, communication, market possibilities. Although there are strong potentials for processing of local products e.g., cassava, maize, fruits and vegetables, KUD have restricted themselves to fertiliser distribution and paddy cultivation. Plantation crops like sugarcane, rubber and coconut are also not well-developed because opening of new lands for farming is expensive. KUD lack farm machines, land tilling equipments, rice processors, warehouses, and linkages with private enterprises where they can market their products. The concepts of joint marketing, joint purchasing and establishing joint-use facilities like cattle-feed manufacture, livestock development, fruits and vegetables cultivation, grading and processing have not been adopted. This mainly due to lack of working capital and initiative on the part of KUD leaders and members, and lack of information and training of managers. KUD have been operating on their own without any back-up and business collaboration and support from other KUD and their business federations/partners. Unfavourable purchasing policies of the private processing industries e.g., sugar, rubber and cassava, put the members to great price disadvantage.

These can be summarised as follows: Lack of ability to undertake marketing; joint marketing; joint capital utilisation; unfavourable purchasing policies of private processing industries esp. rubber, sugar and cassava; lack of warehouses, transportation and utilisation facilities; serious lack of business relations with secondary level organisations/private enterprises; no joint ventures in processing; lack of business information; lack of marketing facilities; insufficient farm guidance; insufficient provision of services to members; lack of facilities like electricity, transportation and communication; lack of training of leaders and managers; and lack of member education.

POSSIBILITIES:

Economic Business

In order to help increase the income levels of farmer-members, KUD need to further develop their own economic business. For this the following possibilities exist: increase quality and quantity of paddy, rubber, cassava, beef/dairy cattle and sugarcane; higher levels of transportation, warehousing and processing facilities; introduce technologies to process local products for local use e.g., cassava, rice bran and pineapple waste for cattle-feed manufacture; increase fruits and vegetable production and their quality; establish joint ventures in rubber and cassava processing to overcome shortage of capital; introduce joint marketing, joint purchasing and joint-use facilities concepts; establish business information systems in collaboration with secondary level federations; expand training of KUD leaders and managers in management and farm-related subjects; training of managers through private processing industry e.g., sugarcane, rubber processing, cassava processing, cattle-feed manufacture, farm machines operations; and expansion of member information and education activities at the KUD level.

**KUD ACTIVATION MASTER PLAN:
Economic Business**

In view of the fertile soil, possibilities of expansion of irrigation network, development of electricity and communication network, and the continuing positive support to the KUD from the government, KUD in the province present good opportunities for business development. The province is also a focus of development in view of its nearness to West Java and government's intentions to locate production centres in Lampung. Private enterprises have already establish cattle farms, cassava processing industries, sugarcane and rubber processing units in the province to which the KUD could provide economic and service support.

The economic business to the advantage of KUD members can be further expanded by adopting some of the following methods: introduction of concepts of joint marketing; joint purchasing and joint use of capital; joint-use facilities in cattle-feed manufacture, rubber and cassava collection centres, transportation and warehousing; fruit and vegetable processing; establishing linkages with secondary level business federations and private enterprises for supply of consumer goods and farm inputs and implements; establishing business information systems; introducing members' accounts settlement systems; expanding and upgrading of rice processing and warehousing; establishing farm machines/transport maintenance workshops; providing guidance on farm management, planning and better-living; instituting management and farm-related training for leaders and managers; and an intensive member education programme at the KUD level.

II. MAIN FINDINGS

AGRICULTURAL PRODUCTION

Distribution of Farm Input Materials

Farm input materials include chemical and bio-fertilisers, farm chemicals e.g., insecticides, pesticides, rodenticide, fungicides and herbicides etc., and the supply of improved and quality seeds for key crops e.g., paddy, maize, soybeans etc. Chemical fertilizer is produced by several State-owned companies but the distribution of urea is coordinated by PT Pusri. Fertilizer is distributed from company-owned warehouses which are located at kecamatan level. This network is available throughout the country. The KUD pick up their requirements from these distribution points. KUD, in turn, distribute the fertilizer from their own warehouses or through the TPK on the basis of pre-arranged delivery schedules.

The distribution of farm chemicals is through KUD or private channels. The main producers of these farm chemicals are Bayers, Ciba, PT Petrokemia Kayaku and others. While the main concentrates are imported, the formulations are done in Indonesia according to requirements. The distribution of farm inputs by KUD in Lampung was as follows:

Farm Inputs	Year 1990		Year 1993	
	National	Lampung	National	Lampung
FERTILISER				
No. of KUD	3,550	102	3,461	103
Urea (Tons)	1706,547	33,897	3737,760	83,640
All Others (Tons)*	1341,910	33,046	2293,965	65,541
PPC & ZPT (lt)	-	-	928,811	734
Others (Tons)	33,224	41	56,503	4
FARM CHEMICALS				
No. of KUD	1,647	47	934	30
Insec. lqd ('000lt)	6,782	27	361,155	13,502
-"- not lqd (Tons)	3,992	34	2588,977	20,615
Rodenticide (Tons)	2,496	35	9,001	56
Fungicides (Tons)	827	101	100,363	225
Herbicides (Tons)	243	12	15,869	381

*includes: TSP, DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

The urea distributed in 1993 through the KUD network was 83,640 tons (2.2%) of the national urea distribution (3737,760 tons). The distribution in 1993 was higher (247%) of 1990 distribution. The farmers have increasingly been using bio-fertilizer.

The distribution of seeds by KUD in Lampung has been as follows:

Type of Seeds	Year 1990		Year 1993		
	National	Lampung	National	Lampung	
No. of KUD		980	31	545	22
Paddy (kg)	26,351,795	4900,515	5336,522	590,386	
Corn (kg)	635,324	5,089	479,911	10,775	
Soybeans (kg)	610,344	7,660	1442,920	-	
Others (kg)	3290,037	59,648	1068,673	393	

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

In Lampung KUD distributed paddy seeds (590,386 kg) 11.0% of the national distribution (5336,522 kg) in 1993. In 1993 it was only 12% of the paddy seeds distributed in 1990. Seeds of paddy are developed and distributed by PT Sanghianseri, a State-owned company using KUD channels. Seeds for palawija and horticulture crops are obtained by the farmers from the open market. The government, however, operates several seeds certification stations, as to certify their quality.

Dissemination of Farm Machinery

The following table indicates the availability of farm machinery in Lampung during the years 1984, 1993 and 1994:

Type of Farm Machines	1984	1993	1994	% of 1993
2-Wheel Tractors	52	887	1,291	145.5
Tractors/all types	153	424	451	106.3
Hand Sprayers	42,812	77,884	80,946	103.9
Other Pest Control Eqpt	889	3,199	3,686	115.2
Threshers	2,038	14,900	12,035	80.7
Paddy Processors	3,569	4,723	4,635	98.1
(out of which, RMU)	--	(1,775)	(1,631)	(91.8)
Water Pumps	--	305	389	127.5

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

There was an increase in the number of hand sprayers in 1994 (186%) as compared with the number in 1984. A majority of farm machines are within the KUD sector. Some of the equipments have been imported, and some have been locally assembled. Some of the equipment was made available to the KUD under OECF and Kennedy Round Programmes. Nearly all the KUD owned paddy drying platforms and small godowns to hold paddy and rice. Cooperatives are not reported to own any cold stores or any other agro-processing units.

**BUSINESS MANAGEMENT OF KUD
AND RELATING LEGAL SYSTEM**

**Situation of Business:
Purchasing and Marketing Business**

Purchasing Business System, Commodities and Turnover

To meet the needs of the farmer-members, the KUD network has met the input needs to some extent in the province. The government programmes which have been assigned to the KUD, further reinforce their business operations. The government programmes include: distribution of chemical fertilisers, agricultural credit, distribution of essential commodities e.g., sugar, rice, soybean, kerosene oil etc. The members, therefore, not only purchase their input needs through the KUD but also their consumption needs.

Fertilizer distribution: In Lampung, PT Pusri distributes chemical fertilizer through various channels e.g., the Puskud, KUD, PT Pertani and private channels. The distribution of fertilizer in the province during 1990-1995 is given in the following table:

Particulars	1990	1992	1993	1995	% of 1992
No. of KUD	102	77	103	86	111
Fertilizer (Tons) (all types)	66,943	78,028	149,181	155,014	198

Source: Department of Cooperatives-RI, Jakarta

During the period 1990/1993, the fertilizer was distributed in the country as is seen in the following table:

Particulars	1990/91	1992/93
Total National distribution (Tons)	2,810,539	3,031,971
Allocated by PT Pusri for distribution by:		
-Puskuds	0.2%	0.1%
-KUD	80.9%	80.3%
-Persero Niaga	1.6%	3.2%
-PT Pertani	11.6%	8.8%

Fertilizer is produced by several government companies including the PT Pusri, but the distribution is coordinated by PT Pusri. PT Pusri, in turn, allocates quota for distribution among various agencies including the Puskuds. PT Pertani, a government company, distributes fertilizer for the plantations.

Farmers obtain their farm chemicals either from the KUD and from the open market.

Seeds Distribution: Distribution of seeds is open. Paddy seeds are produced by a government company, PT Sanghianseri, and several authorised private enterprises. Seeds are certified by government Seeds Certification Centres as to their quality. During 1990-1993 the following quantities of paddy seeds were distributed:

1990-91 8,454,120 kg [through KUD: 4,900,515 kg 57.9%]
 1992-93 9,960,030 kg [through KUD: 590,386 kg 5.9%]

The distribution of seeds was deregulated after 1990-91. The farmers were able to purchase their requirements from the open market, hence the sudden drop during 1992-93. According to the Seeds Certification Centre, Lampung, only 20-25% of the farmers use certified seeds. Farmers in the province use corn and soybeans certified/ recommended seeds. No recommended cassava seeds are used in the province, which is the principal crop. Farmers use the traditional stem-multiplication method.

Farm Machines and Agricultural Implements: Because of the low levels of farm income and the transmigration character of the area, the use of farm machines is limited. Only traditional implements, hand-tractors and farm cattle are used. The table below shows the availability of various farm implements in the province:

Type of Farm Implements	1993	1994	Percent
2-wheel tractors	887	1,291	145.5
Tractors/all types	424	451	106.3
Hand Sprayers	77,884	80,946	103.8
Pest Control Equipment	3,199	3,686	115.2
Threshers	14,900	12,035	80.7
Paddy Processors	4,723	4,635	98.1
(out of which, RMU)	(1,775)	(1,631)	(91.8)
Water Pumps	305	389	127.5

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta.

The farmers purchase their farm implements either through the KUD or from the open market. KUD procure the equipments from the wholesale dealers.

Retail Outlets (Waserda) and TPK (Kiosks): Farmers purchase their farm inputs and consumer needs from the Waserdas and TPK. Each KUD operates, on an average, 5-8 TPK located close to the farm operational areas. Some of the TPK are operated by the farmer-members as their private enterprise but selling farm inputs.

The position of retail outlets in 1994 and 1995 in the province was as follows:

Particulars	1994	1995	Percent
No of Waserda	102	182	178.4
Working Capital (M.Rp)	732.0	1,076.0	146.9
Turnover (M.Rp)	2,293.0	4,291.0	187.1

Source: Ministry of Cooperatives-RI, Jakarta 1996

Turnover: The total turnover of KUD in Lampung during the years 1992 to 1995 is given in the table below:

Particulars	1992 (M.Rp)	1994 (M.Rp)	1995 (M.Rp)	% of 1992
Lampung KUD	131,965	175,803	122,085	93%
National KUD	3,807,639	4,837,683	5,669,411	149%

Major Source of Procurement of Commodities

Chemical fertilizer distribution is coordinated by the PT Pusri which has its warehouses located throughout the country and even at the kecamatan level from where the KUD get their supplies through the Puskud. The government provides credit to the farmers through the KUD for purchase of urea. Other chemical fertiliser formulations are available in the open market. Similarly, bio-fertilisers, farm chemicals are obtained from the open market.

Seeds, except for paddy, are procured from the open market. Paddy seedlings are produced and distributed by PT Sanghianseri. The government operates a number of 'Seeds Certification Centres' throughout the province in order to ensure seeds quality.

Cattle-feed components are procured from the open market. In Lampung private companies produce a variety of feed. There are no processing units in the cooperative sector. Cassava is a major component of cattle-feed.

Merchandise for sale through the TPK and the retail outlets is obtained from the open market. There is no wholesale cooperative agency which sells or coordinates the supply of consumer goods to these outlets.

Marketing Business System by Commodities and Turnover

This consists of marketing the produce of farmers with their KUD. Major marketing activities in the province have been: paddy, rice, cassava, corn, rubber, sugarcane and others. The KUD help procure paddy/rice from its members for the national food-stock and try to fill the target set for it for the supply of rice to Bulog. The members supply the maximum which they can but still the preference of the farmer remains to sell the produce in the open market at a higher price than fixed by the government. The

procurement price of paddy/rice is determined by the government every season. KUD gets credit from the government to purchase rice.

The marketing of paddy/rice by the members in Lampung province during 1988-89 and 1994-95 is given in the table below:

Particulars	1988-89		1994-95	
	National	Lampung	National	Lampung
Paddy/Rice Procured				
By KUD (Nos)	2,018	45	1,993	20
Procured (Tons)	1,096,212	21,848	786,066	12,494
Sold to Bulog				
By KUD (Nos)	2,120	47	1,133	20
Sold (Tons)	2,023,952	34,164	509,919	4,710

Source: Department of Cooperatives-RI, Jakarta 1996

It is noticed from the above that procurement and supply of rice has gone down tremendously over the year mainly because the farmers are increasingly taking to cassava, maize and cash crop cultivation. The total production of rice in the province has also gone down. (see table below).

Rice Production	1992	Percent	1994	Percent
Province Total (Tons)	1,089,964	-	1,050,238	-
-North Lampung	284,209	26.0%	251,653	24.0%
-Central Lampung	453,815	41.6%	461,733	43.9%

Other main farm products which the farmers market with their cooperatives include, maize, cassava, rubber, sugarcane, cloves, fresh vegetables, cash crops, and some poultry. The total production of some of the key commodities in the province is compared with the two selected districts, Central Lampung and North Lampung in the table below.

Commodity	1992	1994	% Prov. Total .94
CASSAVA			
Province Total (T)	2,594,005	2,095,109	-
-North Lampung	1,211,941	1,191,830	56.8%
-Central Lampung	1,211,941	767,160	36.6%
MAIZE			
Province Total (T)	530,388	563,069	-
-North Lampung	146,319	195,230	34.6%
-Central Lampung	288,121	285,850	50.7%

SOYBEANS				
Province Total (T)	179,793	110,380	-	
-North Lampung	77,943	49,137	44.5%	
-Central Lampung	84,136	47,828	43.6%	
CHILIES/CABE				
Province Total (T)	10,640	12,404	-	
-North Lampung	2,267	3,441	25.0%	
-Central Lampung	2,749	3,209	25.0%	
CUCUMBER				
Province Total (T)	3,592	2,643	-	
-North Lampung	1,039	588	22.2%	
-Central Lampung	963	868	32.8%	
BANANA				
Province Total (T)	78,930	117,977	-	
-North Lampung	18,811	6,499	05.5%	
-Central Lampung	25,917	8,669	07.6%	
SUGARCANE				
Province Total (T)	281,898	317,938	-	
-North Lampung	65,040	88,986	27.9%	
-Central Lampung	216,858	228,952	72.0%	
RUBBER				
Province Total (T)	36,964	27,388	-	
-North Lampung	15,334	17,961	66.6%	
-Central Lampung	4,205	1,624	05.9%	
CLOVES				
Province Total (T)	2,826	1,234	-	
-North Lampung	461	49	03.9%	
-Central Lampung	218	219	17.7%	
EGGS (ALL TYPE)				
Province Total (T)	14,421	21,368	-	
-North Lampung	2,750	2,270	10.6%	
-Central Lampung	4,273	8,478	39.6%	
CHICKEN (ALL TYPE)				
Province Total (Units)	13.8 m	16.7 m	-	
-North Lampung	3.2 m	3.5 m	21.0%	
-Central Lampung	4.7 m	6.3 m	37.5%	
MEAT PRODUCTION				
Province Total (T)	3,590	3,712	-	
-North Lampung	553	571	15.3%	
-Central Lampung	873	902	24.2%	

Source: Profil Pertanian Agrosistem (P2RT), Kanwil Lampung 1996

The total business volume and the total surplus of KUD in the province in 1992-1995 was as follows:

Particulars	1992	1994	1995	% of 1992
Total Turnover (M.Rp)	131,965	175,803	122,085	92.5%
Total Surplus-SHU (M.Rp)	610	756	1,153	189.0%

Major Market Area, Buyers

Major market areas for the produce of the farmer-members in Lampung are the government (Bulog), private processing industries (sugar, rubber, cassava and cattle-feed formulators). Some of the farm products e.g., fresh vegetables, cash crops like coffee, cloves, also go to Jakarta.

Procurement of Funds for Economic and Utilisation Business

Funds for operating economic and utilisation business is available from various sources:

- Credit from government for procurement of paddy/rice, corn, soybeans, cloves and the service charges the government Pays to the KUD for disbursement of such credit;
- Credit for production of sugarcane;
- Service fee for handling telephone and electricity bills;
- Credit from private enterprises for procurement of vegetables and other farm products e.g., cassava;
- Surplus earned from the business of the KUD.

The level and variety of such credits is very low in the province. KUD have very low financial strength and so have the farmer-members.

Holding and Utilisation of Kiosks, Storage, Processing Facilities

Retail shops, kiosks and warehouses are operated by the KUD as a service to the members. In 1995, the situation in KUD sector in Lampung province was as follows:

Total of Retail shops/Waserda	...	...	...	182 units
Drying Floors	...	...	...	8 units
Warehouses	...	...	...	8 units
Rice Milling Units	...	...	...	20 units
Rice Dryer Units	...	...	...	87 units

Competition with Private Dealers

The KUD are neither integrated horizontally nor vertically. Each unit works on its own and develops its own business with the funds raised through its own efforts. Since a majority of business units of KUD are operating within the government-supported system, the element of competition with the private dealers does not exist. Procurement of rice and clove, distribution of fertilizer, sugar, soybeans, maize, wheat flour etc. are all regulated by the government and are consequently a secure business, leaving not much scope for competition.

ORGANIZATION, MANAGEMENT & BUSINESS OF PUSKUD
Situation of Business

Purchasing Business Methods, Commodities, Turnover

The Puskud, the provincial federation of KUD, a member of the Inkud, participates in business ventures sponsored or proposed by the Inkud, besides supporting the business development of the KUD at the primary level in the province. The Puskud Saburai Lampung is a federation of 202 members (178 full members, 24 candidate members) (184 KUD and 18 other cooperatives). In commodities like the cloves and cassava chips, the Inkud assigns the Puskud to fulfil a specific trader order for home use or for exports. The indent specifying the quantity and quality and the time frame is passed on the Puskud for execution. The Puskud, in turn, contacts the relevant KUD and asks them to supply the required items. Upon receipt of raw commodities, and after some semi-processing, the items are exported.

The Puskud also coordinates the procurement of commodities either for national food stocks or for distribution in the open market. Methods adopted are negotiated with the relevant agencies/suppliers, and are either on a fee basis or on a commission basis. Procurement prices of rice and cloves are regulated by the government. During 1995, the Puskud purchased the following commodities:

Commodities	Purchases (M.Rp)	% of Total Purchases	
TOTAL PURCHASES-1995		Rp 3,112.8M	
-Sugar	1,599.1	...	51.3
-Wheat flour	621.4	...	19.9
-Beras M.O.	500.1	...	16.0
-Fertilizer KCL	35.4	...	1.1
-Kerosene Oil-BBM	18.0	...	0.5
-Rice Asalan	8.3	...	10.5
-Fertilizer Zeolite	4.7	...	0.1
-Fine Bran	5.3	...	0.1

The Puskud does not purchase commodities like soybeans, chemical fertilizer, cloves, but acts as a coordinator for procurement and distribution. For this service, the Puskud receives service fees from various agencies e.g., from Bulog, Clove Agency, Kopti etc. During the year 1995, the Puskud received the following service fees:

Soybean fee from Dolog	...	Rp	1.3 m	3.0%
Sugar distribution fee	...	Rp	1.4 m	3.2%
Soybeans distribution among Kopti		Rp	7.2 m	16.0%
Fertilizer distribution fee		Rp	1.2 m	2.6%
Fertilizer transportation fee		Rp	2.6 m	5.9%
Coffee processing charges		Rp	26.4 m	58.9%
Fee.Supply of timber-KUD Sidokayo		Rp	4.5 m	10.0%
Total		Rp	44.8 m	

Major suppliers and Buyers (KUD and non-KUD)

The major suppliers of the Puskud have been the private enterprises and the State-owned chemical fertilizer company, PT Pusri. It obtains its supplies of sugar, wheat flour, and soybeans from the Bulog. Farm produce e.g., paddy/rice, coffee, clove, cassava is procured through the KUD network. The Puskud also acts as an agent of the Indocement for the supply of cement in the province.

Its major buyers are the KUDs, clove holding agency through the Inkud, farm produce processing factories.

Marketing Business Methods, Commodities, Turnover

The marketing business methods include negotiations by the KUD and the basic level farmers with the Puskud, as well as the requirements of national food stock maintained by the government.

The main commodities which the members of the Puskud sell to the federation are: cassava chips (gaplek), coffee and cloves. The marketing business (sales by Puskud) of the Puskud during 1995 was as follows:

Commodities	Value (M.Rp)	% of Total Sales
TOTAL SALES-1995	...	Rp 3,211.6M
-Sugar	1,648.1	51.3
-Wheat flour	640.0	19.9
-Beras M.O.	514.0	16.0
-Fertilizer-KCL	35.7	1.1
-Kerosene Oil-BBM	19.0	0.5
-Rice Asalan	341.7	10.6
-Fertilizer Zeolite	6.8	0.2
-Fine Bran	5.9	0.1

The Puskud supplies cloves to Inkud and semi-processed coffee is supplied in the open market or partly exported.

Major Suppliers of Marketing Commodities and Buyers (KUD and non-KUD)

KUD and the farmer-members are the major suppliers of farm products to the Puskud. For other commodities, the suppliers are private traders, agents and the manufacturers. Major buyers of Puskud have been the Bulog and the Clove Procurement Agency (working in close collaboration with the Inkud), and the open market.

Funds for Economic Business and Operation of Joint Use Facilities

During the 1994, the financial position of the Puskud was not stable. The table below compares the performance of the

federation in 1994 with that of 1995:

Particulars	Year 1994 (M.Rp)	Year 1995 (M.Rp)	%
Total Sales of Goods	3,146.4	3,211.6	102.0
Total Fees Receipts	135.9	949.1	697.7
TOTAL	3,282.4	4,160.7	126.7
Income from Sales	232.0	1,048.2	451.7
Operational Costs	274.4	369.8	135.0
Operational Surplus	[42.3]	678.3	614.2
Non-operational Surplus	25.9	152.6]	588.4
Net Surplus-SHU	[16.4]	525.6	287.5

As is seen, the federation has been passing through difficult times in 1994, but there has been some improvement in business performance in 1995. The pillar of economic strength of the Puskud has been coffee processing, handling of clove procurement, and transportation of fertilizer and sugar. The federation does not have any utilisation business or processing facilities of its own. Whenever needed, it hires the godowns, processing facilities and transport trucks from private traders.

Its own capital consists of initial savings (IS), compulsory savings (CS), voluntary (VS) and special deposits (SD). The composition of these savings from two selected districts is as follows:

Shares of Puskud from:	Coops Nos	IS	CS	VS	SD	Total	% of Puskud
		-----million Rupiah-----					
Province/Puskud	202	9.3	69.2	0.0	90.8	169.4	-
-Central Dist	66	2.8	26.5	0.0	19.2	48.6	28.7
-North Dist	52	2.3	13.2	0.0	9.0	24.7	14.5

The two districts constitute almost 43.2% of the deposits of the Puskud, and 58.3% of its membership. However, the KUD in the districts expected the Puskud to be more supportive in their business activities. As a result the Puskud has been finding it difficult to realise the entire savings of the members.

Situation of Operation of Kiosks, Collection Centres, Processing Facilities

The Puskud does not operate any kiosks, collection centres and processing facilities of its own due to severe lack of the needed infrastructure. KUD are its collection centres and sales points. Whenever needed, it hires processing, warehousing and transportation facilities from the private sources.

Competition with Private Traders

Except for enjoying monopoly status in the procurement of cloves and transportation and distribution of fertilisers, sugar and wheat flour, the Puskud finds it difficult to compete with the private trade. Mainly due to its not been able to enter the agro-processing sector, it has lost much ground to the private trade, specially in sectors like coconut processing, cassava processing, cattle-feed manufacturing, seeds multiplication and distribution. Only recently the Puskud leadership has planned to set up desiccated coconut processing, coconut charcoal making, cattle-feed plants, coffee and cassava processing units, setting up corn silos and processing. It also plans to enter into joint ventures to produce paper pulp. The Puskud also plans to improve technical capability of its staff through training.

Lampung has potentials for these key sectors. Puskud could emerge as a strong business house with the network of KUD at its command. Besides, it can provide market information service to its affiliates in the province.

RELATING LEGAL SYSTEM AND STRUCTURE

Policy for Improvement of Distribution and Processing of Farm Products and Price Support

In accordance with the declared National Policy to increase agricultural production and boost export, the government is committed to support farmers and provide them with the needed infrastructure. The government has established a number of institutions and services aimed at providing farm inputs, extension services and post-harvest technology. Also, consequently, the government aims at giving support to agro-processing activities through its own system and with the support of private enterprises. As a result, the country is witnessing the growth in agro-processing activities. More and more private companies are entering agro-processing business.

With a view to guarantee better economic returns from farm operations, the role of government agencies like the Bulog is being reviewed so that the farmers are sure to get proper prices for the farm products, especially, rice, soybeans, corn and other cash crops. Clove procurement agency, coconut development board, coffee board are some examples. For every harvesting season the government announces floor prices for key commodities.

The KUD are used increasingly by the government to procure food items for the national food stock and distribute essential commodities in the country. The KUD are also used to disburse agricultural credit among the farmers. The Puskuds through the Inkud, are planned to serve as gross distributors of consumer items through the Waserdas and TPK.

Taking advantage of the close proximity with Jakarta, its huge market, and the rich soil conditions in Lampung, the Provincial government of Lampung has decided to convert the province into

an 'Agro Area' thereby intensifying farm operations. The provincial government has planned to increase production of fruits and vegetables, grains, cash crops, livestock, poultry and install the needed processing units e.g., cattle-feed mills, slaughter houses, poultry farms including distribution of quality seeds for fruits and vegetables.

FINDINGS OF THE DETAILED FIELD SURVEY [OF 5 KUD IN THE PROVINCE]

Purchasing and Marketing Business

Situation of Establishment of Commodity-wise Groups

The 5 KUD surveyed in Lampung province were: KUD Kancana Jaya (MI), KUD Usaha Bersama (M), and KUD Karya Maju (M) in the North Lampung district, and KUD Tri Widodo (CM), and KUD Karya Tani (M) in the Central Lampung district. All the KUD are situated in the plains, within a radius of 150 km from Bandar Lampung, the provincial capital. The inhabitants are the former transmigrants, arriving in the late '50, who were each given 2.5 ha of farm land for cultivation and houses.

Over a period of time, with the support of the government, residents have organised themselves in KUD and progressively opened up the forests converting them into vast paddy lands and plantations. The government has created supporting infrastructure e.g., town planning, irrigation, farm extension, education, health and communication facilities.

The main activities of KUD have been: production, processing and distribution of paddy, maize, cassava, sugarcane, rubber plantation, fruits and vegetables besides raising some livestock and poultry. KUD have provided marketing and purchasing services to the farmer-members in various commodities e.g., fertilizer, farm chemicals, seeds, credit disbursement, essential commodities distribution, cattle-feed through a network of waserdas and TPK. The KUD have contributed significantly to national food stock. The farmers have been organised into Kelompok Tani (KT), members' groups, women and youth groups, and commodity groups. The number of members and KT is given below:

Cooperatives/ Category	Popula- tion	House- holds	Members	KT	Villages covered	TPK
Kancana Jaya-MI	7,006	1,476	1,200	24	01	07
Usaha Bersama-M	15,629	3,438	900	24	05	15
Karya Maju-M	5,907	1,206	814	103	03	05
Tri Widodo-CM	25,157	1,365	2,784	26	14	22
Karya Tani-M	24,658	18,700	3,811	73	08	06

The membership of KUD is open to all residents in rural areas. The head of the household becomes the member and the whole household utilises KUD services. However, individuals have increasingly taken up the membership.

As compared the membership with the population, the percentage of farmers in the KUD is still very low, as follows:

Kancana Jaya	...	...	17.1%
Usaha Bersama	...	...	5.7%
Karya Maju	...	...	13.7%
Tri Widodo	...	...	11.0%
Karya Tani	...	...	15.4%

The average percentage of membership to the population is 12.5%. The highest percentage is that of KUD Kancana Jaya (17.1%) which is a Mandiri Inti.

With a view to provide services and distribute farm inputs and credit, Farmers' Groups (KT) have been organised who also serve as commodity groups. North Lampung and Central Lampung districts are the most progressive districts of the province. Most of the government extension programmes have been carried out through these groups. The needs of the farmer-members are met through the network of TPK in which the KT's are actively involved. These groups form an integral component of the KUD organisation at the village level. TPK (kiosks) are operated by the KUD as organic units as well as by members as their private business (non-organic units).

Purchasing Business Methods, Commodities Handled, Turnover and Commissions

While the members purchase their requirements e.g., farm inputs, from their KUD, the KUD also purchase their requirements from external sources in order to sell the final products to the members after some processing. The purchasing business of the KUD, therefore, covers the procurement and transportation of fertilizer, paddy, farm implements, equipment, seeds, sugar, cattle-feed, and groceries for waserda and TPK.

KUD do not show separately in their accounts the commissions received or paid. However, they do show the service fees received or paid by them.

The table below shows the commodities purchased from various sources by the 5 surveyed KUD during 1994 and 1995:

KUD/Purchasing Business Items	Total Purchases (Mil.Rp)		% of KUD Turnover of Year 1995
	1994	1995	
<u>KUD KANCANA JAYA</u>			Rp 6,405.1M
-Fertilizer	524.8	1189.7	18.5%
-Rubber	1013.9	1758.2	27.4%
-Waserda	2.5	12.4	0.1%
-Sugar	52.1	17.4	0.2%
<u>KUD USAHA BERSAMA</u>			Rp 1,036.2M
-Fertilizer	607.4	739.9	71.4%
-Farm Chemicals	50.0	85.4	8.2%

-Waserda	100.0	170.8	16.5%
-Seeds (Paddy/Corn)	50.0	75.0	7.2%
<u>KUD KARYA MAJU</u>			Rp 608.5M
-Fertilizer	450.4	483.6	79.3%
<u>KUD TRI WIDODO</u>			Rp 257.2M
-Fertilizer	74.5	140.2	54.4%
-Farm Chemicals	19.4	13.5	5.4%
-Paddy/Rice	57.4	46.4	17.8%
-Waserda	9.4	7.4	2.7%
-Sugar	19.8	19.8	7.7%
<u>KUD KARYA TANI</u>			Rp 4,022.3M
-Fertilizer	946.6	1452.0	36.1%
-Paddy/Rice	362.2	2547.0	63.3%
-Livestock	141.6	419.7	10.4%
-Farm Chemicals	3.9	11.8	0.2%
-Cattle-feed	16.2	48.8	1.2%
-Sugar	46.6	25.5	0.6%
-Electricity Bills	85.5	103.0	2.6%
-Wartel	25.7	52.4	1.3%

Due to the location of KUD in former transmigration areas, the consumption of fertilizer is high. Major crops consuming fertilizer have been: paddy, cassava, and rubber plantations.

Percentage of purchasing business of major commodities in 1995 has been as follows:

KUD	Fertilizer	Paddy	Sugar	Rubber	Groceries
Kancana Jaya	18.5	-	0.2	27.4	0.1
Usaha Bersama	71.4	-	-	-	16.5
Karya Maju	79.3	-	-	-	-
Tri Widodo	54.4	17.8	7.7	-	2.7
Karya Tani	36.1	63.3	0.6	-	-
Average	51.9%				

On an average 51.9% purchasing business of the KUD consists of fertiliser distribution, the others are insignificant.

Major Suppliers of Goods and Patronage of Federations

Major suppliers of goods to the KUD have been the private traders in district headquarters or in Bandar Lampung. Fertilizer is obtained from the PT Pusri through the Puskud-Lampung, sugar from the Dolog, and rubber from the small-holder member-farmers. Groceries for the Retail shops and TPK is obtained from the wholesalers. The KUD Karya Maju does not buy the sugarcane from its members. It only organises cultivation, transportation and coordination on behalf of the farmer-members.

The KUD Karya Tani deals in cattle fattening programme. For this purpose it receives the cattle from a private company and coordinates their distribution among the farmer-members.

Marketing Business Methods, Commodities Handled, Turnover and Commissions

The KUD market their products e.g., paddy, rubber, livestock etc. with their members and the processing industry or in the open market. The marketing is done as per negotiations reached between the KUD and the buyers. In many cases the KUD act as coordinating bodies e.g., agents of the government for rice procurement, collecting agencies for rubber and sugar processing factories.

The table below shows the marketing business activities of 5 KUD surveyed in Lampung Province:

KUD/Marketing Business Items	Total Marketing (Mil Rp)		% of KUD Turnover of Year 1995
	1994	1995	
<u>KUD KANCANA JAYA</u>			Rp 6,405.1M
-Fertilizer	543.9	1211.1	18.9%
-Sugar	55.3	18.7	0.2%
-Rubber	1085.3	2086.7	32.5%
-Waserda	3.2	12.5	0.2%
<u>KUD USAHA BERSAMA</u>			Rp 1,036.2M
-Fertilizer	630.0	781.3	75.3%
-Farm Chemicals	315.0	390.6	37.6%
-Waserda	104.1	176.5	17.0%
-Seeds (Paddy/Corn)	55.0	76.1	7.3%
<u>KUD KARYA MAJU</u>			Rp 608.5M
-Fertilizer	465.3	500.3	82.2%
<u>KUD TRI WIDODO</u>			Rp 257.2M
-Fertilizer	78.5	145.6	56.8%
-Paddy/Rice	59.7	47.8	18.6%
-Waserda	10.2	8.1	3.1%
-Sugar	20.7	20.8	8.1%
<u>KUD KARYA TANI</u>			Rp 4,022.3M
-Fertilizer	964.1	1487.2	36.9%
-Paddy/Rice	365.2	2572.4	63.9%
-Livestock	154.0	424.9	10.5%
-Farm Chemicals	4.4	13.3	0.3%
-Cattle-feed	18.0	54.2	1.3%
-Sugar	48.2	26.4	0.6%

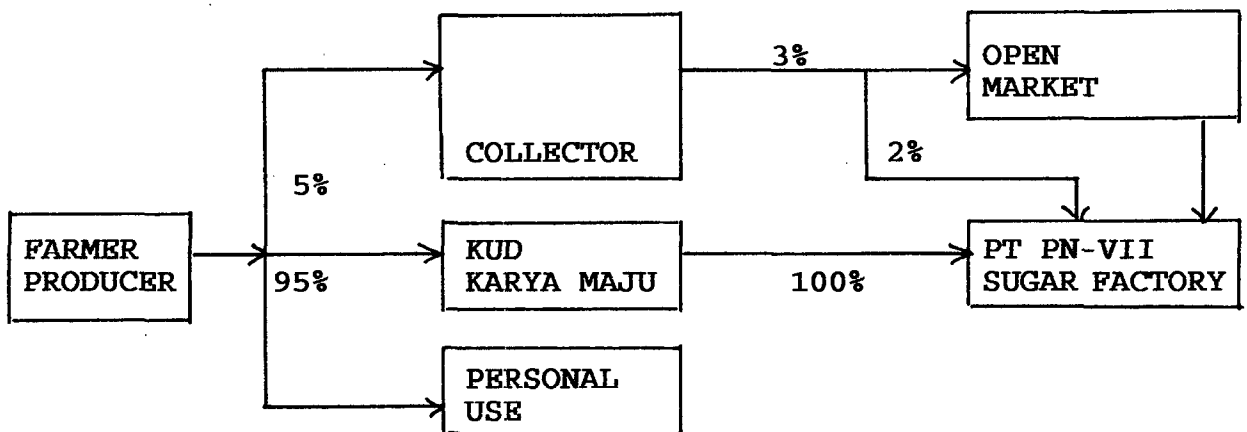
The KUD accounts do not show separately the commissions received or paid. They, however, do show the service fees received or paid by them.

The percentage of marketing business of KUD of major commodities in 1995 has been as follows:

KUD	Fertilizer	Paddy	Sugar	Rubber	Groceries
Kencana Jaya	18.9	-	0.2	32.5	0.2
Usaha Bersama	75.3	-	-	-	17.0
Karya Maju	82.2	-	-	-	-
Tri Widodo	56.8	18.6	8.1	-	3.1
Karya Tani	36.9	63.9	0.6	-	-
Average	54.0%				

On an average 54.0% of the marketing business of the KUD consists of fertiliser distribution.

With regard to the marketing of sugarcane, as a produce of the farmer-members of KUD Karya Maju, the following procedure is followed:



Given below is a summary of marketing and purchasing business of the KUD showing the commissions received by them. From the commissions received, the KUD cover their overheads and handling expenses:

KUD/Items 1995	Purchase Value (M.Rp)	Sales Value (M.Rp)	Commission Earned	Percent
KUD KENCANA JAYA				
-Fertiliser	1189.7	1211.1	21.4	1.7%
-Rubber	1758.2	2086.7	328.5	18.6%
-Waserda	12.4	12.5	0.1	0.8%
-Sugar	17.4	18.7	1.3	7.4%
KUD USAHA BERSAMA				
-Fertiliser	739.9	781.3	41.4	5.5%
-Farm Chemicals	85.4	390.6	305.2	357.3%
-Waserda	170.8	176.5	5.7	3.3%
-Seeds	75.0	76.1	1.1	1.4%
KUD KARYA MAJU				
-Fertiliser	483.6	500.3	16.7	3.4%
KUD TRIWIDODO				
-Fertiliser	140.2	145.6	5.4	3.8%

-Paddy/Rice	46.4	47.8	1.4	3.0%
-Waserda	7.4	8.1	0.7	9.4%
-Sugar	19.8	20.8	1.0	5.0%
<u>KUD KARYA TANI</u>				
-Fertiliser	1452.0	1487.2	35.2	2.4%
-Paddy/Rice	2547.0	2572.4	25.4	0.9%
-Livestock	419.7	424.9	5.2	1.2%
-Farm Chemicals	11.8	13.3	1.5	12.7%
-Cattle-feed	48.8	54.2	5.4	11.0%
-Sugar	25.5	26.4	0.9	3.5%

Major Buyers, Use of Federations and Demand for Federations

Major buyers of products of KUD are the processing factories located in the districts. Paddy/rice is sold to the Dolog as well as to the private traders, rubber and sugarcane is sold to the rubber and sugarcane processing factories located close to the cooperatives. Cattle-feed is sold to the farmer-members for cattle development purposes, the cattle is sold to the private cattle processing factory. The Puskud's role is limited to the transportation of fertilizer. None of the 5 KUD does any other business with the Puskud. The KUD, however, expressed a strong desire that the Puskud needs to be more active in providing sales and purchase opportunities to them.

Necessary Operation Fund for Economic and Utilisation Business and its Procurement

For executing government programmes e.g., distribution of fertilizer, procurement of rice, handling a variety of KUT, handling electricity bills and the telephone kiosks, the KUD get a fee or a discount. Similarly, on the purchase of some ingredients for the cattle-feed the government allows a subsidy on wheat pollard with a view to develop dairy industry. This business is, however, conducted by KUD Karya Tani only.

KUD have very limited choice or range of credit lines from financial institutions. Utilisation of rice milling units, warehouses, farm machines is very low in the area because these facilities are either old or have become unserviceable.

The Utilisation and Operation of Kiosks, Collection/ Storage Facilities and Processing Facilities

A majority of kiosks, which are of poor quality, are used for storing and supply of farm equipments, fertilizer, farm chemicals and other farm supplies e.g., sacks, farm implements, tubing etc.

The facilities in the area are the barest minimum. There is no processing activity even for the major crop of cassava. The area lacks electricity and easy-to-use farm implements e.g., hand tractors.

The Situation of Competition with Private Dealers

The KUD are in no position to compete with private dealers due to their very weak financial and operational position. Except for KUD Kancana Jaya, rest of the KUD are on a mere surviving level.

FINDINGS OF THE KUD SURVEYED

[A] KUD OUTLINE/KANCANA JAYA

Name of KUD: KANCANA JAYA Category: KUD Mandiri Inti
Location: Province Lampung, Kabupaten Lampung Utara, Kecamatan Tulang Bawah Tengah, Desa Mulya Kancana
No of Members: 1,200 (all full members)
Year Organized: January 1 1975 Regn No: 280.A/BH/8/1976
No of Employees: 313 Full Time: 98 Part-time: 215
Name of Chairman: Mr Suparlan Date of Survey: 04 Sep 1996
Manager: Mr Yulimanto

Specific Character of Location

Site Condition: 40m above sea level. Rich soil. Plains. 6-7 months wet season, rest of the year it is dry. Average temperature between 24-35C. 160 km from Bandar Lampung, and 40 km off the trans-Sumatra highway branching off from Kota Bumi district headquarters. Former transmigration area commencing during the late '50s. Covers one village. Residential areas well planned with wide avenues. The village is accessible by an all-season partly asphalt road.

Socio-Economic Condition: 85-90% farmers, rest plantation workers, civil servants, traders and farm-workers. Economic standards still low, sustaining on farm income, mainly from paddy, maize, cassava, horticulture and plantation. Government schools, primary health centres and other social institutions exist. Partly irrigated, partly electrified, no telephone connection and post office in the KUD village. Purchasing and marketing done at Kota Bumi.

Type of Agriculture: 46% irrigated paddy land, maize, all-season running river in the neighbourhood. Rubber plantation about 20%, rest for horticulture, grazing fields and orchards. Insignificant livestock and poultry activity in the area. Individual farmers rear goats, local chicken and ducks.

Major Local Industries: Rubber processing, cassava processing, rice milling and brick/roof-tile making.

Historical Background of KUD

To respond to the social and economic needs of the transmigrant farmers, the cooperative was organized in January 1975, and registered in May 1982 vide Regn No. 280.A/BH/8/1976. The KUD performed well and helped the farmers in marketing their paddy and maize production, and subsequently organized the rubber small-holders through member groups to market their produce to the nearby private rubber processing factory and helped them get better prices of their product. The KUD attained Mandiri status in 1990 and was No.1 rubber collector in the province. The KUD achieved the Mandiri Inti status in 1994, the only one in the district, and was awarded national prizes for efficiency and good management. The KUD has a large working complex with a new

building spread over 2 ha in the heart of the village and has become a source of strength and confidence among the residents and farmer-members.

The KUD area of operation has a total population of 7,006 (Male 3,470 and Female 3,536) and a total households of 1,476. There are 24 Kelompok Tani (all paddy) and 8 units of members' groups and 2 women's groups. The average membership of a KT is 40 farmers. There are 7 TPK.

Character of KUD

The primary activity of the KUD is collection of raw rubber from the small-holders' rubber estates and sends it to the nearby rubber processing factory (PTP-X). It also procures paddy and supplies it to the Dolog and open market after milling. Rubber procurement business is the economic pillar of the KUD followed by distribution of fertilizer. Out of the total sales of the KUD during 1995 (Rp 3,351 million), the rubber business was 62.2% and distribution of fertilizer was 36.1%.

Services of KUD: Rubber procurement (about 10 tons per day), rice procurement, rice milling, distribution of chemical fertilisers, farm chemicals, distribution of sugar, savings and loans, distribution of consumer goods, credit coordination, transportation of raw rubber and watch-and-ward services for rubber plantation.

Major Facilities of KUD: Newly-renovated and constructed building complex consists of office block, meeting hall (200 persons), guest house, 2 rice milling units (combined capacity 10 tons per day), one small godown, waserda and 7 TPK, 7 motor cycles, 4 vehicles, 8 hand-tractors, and out-post rubber collection centres. Electricity available, but no telephone connection yet.

Business of Members: Marketing their raw rubber, paddy, maize to the KUD and purchasing their fertilizer and consumer needs. No horticulture, cassava, livestock and poultry business with the KUD. KUD is also the source of credit for the members.

Business Conditions

-Total Business Volume	... ..	Rp 6,405.1m	1995
-Total Surplus-SHU	... ..	Rp 174.4m	1995
-KUD-Owned Capital	... ..	Rp 233.6m	1995
-Outside Capital	... ..	Rp 0.0m	1995
-Total Assets	.. ...	Rp 668.8m	1995
-Total Institutional Loans Outstanding		Rp 60.0m	1995
-Total Member Loans (Bank Channelling)		Rp 33.3m	1995
-Total Member Loans (Internal S/P)		Rp 108.4m	1995
-Member Savings (Total)	... ..	Rp 34.4m	1995
-Initial Savings	Rp 5.2m		
-Compulsory Savings	Rp 14.8m		
-Voluntary Savings	Rp 14.3m		

Current Management Operation Conditions

The KUD is headed by an annual Members Meeting which elects a 5-member Board of Director for a 5-year term, and a 3-member Board of Supervision for a 5-year term. A one-member Board of Guidance is appointed by the local government for a 5-year term. The Board of Supervision is assisted by the Secretary/Manager. Internal audit is done by one of the assistant managers on a part-time basis. The KUD is audited by the KJA. The management is quite active and responds actively to the needs of the community. It has contributed to the construction of community facilities e.g., office of the Village Head and a mosque. It plans to construct a large community shopping centre to serve the needs of the nearby villages and its own members. Collection and marketing of members' rubber to the rubber factory is the "business pillar" of the business of the KUD. The profit made on this business in 1995 was Rp 168.1 million which was 96% of the declared SHU of the KUD, Rp 174.4 million.

Marketing and purchasing business is hampered by lack of transportation and warehousing facilities.

Current Problems and Solving Plans

Major problems faced by the KUD have been as follows:

- i. Collection and marketing of rubber from plantations;
- ii. Fertilizer distribution and warehousing;
- iii. Distribution network through Waserda/TPK;
- iv. Marketing of farm produce.

The KUD not only needs setting up new business but also expansion of its existing services.

Future Plans for Development

The KUD plans to establish new business and expand its existing business by implementing the following development plans:

- i. Expansion of rubber collection and marketing facilities to about 5000-6000 tons/year from the present 3000 tons per year;
- ii. Expansion of distribution and warehousing network of all types of fertilizer and farm chemicals;
- iii. Expansion of consumer goods distribution network through waserda/TPK; and
- iv. Distribution of farm produce through establishing a community shopping centre in the heart of the village.

The source of funding for (i)-(iii) have not been identified. For (iv) discussions have been initiated with Danamon Bank.

General Comments

The KUD leadership is active but KUD lacks funding sources for expansion of its business. It is in a position to provide training and development opportunities for the nearby cooperatives and has potential to become a "business centre" for the area. The area has potentials for expansion of rubber plantation, diversification of crop, horticulture, cultivation of fruit trees and setting up a livestock development centre.

[B] KUD OUTLINE/USAHA BERSAMA

Name of KUD: KUD USAHA BERSAMA Category: Mandiri
Location: Lampung Province, Lampung Utara District,
Kecamatan Abung Selatan, Trimodadi Desa.
No of Members: 900 (all full members).
Year Organized: October 1979 Regn No:381/BH/8/1981
Mandiri Status achieved in 1983.
No of Employees: 20 Full-time: 9 Part-time: 11
Name of Chairman: Mr Kemin Survey Date: 05 Sept 1996
Name of Manager: Mr Suharsono

Special Character of Location

Site Condition: The KUD is located in the northern part of Lampung province; area of operation 5 villages. Average temperature 23-30 C; plains and paddy fields, forests and plantations of rubber. Rich soil with a plenty of rain and irrigation facilities. 1,091 ha covered by houses and backyards; 5,659 ha by orchards, 10 ha by ponds, and 1,805 ha by plantation estates.

In the KUD area 933 ha under paddy, 2,354 under orchards, 913 ha under backyards, and 5,704 ha covered under other produce. 30-50 meter above sea level. 100 km north of Bandar Lampung, 26 km from Kota Bumi the district head quarters, and 7 km from the main trans-Sumatra highway. Connected with all-season partly asphalt road.

Socio-Economic Condition: 3,438 households; total population 15,629 (7,789 male and 7,840 female); total farmers 3,438. 10-50% of the population is covered by the KUD membership. Electricity available; no telephone connection; poor economic condition of the farmers; formerly transmigration area (most of the inhabitants arrived on the area during the '60s from Java). Due to shortage of funds with the KUD and absence of banking institutions, almost 25-30% of the farmer-members receive loans from the money-lenders at high rates (between 20-30% per month). Educational institution and primary health centre available.

Type of Agriculture: Paddy cultivation adequately supported by irrigation facilities; cassava is widely grown; maize is also grown. No horticulture and livestock activity.

Major Local Industry: Two private cassava processing factories are located in the neighbourhood of the KUD area of operation.

Historical Background of the KUD

The KUD covers an operational area of five (5) villages. It was organized in 1979 and registered vide No. 381/BH/8/1981 on 2nd April 1981. Achieved KUD Mandiri Status in 1983. It responds to the economic and social needs of the inhabitants of the area (who are the transmigrants from Java since the '60s). The KUD has high acceptability among the members.

Character of KUD

The composition of 900 members is: 85% farmers, 10% traders and farm workers and 5% civil servants. A majority of them are former transmigrants. There are 24 Kelompok Tani (KTs), 2 members groups and 1 women group, through whom all services of the KUD are provided to the members. Although a majority of farmer-members grow cassava, the KUD does not yet undertake this business mainly due to lack of funds and the needed facilities. The main business of the KUD is: distribution of fertilizer, seeds and farm inputs, and provision of consumer items through the Waserda, and the RMU. It does not deal in procurement of paddy/rice and its marketing, and savings and loans and in any other horticulture activity. There is no telecommunication facility. The KUD main office and Waserda is located right in the main market of the village.

Services of KUD: The main business of the KUD is: Supply of fertilizer, seeds and other farm inputs, and provision of consumer items through the waserda and RMU. It does not deal in procurement of paddy/rice and its marketing. No savings and loans and any horticulture business activity. No agro-processing.

Major Facilities of KUD: Office block, waserda, 1 unit RMU, 1 unit warehouse, 15 TPK (12 organic, 3 non-organic), 1 unit mini truck and 1 unit motor cycle. Except for the truck and motor cycle rest of the items are fairly old 4-8 years.

Business of Members: Paddy, maize and cassava cultivation.

Business Condition

Total Business Volume	...	...	Rp 1,036.2m	1995
Total Surplus (SHU)	...	...	Rp 4.1m	1995
KUD-Owned Capital	...	...	Rp 39.3m	1995
Outside Capital	...	...	Rp 84.4m	1995
Total Assets	...	...	Rp 123.8m	1995
Total Institutional Loans Outstanding			Rp 20.0m	1995
Total Member Loans (Bank Channelling)			Rp 0.0m	1995
Total Member Loans (Internal S/P)			Rp 132.4m	1995
Member Savings	...	...	Rp 3.2m	1995
-Initial Membership:		Rp 2.6m		
-Compulsory Savings:		Rp 0.2m		
-Voluntary Savings:		Rp 0.4m		

Current Management Operation Condition

The KUD is headed by a 3-member Board of Directors elected for a 5-year term by the General Meeting. A 3-member Board of Supervision is also elected for a 5-year period by the General Meeting. The BOD meets every month/8 times a year (the recent meeting April 96), and the Board of Supervision meets four times a year (last meeting June 1996). The KUD is guided by a Board of Guidance consisting of 5 members (all heads of the 5 villages) which is constituted by the Bupati. The two elected Boards are answerable to the General Meeting. The General Meeting is held regularly every year and takes note of the audit report. Since

1992 the KUD is audited by the KJA. KUD finds it difficult to pay the audit fee (1.5 million per audit year). The KUD has a paid manager. There are 7 business units e.g., Finance, Fertilizer, KUT, Marketing, Waserda, Savings & Loans, and RMU.

Marketing and purchasing business is hampered by lack of funds and infrastructure facilities. The only utilization business is: waserda, RMU and truck. No communication facilities are available with the KUD.

Current Problems and Solving Plans

Major problem is financial to undertake marketing, purchasing and lending services. Waserda is operating well because of its location and strategic assortment available - consumer items, fertilizer, farm chemicals, and small farm implements. The 15 TPKs are located in different parts of the area of operation but are inadequate in terms of facilities and merchandise. There is absence of communication - postal and telecommunication.

The KUD has plans to meet these demands through modest projects, as follows: i) Expansion plan for the Waserda including TPK; ii) Sale and purchase of farm products, and iii) Setting up a PosDesa - postal and telecommunication service.

Future Plans for Development

The KUD has developed the following plans for improving its future business:

- i. Expansion of Waserda and TPK for distribution of consumer goods and farm inputs;
- ii. Soliciting soft loans/interest-free loans for expanding sales and purchase of farm products of members;
- iii. Establishing postal and telecommunication services in the village for the community and to improve its own business.

General Comments

The KUD Usaha Bersama has good leadership and a capable manager but seriously lacks financial resources. The working staff is trained by the KUD at various places and spends money from its own resources for member education activities. The location of the KUD and its good record of work is potential for growth if financial position is facilitated by external loans in expanding waserda, TPK and telecommunication facilities.

[C] KUD OUTLINE/KARYA MAJU

Name of KUD: KARYA MAJU Category: Mandiri
Location: Province Lampung, Kabupaten Lampung Utara, Kecamatan Sungkai Utara, Desa Kota Negara
No of Members: 814 (Full 784, Candidate 30)
Year Organised: May 1980. Regn No: 363/BH/8/1980 dt Sept 17 1980
No of Employees: 10 (all full time)
Name of Chairman: Mr Triono. Date of Survey: 06 Sept 1996
Manager: Drs Faisol

Specific Character of Location

Site Condition: 35-50m above sea level. Rich soil. Plains. 6-7 months wet season, rest of the year it is dry. Average temperature between 24-32C. 150 km from Bandar Lampung, about 45 km of the trans-Sumatra highway branching off from Kotabumi, district headquarters. Former transmigration area commencing during 1967. Land for cultivation still needs opening. KUD covers three villages. Residential areas well planned with wide avenues. The KUD is accessible by an all-season asphalt road, partly of poor quality.

Socio-Economic Condition: +90% farmers. 30% original inhabitants and 70% transmigrants, rest farm workers, civil servants and traders. Economic standards still low, sustaining on farm income, mainly from sugarcane cultivation, maize, paddy, horticulture and poultry-raising. Government schools, primary health centres and other social institutions exist. No electricity, no telephone and inadequate postal services. All major purchasing and marketing is done at district headquarters, Kotabumi, otherwise local small traders fulfil the needs. The farmer-members have very weak financial situation which adversely affects the business performance of the KUD as well. Farmers often borrow from private traders at the rate of 25-30% per month.

Type of Agriculture: Depends on rainfall. No irrigation. A small all-season river passes through the area. Cultivation completely traditional. No immediate programme to construct further irrigation channels. Main crops are sugarcane cultivation, cassava, maize and paddy. No livestock raising, and very insignificant poultry and duck-raising. Farming cattle used. Potentials of the area include maize cultivation, palm oil, rubber, irrigation and farm produce transportation.

Major Local Industries: Sugar factory PTP Nusantara-VII Pabrik Gula Bunga Mayang.

Historical Background of KUD

To respond to the social and economic needs of the transmigrants, the cooperative was organised in May 1980, and registered on 17th September 1980 vide Registration No.363/BH/8/1980, Mandiri status achieved in 1991. The KUD is situated in a relatively poor area with no social and economic infrastructure. The KUD provided the much-needed economic support and social strength to farmer-members.

The KUD area of operation has a total population of 5,907 (Male 2,910, Female 2,997) with a total of 1,206 households. The area of operation covers three (3) villages. The total area covered is 1,911 ha consisting of 275 ha by houses and backyards, 136 ha by orchards, 300 ha forests and 1,200 ha plantations. Paddy is grown in 115 ha, and local fruits (e.g., rambutan) on 54 ha.

Character of KUD

The KUD covers the sugarcane and rice marketing activities of the members and distributes among them fertilizer, seeds and KUT. It follows the democratic organisation in accordance with the Cooperative Law. It has a General Member Meeting (last meeting March 1996) which elects a 5-members Board of Directors for a 3-year terms (last meeting August 1996) which meets at least three times a year, and a 3-member Board of Supervision for a 3-year term which meets five times a year. A 3-member Board of Guidance is appointed by the local government for a 3-year term which meets once in two years. The members of the BOD are full-time. There is no system of internal audit. The Board of Supervision is assisted by the Secretary/Manager.

Although the KUD is a major supplier of sugarcane to the sugar factory, there is no reciprocative support to the farmer-members and the KUD in the form of share contribution or infrastructural support.

Services of KUD: Marketing and purchase of paddy, marketing of sugarcane to the factory, distribution of fertilizer, sugar, seeds and KUT. No business of horticulture, farm implements, savings and loans. Sugarcane transportation, tilling of farm land and harvesting of sugarcane is done with outside help due to lack of facilities and resources. In the three villages of the KUD there are 103 Kelompok Tani with an average membership of 34, maximum number being 36 and lowest membership 5. There are 7 members' groups and 5 TPK.

Major Facilities of KUD: Office premises, and a small godown, 4 motor cycles, one 6-ton truck and land 2500m². No telephone, no office machines.

Business of Members: Marketing their sugarcane and paddy. Purchasing fertilizer and seeds from the KUD and receiving credit and other services through the KUD.

Business Conditions

-Total Business Volume	...	...	Rp	450.1m	1995
-Total Surplus-SHU	...	...	Rp	5.5m	1995
-KUD-Owned Capital	...	...	Rp	34.2m	1995
-Outside Capital	...	...	Rp	0.0m	1995
-Total Assets	...	...	Rp	39.2m	1995
-Total Institutional Loans Outstanding			Rp	0.0m	1995
-Total Member Loans (Bank Channelling)			Rp	0.0m	1995
-Total Member Loans (Internal S/P)			Rp	3.0m	1995
-Member Savings (Total)	...	...	Rp	24.9m	1995

-Initial Savings	Rp 2.4m
-Compulsory Savings	Rp 9.1m
-Voluntary Savings	Rp 13.3m

Current Management Operation Condition

Due to severe shortage of capital and a complete absence of social and economic infrastructure, the KUD operates only a limited range of activities, but efficiently and to the best of its ability. Operational conditions are most minimal although vast potential exist. The distribution of fertilizer and sugar is well-managed. The Waserda and TPK are newly established (1996).

Current Problems and Solving Plans

Major problems relate to farming infrastructure e.g., tilling, cultivating, harvesting, transportation and irrigation. KUD invites contractors from Palembang (South Sumatra) for tilling who bring their own tractors and other farming implements per season. The management also hires contractors for harvesting from outside the area who bring their own trucks to transport sugarcane to the sugar factory. In between, the farmer-members tend the crop themselves on 'gotong rayong' basis. Paddy cultivation and harvesting is done by the farmers themselves. The sugar factory does not provide any economic or infra-structural support to the KUD. The farmers also wish to increase the quality of sugarcane by using high-yielding seeds, but are unable to obtain them due to lack of capital.

Major problems faced by the member-farmers are:

- i. Sugarcane field tilling, harvesting and transportation;
- ii. Irrigation;
- iii. Distribution of fertilizer, seeds, consumer goods;
- iv. Utilisation of sugarcane for local use and marketing;
- v. Low quality sugarcane seeds.

Future Plans for Development

The KUD has proposed several alternatives to solve these problems. The following have been suggested:

- i. At least 4 units of 6-8 ton trucks for transportation;
- ii. 2 units of tractors to till and process the farm land;
- iii. Setting up distribution network through Waserda/TPK;
- iv. Interest-free/soft loan for improving Loan and Savings and KUD operational infrastructure;
- v. Diesel irrigation pumps; and
- vi. Development of a sugarcane seeds multiplication farm.

The source of funding has, however, not been identified.

General Comments

The area has a strong potential for diversifying farm products e.g., rubber estates, coconut, cassava, horticulture and local sugarcane crushing. The soil is rich and the farmer-members have willingness to take up new ventures.

[D] KUD OUTLINE/TRI WIDODO

Name of the KUD: KUD TRIWIDODO Category: Calon Mandiri
Location: Province Lampung, Kabupaten Lampung Tengah, Kecamatan Tri Murjo, Desa Untoro.
No of Members: 2,784 Year Organized: May 1977.
Regn No: 302.A/8/77 dt 25 May 1982
No of Employees: 11 (all full-time)
Name of Chairman: Mr Wakidi AD
Manager: Mr Luk Deri Date of Survey: 07 Sept 1996

Specific Character of Location

Site Condition: About 30m above sea level, plains, rich soil, 8-9 months wet season, 3 months dry season, potential irrigation area - new canal is being constructed to be operational in 2-3 years time passing through the KUD area of operation for more than 10 km. 40 km from Bandar Lampung, and 8 km from Metro, district head quarters. The KUD covers 14 villages (9 formally and 5 informally). Main market at Metro, and another marketing centre about 1 km from the KUD. Approachable by all-season asphalt road.

Socio-Economic Condition: Total population of the area is 25,157 (Male 12,650, Female 12,507) as in 1995. Formerly a local transmigration area (since 1957) but a large sprinkling of people from Java exists. Electricity available, no telephone at KUD. Majority of farmers (75-80%), traders, civil servants and professionals in the area. Reasonable economic conditions. Schools, health centres, post office, bank and other social institutions exist. Farmers face acute problem of transportation and marketing of their agricultural produce due to lack of facilities.

Type of Agriculture: Paddy (2 times a year), corn, cassava and palawija crops. No fruits and other cash crops are grown. Area for agriculture in the area of operation of the KUD is: 2,507 ha for paddy, 756 ha for house backyards, and 75 ha for other purposes. Use of farm machines is limited. Urea and other farm chemicals are used. Farmers have not taken up livestock development, poultry and other occupations mainly because of lack of weak financial conditions.

Major Local Industry: Bricks and roof-tile manufacturing and a large cassava processing factory, all in private sector. The cassava factory has monopolized the cassava trade. Large construction work on irrigation canal in progress. Tourist attraction of the area is the Elephant Training Centre.

Historical Background of KUD

The KUD was organized on May 22 1977 and registered vide No. 302.A/8/77 on May 25 1982, and has qualified to be a Candidate Mandiri KUD. It was organized to fulfil the economic needs of the farmers of the area and as a support to the transmigrants. The Bulog sponsored and supported the KUD to be a rice procurement centre from the area with a view to provide economic support and

incentive to the farmers. The Bulog gifted a building to the KUD and a RMU to supplement its economic programmes.

Character of KUD

There are 1,365 households in the KUD area. The KUD covers the rice processing and marketing activities of the member-farmers and serves them through the Waserda (1) and 22 TPK (2 organic and 20 non-organic). It follows the democratic organisation in accordance with the Cooperative Law. It has a General Members Meeting (last meeting was held on 31st March 1996) which elects a 3-Member Board of Directors for a 3-year term (last meeting held on 30th August 1996), and a 3-member Board of Supervision for a 3-year term (last meeting held in June 1996). The Members Meeting is held every year, the BOD once a month, and the Board of Supervision every three months. The KUD also has a 3-member Board of Advisors consisting of village headmen and other prominent local leaders appointed by the Bupati. The members of the BOD are full-time members although all of them are also the farmers.

The KUD has a full-time manager appointed by the BOD who is supported by a total of 11 staff members.

The KUD has 26 Kelompok Tani, all paddy and palawija groups, 4 women's groups. Maximum number of a group is 50 and the minimum number is 24.

Services of KUD: Procurement of paddy/rice from members for sale to Dolog/open market, supply of fertilizer and farm chemicals, and a limited range of savings and loans. Operates 2 units of RMU - each 0.5 ton/hour capacity, 1 unit hand-tractor. Education, training and extension programmes for farmers, officials and employees of KUD.

Major Facilities of KUD: Office block, 1 unit RMU and a godown of 100 ton capacity (gifted by Bulog in 1989 to support rice procurement programme of the government), one hand tractor, one waserda and 22 TPK (2 organic and 20 non-organic). No telephone and transportation. 11 staff members.

Business of Members: Mainly paddy, palawija and savings and loans. Some members grow water melon and other vegetables. The economic strength of the members is low which consequently influences the business of the KUD. RMU operation is low. The quality does not qualify the standards fixed by Dolog, and has to be sold in the open market.

Business Conditions

-Total Business Volume	...	...	Rp 608.5m 1995
-Total Surplus-SHU	...	...	Rp 11.8m 1995
-KUD-owned Capital	...	...	Rp 15.9m 1995
-Outside Capital	...	...	Rp 0.0m 1995
-Total Assets	...	...	Rp 325.8m 1995
-Total Institutional Loans Outstanding			Rp 351.0m 1995

-Total Member Loans (Bank Channelling)	Rp	7.2m	1995
-Total Member Loans (Internal S/P)	Rp	811.2m	1995
-Total Member Savings	Rp	8.8m	1995
-Initial Savings	Rp	6.8m	
-Compulsory Savings	Rp	1.9m	
-Voluntary Savings	Rp	0.0m	

Current Management Operation Condition

Due to inadequate and out-dated rice-milling facility the rice processing is below the Dolog acceptable standards. Serious financial shortage hampers improvement/expansion of RMU units which are already very old and not sufficient. The only Kabuta hand tractor is already old and is not a good economic proposition. The key business of the KUD has been purchasing and sale of fertilizer, farm chemicals, paddy, waserda and TPK and sugar. The RMU and the KUT fee is another economic strength. As compared with the total turnover of the KUD in 1995 (Rp 236.9 m), the sale of fertilizer itself was Rp 145.6 m, almost 61.6%. The maximum profit was from fertilizer distribution Rp 5.4 million, rice Rp 1.4 million, sugar distribution Rp 1.0 million.

Current Problems and Solving Plans

Major problems faced by the KUD has been: serious shortage of capital, outdated and inefficient rice milling units, acute shortage of farm machines, and transportation equipment and inadequate infrastructure for distribution of farm inputs and consumer goods (waserda and TPK).

Future Plans for Development

The KUD has plans for:

- i. Procurement of necessary funds for expansion of member savings and loans programmes. Minimum requirement of about Rp.30 million on interest-free/soft loan basis;
- ii. Increase transportation and farm machines e.g., trucks and tractors. Minimum requirement 15 units of hand- tractors and 2 units of trucks;
- iii. Improvement/expansion of rice milling and warehousing capacity. Minimum requirement of one complete large-size composite unit of RMU with appropriate warehousing facilities; and
- iv. Expansion of distribution network through waserda and TPK (according to the government instructions the KUD has to establish at least one TPK in each of its villages). Minimum requirement of 22 units of waserda-cum-TPK in the area of operation of the KUD.

The source of funding has, however, not yet been identified.

General Comments

The management of the KUD is keen for the development of services, providing additional support services to the members and enhancing the income of farmer-members. The KUD members' farming pattern is very soon to undergo a major change because of the irrigation facilities being provided by the government through the construction of a major canal in the area. It is expected that the members will change from cassava cultivation to paddy and horticulture production. This is the time when the KUD needs support and assistance.

[E] KUD OUTLINE/KARYA TANI

Name of KUD: KARYA TANI Category: Mandiri
Location: Province Lampung, Kabupaten Lampung Tengah, Kecamatan Punggur, Desa Kota Gajah
No of Members: 3,811 (Full 2,750 Candidate Members 1,061)
Year Organised: 1975 Regn No: 260.A/BH/8/1975 dt 29 March 1975
No of Employees: 32 Full Time: 13 Part Time: 19
Name of Chairman: Mr Ahmad Usman
Manager: Mr Eko Yanto Suradi Date of Survey: 09 Sept 1996

Specific Character of Location

Site Condition: Covers 8 villages. 80 km from Bandar Lampung, 17 km from Metro, head quarters of Central Lampung district. 30m above sea level. Rich soil. Plains. 8-9 months wet season, rest of the year dry. Average temperature between 25-32C. Former transmigration area commencing from 1952 onwards. Residential areas well-planned with broad avenues. The village is accessible by all-season good asphalt road. KUD located on the main road. The new canal passes closeby, almost 10-12 km through the KUD area, presenting rich opportunities for the farmers to increase farm produce and diversify cropping pattern.

Socio-Economic Condition: 75-80% farmers, rest farm workers, artisans, traders, civil servants. Economic standards still low, sustaining mainly on farm income, mainly from paddy, maize, horticulture, cassava and livestock improvement, poultry. Government schools, primary health centres and other social institutions exist. 60-75% irrigated. Electricity, telephone, postal and banking services available. Drinking water supply in some areas. Purchasing and marketing done in the village and at Metro. Average land holding 0.75 ha.

Type of Agriculture: 60-75% irrigation from the canal system. Paddy, palawija, corn, and cassava. Small cattle raising and cattle fattening activities including poultry carried out in the area of operation of the KUD.

Major Local Industries: Private cassava factory, handicrafts, brick-and-roof-tile making industry.

Historical Background of KUD

In response to the demands to improve social and economic conditions of the transmigrant farmers, the KUD was organised in April 1975, which was registered in 1982 vide Regn No. 260.A/BH/8/1975. The KUD achieved Mandiri status in 1991. The KUD performed well and helped farmer-members in marketing their farm produce and raising their economic levels to some extent. KUD undertook various activities in a limited way e.g., livestock development. Due to shortage of capital, waserda, warehousing, rice milling, savings & loans, farm machines could not develop.

The KUD covers 8 villages with a total population of 24,658 (Male 12,581, Female 12,077). Total farmers 19,630. Households in the

KUD area: 18,700. Houses and backyards cover 461.44 ha, paddy land 2,970.8 ha out of a total of 5,722.9 ha. Total irrigated area is 2,746 ha.

Character of KUD

The primary activity of the KUD is collection of paddy, processing paddy, marketing of rice, cattle fattening, credit disbursement, distribution of fertilizer, sugar, wartel and member extension programmes. Out of the total sales of the KUD, the sale of fertilizer was 35.3%. There are a total of 73 Kelompok Tani: 69 paddy, 2 livestock, 1 women and 1 youth, average number of a group is 30 members. Members' groups. There are 6 TPK - 1 organic and 5 non-organic.

Services of KUD: Distribution of fertilizer, farm chemicals, seeds, sugar. Distribution of cattle for fattening, cattle-feed, and consumer goods. Saving and loans, transportation of fertilizer and cattlefeed. Electricity bills servicing, renting of farm machines and wartel.

Major Facilities of KUD: Rice milling units (2) 3 tons/hour, one blower machine, one dryer, one generator, 8 units hand-tractors, 1 unit wartel, office block, office machines, 20 tons capacity warehouse, 2 units motor cycles, and 6 TPKs. Space has been prepared for starting a waserda during 1996.

Business of Members: Marketing their farm produce through the KUD, receiving cattle for improvement from a private cattle processing factory, obtaining supplies of sugar, cattle-feed, fertilizer and KUT from the KUD.

Business Condition

-Total Business Volume	...	...	Rp 4,022.3m 1995
-Total Surplus-SHU	...	...	Rp 172.5m 1995
-KUD-Owned Capital	...	...	Rp 68.1m 1995
-Outside Capital	...	...	Rp 137.5m 1995
-Total Assets	...	...	Rp 177.0m 1995
-Total Institutional Loans Outstanding			Rp 815.0m 1995
-Total Member Loans (Bank Channelling)			Rp 45.9m 1995
-Total Member Loans (Internal S/P)			Rp 379.0m 1995
-Initial Savings		Rp 6.6m	
-Compulsory Savings		Rp 7.1m	
-Voluntary Savings		Rp 7.9m	

Current Management Operation Condition

The KUD is headed by an annual Members Meeting which elects a 5-member Board of Directors for a 5-year term, and a 3-member Board of Supervision for a 5-year term. A 3-member Board of Guidance for a 3-year term is appointed by the local government. The General Meeting meets at least once a year, the BOD 6 times a year, (last meeting September 1996), the Board of Supervision 4 times a year, (last meeting August 1996), and the Board of Supervision as and when needed, (last meeting held in 1987). The

Secretary/Manager assists the Board of Supervision. Balance sheet is prepared once a month. There is no regular internal auditor. The General Manager is appointed from the open market. There is a total of 32 employees.

Supply of fertilizer formed 20.2% of the SHU, rice 14.4%, livestock 2.8%, wartel 7.5%. Marketing and purchasing business is seriously hampered by lack of waserda, warehousing, shortage of TPK, inadequate capital, transportation and farm machines. Rice milling unit is too small to compete with larger and more efficient RMU in the private sector. KUD faces rice marketing problems with the Dolog due to poor quality.

Current Problems and Solving Plans

Some of the major problems faced by the KUD have been as follows:

- i. Acute shortage of capital to produce and distribute cattle-feed. The KUD procures nearly 1200 tons per year for the livestock. Production of cattle-feed using local components (e.g., pineapple waste as raw material) at the KUD is considered cheaper and more practical;
- ii. RMU and warehousing is grossly inadequate and of poor quality. The KUD anticipates substantial increase in paddy production with the commissioning of new canal in 2-3 years time;
- iii. The 8 hand-tractors received by the KUD as a BNI credit have gone out of order due to poor quality and unavailability of spare parts. A sharp demand for small hand-tractors is anticipated;
- iv. Setting-up and expansion of waserda/TPK.

Future Plans for Development

The KUD plans to improve its business and services to farmer-members by implementing various projects. Several of development plans have been discussed by the Board. Some of these have been:

- i. Procurement of 4 units of 8 ton trucks to facilitate distribution and transportation activities;
- ii. Establishing a new feed-mill of 1 ton per hour capacity to cater to the needs of livestock farmers. Substantial increase in livestock development is foreseen.
- iii. Expansion of present RMU by installing an integrated RMU of at least 1 ton per hour capacity together with a warehouse;
- iv. Procurement of 15 units of Kubota hand-tractors of various capacities to increase paddy production and diversification of cropping pattern in the area;

- v. Establishing at least 8 units of waserda/TPK for a wider distribution of consumer goods and farm inputs.

General Comment

The KUD area is set to witness a tremendous change in cropping pattern with the commissioning of a large irrigation canal. The KUD is preparing itself to meet the future requirements of members. Capital requirement is high and urgent.

FINDINGS OF THE COMMISSIONED SURVEY-I Agricultural Production

Distribution of Agricultural Input Material such as Makers and Dealers of Chemical, Vinyl, Feed-stuff

While the production of most of the agricultural inputs e.g., urea, other chemical fertilizer and paddy seeds remains in the hands of the government-owned companies, the majority of distribution is channelled through the KUD system. Farm inputs for plantation/estate crops is done through the PT Pertani.

The vinyl sheeting is mainly used as protective against rains, nurseries and packaging. Several private companies have been producing the vinyl sheets, bottles and bulk material as follows:

Vinyl sheets	64,000,000 m2 sheets/year
-"-bottles	7,200,000 per year
-"-bulk material	1,380 Tons/year

Most of the material produced is consumed in South (20 million m2), Central (480 Tons), and Bandar Lampung (44 million m2 sheet, 7.2 million bottles and 900 tons of bulk material).

In 1994, a total of 991 tons of compound-feed was produced by 10 private formulators using a variety of ingredients e.g., banana chips, bakery, fish and shrimp flour, and cassava. The additional requirements are imported from outside the province. Some of the KUD have small cattle-feed units but the production is small.

The distribution of farm inputs and cattle-feed is done through the network of TPKs operated by the KUDs.

Distribution of Farm Machinery (Makers and Dealers)

The following table indicates that KUD farm households own a large number and variety of farm machines in the province:

Farm Machines	1985	1990	1994	% of 1990
Tractors	693	937	1,437	153.3
Combines	847	973	1,252	128.6
Dryers	762	899	1,277	142.0
Power sprayers	1,231	1,398	1,597	114.2
Pumps	385	427	737	172.5

Threshers	671	681	1,372	201.4
Engines	231	421	537	127.5
Small Trucks	103	127	197	155.1

Source: Kanwilkop, Lampung 1995

Most of the farm machines are Japanese origin - either imported in 100% form or locally assembled. Some of the farm machines and equipment have been given to KUD under OECF and Kennedy Rouad Programmes. Farm machines are available in the open market or are bought from Jakarta market. KUD do not sell these machines except for some small farm equipment and implements. Servicing and spare parts are easily available.

Agro-Processing and Its Distribution

Demand of Major Farm Products

(Commodities, Form of Processing, Consumption Areas)

Because of its close proximity to Jakarta, Lampung supplies a variety of farm products to the national capital. It has been a significant contributor of rice to the national food-stock (Bulog). Production of major commodities of Lampung in 1994 has been as follows:

Commodity	Production (Tons)	Distributed in Province	Distributed outside Province
Rice	1760,450	1760,441	-
Corn	843,151	513,443	231,308
Soybeans	204,978	30,243	73,135
Cassava	2304,524	1691,031	613,493

Source: Department of Agriculture, Lampung 1995

Most of the agricultural products have been consumed within the province itself.

Except for some rice milling, there is no other agro-processing activity in the province.

Other agricultural products include vegetables and some fruits. Most of the products are sold to wholesalers for shipment to Jakarta. The balance is consumed within the province itself. The production and distribution of vegetables and fruits in the year 1994 is given below:

Commodity	Production (Tons)	Distribution in Lampung	Distributed outside Lampung
Vegetables	1356,904	604,106	762,098
Onions	2,035	757	1,278
Cucumber	2,401	2,401	-
Chilly	24,404	19,866	4,538
Banana	115,657	25,275	90,382

The farm products are collected through the KUD network either at the initiative of the traders and their agents or at the behest of the KUD or its farmers groups.

Technical level of Major Processed Farm Products by Commodities

Rice is the major farm product followed by vegetables and some cash crops. Rice production is distributed in the open market and to the national food-stock (Bulog). Vegetables are consumed in the local market, and the remaining is shipped to Jakarta through private traders. Cash crops are collected by private traders and some through the KUD network. There is no agro-processing industry within the cooperative sector. Milk production is insignificant, and whatever is produced is consumed locally.

No processing of poultry is undertaken in the cooperative sector, except that they help procure the raw material including eggs, and ship it to the consumer centre of Jakarta through traders and their agents.

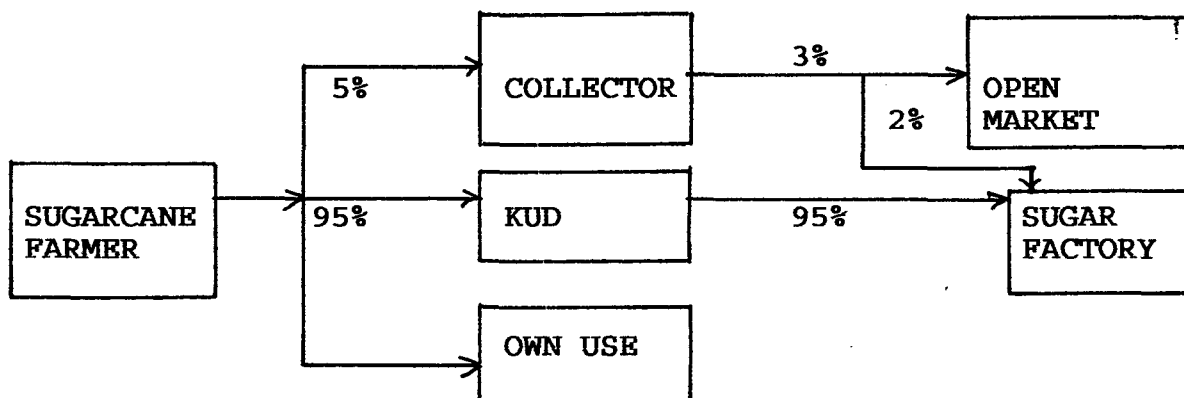
Major Agro-Processing Business Entities, Volume of Production and Facilities

Major agro-processing industry in the province is the rice processing and production of cattle-feed. In 1994 there were 112 KUD which owned rice milling units of 0.5 ton/hour capacity each. There were 10 private enterprises producing a total of about 991 tons per year.

In 1994 Lampung had a traditional slaughtering capacity of 19,026 heads per year and it was 100% utilized. Part of the product was shipped to Jakarta through private traders. There was no proper processing facility in the province.

Marketing Area of Major Farm Products, Distribution System

Major marketing destinations of farm products from Lampung have been Jakarta, and Lampung itself. Cash crops, vegetables and fruits generally move into Jakarta. A typical sample of marketing of sugarcane (KUD Karya Maju) is given below:



Business Customs and its Practice (Pricing, Accounting Settlement)

These practices are more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability. The terms are generally cash-upon-delivery of goods. However, for larger values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be enumerated as under:

a) **Rice:** The procurement is under the government programme. The procurement price is fixed by the government. The farmers sell their paddy/rice to the KUD against this fixed price. The KUD pays the farmers in cash and rarely through their accounts in the cooperative. The surplus paddy/rice is sold by the farmer in the open market, generally to the trader who comes first to his house with cash in hand. In this case the terms are usually cash. In many cases, a token advance payment is also made to the farmers for the next crop.

b) **Vegetables:** The transactions are cash-and-carry from the road head. In the case of farmer bringing the crop to the open market, he returns home with cash in hand. The KUD in the province do not deal in vegetable business. The transactions are between the KT/households and the traders. In some cases the KUD organises contacts between the traders and the farmers.

c) **Cash Crops:** Except for clove, all transactions are on cash-and-carry basis.

FINDINGS OF COMMISSIONED SURVEY-II ACTUAL SITUATION OF AGRICULTURISTS AND THEIR DEMANDS

Situation of Holding of Farm Machinery and Facilities

81.66% of the 60 farm households surveyed in the area of operation of three KUD (KUD Usaha Bersama, KUD Kencana Jaya and KUD Triwidodo) were engaged in farming. The main family income is also from farming. On an average 49% of the family income is derived from paddy cultivation (the highest being 74.6% in the case of KUD Triwidodo area and the lowest 32% being in KUD Usaha Bersama area). The other crops, though insignificant, are maize, cassava, sweet potatoes, some fruits like rambutans, bananas and some cash crops like coconut, coffee, cocoa and pepper. The farmer-members have acquired some farm machineries, equipment and facilities. Among the most expensive ones are 4-wheel tractors (Triwidodo-2 and Usaha Bersama-1). The highest concentration of farm machinery was in respect of pest control - hand sprayers-41, mist blowers-23 and power sprayers-25. There were some harvesting and storage equipment e.g., fan-mills-6, comb threshers-7 and containers-7. the highest concentration of farm machinery has been among the household families of KUD Triwidodo.

Produce storage facilities owned by the members of the three KUD include, on an average: Farm produce storage 1450 m²; farm equipment garage 36.6 m²; cattle shed 174 m²; and poultry house

Except for the 4-wheel tractors, rest of the farm machinery and equipment is locally assembled in Indonesia. Most of the farm machinery has been purchased from private traders. Two farm households out of ten in the Triwidodo area have purchased their farm machines on 100% basis from their cooperative. Similarly only one farm household from among 20 of the Usaha Bersama KUD, had purchased its farm machinery on 100% basis from the cooperative.

Measures for Obtaining Production/Consumer Goods (Situation of Using KUD)

The KUDs have been used by the members to sell bulk of their paddy at government-guaranteed prices (using the Bulog/Dolog channels). The KUDs have also been used by the members to purchase some of the controlled commodities which are sold by the KUD at regulated prices. Otherwise the farmers have been free to use any channel which appears to them to be more economically advantageous. 91.5% of the farmers purchased chemical and organic fertilizer from their KUDs. 46.6% of the farm household purchased their 100% requirements from their cooperatives. 55% of the members had purchased their other requirements from their KUD, but only 21.6% of the household purchased their 100% requirements from their cooperatives. These requirements included: paddy seeds, farm machines, small farm tools, packaging material, consumption items like rice, fish, other food stuff and some clothing. The highest utilization of the KUD facilities has been to purchase fertilizer and farm chemicals including some seeds.

On an average, farmers get 49% of their agricultural income from rice cultivation; 19% from cash crops; 8.3% from vegetables and fruits; 5.3% from livestock, dairy and poultry, and 17% from other agricultural operations (see table below).

Break-Up (Percentage) of Agricultural Income of Farm Households : 3 KUD Areas in Lampung Province

Source of Income	USAHA BERSAMA	KENCANA JAYA	TRIWIDODO	Av. %
Rice	74.6	42.0	32.0	49.0
Livestock/Dairy	11.0	3.5	2.0	5.3
Fruits & Veg.	4.4	1.7	19.0	8.3
Cash crops	3.7	26.5	28.0	19.0
Other income	6.3	26.5	19.0	17.0

The highest income-generating factor has been paddy, followed by cash crops and a few other factors.

The household expenses, on an average, have been found to be as follows: Food 54%; Clothing 13%; Education 11.6%; Housing 6.3%; Ceremonies and social activities 5.3%; and others 9.6%. The table below shows the break-up of household expenses:

Break-Up (Percentage) of Household Expenses

Expenses	USAHA BERSAMA	KENCANA JAYA	TRIWIDODO	Av. %
Food	66.7	47.1	49.2	54.0
Clothing	12.7	11.7	14.4	13.0
Housing	4.6	6.6	7.0	6.3
Education	6.8	9.9	18.0	11.6
Ceremonies	4.3	8.4	3.6	5.3
Others	4.3	15.8	7.8	9.6

In the life of a farm household KUD's two outlets, the Waserda and the Kiosk, play an important role - where from the goods are purchased and where the goods are sold. The farmer needs not only the farm inputs but also the animal/poultry feed.

The farm households have been making use of the small consumer stores, waserdas or kiosks owned by their 3 KUDs. Although the members have expressed their satisfaction with the existence of these stores (sales outlets), they have made some comments on their operations. Some of the observations have been: they are of an average type (18.3%), they stock too few items (25%), they should be brighter (6.6%). Several respondents wanted these waserdas to be renovated to be useful.

In addition, the farm households have made use of the purchasing business facilities of their KUD in the form of kiosks and warehouses. Members have found these to be good but expressed that they all needed improvement: these are too small and too far (31.6%); and these need renovations to be useful and effective (35%).

Merchandise Ratio and Marketing Methods of Farm Products (Situation of Using KUD)

Main crops which are on procurement list of the government for purposes of national food-stock are generally offered by the farmer-members to their KUDs. These are sold by the members at government-designated prices. Whatever is left behind, the members sell in the open market on "cash and carry" basis because they needed money for their own use and for next cultivation. 31.6% had distributed their products through paddling in the market. All others sold their products in the open market or to their favoured traders.

In the case of cash crops, fruits and vegetables, poultry and dairy products, members sold their products directly to the concerned dealers because the prices they received were always in cash. Some of them carried their farm products themselves to the nearby town centres and sold them there against cash.

Intention to Introduce Farm Machinery and Facilities

Some of the farm households have been using power-driven farm machines with a view to conserve energy and to increase the

agricultural production. Farmers of Triwidodo and Usaha Bersama have been ahead of KUD Kencana Jaya. In view of expanding situation of industrial development, farm labour shortage is increasingly felt. Introduction of farm machines, though simple ones, can help overcome the farm labour shortage. In response to the survey, the farm household members had indicated the mechanization of some of the farm operations (see table below).

Farm Households' Intention to Mechanise Farm Operations

Intention to Mechanise	USAHA BERSAMA	KENCANA JAYA	TRIWIDODO	Responses Received	Av. %
Tilling	04	08	08	20/60	33.3
Rice Transplanting	11	04	02	17/60	28.3
Harvesting	09	04	03	16/60	26.6
Threshing	06	06	06	18/60	30.0
Drying	06	01	04	11/60	18.0
Transportation	02	02	05	09/60	15.0
Feeding Machines	02	01	04	07/60	11.6
Milking	--	--	--	--	--
Others	01	--	--	01/60	--

These responses out of 60 were: Tilling-20 persons 33.3%; Threshing-18 persons 30%; Rice transplanting-17 persons 28.3%; Harvesting-16 persons 26.6%; Drying-11 persons 18%; Transportation-9 persons 15%; Feeding Machines-7 persons 11.6%.

With the increase of farm machines and the projected mechanization of farm operations, there would also be the need for setting up farm machines service centres/automobile workshops etc. There will also be the need for providing appropriate training to the farm machine operators besides instituting some vocational training to the members of households.

Evaluation and Demand for Business Activities (Purchasing, marketing, processing, joint shipment, joint-use facilities, terms of loan, farm guidance, better-living guidance and others)

In the light of the results of the farm household surveys carried out on a selected group of members (60 households) of three KUDs, it has been found that the members desire to enhance the operations of their KUDs so that they are able to get better and timely economic services (see the table below).

Expectations of the Farm-Households from Their KUD

Expectations	Average %
-Upgrading Kiosks and Waserda ...	46.6
-Kiosks: Expansion of Items Range ...	35.0
-Waserda: Expansion of Items Range ...	35.0
-Establishing Joint Purchasing ...	81.6
-Establishing Joint Marketing ...	81.6
-Establishing Joint-Use Facilities ...	81.6

-Renovate & Expand Rice Milling Facilities	...	35.0
-Improve/expand Warehousing Capacity	...	35.0
-Improve/Expand Assembly Hall	... ..	31.6
-Expand Loan Variety	... ..	61.6
-Increase Existing Credit Limits	... ..	61.6
-Increase Farm Production Guidance	... ..	31.6
-Increase Fertilizer Guidance	... ..	21.6
-Increase Better-Living Guidance	... ..	11.6

Warehousing and kiosks facilities are too small and need expansion (46.6%); range of goods and their quality need improvement (26.6%); waserdas are too small and need further expansion and improvement (35%); joint marketing, joint purchasing and joint-use facilities through KUD need to be encouraged (81.6%); variety of loans extended and the maximum credit limit to be increased (61.6%); to help overcome the problem of low fertility of land and proper shipment of agricultural produce, intensive farm guidance activities need to be instituted, e.g., better farming techniques (31.6%), fertilizer application (21.6%), and grading and packaging (11.6%); to promote a greater interaction with the member and their family members, and the assembly halls need expansion and improvement (31.6%). No regular better-living guidance exists.

**HAMPERING FACTORS AND POSSIBILITIES
FOR AN INTEGRATED DEVELOPMENT OF KUD**

**Hampering Factors:
Marketing Business**

The following hampering factors were observed:

- 01 Lack of understanding and acceptance of joint marketing system;
- 02 Serious lack of capital;
- 03 Lack of business relations among the KUD and with the secondary level cooperatives;
- 04 Unfavourable purchasing policies of the private processing industry e.g., sugar, rubber and cassava, putting the KUD members to great price disadvantage;
- 05 Serious lack of warehousing, transportation and utilisation facilities;
- 06 Lack of electric supply, telecommunication, banking facilities;
- 07 Farm production planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-charge of farm guidance;

- 08 Due to outdated and low-capacity rice milling units, KUD fail to meet the Bulog quality standards for rice procurement.

**Hampering Factors:
Purchasing Business**

The following hampering factors have been noticed:

- 01 Lack of business relations among the KUD and with the secondary level cooperative organisations;
- 02 Lack of capital;
- 03 Due to lack of space and shortage of capital, KUD waserdas and TPK unable to supply farm machines, farm input and consumer goods;
- 04 Lack of understanding and acceptance of joint purchasing systems;
- 05 Serious lack of warehousing, transportation and utilisation facilities;
- 06 Lack of electric supply, telecommunication, banking facilities;
- 07 Farm production planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-charge of farm guidance;
- 08 Lack of supply of quality seeds.
- 09 Lack of business information and communication.

**Possibilities:
Purchasing Business**

In order to satisfy the purchasing needs of the farmer-members and to increase the purchasing business of the KUD in Lampung, the following possibilities exist:

- 01 In view of large paddy processing, cultivation of cassava, pineapple processing factories in the area and vast potential for livestock development, it is possible for KUD to establish cattle-feed formulation plants and supply it to the farmers;
- 02 In order to enable the farmers to procure their farm implements, inputs and consumer goods and to increase the purchasing business of the KUD it is possible to for them to increase the number of waserdas and TPK to supply more of farm machines, implements and processing equipment;
- 03 Adopt joint purchasing system;

- 04 To provide timely and adequate financial support to the farmer-members to obtain sufficient quantities of inputs, it is possible for the KUD to tap various sources, external and domestic, to obtain interest-free or low-interest credit;
- 05 To ensure a continuous supply of inputs and consumer goods it is possible for the KUD to develop a business network with the secondary federation (Puskud), wholesalers, and manufacturers on a joint purchasing basis;
- 06 To manage the purchasing business of the KUD efficiently and to meet with the demands of the members, it is possible for the KUD to arrange on a continuous basis the training of managers and key members on business management.

THE RECOGNITION OF SPECIFIC CHARACTER OF KUD

There are 255 KUD in Lampung as of 31st December 1995. 165 of them (64.7%) are KUD Mandiri, which is 106% of the national average of 60.7%.

[1] Relatively medium scale of management and lower ratio of membership coverage.

- a. The average number of members of KUD is 1004 which is 69.4% of the national average of 1446 members per KUD;
- b. The average number of employees is 45.3 persons per KUD which is 562.5% of the national average of 8.30. This is because some of the KUD employ a larger number of estate workers. The ratio of number of managers in KUD is 0.8 per KUD, the same as that of national average;
- c. On an average the total business volume is Rp 478.7 million per KUD which is 78% of the national average;
- d. The SHU on an average is Rp 4.5 million which is 71.4% of the national average;
- e. The average assets is Rp 193.9m per KUD which is 85% of the national average.

[2] The main business is fertilizer distribution, paddy procurement and rice milling. Rice mills are of low capacity. Warehousing capacity is low. Drying floors are in bad shape. Other business include: collection of products of rubber and sugarcane smallholders, cloves, chillies, sale of consumer goods and farm inputs, telephone kiosks, and electricity bills handling. Although cassava is widely grown, very few KUD are directly involved in this business.

[3] All KUD are keen and positive to develop additional business, such as: livestock, using corn and cassava for cattle-feed, horticulture and sugarcane cultivation but due to acute shortage of capital and farm machines are unable to do so.

Transport equipment is inadequate.

- a. Almost all Chairmen requested to provide them with working capital on soft loan basis to undertake new businesses;
- b. All KUD requested for expansion of rice milling and transport equipment;
- c. One KUD requested specifically for hand tractors and cattle-feed processing facility. Another KUD requested for heavy duty tractors for sugarcane cultivation.

OUTLINE OF THE MASTER PLAN

Suggested Directions to Expand KUD Business

Purchasing Business

Establishment of Purchasing Business Method such as Joint Procurement

- 01 In order to maintain a steady and timely supply of farm inputs, and at reasonable prices, it is necessary that a joint procurement system is established by the KUD.
- 02 A comprehensive farm production plan be developed by the farmer-members with the full involvement of the KUD and the KTs with the following objectives in view:
 - Estimated production of each commodity (horticulture, livestock, poultry, cassava, rubber and sugarcane);
 - Estimated needs of fertiliser, seeds, farm machines and implements and guidance with a time-frame; and
 - estimated credit required.
- 03 KUD to invest in transportation facilities for movement of goods for waserda and raw material for production of cattle-feed;
- 04 KUD to procure raw material e.g., pineapple waste, for production of low-cost cattle-feed;
- 05 A joint procurement system, adequately supported by a market information/communication system, could be developed with the help of secondary level organisations e.g., Puskud.
- 06 KUD to establish members' accounts.

Improvement of Purchasing Outlets

- 01 Enlist collaboration of secondary level organisations or wholesale agencies to secure constant supply of farm inputs, machines and consumer goods at reasonable prices on

joint purchasing basis;

- 02 Increase the number of waserdas and TPK and provide quality merchandise and service;
- 03 KUD to establish farm machines service centre at the district level as well as at the provincial level.

Obtaining Contracted Buyers

The province has a good potential for livestock development because of vast areas and a good crop of cassava and an active rice milling business. There is high availability of cassava, sugarcane tops, corn, rice bran and pineapple waste. The KUD have not been engaged in the production and supply of feed thereby losing a lot of business to private enterprises. It is, therefore, necessary to:

- 01 Establish a joint purchasing system in feed, cassava and corn processing;
- 02 The KUD, in association with secondary level business organisations, could help negotiate long-term agreements with the sellers.

Marketing Business

Organising Producers' Groups (including adoption of new commodities to be promoted)

- 01 To increase the quality of farmers' produce, special farmers groups e.g., paddy, rubber growing, sugarcane growers, cassava growers group be organised;
- 02 To increase the quality and quantity of rubber, sugarcane and cassava;
- 03 Instead of laying emphasis on growing cassava, farmers should diversify farm products e.g., corn, horticulture, sugarcane, cash crops like coconut, rubber;
- 04 Emphasis be laid on rearing livestock and poultry;

Establishment of Marketing Business System such as Shipment Control, Pooling Calculations

- 01 KUD to produce cattle-feed by using pineapple waste, cassava and corn for supply to the farmers to develop livestock business;
- 02 KUD to establish rubber, sugarcane and cassava collection centres and support them by additional transport equipment;
- 03 KUD should encourage joint marketing of members' produce to negotiate with the traders and settle accounts based on pooling calculations.

Provision of Information on Price to Members

KUD in association with Mandiri Inti and Puskud should develop a market information system by using radio broadcasts.

Obtaining Contracted Buyers

Long-term contracts be developed with local processors to ensure a constant marketing of farm produce e.g., with rubber, sugar and cassava processing industries.

Agro-Processing Business

Improvement of Rice Milling Technology/ Needs of the Transmigration Areas of Lampung

- 01 Improvement in capacity and expansion in quantity the rice milling facilities;

Improvement of Storage and Processing Technology of Farm Products and Practices

- 01 Increase drying floors, rice processing and warehousing facilities;
- 02 Establish feed-mixing plants for production of low-cost cattle-feed using cassava, pineapple waste and rice bran;
- 03 Increase transportation equipment such as trucks;

Rationalization of Management of Relating Facilities

- 01 Establish systems for management of mixing plants, joint livestock farming and transportation management;
- 02 Obtain the feed ingredients on joint purchasing basis;
- 03 To overcome shortage of funds, adopt joint capital concept together with neighbouring KUD;
- 04 Provide financial and technical assistance including low-interest or interest-free soft loans to KUD to set up and improve these facilities;
- 05 Provide necessary information and training to farmers in improving the quality and quantity of their products, especially rice, livestock and cash crops.

Obtaining Contracted Buyers

Establish joint ventures and long term agreements with the processing industries e.g., sugar, rubber and cassava processors.

III GENERAL REVIEW OF THE PROVINCIAL SITUATION [LAMPUNG]

1. Social Life in Rural Areas

The population in the province of Lampung is 6,018,000 according to the Statistical Yearbook of Indonesia, 1994 published by the Central Statistics Bureau-BPS. In the total population, 2,785,000 people are working of which 2,018,000 is engaged in agriculture. Except for the agricultural sector, to find employment opportunity or absorb the excess labour force in other sectors seems difficult. In other words, agriculture, being the highly labour-intensive industry, is the most important industry in the province.

The original society of the Lampung peoples, has its own traditional law. That traditional societies differs from one society to the others. Those societies live in different places in the province. In general, that society can be grouped into two major groups, namely "Peminggir" who live along the coastal areas such as Krui, Ranau Komering and Kayu Agung and "Pepadun", who live inland of Lampung, consist of traditional societies Abung (Abung Siwo Migo), Pubian (Pubian Telu Suku), Menggala/Tulang Bawang (Migo Pak) and Buay Lima.

Traditional ceremonies are commonly characterized by wedding ceremony which is conducted according to the traditional customs and Islamic traditions adapted to their own customs and style.

The customs and weddings ceremony of the Papadun tradition are generally seen in "Jujur" weddings, according to the Patrilineal line which is distinguished by giving some money to the bride in order to prepare "Sesan" such as household appliance. This "Sesan" will be given to the bridegroom family during wedding ceremony. It is also as a formal ceremony in which the bride is handed over to the bridegroom's family, meaning that traditionally the relation between the bride and her parent has been closed. This wedding ceremony is similar in the customs of Hibal Serba, Bunsang Aji, Ittar Padang Ittar Manom (Cakak Manuk) and Sembangan.

In many ways genealogical characteristic are dominant in Lampung social pattern as it involves a traditional law based on legal relationships as well as on blood relationships. The principles of daily life in Lampung society are distinctive and revealed in five principles as follows:

1. Pi'il Pesengiri (Self-esteem)
2. Sakai Sambayan (Unity)
3. Nemui Nyimah (Charity)
4. Nengah Nyappur (Improvement)
5. Bejuluk Beadek (Call-name)

"Pi'il Pesengiri" is all that concerns self-esteem and behaviour. It is a means of preserving self-esteem and status privately as well as collectively. Lampung will sacrifice everything (including their lives) to defend their Pi'il Pesengiri. On the other hand, by applying Pi'il Pesengiri, one can do anything, even though this can have a negative material effect as well.

"Skai Sambayan" consists of actions and ideas based on mutual assistance. "Shoulder to shoulder" and this is not merely limited to the material meaning, but includes spiritual values of unity. "Nemui Nyimah" means being kind hearted and friendly to everybody in thought and to be polite to guests. "Nengah Nyappur" is the part of the culture that strives to improve and change for the good of the individual and society. "Bejuluk Beadek" is based on the "Titei Gemattei" which has been inherited from generation to generation long ago. The basic decision-making process that obeyed (Titei Gematei) including, that is, a nick name for anyone who is not married (Bejuluk) and after marriage a granting of Adek (Beadek) in the course of a certain traditional ceremony.

The ratio of religious followers in the province are as follows:

Moslems	...	...	...	94.4%
Hindus	...	...	...	2.3%
Protestants	...	...	...	1.6%
Roman Catholics...	...	...	...	1.0%
Buddhists	...	...	...	0.6%

2. Legal Bases for Handling of Farm Products

Although no data are available from the report of the commission survey, the situation seems almost the same with other provinces.

3. Distribution of Commodity for Agricultural Production

3.1 Agricultural Chemicals: Farm input materials include chemical fertilizers and farm chemicals such as insecticides, pesticides, rodenticide, fungicides and herbicides.

The distribution of farm chemicals is through KUD or private channels. The main producers of these farm chemicals are Bayers, Ciba, PT Petrokemia Kayaku and others. While the main concentrates are imported, the formulations are done in Indonesia according to requirements.

Chemical fertilizer is produced by several State-owned companies but the distribution of urea is coordinated by PT Pusri. Fertilizer is distributed from company-owned warehouses which are located at Kecamatan level. This network is available throughout the country. The KUD pick up their requirements from those distribution point. KUD, in turn, distribute the fertilizer from their own warehouses or through the TPK on the basis of pre-arranged delivery schedules.

The quantity of farm chemical distributed in the province is shown in the following Table:

Farm Inputs	Year 1990		Year 1993	
	National	Lampung	National	Lampung
FERTILISER				
No. of KUD	3,550	102	3,461	103
Urea (Tons)	1706,547	33,897	3737,760	83,640
All Others (Tons)*	1341,910	33,046	2293,965	65,541
PPC & ZPT (lt)	-	-	928,811	734
Others (Tons)	33,224	41	56,503	4
FARM CHEMICALS				
No. of KUD	1,647	47	934	30
Insec. lqd ('000lt)	6,782	27	361,155	13,502
-"- not lqd (Tons)	3,992	34	2588,977	20,615
Rodenticides (Tons)	2,496	35	9,001	56
Fungicides (Tons)	827	101	100,363	225
Herbicides (Tons)*	243	12	15,869	381

*includes: TSP, DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

3.2 Vinyl Sheet/Plastics: The vinyl sheeting is mainly used as protective against rains, for nurseries, rubber and other plantations and packaging. Several private companies have been producing the vinyl sheets, bottles and bulk material. Their quantity is as follows:

Vinyl sheets	64,000,000 square metre sheets/year
Bottles	7,200,000 per year
Bulk material	1,380 tons/year

Most of the material is consumed in South (20 million square metre), Central (480 tons) and Bandar Lampung (44 million sheet, 7.2 million bottles and 900 tons bulk material).

3.3 Cattle-Feed: The population of livestock in the province is fairly small except beef-cattle and local chicken. Accordingly, animal-feed production is insignificant. In 1994, a total of 991 tons of compound feed was produced by 10 private formulators using a variety of ingredients e.g., banana chips, bakery, fish and shrimp flour, and cassava. Some of the requirements are imported from outside the province. Some of the KUD have small cattle-feed units but the production is small.

4. Distribution of Farm Machineries

The following Table indicates the availability of farm machinery in the province during the years 1984, 1993 and 1994.

Type of Farm Machines	1984	1993	1994	% of 1993
2-Wheel Tractors	52	887	1,291	145.5
Tractors/all types	153	424	451	106.3
Hand Sprayers	42,812	77,884	80,946	103.9
Other Pest Control Eqpt	889	3,199	3,686	115.2
Threshers	2,038	14,900	12,035	80.7
Paddy Processors	3,569	4,723	4,635	98.1
(out of which, RMU)	--	(1,775)	(1,631)	(91.8)
Water Pumps	--	305	389	127.5

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

As is seen from the table, there was an increase in the number of hand sprayers in 1994 as compared with that of in 1984. A majority of farm machines are within KUD sector. Some of the equipments have been imported mostly from Japan, and some have been locally assembled. Some of the equipment was made available to KUD under OECF loan and Kennedy Round Programmes. Farm machines are available in the open market or are bought from the Jakarta market. KUD do not sell these machines except for some small farm equipment and implements. Servicing and spare parts are easily available.

5. Production and Demand of Major Farm Products

The following Table shows the production of paddy/rice and palawija crops and their distribution. Most of the products have been consumed within the province itself.

Commodity	Production (Tons)	Distributed in Province	Distributed outside Province
Rice	1760,450	1760,441	-
Corn	843,151	513,443	231,308
Soybeans	204,978	30,243	73,135
Cassava	2304,524	1691,031	613,493

Source: Department of Agriculture, Lampung 1995

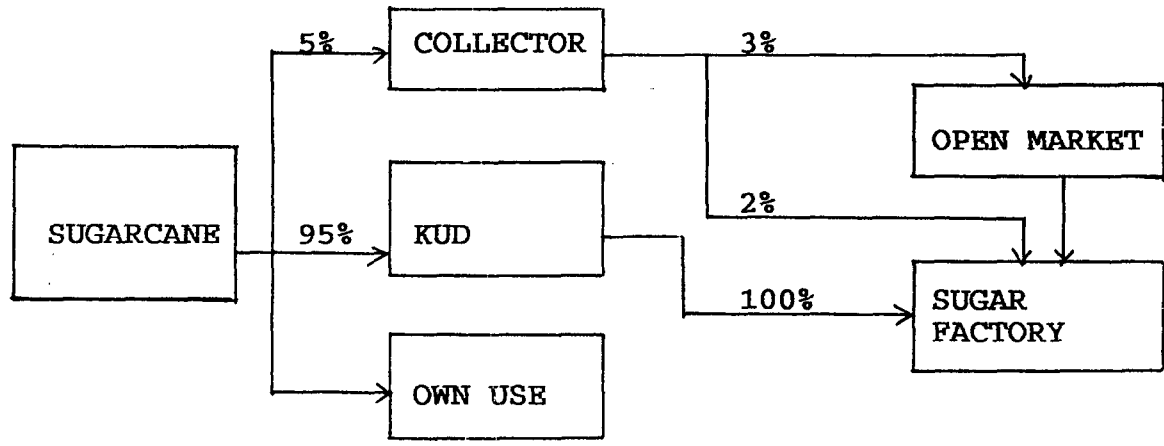
Other agricultural products include vegetables and some fruits which are shown in the Table below. Most of the products are sold to wholesalers for shipment to Jakarta. The balance is consumed within the province itself.

Commodity	Production (Tons)	Distribution in Lampung	Distributed outside Lampung
Vegetables	1356,904	604,106	762,098
Onions	2,035	757	1,278
Cucumber	2,401	2,401	-
Chilly	24,404	19,866	4,538
Banana	115,657	25,275	90,382

Source: Department of Agriculture, Lampung Province, 1995

As for livestock products, the population of dairy cattle in the province is only 2,000 heads. Accordingly, the distribution of milk was 15,120 litre from private sector in 1994. There are some capacity of slaughtering in the province, but no data are available for beef production from the commission survey report.

The characteristic of agricultural production in Lampung is estate crops. The production of coffee is the biggest in the country. The production of coconut, pepper and sugarcane are dominant. A typical flow chart of marketing for sugarcane is shown in the following flow chart.



6. Agro-processing Activity

6.1 Paddy Processor: There are 4,635 paddy processor in the province. Out of which 1,631 are rice mill units. Nearly all KUD owned paddy drying platforms and small warehouses to hold paddy and rice. KUD has 112 rice milling units. All of them are of 0.5 ton/hour capacity.

6.2 Other Processors: There is no agro-processing industry within the cooperative sector. The milk production is very small. No processing of poultry is undertaken in the cooperative sector, except that they help procure the raw material including eggs, and ship it to the consumer centre of Jakarta through traders and their agents. Judging from the production of cassava and estate

crops, they should have sugar mills and cassava processing units to produce flour, chips and pellet. No data are available from the commission survey report.

7. Business Transactions for Agricultural Products

The practices are more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability and perishability. The terms are generally cash-upon-delivery of goods. However, for larger values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be summarized as follows:

Rice: The procurement is under the government programme. The procurement price is fixed by the government. The farmers sell their paddy/rice to KUD against fixed price. KUD pays farmers generally through their account in the cooperative. The surplus paddy is sold by the farmer in the open market, generally to the traders who comes to his house with cash in hand. In this case, the terms are cash, and in many cases, a token advance payment is also made to the farmers for the next crop.

Vegetables and Fruits: The transaction are usually cash-and-carry from the road-head.

Cash Crops: Except for clove, all transaction are on cash-and-carry basis. The price for clove procurement is fixed by the government. Payments to the farmers are made through KUD.

Poultry: Generally terms are cash-upon-collection from the producer. The middleman, in turn, either sells the commodity on cash terms to the retailer or payment-after-sale basis.

JICA-JAPAN INTERNATIONAL COOPERATION AGENCY
JA/ZENCHU-CENTRAL UNION OF AGRICULTURAL COOPERATIVES-JAPAN
MINISTRY OF COOPERATIVES AND SMALL ENTERPRISES DEVELOPMENT
GOVERNMENT OF THE REPUBLIC OF INDONESIA

**STUDY ON INTEGRATED DEVELOPMENT OF RURAL COOPERATIVES-KUD
IN THE REPUBLIC OF INDONESIA 1996-1997**

ECONOMIC BUSINESS OF KUD INCLUDING AGRO-PROCESSING SECTOR

03 WEST JAVA

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03 WEST JAVA

I. SUMMARY OF FINDINGS AGRO-PROCESSING, DISTRIBUTION AND KUD SITUATION

AGRO-PROCESSING & DISTRIBUTION

Major items of farm products in the province have been: Rice, potatoes, tomato, green vegetables, seasonal fruits, tea, dairy and livestock products. Some of the KUDs in the highland areas are actively engaged in the handling and marketing of farm products like potato, tomato, beans and milk. The KUD help organise farmers' groups which produce items of their choice and supply them to the local market and to the wholesale markets in Jakarta through the agents of traders. The traders, through their village level network, collect the items and despatch them, on their own and against cash payments, to Jakarta for disposal. Indofood, for instance, also picks up potato from a number of highland areas for its processing factory.

Indomilk, Fresian Flag and other private milk processing companies make an extensive use of the milk cooperatives/KUD to secure supplies of their milk requirements.

No processing of farm products is done by the KUD, except for cleaning up the products and packing them up in sacks. KUD Pasir Jambu is one of the few having entered into an agreement with the Hero Supermarket to supply grade-1 vegetables according to the specifications laid down by the supermarket. The KUD does a part of packaging on behalf of the supermarket. The packaging material is supplied by the supermarket and the goods are lifted in its own trucks from the KUD collection centre.

Soybean is converted into tahu and tempe products. The KOPTIs have flourished because of the high demands of their products. Soybean is also imported to supplement the local production.

The technical level of agro-processing in the province can be classified into three levels: primary, intermediate and final. All agro-processing is in the private sector. At the primary level, the KUD are engaged in the collection and distribution of basic agricultural products e.g., vegetables, poultry, livestock and milk. At the intermediate level, the processing of agricultural products is limited to cooling/chilling of milk, raising of dairy cattle, chicken, production of cattle-feed, drying and semi-processing of tea leaves, traditional production of potato and cassava chips, tahu and tempe.

The GKSI (the Union of Indonesia Dairy Cooperatives) does some pasteurisation of milk at its plant in Bandung. The final level of processing of agricultural products is with the private

enterprises. In some of the Kabupatens, there are government-owned and operated traditional slaughter-houses (beef-slaughtering capacity of 57,821 tons in 1994). The tea processing is done by private companies. The Indofood, for instance, does a major processing in consumer food sector.

A major intermediate level of processing rests at the KUD level through the rice milling units. The KUD, being the government-designated rice procurement infrastructure, were provided, under various development assistance programmes in the past, with rice milling units, warehouses, drying floors and some basic facilities to ensure a constant supply of rice to the national food stock. Most of the KUD own drying floors and some simple rice processing equipment e.g., dryers, polishers etc. However, bigger rice mills are still in the private sector which cater to the open market requirements. The following table shows the availability of rice mills in the province during the period 1985-1994:

Particulars	1985	1994	% of W. Java	% increase over 1985
WEST JAVA				
-Owned by KUD (Nos)	98	513	-	523.4
-Owned by non-KUD (Nos)	14,486	19,301	-	133.2
-Milling Cap. (Tons)	6484,100	8312,949	-	128.2
BANDUNG DIST				
-Owned by KUD (Nos)	5	15	2.9	300.0
-Owned by non-KUD (Nos)	1,141	1,459	7.5	127.8
-Milling Cap. (Tons)	323,189	414,345	5.0	128.1
GARUT DIST				
-Owned by KUD (Nos)	-	28	5.4	-
-Owned by non-KUD (Nos)	753	1,018	5.3	135.1
-Milling Cap. (Tons)	288,288	369,600	4.4	128.4

Similarly in the sector of milk handling, in 1994, there were 454 KUDs and 25 milk cooperatives which had distributed 204 million litres of fresh milk. The following table gives the status of milk handled by KUD in the districts of Bandung and Garut as compared with the collections at the provincial level:

Location	KUD	Milk Coops	Total Milk Handled/lt	% of West Java
West Java	454	25	204,796,074	-
-Bandung Dist	47	7	143,351,401	70%
-Garut Dist	35	5	27,513,495	14%

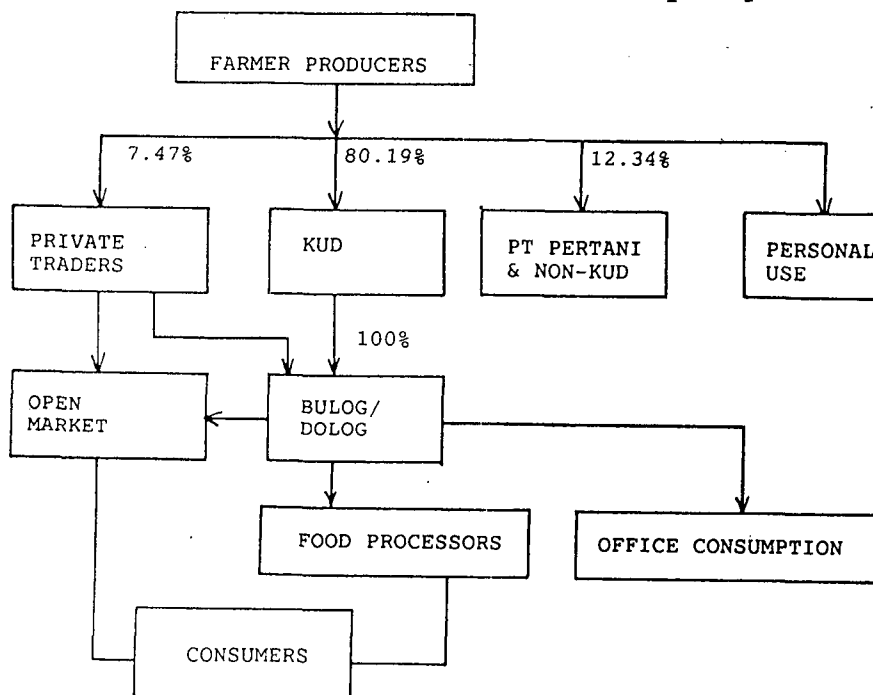
Source: Kanwilkop-West Java, 195. Bandung

Milk processing facilities include: cooling and chilling installations, pasteurisation, cheese and sterilisation equipment. The GKSI's (Bandung milk treatment plant) processing capacity is 270,000 lt per day, while the performance is 246,000 lt per day - 91% of the installed capacity.

KUD do not undertake any poultry processing activity. They act as mere distributors. However, the role of KUD in organising farmers' groups in these sectors is significant. In 1985, a total of 23.7 million broiler/local chicken were produced, while in 1994, the number rose to 146.6 million (612%). A similar trend is noticed in Bandung and Garut districts, as is shown in the table below:

Location	1985	1994	Percent
WEST JAVA	23.76 m	146.62 m	612%
BANDUNG DIST	1.98 m	11.11 m	561%
GARUT DIST	0.69 m	3.36 m	487%

As for distribution of rice, major destinations are two: national food stock and the open market. The FLOW CHART below shows the procurement and distribution channels of paddy/rice in the province:

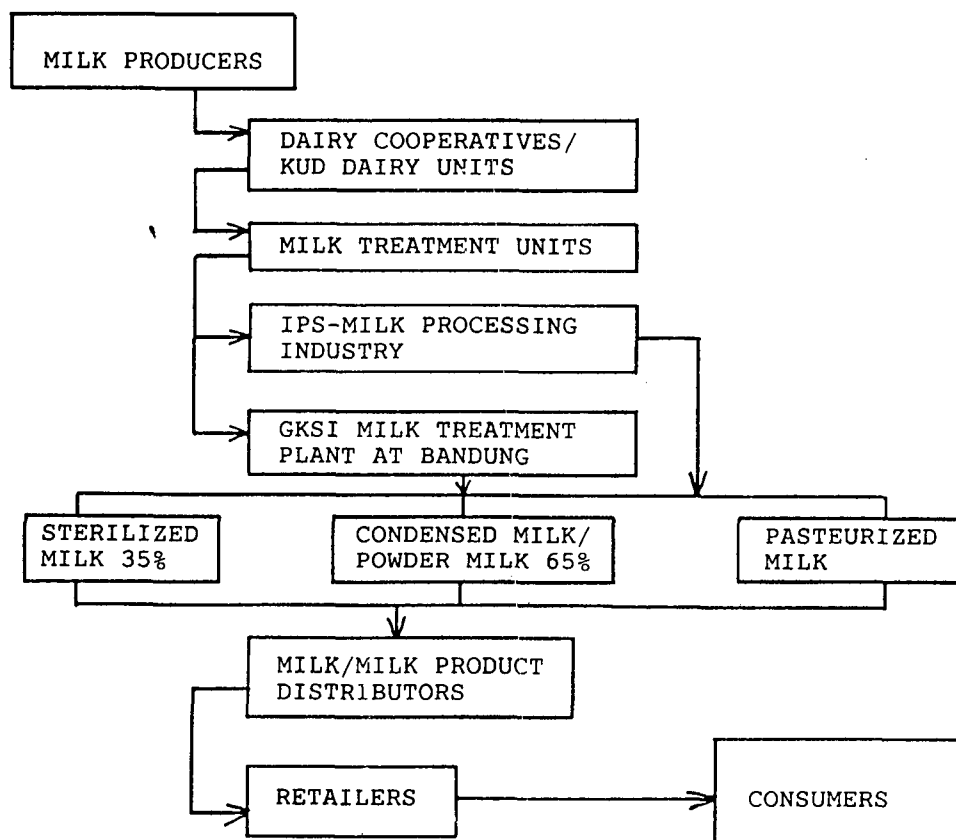


The success of distribution system depends on the quantity, quality and kind of the products. For other agricultural products, mainly vegetables, fruits and some cash crops, the major destinations are the wholesale markets of Jakarta, Bandung, Serang and Cirebon. Some of the major supermarkets obtain their farm products through the farmers' groups (Kelompok Tani-KT) and

the KUD. The known instance has been the KUD Pasir Jambu which has a business agreement with the Hero Supermarket in Jakarta. Another KUD in Kab Bandung, KUD Sarwa Mukti, has also specialised in handling fresh vegetables, but not doing any value addition or processing. In Kab Garut, the KUD Bayongbong is also engaged in horticultural activities, but no processing is undertaken.

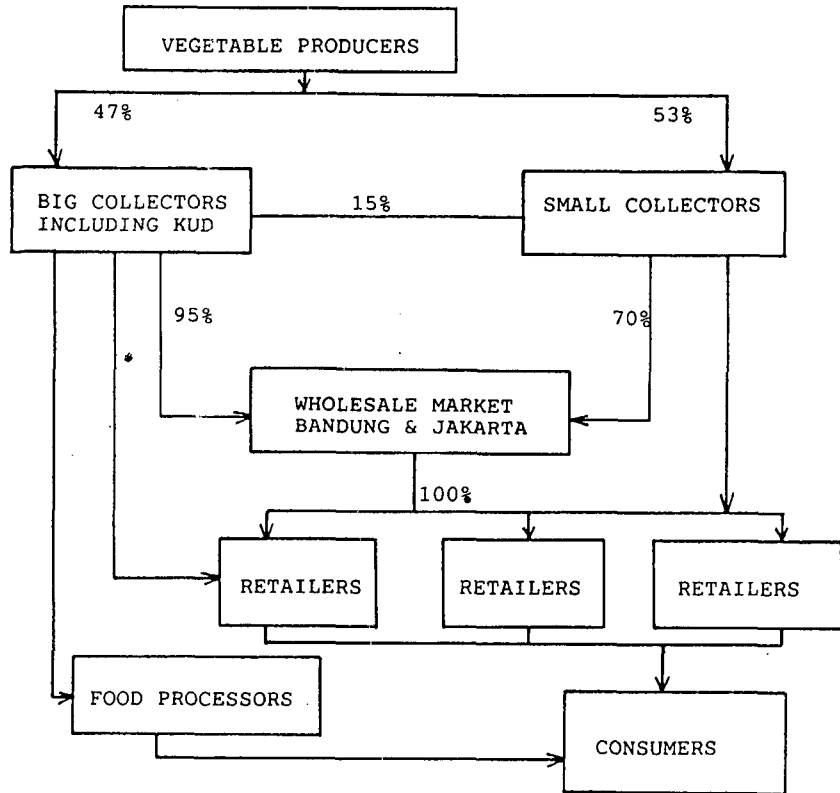
Tea processing industries within the province handle nearly the entire produce of the tea plantations for processing, packaging and distribution. KUD are not engaged in tea processing because of the high investments. Nearly 75% of the coffee produced in the province is consumed locally. The Inkud, in association with the Puskud-West Java, purchases nearly the entire produce of cloves of the province and holds it in stock for future distribution among the kretek cigarette manufacturers. The Puskud-West Java does not operate any agro-processing facilities except for two rice mills in Karawang and Indramayu.

The fresh milk is shipped to major private milk processing factories (IPS) located in and around Jakarta. The surplus is processed by the GKSI at its own facilities located at Bandung. GKSI products (Susu Alam Murni) include fresh milk, yogurt and flavoured milk. The following Flow Chart explains the collection and distribution channels of milk in West Java:



In the production of potato and tomato, Bandung and Garut districts have been outstanding by tonnage as well as by area cultivated. By tonnage, Bandung district had a share of 65.3% of the total production of potato in the province, while for Garut

it was 13.1%. By the area cultivated, Bandung and Garut had a share of 41.6% each of the province. In the case of tomato tonnage, Bandung district had a share of 36.3% and Garut 19.1% of the province total. Bandung district covered 33.3% and Garut 16.6% of the tomato area cultivated. The following Flow Chart explains the procurement and distribution channels of vegetables in West Java.



The KUD have not established any handling system, except for arranging for the transport of items or negotiating the deals. KUD Walatra had undertaken a one-time business in the supply of 200 tons of tomato for Singapore market through a private trader.

OVERVIEW OF KUD: Economic Business

KUD in the province are reported to be quite active in marketing and supply business. Principal economic business of the KUD consists of: distribution of fertilisers, farm inputs, production and distribution of cattle-feed, supply of paddy/rice to the national food stock, procurement and distribution of milk, fruits and vegetables, and distribution of consumer goods to farmer-members. Other economic business include: procurement of cloves, distribution of essential commodities e.g., sugar, wheat flour, kerosene oil and disbursement of farm credit.

The total turnover of KUD in West Java during 1992 was Rp 750,970 million which rose to Rp 901,424 million in 1995 (120%). Similarly, the total surplus (SHU) in 1995 was Rp 12,972 million which rose to Rp 13,224 million in 1996 (102%).

Fertiliser distribution business is one of the major economic business of KUD in the province. During the year 1993, nearly 17% of the national chemical fertiliser distribution took place in the province. Chemical fertilisers are produced by several State-owned fertiliser companies but the distribution is coordinated by PT Pusri. The fertiliser is distributed through various channels e.g., the Puskuds, KUD, Persero Niaga, private channels and PT Pertani. The allocations for fertiliser supply to the provinces is based on a formula. For 1992-93, the allocations made were: 0.1% through the Puskuds, 80.3% through the KUD, 3.2% through Persero Niaga and 8.8% through the PT Pertani. While in 1991 a total of 244,440 tons of urea was used in the province, it was 261,508 tons (107%) in 1992. In 1994, 403 KUD had used 345,000 tons and in 1995-96, 500 KUD had used 428,191 tons (124%) of chemical fertilisers in the province. The 1995-96 consumption was 175% of the consumption of 1991. The prices of urea are determined by the Government from time to time. For the purchase of urea for paddy cultivation, the government provides credit channels to the farmers through the KUD network. The KUD receive a fee for the disbursement of fertiliser/farm credit, which, in fact, forms a substantial portion of the working capital of KUD.

The distribution of farm chemicals is undertaken by the KUD purely on individual basis since these are available in the open market. While the main concentrates of farm chemicals are imported, the formulations are done in the country by various companies according to the local requirements. In 1990 these chemicals were distributed by 183 KUD, and in 1993 only 55 KUD dealt in these commodities.

For marketing of fertiliser by surveyed KUD indicate that this business has been a prominent one. KUD Pasir Jambu supplied 178% more of fertiliser in 1995 as compared with 1994, in the case of KUD Walatra it was 327%, and for KUD Cikajang it was 122%. The rate of commissions earned by the KUD from sales over purchase of fertiliser were as follows: Pasir Jambu 0.3%, Walatara 17.0%, Bayongbong 1.3%, and Cikajang 4.3%. The Puskud-West Java undertakes transportation of fertiliser to the KUD from the PT Pusri's warehouses. The earnings from transportation business alone was 10.3% of the total business volume in 1995. No KUD in the province does any kind of reformulation of urea/chemical fertiliser.

Similarly, since the deregulation of seeds distribution, less and less KUD are undertaking this business. The distribution of paddy seeds through the KUD in West Java, as compared with the national distribution of 5.3 million kg in 1993 was 335,820 kg (6.2%). It was 46% of the paddy seeds distributed (728,740 kg) in 1990. Farmers were buying their seeds requirements from the open market. Improved seeds are distributed by government agencies and private traders. Paddy seedlings are developed and distributed by the State-owned company, PT Sang Hyangseri. The government also operates several seeds certification stations as to certify their quality. KUD are not engaged in seeds multiplication programmes.

The KUD help procure paddy/rice from the members for the national food stock. They try to fill the target set for each season. The members supply the maximum which they can but still the preference of the farmer remains to sell the produce in the open market at a higher price than fixed by the government for supplying to the Bulog. The procurement price of paddy/rice is determined by the government every season. KUD get credit from the government to purchase rice. While during the year 1985-86, 264 KUD procured a total of 250,233 tons of paddy/rice, 293 KUD had procured a total of 325,150 tons (130%) during the year 1994-95. While the procurement of paddy from the farmers was increasing, its supply to the Bulog has decreased tremendously. In West Java only 35.8% of the year 1985-86 was supplied to Bulog in 1994-95. (See the table below):

Particulars	1985-86		1994-95	
	National	W.Java	National	W.Java
<u>Paddy/Rice Procured</u>				
By KUD (Nos)	2,082	264	2,117	293
Paddy procured (Tons)	1481,982	250,233	1700,000	325,150
<u>Sold to Bulog</u>				
By KUD (Nos)	1,925	246	2,309	286
Paddy sold (Tons)	1392,538	230,597	710,990	82,645

Source: Department of Cooperatives-RI, Jakarta

Except for a few KUD, marketing of vegetables and fruits is done by the members themselves through the KTs. Due to its closeness with the national capital, the demand for fresh fruits and vegetables is strong. Chilies registered an increase of 112.3% in 1994 over 1992, onions 106.6% and bananas 151.9% during the same period. KUD act only as organisers for the collection of vegetables and putting the farmers in touch with the traders. The business is rarely reflected in the books of the KUD since the deal is between the producer-members and the traders.

Procurement of cloves is a government programme and is coordinated by the Puskud in association with the Inkud. The kretek cigarette factories are obliged to purchase their entire cloves requirements only from the national clove buffer stock maintained by the Inkud. During 1994-95, West Java KUD supplied almost 11.5% (13,149 tons) of the national procurement (113,528 tons) to the cloves national stock. During the year 1995, the Puskud received Rp 678 million as its handling fee, which is 25.2% of its total business volume.

Milk business is becoming the profit centre of many KUD in the province. In 1994, out of a total 361.6 million kg the share of West Java was 161.8 million kg (44.7%). In the case of East Java it was 36.4%. Milk marketing business of some of the covered KUD in 1995 over the year 1994 was as follows: Pasir Jambu 122%, Bayongbong 97%, Cikajang 127%. In 1995, the commission earned by

various KUD on sale of milk over purchases was as follows: Pasir Jambu 18.3%, Tani Mukti 70.3%, Bayongbong 16.8% and Cikajang 44.6%, indicating that milk handling forms a sizeable business of KUD in the province.

In 1994, the total production of cattle-feed in the province was 804,600 tons - 310,600 tons using corn and 494,000 tons using rice bran as ingredients. Cattle-feed is produced by various private companies and the KUD in their small-size mixing plants. Wheat pollard is subsidized by the government. The price of the concentrate product is fixed by the KUD taking into account the cost of production and a small margin of profit. One single large producer in the province is PT Agro. The GKSI also produces feed concentrates at Cirebon, the facility is since turned over a primary milk cooperative for operation. KUD Cikajang increased its marketing business in 1995 (150% over 1994). KUD members prefer to obtain their supplies of cattle-feed from their KUD because of short-term credit facilities provided. The commissions earned by the covered KUD from cattle-feed sales over purchases in 1995 was 19.5% for Cikajang and 12.6% for Bayongbong

In addition to farm-related marketing and supply business, the KUD are also engaged in distribution of consumer goods to the members and general public. This is done through TPK (kiosks) and retail shops (waserdas). Waserdas are generally located within the premises of the KUD. Some of the shops are located in the main shopping areas of the KUD towns. TPK (Kiosks) are located in the towns and closer to the farming areas and/or attached to KUD warehouses. While the TPK supply farm inputs, the retail shops supply consumer goods. In 1995 the position of TPK and retail shops was as under:

Total Number of KUD	...	...	759
Number of KUD owning kiosks	...	...	466
KUD own buildings	...	...	509
KUD's own kiosks	...	...	546

Operation of retail shops has been giving good returns to the KUD. The increase in turnover of these shops in 1995 over 1994 was: Pasir Jambu 146%, Bayongbong 128%, Cikajang 126%. The commissions earned by the covered KUD from sales over purchases in 1995 was as follows: Pasir Jambu 7.7%, Tani Mukti 2.0%, Walatara 2.8%, and Cikajang 10.2%. The retailing business of the Puskud-West Java showed a declining trend on account of renovations and shift in priorities. The Puskud distributes, among other commodities, sugar and wheat flour to the KUD. The fee received by the Puskud in 1995 was Rp 286 million, 10.6% of its total business volume.

Funds for operating economic and utilisation business is available from various sources. These include: i) credit from government for procurement of paddy/rice, corn, cloves and the service charges received for disbursement of such credit; ii) subsidized distribution of wheat pollard; iii) service fee for handling telephone and electricity bills; iv) credit from enterprises to purchase trucks and farm machines; and v) surplus

earned from business.

Since a majority of business operate within the government-supported programmes, the element of competition with private dealers does not exist. Rice procurement, clove procurement, fertiliser distribution, wheat pollard distribution are all regulated and are consequently a secure business, leaving not much room for competition.

HAMPERING FACTORS:

Economic Business

Although the KUD in West Java are regarded as progressive, the diversification of business has not taken place which could have provided better purchasing and marketing opportunities to the member-farmers. KUD have been sustaining mainly on the fees and commissions received by them in implementing government programmes. The concepts of joint marketing, joint purchasing and establishing joint-use facilities like cattle-feed manufacture, milk handling and diversification in its processing, fruits and vegetable grading, processing and transportation have not been adopted mainly due to lack of initiative on the part of KUD leaders and members and lack of information and training of managers. KUD have been operating on their own without any back-up and business collaboration and support from other KUD and their business federations/partners. No joint ventures have been established. Lack of flow of business information, lack of guidance in farm management, planning, better-living and internal staff training are some other factors.

These can be summed up as follows: Lack of ability to undertake marketing; joint marketing; joint capital; delayed payments including lack of accounts settlement systems; lack of business information; lack of marketing facilities; inadequate capital; insufficient farm guidance; inadequate business relationship such as joint ventures; inadequate provision of services to the members; absence of joint purchasing systems; insufficient capacities for warehouses and retail outlets; and lack of business collaboration with their business federations. Although quality rice is grown in some parts of the province, no KUD has undertaken any steps to brand their products to establish credibility and identity.

POSSIBILITIES:

Economic Business

With a view to increase the income levels of farmer-members, KUD need to further develop their own economic business. For this the following possibilities exist: increase production of higher quality milk; provide higher technical levels of cooling capacity and speedy transfer of chilled milk to processing industries; establish technology transfer for processing of fruits and vegetables; establish methods for horticulture products price negotiations; introduce joint marketing, purchasing and joint-use facility concepts; establish joint ventures to overcome shortage of capital; establish grading, packaging, storing and shipment

facilities at KUD/district level; quality improvement and expansion of cattle-feed production facilities; introduce and expand livestock/dairy cattle development and establishing calf nurseries; establish business relations with secondary level federations/private enterprises for supply of consumer goods and farm inputs; establish business information systems; expand training of KUD leaders and managers in management and farm-related subjects; training of managers through the private industry e.g., milk processing, cattle-feed manufacture, farm machine operations; and expansion of member information activities at the KUD level.

**ACTIVATION MASTER PLAN:
Economic Business**

In view of the ideal geographical and climatic conditions of the province, the broad-based network of KUD, and the vast potentials in farming and dairying, it is possible for the KUD to provide better economic returns to their members. Taking advantage of the continuing positive support of the government and the infrastructure e.g., nearness to high consumption centres like Jakarta and industrial centres, training and educational institutions, KUD can improve their economic business. Co-operative and business development climate in West Java is conducive. Some of the KUD have introduced mechanisation in their operations e.g., milk processing, computerization of accounts, telecommunication facilities.

The economic business to the advantage of KUD members can be further expanded by adopting some of the following methods: introduction of concepts of joint marketing; joint purchasing; joint use facilities e.g., cattle-feed manufacture, livestock/dairy-cattle development; joint capital utilisation; establishing linkages with secondary level business federations and private enterprises for supply of consumer goods and farm inputs; establishing joint ventures with private enterprises in fruits and vegetable grading and processing; provision of quality seeds esp. potato; establishing business information systems; introducing members' accounts settlement methods; extensive computerisation; establishing farm machine/transport maintenance workshops; providing guidance on farm management, planning and better-living; instituting management and farm-related training for leaders and managers; and expanding member education. In order to improve the quality of staff training, revamping of curricula at provincial training centres is necessary.

II . MAIN FINDINGS

AGRICULTURAL PRODUCTION

Distribution of Farm Input Materials

Farm input materials include chemical and bio-fertilisers, farm chemicals e.g., insecticides, pesticides, rodenticide, fungicides and herbicides etc. and the supply of improved and quality seeds generally for key crops e.g., paddy, maize, soybeans etc. Chemical fertilisers are produced by several State-owned fertilizer companies but the distribution is coordinated by PT Pusri. The fertilizer is distributed from company-owned warehouses which are located at kecamatan level. The KUD pick-up their requirements from these distribution points against the delivery notes issued by the Puskud. The KUD, in turn, distributes the fertilizer from their own warehouses or on the basis of pre-arranged delivery schedules.

The distribution of farm chemicals is undertaken by the KUD purely on individual basis. Some of the KUDs do not involve themselves in the supply of these harmful chemicals. These chemicals are available in the open market. The main producers are Bayers, Ciba, PT Petrokemia Kayaku and others. While the main concentrates are imported, the formulations are done in Indonesia according to the local requirements.

While in 1991 a total of 244,440 tons of urea was used in the province, it was 261,508 tons (93.4%) in 1992. The use of other fertilizes e.g., TSP, ZA, KCL also showed a similar increase. Similar trend has been noticed in the kabupatens of Bandung and Garut, indicating that the farmers have been relying heavily on the application of chemical fertilisers to achieve a higher level of agricultural production. Farmers have also been using bio-fertilisers, composts etc. In 1994, 403 KUDs had used 345,000 tons and in 1995-96, 500 KUD had used 428,191 tons of chemical fertilisers.

In 1994, the total distribution of insecticides and fungicides was as follows: insecticides 3,101 tons non-liquids, and 719 tons liquids; and fungicides 4 tons liquids.

FERTILIZER AND INSECTICIDES DISTRIBUTION IN WEST JAVA

Particulars	Year 1990		Year 1993	
	National	West Java	National	West Java
FERTILISER				
No. of KUD	3,550	461	3,461	453
Urea (Tons)	1,706,547	295,790	3,737,760	631,910
All others* (Ton)	1,341,910	288,531	2,293,965	404,530
PPC & Zn (lt)	-	-	928,811	66,096
Others (Tons)	33,224	14,260	56,503	4,632

FARM CHEMICALS

No. of KUD	1,647	183	934	55
Insec. Lqd '000lt	6,782	135	361,155	4,279
-"- not Lqd (Tons)	3,992	1,393	2,588,977	212,333
Rodenticide (Tons)	2,496	36	9,001	391
Fungicides (Tons)	827	9	100,363	2,657
Herbicides (Tons)	243	5	15,869	174

*includes: TSP, DAP, ZA, KCL and NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

Seeds of paddy, palawija and horticulture crops are obtained by the farmers from various sources. The paddy seeds are distributed by PT Seng Hyangseri, a State-owned company, while the seeds for others are available in the open market. However, the government operates several seeds certification stations, as to certify their quality.

The distribution of seeds by the KUD in West Java during 1990 and 1993 has been as follows:

Type of Seeds	Year 1990		Year 1993	
	National	West Java	National	West Java
No. of KUD	980	131	545	43
Paddy (kg)	26,351,795	728,740	5336,522	335,820
Corn (kg)	635,324	10,957	479,911	1,296
Soybeans (kg)	610,344	3,500	1442,920	7,523
Others (kg)	3290,037	827,098	1068,673	30

Source: Koperasi Unit Desa 1990 & 1993, BPS-Jakarta

The distribution of paddy seeds through the KUD in West Java, as compared with the national distribution of 5,336,522 kg in 1993 was 335,820 kg (6.2%). It was 46% of the paddy seeds distributed (728,740 kg) in 1990. Apparently the farmers were buying their needs from the open market.

Dissemination of Farm Machinery

Various types of farm machines are available in the province. In 1994, the following farm machines were reported:

Farm Machines (1994)	In Use	Damaged	Total	% in use
2-wheel tractors	11,279	783	12,062	93
4-wheel tractors (all types)	619	33	652	95
Hand sprayers	282,960	20,251	303,211	93
Other sprayers	66,171	4,552	70,723	93
Threshers etc.	204,519	1,466	205,985	99
Rice Milling Units	2,584	104	2,688	96
Water Pumps	5,342	354	5,696	94

Source: Dinas Tanaman Pangan, West Java 1994

A majority of farm machines are available within the KUD sector. There were 1695 godowns of all sizes, 238 RMUs, and other machines which were owned by the KUD as in July 1995. Some of the equipments have been imported, and some have been locally assembled. Several of farm equipments and rice processing machines were given to the KUD under OECF and Kennedy Round Programmes. Equipments like the large-size godowns (1000 to 30 ton capacity), dryers, rice polisher, moisture testers, soybean threshers, cassava root-cutters, corn shellers and trucks are owned by other organizations but have been placed at the disposal of the KUDs for their use. Most of the KUD own transportation vehicles. Nearly all KUD owned paddy drying platforms.

KUD engaged in milk business own cooling units, holding tanks, milk testing equipment, transfer truck/tankers besides dairy-related machines, and the cattle-feed mixer units and small warehouses. No cold stores or any other processing industrial units are owned by the KUDs.

PROCESSING AND DISTRIBUTION OF FARM PRODUCTS

Demands of Major Farm Products (Item, form of processing and consumption)

The impact of industrialization in West Java has led to the growth of urbanization and consequently accelerated the demand for agricultural products, among others. The contribution of industry in West Java to the national economy is nearly 31%. Consequences of industrial growth have been: drastic reduction of cultivable land, high demands for agricultural produce especially vegetables, dairy and livestock products, and the emergence of three growth centres i.e., Jakarta, Cirebon and Serang. Vegetables alone cover almost 60% of the market share in these three consumption centres. Jakarta has also become a major tourist entry point. These centres have also become major import and export points.

With a view to ensure a constant supply of farm products, especially the horticultural products, to the major towns including the three growth centres, and to stabilise the price levels, it is necessary that a strong chain of farmers' association is created and sustained. Another pre-requisite is to ensure provision of regular irrigation facilities to the farmers and to provide them with appropriate extension and farm technical services. Irrigation methodology has to be diversified and a stress is to be laid on a gradual farm mechanization including creation of infrastructure for holding farm products to maintain a constant supply and a stable price line.

During the 6th Five-Year Plan and the 2nd long-term plan it has been re-emphasized that farmers' organizations like the KUDs, workers' cooperatives, small traders' cooperatives should be strengthened. In West Java the number of KUD Mandiri Inti is proposed to be increased.

The current situation on handling and processing of agricultural products is not so encouraging. Traditional methods of production, handling of agricultural produce, and its marketing are followed. Major items of farm products have been: Rice, potatoes, tomato, green vegetables, seasonal fruits, tea, dairy and livestock products. Some of the KUDs in the highland areas are actively engaged in the handling and marketing of farm products like potato, tomato, beans and milk. The KUD help organize farmers' groups which produce items of their choice and supply them to the local market and to the wholesale markets in Jakarta through the agents of traders. The traders, through their village level network, collect the items and despatch them, on their own and against cash payments, to Jakarta for disposal in the market there. Indofood, for instance, also picks up the potato from a number of highland areas for its processing factory. Indomilk, Fresian Flag and other private milk processing companies make an extensive use of the milk cooperatives/KUD to secure supplies of their milk requirements.

No processing of farm products is done by the KUD, except for cleaning up the products and packing them up in sacks. KUD Pasir Jambu is one of the few having entered into an agreement with the Hero Supermarket to supply grade-1 vegetables according to the specifications laid down by the super market. The KUD does a part of packaging on behalf of the supermarket.

Soybean is converted into tahu and tempe products. The KOPTIs have flourished because of the high demands of their products. Soybean is imported to supplement the local production.

Technical Level of Major Agro-Processing

The technical level of agro-processing in the province can be classified into three levels: primary, intermediate and final. All agro-processing activity is in the private sector. The KUD are engaged in the collection and distribution of basic agricultural products e.g., vegetables, poultry, livestock and milk. At the intermediate level, the processing of agricultural products is limited to cooling/chilling of milk, raising of dairy cattle, chicken, production of cattle-feed, drying and semi-processing of tea, traditional production of potato and cassava chips, tahu and tempe. The GKSI (The Union of Indonesian Dairy Cooperatives) does some pasteurization of milk at its plant in Bandung. The final level of processing of agricultural products is with the private enterprises. In some of the kabupatens, there are government-operated traditional slaughter-houses. The tea processing is done by private companies. The Indofood, for instance, does a major processing in consumer food sector.

A major intermediate level of processing rests at the KUD level through the rice milling units. The KUD being the government-designated rice procurement infrastructure, were provided, under various development assistance programmes in the past, with rice milling units, warehouses and some basic infrastructure to ensure a constant supply of rice to the national food stock. Most of the KUD own drying floor and some simple rice processing equipment

e.g., dryers, polishers etc. However, the major rice mills are still in the private sector which cater to the open market requirements.

Major Agro-Processing Business Entity, Volume of Production, Facilities

The presence of KUD in rice procurement, processing and handling is substantial, as is seen from the following table:

Particulars	1985	1994	% of W.Java	% increase over 1985
<u>WEST JAVA</u>				
-Owned by KUD (Nos)	98	513	-	523.4
-Owned by non-KUD (Nos)	14,486	19,301	-	133.2
-Milling Cap. (Tons)	6484,100	8312,949	-	128.2
<u>BANDUNG DIST</u>				
-Owned by KUD (Nos)	5	15	2.9	300.0
-Owned by non-KUD (Nos)	1,141	1,459	7.5	127.8
-Milling Cap. (Tons)	323,189	414,345	5.0	128.1
<u>GARUT DIST</u>				
-Owned by KUD (Nos)	-	28	5.4	-
-Owned by non-KUD (Nos)	753	1,018	5.3	135.1
-Milling Cap. (Tons)	288,288	369,600	4.4	128.4

Source: Kanwilkop-West Java, 1995. Bandung

Similarly in the sector of milk handling, in 1994, there were 454 KUDs and 25 milk cooperatives which had distributed 204 million liters of fresh milk. The table below gives the status of milk handled by KUDs in the districts of Bandung and Garut as compared with the collections at the provincial level:

Location	KUD	Milk Coops	Total Milk Handled/lt	% of West Java
West Java	454	25	204,796,074	-
-Bandung Dist	47	7	143,351,401	70%
-Garut Dist	35	5	27,513,495	14%

Source: Kanwilkop-West Java, 1995. Bandung

Milk processing facilities include: cooling and chilling installations, pasteurization, cheese and sterilization equipment. The GKSI's (Bandung milk treatment plant) processing capacity is 270,000 lt per day, while the performance is 246,000 lt per day - 91% of the installed capacity.

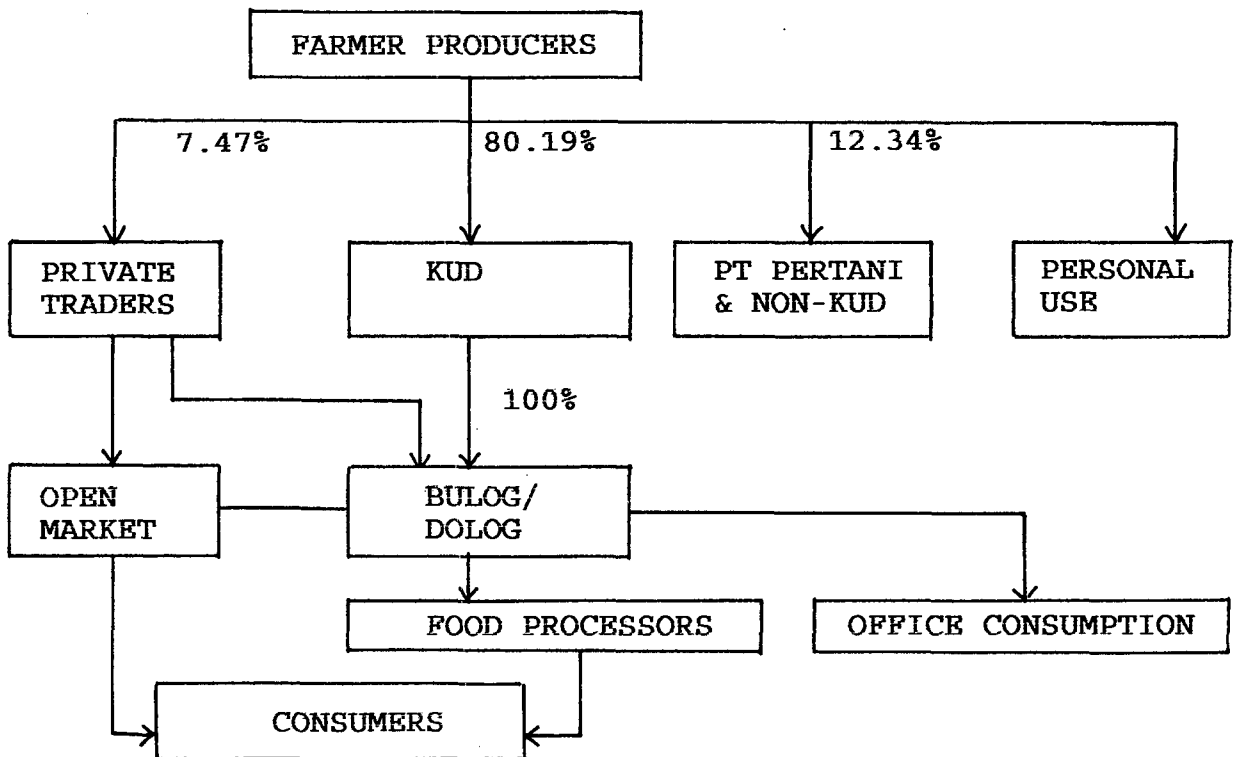
KUD do not undertake any poultry processing activity. They act as mere distributors. However, the role of KUD in organizing farmers' groups in these sectors is significant. In 1985, a total

of 23.7 million broiler/local chicken were produced, while in 1994, the number rose to 146.6 million (612%). A similar trend was noticed in the districts of Bandung and Garut, as is given below:

Location	1985	1994	Percent
WEST JAVA	23.76 m	146.62 m	612%
BANDUNG DIST	1.98 m	11.11 m	561%
GARUT DIST	0.69 m	3.36 m	487%

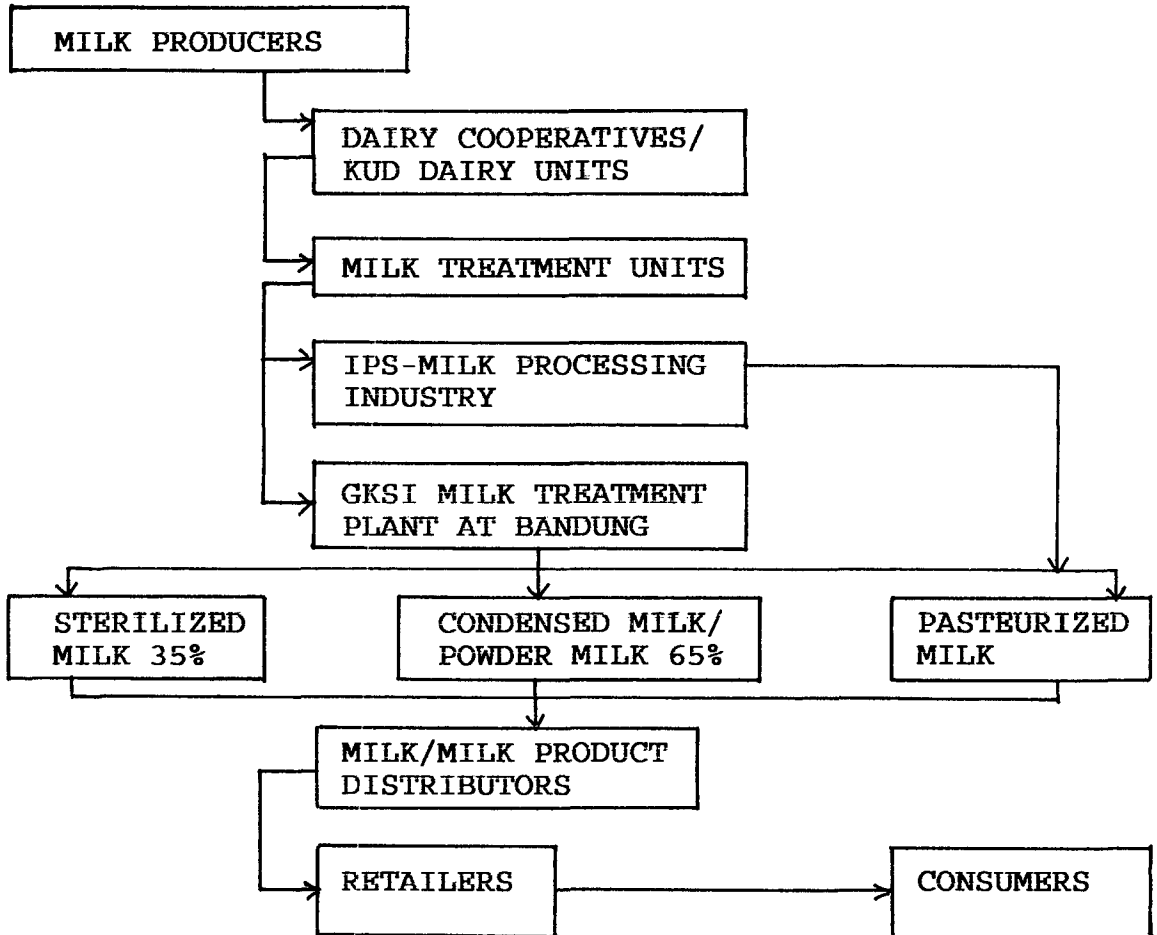
Major Shipping Areas, Distribution System and Facilities by Commodities

For rice, the major destinations are two: national food stock (Bulog), and the open market. The Flow Chart below shows the procurement and distribution of paddy/rice in the province.



For agricultural products e.g., vegetables, fruits and some cash crops, the major destinations for shipping are the wholesale markets of Jakarta, Bandung and Cirebon. Vegetables are collected by the traders and their agents who contact the farmers at the production level itself. The goods procured from the farmers are brought for wholesale disposal in Jakarta, generally at the Karamatdjati wholesale market. Similar markets also exist in Bandung and other major towns. Some of the major super markets obtain their farm product supplies through the farmers' groups and the KUD. The known instance has been that of the KUD Pasir Jambu which has entered into a business deal with the Hero supermarket in Jakarta.

The fresh milk collected from the dairy farmers through the network of KUD and milk cooperatives is shipped to major private milk processing factories (IPS) located in and around Jakarta. The surplus is processed by the GKSI at its own facilities located at Bandung. GKSI products (Susu Alam Murni) include fresh milk, yogurt and flavoured milk. The following **Flow Chart** explains the collection and distribution of milk in West Java.



Milk is procured by the KUD/milk cooperatives and transferred to the IPS on daily basis using transfer tanks of varying capacities. The collecting points have chilling facilities. The payments to the dairy farmers is on every 10-day basis. The payments to the cooperatives from the IPS is also on a twice-a-month basis. The cooperative pays to the farmers based on the milk standards established by the IPS and the procurement prices fixed by the government retaining for themselves a small handling charge.

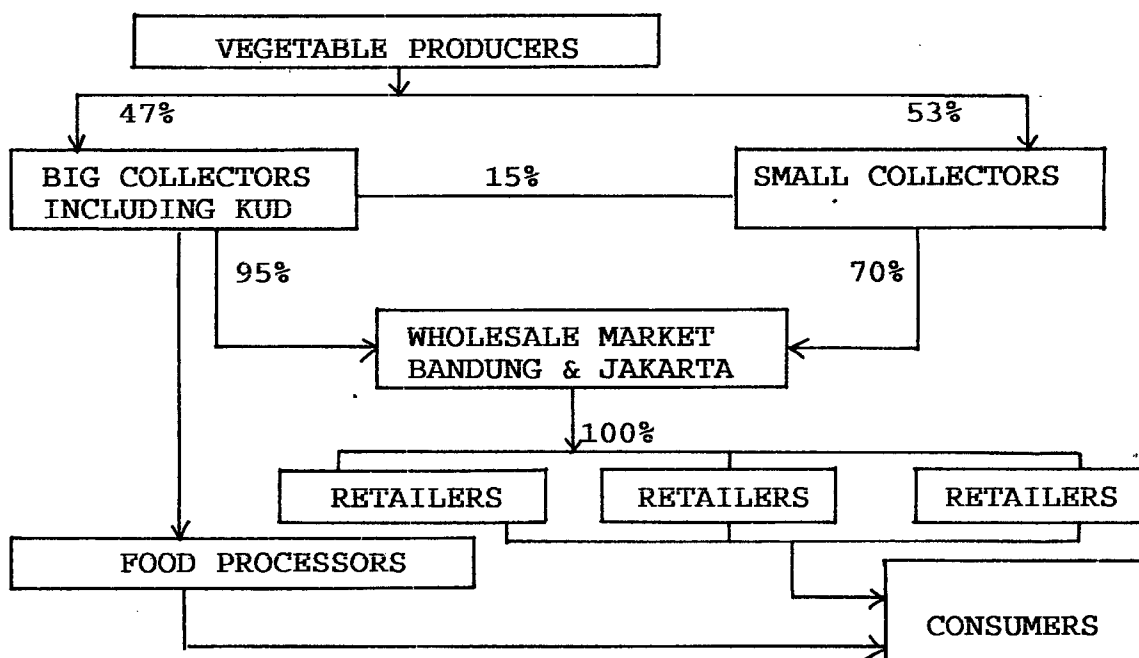
In the case of fresh vegetables, farmers in highland areas of West Java are actively engaged in the production of potatoes, tomato and some green beans and leafy vegetables including onions. The climate is mild, suitable and the farmers have experience in growing these vegetables.

Commodity/Tons	Year 1991	Year 1992	Year 1993
<u>POTATO</u>			
Kab. Bandung	-	-	134,448
Kab. Garut	-	-	26,954
West Java	144,147	209,069	205,189
<u>TOMATO</u>			
Kab. Bandung	-	-	56,584
Kab. Garut	-	-	29,624
West Java	80,731	80,808	156,575

Source: West Java in Figures 1993. Statistics Office/BPS-West Java

In the production of potato and tomato, Bandung and Garut districts have been outstanding by tonnage as well as by area. By tonnage, Bandung district had a share of 65.3% of the total production of potato in the province, while Garut was 13.1%. By the area cultivated, Bandung and Garut had a share of 41.6% each of the province. In the case of tomato tonnage Bandung district had a share of 36.3% and Garut 19.1% of the province total. Bandung district covered 33.3% and Garut 16.6% of the tomato area cultivated.

The following Flow Chart explains the procurement and distribution of vegetables in West Java. The KUD have not established any handling systems, except for arranging for the transport of items or negotiating the deals. The KUD Walatra, at one point of time, had exported about 200 tons of tomato to Singapore through the agents of an exporter. The KUD had only procured the supplies and handed it over to the agents, who graded, packed and forwarded it to Singapore. The KUD had paid to the farmers directly in cash upon procurement. It had received the payment from the agents for the supplies made.



Business Customs, Pricing, Account Settlement

In most of the cases the business is transacted between the farmer and the agents of the traders. The transactions are highly cash-oriented. The word of mouth remains supreme in the negotiations which do not involve very high values or expensive assets e.g., lands and buildings.

In the case of agricultural produce, the agents of traders keep on tracking the producers of required commodities. The farmers are offered, in many cases, advance payments for the crops, given some incentives like seeds, some fertilizer and even advance payments for purchase of farming equipments. In the context of farmers dealing with the KUD the transactions are mostly on cash basis (around 60%), the remaining being on credit basis generally to be adjusted against purchase of fertilisers, cattle-feed etc.

The pricing of agricultural products is determined by various factors e.g., the cost of inputs, labour inputs, and a reasonable margin of profit. The margin of profit depends on the quality and quantity of crops, and the level of competition in the market. This is true of the horticultural, poultry and livestock products.

In the case of fixation of procurement and selling prices of liquid/fresh milk, the decision is made by the government in consultation with the various partners involved in milk business e.g., the Department of Agriculture, the Department of Cooperatives, the Ministry of Trade and Industry, representatives of the private milk industry and the GKSI. While fixing the prices of milk products e.g., yogurt, flavoured milk, butter, cheese, the factors to be taken into consideration are identified by the milk processing industry (IPS).

The prices of urea are also determined by the government. Fertilisers, other than urea, are open for sale. Urea is sold through the network of the KUD in the province. For the purchase of urea for paddy cultivation, the government provides credit channels to the farmers through the KUD network. The KUD receive a fee for the disbursement of fertilizer/credit.

While fixing the prices of cattle-feed, factors taken into consideration are: procurement prices of rice bran, wheat pollard (wheat bran), maize, molasses and other ingredients, operational overhead costs and a reasonable margin of profit to cover transportation and risk costs. The selling price of the cattle-feed is determined by the KUD. Bran prices are subsidised by the government.

The accounts are settled based on the conditions laid down by the KUD and agreed upon between the KUD and the members. In the case of agricultural producers of West Java, the members can purchase their requirements from the KUD on credit basis which are settled against the supplies received by them from the KUD. Members can purchase their requirements of cattle-feed from the KUD on credit. The accounts are settled when the payments for the milk

delivered are made to the members. Goods purchased by the members from the KUD are entered into a Members' Accounts Book, in which are also entered the payments made to the members. The system of accounts settlement is the same all over the province and is acceptable to both - the members and their KUD.

Others

Distribution of agricultural products is also carried out through a network of retail shops (waserda) in West Java. These stores distribute items of daily necessities among the and the members and the community.

The provincial level federation of the KUDs - the Puskud - undertakes some business activities. The business relationship between the two is not active. There is no horizontal and verticle integration between the two tiers.

BUSINESS MANAGEMENT OF KUD AND RELATING LEGAL SYSTEM

Situation of Business Purchasing and Marketing Business

Purchasing Business System, Commodities and Turnover

To meet the needs of the agricultural and dairy farmers, the KUD network has effectively provided the needed inputs. The government provided them with the needed credit and released the farm inputs from the production sources.

Fertilizer Distribution in West Java: PT Pusri distributes chemical fertilizer through various channels e.g., the Puskuds, KUD, Persero Niaga, private channels and PT Pertani. During 1990-91 and 1992-93, fertilizer was distributed in the following way:

Particulars	1990-91	1992-93
Total distribution (National) (Tons)	2,810,539	3,031,971
Distributed by:		
-Puskuds	0.2%	0.1%
-KUD	80.9%	80.3%
-Persero Niaga	1.6%	3.2%
-PT Pertani	11.6%	8.8%

During 1990, 1994 and 1995, about 17% of the national production of fertilizer was distributed in West Java.

Seeds Distribution: Improved seeds are distributed by government agencies and private traders. Paddy seedlings are developed and distributed by the State-owned company, PT Sang Hiyngseri. Government also operates several seeds certification stations,

as to their quality. These stations are located in various parts of the country. The table below explains the distribution of seeds in West Java:

Particulars	Year 1990		Year 1993	
	National	W/Java	National	W/Java
Paddy (kg)	26,351,795	728,740	5336,522	335,820
by KUD (Nos)	980	131	545	43
Corn (kg)	635,324	10,957	479,911	1,296
by KUD (nos)	980	131	545	43

Source: LITBANG, Department of Cooperatives-RI, Jakarta

Cattle-feed Production and Marketing: Cattle-feed is produced by various private companies and the KUD through their small-size mixing plants. The basic ingredients like corn, rice bran, wheat bran (wheat pollard) and molasses are procured from the open market. Wheat pollard is subsidized by the government. The price of the concentrate product is fixed by the KUD taking into account the cost of production and a small margin of profit.

One major producer of the cattle-feed in West Java is the PT Agro which enjoys nearly 45% share of the market. The GKSI (Union of Indonesia Dairy Cooperatives) also produces feed concentrates at Cirebon. The rest is formulated/mixed by the KUD in their small mixing plants or by some individual farms holding a higher level of animals. In 1994, the total production of cattle-feed in the province was of the following order:

Using corn ingredient: 310,600 tons
 Using rice bran : 494,000 tons TOTAL: 804,600 Tons

Farm Machines and Agricultural Implements: The members of the KUD purchase their farm machines, tools and agricultural inputs from the TPK, usually attached to the warehouses/godowns of KUD. TPKs run by the KUD are called 'organic' and those run by KUD members as their private business are called 'non-organic'.

Retail Outlets (Waserdas): Articles of daily use and consumer goods are purchased by the members from the KUD-run retail outlets or mini-markets. The position of retail outlets in West Java in 1994 and 1995 was as follows:

Particulars	Year 1994		Year 1995	
	National	W/Java	National	W/Java
Retail Shops (Nos)	5,190	429	6,061	466
Working Capital (M.Rp)	54,374	7,600	79,426	8,906
Turnover (M.Rp)	330,417	119,129	250,312	22,930

The retail shops are usually located within the premises of the KUD. Some of the KUD have more than one such shops. They receive

their supplies from the wholesale market or local suppliers.

Turnover: The total turnover of KUD in West Java during the years 1992 and 1995 is given below:

Particulars	1992 (M.Rp)	1995 (M.Rp)	% of 1992
West Java KUD	750,970	901,424	120
National. KUD	3,807,639	5,669,411	149

Major Source of Procurement of Commodities

Chemical fertilizer distribution is coordinated by PT Pusri which has its warehouses located throughout the country and even at the kecamatan level from where the KUD pick up their supplies against the delivery notes issued by the Puskud. The government provides credit to the farmers through the KUD for the purchase of urea. Other chemical fertilizer formulations are available in the open market. Bio-fertilisers, farm chemicals are freely available.

Seeds, except for paddy, are procured from the open market. Paddy seedlings are produced and distributed by PT Sang Hyanseri. The government operates a number of seeds certification centres throughout the country in order to ensure seed quality. Cattle-feed components are procured from the open market.

Merchandise for sale through the TPK and the retail outlets is obtained from the open market. There is no wholesale cooperative agency which sells or coordinates the supply of consumer goods to these outlets.

Marketing Business System by Commodities and Turnover

This consists of marketing the produce of members with their KUD. Major marketing activities have been: sale of paddy/rice, vegetables, milk, cloves etc.

The KUD help procure paddy/rice from its members for the national food-stock. The KUD try to fill the target set for it for the supply of paddy/rice to the Bulog. The members supply the maximum which they can but still the preference of the farmer remains to sell the produce to the open market at a higher price than fixed by the government for supplying to the Bulog. The procurement price of paddy/rice is determined by the government every season. KUD get credit from the government to purchase rice.

The marketing of paddy/rice by the members during 1985-86, and 1994-95 is given below:

Particulars	1985-86		1994-95	
	National	W.Java	National	W.Java
<u>Paddy/Rice Procured</u>				
By KUD (Nos)	2,082	264	2,117	293
Paddy procured (Tons)	1481,982	250,233	1700,000	325,150

Sold to Bulog

By KUD (Nos)	1,925	246	2,309	286
Paddy sold (Tons)	1392,538	230,597	710,990	82,645

Source: Department of Cooperatives-RI, Jakarta

From the table above it is noticed that while the procurement of paddy from the farmers was increasing, its supply to the Bulog has decreased tremendously. In West Java only 35.8% of the year 1985-86 was supplied to Bulog in 1994-95.

Vegetables: In West Java, except for a few KUD, marketing of vegetables and fruits is done by the members themselves through the KTs. Because of its close proximity to the national capital the demand for fresh fruits and vegetables on the province is very strong as can be seen from the figures below:

Item (Tons)	1992	1993	1994
Cucumber	508,629	225,081	238,692
Chilly	162,700	172,635	182,129
Onions	225,360	233,316	240,200
Bananas	801,034	1,013,150	1,217,300

Cloves: Procurement of cloves is a government programme and is coordinated by the Puskud in association with the Inkud. The marketing of cloves in West Java as compared with the national was of the following order during 1993-94 and 1994-95:

Particulars	1993-94	1994-95	Percent
National (T)	129,409	113,528	113.9%
West Java	3,875	13,149	29.4%

Milk Marketing: This business is fast becoming the profit centre of many KUD. West Java has become a large milk producing area in the country. The total national milk production and the share of West Java is given below:

In ('000 kg)	1990	1993	1994	Percent
NATIONAL	294,907	356,500	361,690	-
West Java	145,283	166,839	161,842	44.7%
East Java	106,803	122,599	131,751	36.4%

Source: GKSI-Union of Indonesia Dairy Cooperatives, Jakarta

The total business volume and the total surplus of KUD in the province in 1995 and 1996 was as follows:

Total Business Volume (M.Rp)	1995	851,001.0
Total Surplus (SHU) (M.Rp)	1995	12,972.0
Total Business Volume (M.Rp)	1996	906,105.0
Total Surplus (SHU) (M.Rp)	1996	13,224.0

Major Market Area, Buyers

Major market areas for the produce of the farmer-members in West Java are the government (Bulog), fruits and vegetable wholesale markets Kramatdjati in Jakarta, Bandung, the Indofood and retailers in major towns of the province, and the milk processing industry - private and the cooperative.

Procurement of Funds for Economic and Utilization Business

Funds for operating economic and utilization business is available from various sources:

- Credit from government for procurement of paddy/rice, corn, maize, soybean, cloves, and the service charges the KUD receives on disbursement of such credit;
- Subsidized distribution of wheat pollard for cattle-feed;
- Service fee for handling telephone and electricity bills;
- Credit from private enterprises for procurement of vegetables and other farm products;
- Credit lines from enterprises to purchase trucks, machines;
- Surplus earned from the business of the KUD.

Holding and Utilization of Kiosks, Storage, Processing Facilities

Retail shops, kiosks and warehouses are operated by the KUD as a service to the members. In 1995, the situation in West Java was as follows:

Total number of KUD	...	...	759
Number of KUD owning kiosks	...	...	466
KUD own building	...	...	509
KUD own TPK (organic)	...	...	546

Major processing activity in the province is rice milling and milk chilling units. There were 513 RMU in 1994 in the KUD sector and 19,301 RMUs of various capacities with the non-KUD.

Competition with Private Dealers

KUD are neither integrated horizontally nor vertically. Each unit works on its own and develops its own business with the funds raised through its own efforts. Since a majority of business units of KUD are operating within the government-supported system, the element of competition with private dealers does not exist. Rice procurement, clove procurement, fertilizer distribution, wheat pollard distribution are all regulated and are consequently a secure business, leaving not much room for competition.

However, there is some competition in crop financing vis-a-vis horticulture, particularly potato. The BCA and the BRI have been providing some crop financing in horticulture sector.

ORGANIZATION, MANAGEMENT AND BUSINESS OF PUSKUD Situation of Business

Purchasing Business Methods, Commodities, Turnover

The Puskud, a member of the Inkud, participates in business ventures sponsored or proposed by the Inkud, besides supporting the business development of the KUD at the primary level. The Puskud-Java Barat is a federation of 759 member-KUD. In commodities like the Cloves and gaplek (cassava chips), the Inkud assigns the Puskud to fulfil a specific trader order for home use or for export. The indent specifying the quantity and quality and the time frame is passed on the Puskud for execution. The Puskud, in turn, contacts the relevant KUDs and asks them to supply the required items within a specific time. Upon receipt of raw commodities, and after some semi-processing, the items are exported.

The Puskud also coordinates the procurement of rice, cloves, maize and other farm products either for national food stocks or for distribution in the open market. Methods adopted are negotiated with the relevant agencies/supplier, and are either on a fee basis or on a commission basis. Procurement prices of rice and cloves are regulated by the government.

During 1995, the Puskud carried out purchasing business in the following commodities:

Commodities	Purchases (M.Rp)	% of Total Purchases
TOTAL PURCHASES		Rp 12,343.9M
-Farm Chemicals	8,065.2	65.3%
-Soybeans	1,909.4	15.4%
-Kerosene Oil	880.0	7.1%
-Cement	1,494.3	12.1%
-Corn	57.7	0.4%
-Pelangi Supermarket	901.8	7.3%
-Transport Services	70.3	0.5%
-Rajpolah Showroom	57.9	0.4%
-Misc grains	171.4	1.3%

Major Suppliers and Buyers (KUD and non-KUD)

The major suppliers of the Puskud have been the private enterprises and the State-owned fertilizer company, PT Pusri. It also obtains its supplies of soybeans from the Bulog, as well as from the open market. Wheat flour is procured from the private flour mills and through the Bulog. Cement is procured from the Indocement, and supplied to KUD in the province. The Puskud acts as one of the agents of the cement company in West Java.

The Pelangi Supermarket of the Puskud - presently closed due to renovation - has been selling not only the products of the KUD but also of the private manufacturers. It procures its supplies from the manufacturers and wholesale agents direct. The Rajapolah handicrafts showroom is intended to promote the sale of handicrafts and provide financial support to the local artisans in the province.

Marketing Business Methods, Commodities, Turnover

The business methods include negotiations by the KUD and the basic level farmers with the Puskud, as well as the requirements of national food-stocks maintained by the government. Total sales of the Puskud during 1995 were as follows:

Commodities	Sales (M.Rp)	% of Total Sales
TOTAL SALES		Rp 14,205.8M
-Farm Chemicals	8,147.5	57.3%
-Soybeans	1,978.6	13.9%
-Kerosene Oil	925.5	6.5%
-Cement	1,572.3	11.0%
-Corn	65.4	0.4%
-Pelangi Supermarket	999.2	7.0%
-Transport Services	142.9	1.0%
-Rajapolah Showroom	69.5	0.4%
-Misc grains	194.3	1.3%

Major Suppliers of Marketing Commodities and Buyers (KUD and non-KUD)

The main commodities which the members of the Puskud sell to the Puskud are: cloves, rice and maize. In 1995 the marketing business was as follows:

Total rice procured from members	195,557 tons
Out of which supplied to Bulog	76,139 tons (39%)
Balance sold in the open market	119,418 tons (61%)
Rice procured from KUD (Nos)	393

The Puskud was able to procure 197 tons of maize (only 53%) of the set target due to limited funds and heavy price fluctuations. 55 KUD had supplied a total of 9,504 tons of cloves to the Puskud. The Puskud is a holder of stocks of cloves in West Java in association with the Inkud.

KUD and the farmer-members are the major suppliers of agricultural commodities to the Puskud. For other commodities, the suppliers are private entrepreneurs, agents and the manufacturers. Major buyers for Puskud have been the Bulog and the Clove Procurement Agency (working in close collaboration with the Inkud), and the open market.

Fund for Economic Business and Operation of Joint-Use Facilities

The economic position of Puskud during 1994 and 1995 was as follows:

Items	1994	1995
Business Volume	Rp 1,880.3	2,688.2 M 142.9%
Total Assets	Rp 37,304.9	28,221.7 M 75.6%
Total Sales	Rp 14,205.8	12,685.3 M 89.2%
Total Purchases	Rp 13,975.0	12,343.9 M 88.3%
Total Surplus-SHU	Rp 255.5	687.2 M 268.3%
Initial Savings	Rp 51.7	159.6 M 307.6%
Compulsory Savings	Rp 350.5	388.2 M 110.8%
Own Capital	Rp 13,164.0	3,317.6 M 25.2%
Outside Capital	Rp 1,781.4	4,280.4 M 240.3%

Funds for economic business of the Puskud consist of its own share capital, fixed deposits and assets, and credit given by various specific programmes e.g., procurement of rice, distribution of fertilizer etc. During the year 1995, the Puskud received the following major fees for handling key commodities:

-Fertiliser Transportation Fee	Rp 277.2 M
-Sugar+Wheat Flour Distribution Fee	Rp 286.0 M
-Clove Handling Fee	Rp 678.1 M
-Rice Mills Service Fee	Rp 4.0 M

Some of the joint use facilities developed by the Puskud have been the rice mills in Karawang and Indramayu districts, Toserba Pelangi supermarket in Bandung, Rajapolah show room in Bandung, Pasar Induk Cipinang (PIC), a fleet of 20 heavy duty trucks, a printing unit and a few others. During the year 1995-96, the rice mills have declined in operations and consequently closed down, the Toserba Pelangi has been put under renovations, and the PIC has been rented out. The trucks are being used to transport fertilizer and cement.

Situation of Operation of Kiosks, Collection Centres, Processing Facilities

The Puskud does not operate any kiosks, as such. The Toserba Pelangi and the showroom Rajapolah serve as its outlets. The collection centres of the Puskud are the KUDs. The two rice mills in Karawang and Indramayu have some collection and warehousing capacities. The only processing facilities owned by the Puskud are the two rice mills, which have recently been closed down.

Competition with Private Dealers

The Puskud operates only on the monopoly items e.g., cloves, rice procurement, distribution of soybeans, fertilizer, sugar etc. Since the prices of these commodities are government-regulated,

the chances of facing any competition and losing money are remote, except for risks involved in storage and handling or an undue fluctuation in prices. The Puskud has gradually also been withdrawing from procurement of rice. It has strong business relations with the KOPTI (tahu and tempe cooperatives), which have, on their own strength, created a strong market for themselves.

RELATING LEGAL SYSTEM AND STRUCTURE

Policy for Improvement of Distribution and Processing of Farm Products and Price Support

In accordance with the declared National Policy to increase agricultural production and boost exports, the government is committed to support farmers and provide them with the needed infrastructure. The government has established a number of institutions and services aimed at providing farm inputs, extension services and post-harvest technology. Also, consequently, the government aims at giving support to agro-processing activities through its own system and with the support of private enterprises. As a result, the country is witnessing the growth in agro-processing activities. More and more private companies are entering agro-processing business.

With a view to guarantee better economic returns from farm operations, the role of government agencies like the Bulog is being reviewed so that the farmers are sure to get proper prices for the farm products, especially, rice, soybeans, corn and other cash crops. Clove procurement agency, coconut development board, coffee board are some examples. For every harvesting season the government announces floor prices for key commodities.

The KUD are used increasingly by the government to procure food items for national food stocks and distribute essential commodities in the country. The KUD are also used to disburse agricultural credit among the farmers. The Puskuds through the Inkud are planned to serve as gross distributors of consumer items through the waserdas and TPK.

The provincial government has decided to support farmers in highland areas especially for dairy development and horticulture products. "The implementation of cooperative development in the province will be carried out through: an increase of share and access to the market; expansion of access to capital sources, strengthening of capital structure, and improvement in the ability to utilise the capital; an increase of the cooperatives' organisational and managerial capabilities; an increase of access to technology and the ability to use; and an establishment of business partnership." The provincial government has planned to increase production of fruits and vegetables, livestock, milk, and poultry. The Puskud-West Java has planned to enter consumer goods distribution. The GKSI has planned to increase production of milk and cattle-feed.

FINDINGS OF THE DETAILED FIELD SURVEY
[Of 5 KUD in the Province]

Purchasing and Marketing Business

Situation of Establishment of Commodity-wise Groups

All the five KUD are situated in highland areas of West Java, and are not significant contributors to national food procurement programme. All of them are actively following dairying, horticulture, livestock and cattle-feed development activities. As a result, a majority of Klempok Tani (KT) farmers' groups are engaged in these activities. The total number of members and the KTs are given below:

KUD	Membership	KTs
KUD Pasir Jambu	5,412	-
KUD Tani Mukti	5,590	54
KUD Walatra	-	-
KUD Bayonbong	9,504	80
KUD Cikajang	3,590	33

In Tani Mukti two special KTs, women's groups producing and marketing the local handicrafts have also been operating. The KTs, by virtue of their local knowledge of agricultural produce, have become the commodity groups/interest groups e.g., potato growing groups, dairy farmers groups, paddy groups, vegetable growing groups, poultry farming groups etc. Dissemination of information through extension programmes using the KTs has become effective over the year. Most of the government extension programmes, especially the agricultural extension, have been carried through these groups. Distribution of fertilisers, farm inputs, chemicals, improved seeds, cattle-feed is also done through these groups. These groups form an integral component of the KUD organisation at the village level.

Purchasing Business Methods, Commodities Handled, Turnover and Commissions

While the members purchase their requirements e.g., farm inputs, from their KUD, they also purchase their requirements from external sources. The purchasing business of the KUD, therefore, covers the procurement of fertilisers, raw material for cattle-feed mixing, tea leaves, merchandise for sale through the waserdas and kiosks, vegetables etc.

KUD do not show separately in their accounts the commissions received or paid. They do, however, show the service charges received or paid by them.

The table given below describes the commodities purchased by these five KUD during 1994 and 1995:

KUD/Purchasing Business Items	Purchasing Turnover ('000 Rp)		Percent
	1994	1995	
<u>KUD PASIR JAMBU</u>			
Fertilisers	-	149.2	-
Milk	3,206.7	3,850.9	120%
Vegetables	-	104.2	∞
Retail shop	-	514.2	-
Cattle-feed	-	869.6	-
Livestock	-	-	-
Tea	-	273.1	-

The total purchasing business of the KUD during 1995 was Rp 1,629.4 million. The total sales were Rp 1,712.2 million, leaving with it a net gain of Rp 82.8 m. The KUD earned a total of net profit (SHU) of Rp 85.2 in 1995 against the SHU of Rp 67.2m in 1994, resulting into a 26% increase in net profits.

In the same way, the KUD Pasir Jambu had earned in 1995 a profit of 3% over the previous years in utilisation business e.g., operation of rice milling unit, farm machines and warehouse.

KUD TANI MUKTI

Fertilizer	-	-	-
Milk	-	201.8	-
Retail shop	-	615.9	-
Cattle-feed	-	-	-

In 1995 the total turnover of the KUD was Rp 1,964.2 m and its net surplus (SHU) was Rp 40.8 million.

KUD WALATRA

Fertilizer	17.6 (1992)	111.8	622%
Fuel (K.Oil etc.)	-	4.7	-
Milk	-	-	-
Vegetables	-	-	-

The total turnover of the KUD Walatra in 1995 was Rp 2,933.0 million, while its SHU was Rp 48.4 million.

KUD BAYONBONG

Fertilizer	827.8	741.2	89%
Vegetable (Indofoods)	-	5.6	-
Retail shop	12.0	17.6	150%
Milk	4,315.3	4,248.7	98%
Cattlefeed	1,257.0	1,070.4	85%

The total turnover of the KUD in 1995 was Rp 6,207.1 million while its SHU was Rp 101.5 m. Milk business is the profit centre of the KUD. The decline in fertilizer purchasing business and

cattle-feed was mainly due to the competition from outsiders. The milk business was down because of higher milk standards.

KUD CIKAJANG

Fertilizer	599.2	740.2	123%
Milk	1,387.9	1,752.0	126%
Vegetables	-	-	-
Retail shop	17.1	21.4	123%
Cattle-feed	240.8	365.8	152%

The total turnover in 1995 was Rp 3,003.8 million while its SHU was reported as Rp 102.3 million. Milk is the profit centre of the KUD. Its feed-mill has been producing and distributing quality material.

Major Suppliers of Goods and Patronage of Federations

Major suppliers of goods to the KUD have been the private entrepreneurs. The KUD places orders with the agents of manufacturers and wholesale distributors who visit its location. Horizontal integration in respect of procurement of ingredients of cattle-feed does not yet exist. Fertilizer is lifted from the PT Pusri's distribution points which is located nearby. Dairy related material and equipment is supplied by the GKSI-designated suppliers.

The KUD evinced strong confidence in its relationship with the GKSI. There is no enthusiasm in the KUD on its business relations with the Puskud and the Insurance Cooperative-KAI. It may be noted that major and expensive equipments including the trucks remain uninsured because of expensive coverage premium.

Marketing Business Methods, Commodities Handled, Turnover and Commissions

The members market their products e.g., milk, horticulture products, livestock with the KUD. The marketing method is almost standardised. The marketing is done as per negotiations reached between the cooperative and the buyers. Since most of the activities of the KUD are dairy and horticulture-oriented, the negotiations are carried between the IPS/GKSI and the vegetable processing units, generally with Indofood for purchase of potato.

The table below gives in brief the marketing business activities of the KUDs surveyed in West Java:

KUD/Marketing Business Items	Marketing Turnover ('000 Rp)		Percent
	1994	1995	

KUD PASIR JAMBU			
Fertilizer	84.2	149.7	178%
Milk	3,748.0	4,559.3	122%
Vegetables	-	128.0	-

Retail shop	378.0	554.2	146%
Tea	-	97.5	-
<u>KUD TANI MUKTI</u>			
Milk	-	343.7	-
Retail shop	-	628.3	-
<u>KUD WALATRA</u>			
Fertilizer	40.1	130.9	327%
Fuel	-	8.0	-
<u>KUD BAYONBONG</u>			
Fertilizer	833.7	750.9	90%
Vegetables (Indofoods)	-	6.3	-
Retail shop	14.4	18.1	128%
Milk	5,107.5	4,966.3	97%
Cattle-feed	1,357.7	1,205.7	89%
Kiosk/TPK	2.6	4.8	184%
<u>KUD CIKAJANG</u>			
Fertilizer	633.2	772.4	122%
Milk	1,994.7	2,534.2	127%
Retail shop	19.0	23.6	126%
Cattle-feed	290.1	437.3	150%

Source: Annual Reports and Questionnaire responses from the concerned KUDs. August 1996.

The KUD do not show in their accounts the payment or receipt of commissions by them. They do, however, show the service charges received or paid by them.

Given below is a summary of marketing and purchasing business of the KUD showing the commissions received by them. From the commissions received, the KUD cover their overheads and handling expenses:

<u>KUD/Items</u> 1995	<u>Purchase</u> Value/M.Rp	<u>Sales</u> Value/M.Rp	<u>Commission</u> Earned	<u>Percent</u>
<u>KUD PASIR JAMBU</u>				
-Fertiliser	149.2	149.7	0.5	0.3%
-Milk	3850.9	4559.3	708.4	18.3%
-Vegetables	104.2	128.0	23.8	22.8%
-Retail Shop	514.2	554.2	40.0	7.7%
<u>KUD TANI MUKTI</u>				
-Milk	201.8	343.7	141.9	70.3%
-Retail Shop	615.9	628.3	12.4	2.0%
<u>KUD WALATRA</u>				
-Fertiliser	111.8	130.9	19.1	17.0%
-Fuel/K.Oil	4.7	8.0	3.3	70.2%
<u>KUD BAYONGBONG</u>				
-Fertiliser	741.2	750.9	9.7	1.3%
-Vegetables	5.6	6.3	0.7	12.5%
-Retail Shop	17.6	18.1	0.5	2.8%
-Milk	4248.7	4966.3	717.6	16.8%
-Cattle-feed	1070.4	1205.7	135.3	12.6%

KUD CIKAJANG

-Fertiliser	740.2	772.4	32.2	4.3%
-Milk	1752.0	2534.2	782.2	44.6%
-Retail Shop	21.4	23.6	2.2	10.2%
-Cattle-feed	365.8	437.3	71.5	19.5%

Major Buyers, Use of Federations and Demand for Federations

Major buyers of products of the KUD are the IPS/GKSI and the food processing factories in the private sector, especially the Indofoods. Very little use of business federations is made. There is virtually no horizontal or vertical integration among the KUD and between them and the secondary level business federations.

Necessary Operation Fund for Economic and Utilisation Business and its Procurement

For executing the government programmes, e.g., distribution of fertilisers, procurement of rice, handling a variety of credit lines, handling electricity bills payments and the telephone kiosks, the KUD get a fee. Similarly on the purchase of some ingredients for the cattle-feed the government allows a subsidy on wheat pollard with a view to develop dairy industry. In the event of fulfilling any business order on behalf of the Puskud, for instance, KUD are provided with the needed credit by the Puskud.

KUD have very limited choice or range of credit lines from financial institutions. With the availability of easy and a variety of credit lines, the KUD can easily develop their joint use facilities and enhance the utilisation of their existing facilities e.g., the rice milling units, warehouses, cattle-feed and some farm machines.

The Utilisation and Operation of Kiosks, Collection/ Storage Facilities and Processing Facilities

A majority of kiosks are used for storing and supply of farm equipments, fertilizer, farm chemicals and other farm supplies e.g., vinyl sheets, tubing etc.

There are no modern collection and storage facilities. Collection of vegetables is done on the field itself and transported to shipping destinations from the road-heads. Milk is collected at collection centres where some cooling equipment is placed. The fresh milk is moved from these chilling stations to the IPS inlets by using transfer tankers of various capacities. These tankers are extensively used. There are no cold stores in the cooperative sector.

The Situation of Competition with Private Dealers

Since the KUD are dealing with their member-farmers as well-organised legal institutions with sufficient business experience,

the farmers repose their confidence in these institutions. The Cikajang KUD emphatically stated that it did not have any competition with anyone in the area and the member-farmers patronised the cooperative extensively.

FINDINGS OF THE KUD SURVEYED

KUD PROFILE/KUD CIKAJANG

Name of KUD: KUD MANDIRI CIKAJANG Category: Mandiri (1990)
Desa: Cibodas Kecamatan: Cikajang Province: West Java
Year Organized: December 1974 Reg.No.: 6093 C/BH/KWK.10/14
Date of Regn: 5 June 1993
Number of Members: 3,590 {Male 2,668+Female 922}
No. of employees: 70 {Male 61+Female 09}
{Full-time 61+Part-time 09}
Name of Chairman: Drs Nunuh Chaidar Date of Survey: 7 Aug 1996
Name of Manager: Ir Tendy Kusmayadi

Special Character of Location

Site Condition: 1,250-1,400 m from sea level; Rainfall 2,800 mm per year or 220-250 days/year; average temp 17C-27C; humidity levels between 70-85%. Well-connected with Bandung and Garut by an excellent asphalted road. Total land area 12,931 consists of rice fields, house backyards, tea estate, rain-fed areas, fish ponds, forests, cemetery and govt lands.

Socio-Economic Conditions: 1994 population 50,475 (Male 24,751 and female 25,724). Total households: 11,209 (Male 5,005+female 6,204). Electricity and telephone service available in 10 villages, 80% houses covered by electricity. Average income per capita Rp 2500 per day. Reasonably good supply of farm labour at harvest time. Major local industry is the state-owned tea estate. 11 villages covered by the KUD. High tourist potential.

Type of Agriculture: Horticulture and dairy. Upland areas suitable for vegetables, especially potato, tomato, green beans and leafy vegetables. 2 villages have irrigation facilities, rest depend on rains or water from hill-streams.

Major local industries: Government-owned tea estate. Horticulture and dairying.

Historical Background of the KUD

Born out of an amalgamation process of 3 former cooperatives Cikajang, Cigedug, Cikandang. It fulfilled all the criteria to become a Mandiri KUD. Since 1986, received several awards including the 1991 Best National Mandiri Award.

Character of the KUD

Services of KUD: Primary level multipurpose rural cooperative aimed at improving socio-economic conditions of members by

providing sales outlets to their milk and horticulture products.

It provides to the members fertilizer, farm inputs and cattle-feed. It has 45 KT's (19 dairy, 15 rural credit and 11 of tea.)

Major Facilities of KUD: Maintains milk chilling units (cap.5000 lt/hour), milk transfer tankers (combined capacity of 21,000 lt), cattle-feed mixing unit (capacity 2500 kg/hour), a retail shop, electricity bills payment counter, a kiostel, and an office block equipped with telephone and office machines. All lands and office facilities are owned by the KUD.

Business Conditions {As in 1995}

-Total Business Volume	... ..	Rp 3,003.8 m
-SHU	... ..	Rp 102.3 m
-KUD Own Capital	... ..	Rp 582.7 m
-Outside Capital	... ..	Rp 2,421.1 m
-Total Assets	... ..	Rp 3,003.8 m
-Total Institutional Loans Outstanding		Rp 520.0 m
-Total Member Loans (Bank Channelling)		Rp 364.5 m
-Total member loans (internal S/P)	...	Rp 38.6 m
-Member Savings: (as given below)	...	Rp 396.5 m
-Initial Membership	Rp 3.8 m	
-Compulsory Savings	Rp 143.7 m	
-Voluntary Savings	Rp 249.0 m	

Current Management Condition: Regular annual meetings (RAT) are held. RAT elects Board of Directors of 5 persons for 5 years, and a Board of Supervisors of 3 persons for 3 years. BOD meets every month. KUD appointed a qualified general manager who is assisted by other unit managers. Qualified cashier/accountant, waserda manager, technical staff to operate the cattle-feed mill and the chilling units including animal husbandry have been recruited. Proper accounts books and bank accounts are maintained.

Current Problems and Solving Plan

The KUD has the following problems and their possible solutions:

- a. Increasing demand for cattle-feed vis-a-vis limited production capacity of existing mixing plant. It needs to be doubled to about 4000 tons/year.
- b. Member-farmers have limited development opportunities. Dairying has been found to be effective. There is need to increase the dairy cow population through breeding activities. Livestock development is yet another income-generating activity.
- c. Milk production is increasing in the area. Cooling units seem to be insufficient. Quick transfer of fresh milk to IPS is necessary. Transportation facilities need to be enhanced.
- d. Quick payments to members for the milk delivered by them.

Future Plans for Development

KUD proposes to implement the above plans with its own/external resources.

General Comments

KUD appears to move forward steadily. Needs additional lines of easy credit to promote its activities. KUD should try to enter directly into horticulture business and help its further promotion.

FINDINGS OF THE COMMISSIONED SURVEY-I Agricultural Production

Distribution of Agricultural Input Material such as makers and dealers of chemical, vinyl, feed-stuff

While the production of most of the agricultural input material remains in the hands of the State-owned companies and the private enterprises, the distribution among the user-farmers is done through the KUD network. Chemical fertilizer is produced by State-owned companies. Its distribution is coordinated by the PT Pusri in collaboration with the KUD system. Farm chemicals are produced by PT Petrokemia Kayaku, Bayers and Ciba but the distribution is through the open market. KUDs still remain the major distributors of these insecticides. A majority of farm inputs are distributed through the network of State-owned company, PT Pertani.

Except for higher elevation locations, such as Pangalengan and Garut in West Java, vinyl sheeting is rarely used mainly because of the tropical climate and a higher humidity level. Wherever it is used, its main purpose is protective against rains. It is sometimes used to grow some delicate out-of-seasonal fruits, flowers and vegetables. The distribution of such material is through the open market. KUDs have not been selling this material to the members.

Cattle-feed (concentrates) is produced by several agencies in the province. Bandung alone is reported to be producing about 810,000 tons of cattle-feed. In 1994, the production of cattle-feed was in the following order:

Using corn as the main ingredient	310,600 tons
Using dedak (rice bran)	494,000 tons
Total:	804,600 tons
Production in Kab Bandung	60,000 7.4%
Production in Kab Garut	120,000 14.9%

PT Agro holds nearly 45% share of the production of cattle-feed. The rest is formulated/mixed by the KUD in their mixing plants or by some individual farmers holding a higher level of animals.

The distribution of farm chemicals and farm inputs is done through the TPKs of KUD, and in some case, through a portion of

the waserdas of KUD.

Distribution of Farm Machineries (Makers and Dealers)

During 1994, the farm machinery position in West Java was as follows:

12,062	...	2-wheel tractors
652	...	4-wheel tractors
205,900	...	Threshers
2,688	...	Rice Milling Units
303,211	...	Hand sprayers

Nearly 93% of the farm machines available in the province are in good working condition. Most of the farm machines are Japanese origin - either imported in 100% form or locally assembled. Some of the equipments were given to the KUD under OECF and Kennedy Round Programmes. Farm machines are available in the open market. KUDs do not sell bigger machines e.g., tractors. Hand sprayers, threshers and water pumps are sold depending on the individual contracts between the farmers and the KUD. Servicing and spare parts are easily available.

Keeping in view the high level of agricultural production in the province, the level of farm machines and equipment is still very low, because of their high prices and higher levels of maintenance costs. The requirements of farm machines is expected to go up sharply as the industrial development and urbanization in the province accelerates due to shrinkage of farm lands and exodus of farm labour to city centres.

Agro-Processing and Its Distribution

Demand for Major Farm Products (Commodities, Form of Processing, Consumption Areas)

West Java has gradually become a "profit centre" of the country because of its close proximity to the national capital, Jakarta. As a consequence, rural areas of West Java have now access to a very large market for supply of farm products, especially fresh vegetables, fruits, poultry and livestock products. A sample of increase in agricultural products is given below:

Commodity	1985	1994	Percent
Rice (Tons)	5,864,914	6,409,245	109.2
Vegetables (Tons)	315,000	482,500	153.3
Chilly (Tons)	73,285	179,682	246.5
Bananas (Tons)	824,680	1,174,460	142.3
Broiler (kg)	23,756,908	146,624,729	617.1
Eggs (kg)	1,113,593,742	1,282,654,699	115.1

Source: Kanwilkop-West Java, Bandung 1995

The farm products are collected through the KUD network either at the initiative of the traders and their agents or at the behest of the KT's. Products are cleaned up, sorted out and packed in sacks and transported to consumption areas. Very few KUD are engaged in a detailed processing of farm products. In West Java, KUD Pasir Jambu is known to have entered into an agreement with the Hero supermarket for the supply of grade-1 fresh vegetables as per standards established by them. The KUD does the packaging according to the requirements of the supermarket. Another KUD in Kab Bandung, KUD Sarwa Mukti has also specialized in handling fresh vegetables, but not doing any value addition or processing. In Kab Garut, the KUD Bayonbong is also engaged in horticultural activities, but no processing is undertaken.

Technical Level of Major Processed Farm Products by Commodities

Milk is one major commodity which is handled widely more in highland areas of West Java. There were 25 milk cooperatives and 454 KUD-milk units in 1993 collecting nearly 205 million liters of milk for despatch to IPS and the GKSI treatment plants. Some of the cooperatives convert excess milk into yogurt, flavoured milk and ice cream. The GKSI pasteurizes some milk for distribution in the local market under the brand name of "Susu Alam Murni". A major portion of the milk collected goes to the IPS e.g., Frisian Flag, Indo Milk, Ultra Jaya etc.

Fresh vegetables are not processed at the coop level. Some of the KUDs, especially in the highland areas of West Java, have entered into agreement with Indofood, a large private enterprise, for the supply of potato. The KUD Pasir Jambu has entered into agreement with Hero Supermarket for the supply of fresh vegetables.

Several KUD are engaged in collection of green tea leaves and selling them to the tea industry. KUD are not engaged in tea processing because of the high investment.

Soybean is grown in the province but is not sufficient to meet the market needs. The tahu tempé cooperatives - Kopti - are engaged in converting soybeans into food items, a flourishing business.

No processing of poultry is undertaken in the cooperative sector except for organizing its collection and transportation to consumption centres.

Major Agro-Processing Business Entities, Volume of Production and Facilities

There are several major agro-processing enterprises in the province, but they are all in the private sector. Major of them are: Indofood, Bogasari (flour mills) and IPS units. In the cooperative sector the only processing unit is for milk - at the GKSI Milk Treatment Plant in Bandung (137 million kg in 1992).

The processing facilities owned by the cooperative milk units include: cooling units, pasteurization units, sterilizers, milk transfer tankers, cattle-feed mixing units, milk testers and similar.

The province had a beef slaughtering capacity of 57,821 tons in 1994. The slaughter houses are traditional in nature and in private and public sector.

Marketing Area of Major Farm Products, Distribution System

Major marketing destinations of farm products have been Jakarta, Cirebon, Serang and some tourist areas. Cash crops like tea, coffee, cloves generally move towards Jakarta where the major buyers of these commodities operate. Tea processing industries within the province handle nearly the entire produce of the tea plantations for processing, packaging and distribution. Nearly 75% of the coffee produced in the province is consumed locally. The Inkud, in association with the Puskud-West Java, purchases nearly the entire produce of cloves of the province and holds it in stock for future distribution among the kretek cigarette manufacturers.

The distribution system depends on the quantity, quality and kind of the product. Potato, a perishable commodity, is sold in various ways e.g., major vegetable traders from the wholesale business in Jakarta lift the product from the road-head, some of the producer-farmers deliver their produce at the Bandung or Jakarta wholesale market, and yet some others, in association with the KUD, have entered into an agreement with Indofood to supply fixed quantities of the item at their factory in Central Java for conversion into potato chips. Same system applies to tomato crop. In one case, however, the KUD Walatra had delivered about 200 tons of tomato to a trading company for delivery in Singapore. This was a one-time business. Another experience is that of KUD Pasir Jambu which has entered into an agreement for the supply of fresh vegetable to the Hero Supermarket in Jakarta.

Business Customs and Its Practice (Pricing, Accounting Settlement)

These practices are more or less fixed and traditional. Following the West Java traditions, the terms are cash-upon-delivery of goods. However, in some cases bank transfers are also acceptable. A brief description of business customs is as follows:

Rice: The procurement is under the government programme. The procurement price is fixed by the government. The KUD is the procurement agency. It pays to the farmers in cash and rarely through their accounts in the cooperative. The surplus paddy/rice is sold by the farmer in the open market, generally to the trader who comes to his house first with cash in hand. The terms are cash. In some cases the farmers are even paid a token sum to reserve the next crop.

Milk: The farmer sells the milk to the KUD/Milk Cooperative on cash payment basis according to a pre-fixed procurement price which is determined according to a standard for fat/SNF contents and the cost of production of milk. The farmer receives the payment on a 10-day basis. The KUD/milk cooperative also receives its payment from the IPS/GKSI on monthly basis- usually in two instalment. The KUD upon receipt of payment from the IPS pays in the account of the farmer his due, after deducting the costs of items he has purchased from the cooperative e.g., cattle-feed etc. The farmer has two advantages in this case: he gets temporary credit for purchase of cattle-feed on one hand; and he receives his payments for the milk supplied through his account with the KUD. He is thus able to save some money in the savings account or has the freedom to withdraw all his amount.

Vegetables: Indofood also adopts the same method of payment to the farmers. While dealing with wholesale traders and their agents, the terms are usually cash-and-carry from the road-head. When the farmers takes his produce to the wholesale market, he brings home the cash in hand.

Cash crops: Except for cloves, all transactions are on cash-and-carry basis. For the price of the clove, the farmer gets part of his money in the form of a share contribution to his cooperative. The accounting system and the payment system to the farmer in the case of this commodity is rather complicated because many agencies in account settlement are involved, and the money is divided in various heads. The farmer needs a clear cash against the product.

FINDINGS OF COMMISSIONED SURVEY-II

ACTUAL SITUATION OF AGRICULTURISTS AND THEIR DEMANDS

Situation of Holdings of Farm Machinery and Facilities

The farm households survey covered 60 farm households from the area of operation of three KUDs in West Java (KUD WALATRA, KUD TANI MUKTI and KUD BAYONGBONG). Major production of the area has been: fresh milk, fruits and vegetables; and some livestock including poultry. On an average, income of a farm household from livestock and dairy has been almost 67% of its gross agricultural income. Consequently, the farmers have not invested much on farm machinery and agricultural implements. However, since the farmers also deal with the production of fruits and vegetables some simple and traditional farm implements have been procured by them. There were 39 pest control equipments, 9 water pumps, 8 sprinklers and 5 harvest/storage equipments.

The farmers also possessed 342.4m² of farm produce storage; 9.1m² of farm equipment garage; and 173m² of poultry house, facilities in the area of operation of these three KUDs. The farm machines, equipments and the facilities have been rather traditional, and are the minimum required for cultivation of vegetables and fruits (mainly potatoes and oranges) and upkeep of poultry and livestock.

The farmers held, on an average, 30 heads of cattle; 192 local hens, and some sheep, goats and water buffaloes. The highest concentration of cattle and poultry was in Bayong Bong KUD area.

Measures for Obtaining Production/Consumer Goods (Situation of using KUD)

On an average, the gross agricultural income of a household constitutes 95% of its total income. 61.6% of the gross agricultural income is spent on production-related expenses. The breakdown of the agricultural income is as follows:

Break-Up (Percentage) of Agricultural Income of Farm Households : 3 KUD Areas in West Java

Source of Income	WALATRA	TANI MUKTI	BAYONGBONG	Av. %
Rice	0.7	13.5	3.4	5.6
Livestock/Dairy	69.8	52.9	78.3	67.0
Fruits and Veg.	37.4	21.7	14.6	24.0
Cash Crops	--	11.1	2.3	4.3
Others	--	--	--	--

The major source of income of households has been from livestock and dairy activities (67%), followed by fruits and vegetables (24%) and just 5.6% from rice. The highest income-generating sectors have been: dairying and vegetables in KUD Walatra.

The breakdown of household expenses has been as follows: on an average 51.3% goes towards food expenses; education (15.3%); for clothing (12.6%); housing (7.3%); ceremonial expenses (5%); and about 8.3% towards other expenses. (see table below).

Break-Up (Percentage) of Household Expenses

Expenses	WALATRA	TANI MUKTI	BAYONGBONG	Av. %
Food	38.3	59.6	56.0	51.3
Clothing	11.8	11.4	15.0	12.6
Housing	13.5	6.7	2.3	7.3
Education	19.5	6.1	19.6	15.3
Ceremonies	5.7	6.1	2.8	5.0
Others	10.9	9.7	4.0	8.3

Households have been making use of their KUDs, to some extent, to procure their production and consumer needs as well as for sale of their products. 59% of the farm households purchased their fertilizers and pesticides from their KUDs. Other major purchases made by the members from their KUDs included: rice (65%); fish; paddy seeds; food; clothing; production/packaging material etc.

Very little of farm machines were purchased from the KUD. Farm household members of KUD Tani Mukti have been the main producers of vegetables e.g., white potatoes, and cabbage. Nearly 63-64% of the agricultural produce was sold by the members. Since the major produce of the members has been milk, 40% of the household sold their products to their KUD Tani Mukti, and 60% of them to KUD Bayong Bong, rest of them sold their entire production to IndoFood, a private milk processing company. The KUD, in turn, supplied the milk to the cooperative milk processing factory - the GKSI milk treatment plant - (in Bandung). Milk collection and its despatch to the cooperative dairy in Bandung has been its profit centre. The second important business of the KUD was in fruits and vegetables sector.

The KUD retail shops (waserdas) have been used to purchase daily household necessities, food items, some simple farm equipments, clothing etc.

Merchandise Ratio and Marketing Methods of Farm Products (Situation of Using KUD)

Not all the farm households use their KUDs to market their farm products. Only 40% sold their milk to KUD Tani Mukti, and 60% to their KUD Bayong Bong. The KUDs assisted their members to procure the required fruits and vegetables and arranged for its transportation either to Jakarta or to the nearby town centre of Bandung. Nearly 48-49% of the fruits and vegetables were marketed by the members on their own, either in the open market or to the contractors/commission agents.

None of the households or any of their KUDs possessed any grading, packaging and cold storage/warehousing facilities. The KUDs, however, operate outlets (kiosks) from which the farmers can purchase agricultural inputs and implements, but the range has not been wide. Members have suggested their renovations and expansion (85%), too far a location (45%), range of items available was limited (38%).

Intention to Introduce Farm Machinery and Facilities

Since the main occupation and earning source of the farm households has been dairying and poultry, the emphasis on anticipated mechanization has been on feeding machines (35%), milking (37%), and transportation (25.5%). However, other mechanization requirements have been: tilling (31.6%), rice planting (20%), and harvesting and threshing operations. (see table below):

Farm Households' Intention to Mechanise Farm Operations

Intention to Mechanise	WALATRA	TANI MUKTI	BAYONG BONG	Responses Received	Av.%
Tilling	03	10	06	19/60	31.6
Rice Transplanting	01	04	07	12/60	20.0
Harvesting	02	--	06	08/60	13.3

Threshing	01	--	07	08/60	13.3
Drying	03	02	04	09/60	15.0
Transportation	05	06	04	15/60	25.0
Feeding Machines	02	08	11	21/60	35.0
Milking	01	07	14	22/60	36.6
Others	--	--	--	--	--

In view of the lines of business of the surveyed farm households, and in the light of the topography of the area where the households live, it is clear that the mechanization is needed in transportation, milking, tilling and cattle-feed formulation. Some of the households have stated their need for setting up storage/warehousing facilities.

Evaluation and Demand for Business Activities (Purchasing, marketing, processing, joint shipment, joint-use facilities, terms of loan, farm guidance, better-living guidance)

The farm households have said that purchasing and marketing facilities, equipments including the Rice Milling Unit (RMUs) were inadequate and needed either renovations or upgrading (36.6%).

A summary of expectations from their KUD preferred by the households is given in the following table:

Expectations of the Farm Households from Their KUD

Expectations	Average %
-Upgrading Kiosks and Waserda	18.0
-Kiosks: Expansion of Items Range	26.0
-Waserda: Expansion of Items Range	26.0
-Establishing Joint Purchasing	75.0
-Establishing Joint Marketing	75.0
-Establishing Joint-Use Facilities	75.0
-Renovate & Expand Rice Milling Capacity	36.6
-Improve/Expand Warehousing Capacity	20.6
-Improve/Expand Assembly Hall	31.6
-Expand Loan Variety	40.0
-Increase Existing Credit Limits	40.0
-Increase Farm Production Guidance	40.0
-Increase Fertilizer Guidance	40.0
-Increase Better-Living Guidance	20.6

Kiosks and waserda (15-18% wanted renovations), expansion of range of items (26%). There are no processing facilities. The distribution channels, (75%) farmers suggested promoting joint marketing through the KUD. Some of the KUDs organise joint shipment but wanted it to be increased. Joint use facilities needs promoting (75%). This obviously covers feed-mills, milk collection and handling facilities including its transportation. Although all of them said that the loans are adequate yet 38% felt it was difficult to deal with managers and the conditions

of the loans were too many. 40% wanted more varieties of loans, and the maximum credit limit to be increased. 40% wanted more of guidance on farm production, and fertilizer utilization. With a view to promote harmony within the community, the farmer-members expected that their KUD could promote use of its facilities e.g., assembly halls for wedding (31.6%) etc. No regular or formal better-living activities (20.6%) are being carried out for the farmer-members by any of the three cooperatives.

HAMPERING FACTORS AND POSSIBILITIES FOR AN INTEGRATED DEVELOPMENT OF KUD

Hampering Factors: Marketing Business

The following hampering factors were observed:

- 01 Lack of business relations among the KUD and secondary level organisations;
- 02 Lack of understanding and acceptance of joint marketing system by KUD and secondary organisations;
- 03 Lack of infrastructure which could add value to the produce e.g., cold stores, milling capacity, holding capacity (storage, warehouses), grading and forwarding facilities;
- 04 Lack of capital to expand and diversify marketing business;
- 05 KUD lack initiative to establish new business units e.g., trading in vegetables, transportation services to members up to the market points;
- 06 Farm production planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-charge of farm guidance;
- 07 Lack of business information and communication among the farmers on one hand, and between the farmers and the KUD, on the other;
- 08 Lack of information and extension on quality products to suit the standards established by the government;
- 09 The payment to the farmers for the products delivered is late;
- 10 Lack of system of members' accounts settlement.

Hampering Factors: Purchasing Business

The following hampering factors have been noticed:

- 01 Lack of business relations among KUD and secondary level cooperative organisations;

- 02 Lack of understanding and acceptance of joint purchasing system;
- 03 Lack of purchasing capacity among the members;
- 04 Cattle-feed low in nutrition, and inadequate in quantity;
- 05 Inadequate supply of quality seeds, fertilizer and farm chemicals. KUD do not engage in compost/bio-fertilizer supplies;
- 06 For the development of livestock, the economic returns to the farmers is too low due to lack of infrastructure facilities e.g., cattle-sheds, pasture land etc.;
- 07 Due to lack of space and capital retail outlets (waserdas) and Cooperative Service Place (TPK) do not hold a larger variety of inputs and consumer goods;
- 08 Lack of quality seeds;
- 09 The location of TPK is not ideally suitable for the members;
- 10 KUD do not offer any extension services.

Possibilities:

Marketing Business

In the case of highland areas of West Java, in order to assist the farmer-members to obtain higher incomes from their marketing with their KUD, the following possibilities exist:

- 01 In order to help increase the income levels of farmer-members, it is possible to increase production of higher quality of milk which attracts higher prices;
- 02 In order to market the products efficiently it is possible for the KUD to provide higher levels of cooling capacity and a faster transfer of chilled milk at the KUD and district level to processing destinations;
- 03 With a view to add value to members' produce, milk and vegetables, it is possible for the KUD to provide technology in converting these products into products of local use;
- 04 It is possible for the KUD to directly help members to negotiate better prices for horticulture products;
- 05 KUD to enter the vegetables and fruits business on a joint marketing system basis;
- 06 In order to overcome the shortage of working capital, it is possible for the KUD to enter into joint venture arrangements with private industry on joint marketing basis;

- 07 It is possible for the KUD to introduce grading, packaging, storing and shipment facilities at KUD and district levels;
- 08 With a view to understand and conform to the requirements of milk and vegetable industry, it is possible for the KUD to train their managers and key members with the help of concerned industries;
- 09 More frequent extension activities are needed to keep the KT's informed of the current market situations, standards and fixation of prices for various commodities and how to qualify to achieve these set standards;
- 10 It is possible for the KUD and secondary organisations to establish a reliable market information system.

Possibilities:

Purchasing Business

In order to increase the purchasing business of the KUD and to satisfy the needs of the farmer-members, the following possibilities exist:

- 01 In view of the widespread cattle development activities in the highland areas, it is possible for the KUD to provide economical and nutritiously balanced cattle-feed;
- 02 With a view to provide sufficient feed/concentrates it is possible for the KUD to improve efficiency and capacity of cattle-feed mixing plants;
- 03 In view of the farm mechanization it is possible for the KUD to supply more farm machines, farm implements, farm inputs, consumer goods and other services through the improved waserdas and TPK;
- 04 It is possible to establish joint use facilities e.g., machines repairs and maintenance workshops at the district level by the KUD and other secondary organisations at the provincial level;
- 05 In order to overcome shortage of working capital it is possible to tap various sources, external and domestic, to obtain higher credit and financial support to members to obtain timely and sufficient quantities of inputs;
- 06 In order to enhance supplies of inputs and consumer goods, it is possible for the KUD to develop a business and information network with wholesalers, manufacturers and the Puskud;
- 07 With a view to provide technical information to the members, it is possible for the KUD to arrange for the training of their managers and employees and key members at district and provincial levels.

OUTLINE OF THE MASTER PLAN

Suggested Directions to Expand KUD Business

Purchasing Business

Establishment of Purchasing Business Method such as Joint Procurement

- 01 In order to maintain a steady and timely supply of farm inputs, and at reasonable prices, it is necessary that a joint procurement system is established by the KUD at the district level and by the Puskud at the provincial level.
- 02 A comprehensive farm production plan be developed by the farmer-members with the full involvement of the KUD and the KTs with the following objectives in view:
 - estimated production of each commodity (horticulture, livestock, poultry, milk);
 - estimated farm inputs (quantity/quality) with a time frame including ready-to-milk cows, grass seeds, roughage;
 - estimated credit required.
- 03 KUD to promote supply of improved variety of seeds (esp. potato), appropriate fertiliser compositions along with exercising technical quality controls;
- 04 KUD jointly establish a joint procurement and business negotiations to obtain the inputs e.g., cattle-feed ingredients;
- 05 Strengthening the dairy farming activities e.g., higher yields of milk, better health of dairy cows, increase in animal husbandry and dairy extension services, increase in the number of dairy cattle, supply of quality cattle-feed;
- 06 Therefore, the KUD to establish nursery/station for calves;
- 07 Expanding the capacities of mixing plants, procurement of basic ingredients from local resources e.g., rice bran, corn, cassava through the KUD channels.

Improvement of Purchasing Outlets

- 01 Expand the range of merchandise and services at waserdas and TPK e.g., farm machines, agricultural implements, maintenance and repairs services;
- 02 Kiosks need to be located closer to members' activity, and be equipped with communication and extension services.
- 03 Introduce joint purchasing system together with appropriate stock-point, market information/communication systems for

livestock-feed.

Marketing Business

Organizing Producers' Groups (including adoption of new commodities to be promoted)

- 01 Farmer-members should concentrate on production of high quality vegetables by using better seeds (e.g., potato) and adopting improved methods and tools for cultivation;
- 02 Emphasis be laid on handling livestock and poultry in a more hygienic and scientific manner by providing extensive animal care and guidance;
- 03 Processing of vegetables to overcome perishability;
- 04 The KT's and the handling managers need to be exposed to new methods and techniques through guidance and extension to learn to meet the market demands;
- 05 With a view to create market credibility to local products, it is desirable that the locally produced goods be prominently branded as a KUD/CI (Corporate Identity);
- 06 An exclusive horticulture and livestock management/training institution may be necessary to impart skills development among employees/managers and key farmers' groups/ leaders of the area.
- 07 Provide guidance to farmers in improving the quality and quantity of their products, especially, vegetables, livestock and dairy products.

Establishment of Marketing Business System such as Shipment Control, Pooling Calculations

- 01 In view of perishability of milk and vegetables there is a need to create holding facilities such as: cold stores, cooling stations (for milk as well as for vegetables) and refrigerated transfer trucks to consumption destinations;
- 02 Setting up sorting, grading and packaging facilities before shipment of members produce;
- 03 The KUD to initiate and establish members' accounts through which members' accounts with the KUD are settled, providing thereby also a scope for increasing members' savings;
- 04 KUD to establish stock point and collection facilities to stabilise market and supply needs and prices;
- 05 KUD to introduce computerization for uniformity in accounts for better controls on funds and inventories.

Provision of Information on Price to Members

The KUD to develop a market information system in association with Mandiri Inti and Puskud and other secondary level institutions by using radio broadcasts;

Obtaining Contracted Buyers

Long-term contracts be developed with local processors e.g., food processors, supermarkets to ensure a constant marketing of farm produce.

Agro-Processing Business

Improvement of Agro-Processing Technology in Highland Areas of West Java

- 01 Creating vegetable and fruit processing activities e.g., potato chips, salted vegetables, dehydrated vegetables, to achieve a higher 'value addition' for the farmer-producers;
- 02 Increasing technical level of facilities for milk handling e.g., more of chilling centres, transfer tankers, pasteurization of milk for local supplies;
- 03 KUD to enter into joint venture/business agreements with private industry to improve business of KUD;
- 04 Establish farm guidance and farm management systems to increase/improve the quality of vegetables and fruits;

Improvement of Storage and Transportation Technology of Farm Products and Practices

The present level of cooling facilities for milk are the barest minimum, limiting the level of milk holding. Even the KUDs which handle fresh vegetables do not own any processing or holding capacities. It is necessary, therefore, to:

- 01 Provide/increase transportation facilities for picking up milk and fresh vegetables from production points;
- 02 Provide financial and technical assistance through no-interest/low interest soft loans, and equipment, from external and domestic sources to KUD to set up and improve these facilities;
- 03 To overcome the shortage of funds, adoption of joint capital concept by a few neighbouring KUD with the assistance and experience of KUD Mandiri Inti and other secondary level institutions;

Rationalization of Management of Relating Facilities

- 01 Improve the management capacity of KUD in increasing the efficiency and production of feed mixing plants, milk

handling equipment and its transportation;

- 02 By streamlining the management of supply and demand at a district/2-district level, the business of KUD can be strengthened. On this basis, joint-use facilities like rice milling, cattle-feed mixing plants, central cooling stations, pooled transportation system, auto-repair & maintenance centres, dissemination of marketing information can be developed together with information/communication system;
- 03 KUD to provide better-living and farm management extension;
- 04 Constant training of KUD employees and key members in business management.

Obtaining Contracted Buyers

KUD to seek joint business ventures and long-term contracts with private industry e.g., food processors, milk processors to improve their business performance.

III GENERAL REVIEW OF THE PROVINCIAL SITUATION [WEST JAVA]

1. Social Life in Rural Areas

The population in the Province of West Java is 35,384,000 according to the Statistical Yearbook of Indonesia, 1994 published by the Central Statistics Bureau (BPS). It is the biggest population among provinces in the country and the most crowded province except the special territory of Jakarta and Yogyakarta.

Most of the population lives in the villages with agricultural activity. Rural people's daily life is closely connected with agriculture and animal husbandry. Most rural people show willingness to work hard. Usually farmers use animals for tilling and drafting. The central and south areas of the West Java belong to hilly-mountain area in agro-ecosystem. The land holding by each farmer is very small. They are obliged to adopt a variety of crops or diversification of product to maintain agricultural income.

Animal husbandry activities are mostly part-time job for farmers except dairy farmers and poultry raising farmers. Most cattle are fed by grass-feeding through "cut and carry" system. For dairy farmers, average animal ownership is 2 to 6 milk cow per household. In the case of poultry farmers, they feed usually 1,000 to 10,000 chickens.

The ratio of religious followers are as follows:

- Moslems	...	...	98.12%
- Protestants	...	...	1.10%
- Roman Catholics	...	...	0.37%
- Buddhists	...	...	0.27%
- Hindus	...	...	0.07%

The ceremony of rural area is strongly influenced by Islamic region and traditions. There are some ceremonies such as:

- Wedding ceremony
- Children to become adult ceremony
- Idul Fitri and Idul Adha

In the case of wedding ceremonies, all family members and rural people participate. In case of religious ceremonies, all rural people participate to thank for good harvesting and to have a good life in future.

2. Legal Bases for Handling of Farm Products

Although no data is available from the commissioned survey, but the situation can be estimated to be the same as with the other provinces.

3. Distribution of Commodity for Agricultural Production

3.1 Agricultural Chemicals: Urea is manufactured by several government companies but the coordination for its distribution is done by PT Pusri. Farm chemicals are produced by PT Petrokemia Kayaku, Bayers and Ciba but the distribution is through the open market. Some KUD have undertaken it purely on individual basis. Table below shows quantities of fertilizers and farm chemicals distributed in the province.

Particulars	Year 1990		Year 1993	
	National	West Java	National	West Java
FERTILISER				
No. of KUD	3,550	461	3,461	453
Urea (Tons)	1,706,547	295,790	3,737,760	631,910
All others* (Ton)	1,341,910	288,531	2,293,965	404,530
PPC & Zn (lt)	-	-	928,811	66,096
Others (Tons)	33,224	14,260	56,503	4,632
FARM CHEMICALS				
No. of KUD	1,647	183	934	55
Insec. Lqd '000lt	6,782	135	361,155	4,279
--- not Lqd (Tons)	3,992	1,393	2,588,977	212,333
Rodenticide (Tons)	2,496	36	9,001	391
Fungicides (Tons)	827	9	100,363	2,657
Herbicides (Tons)	243	5	15,869	174

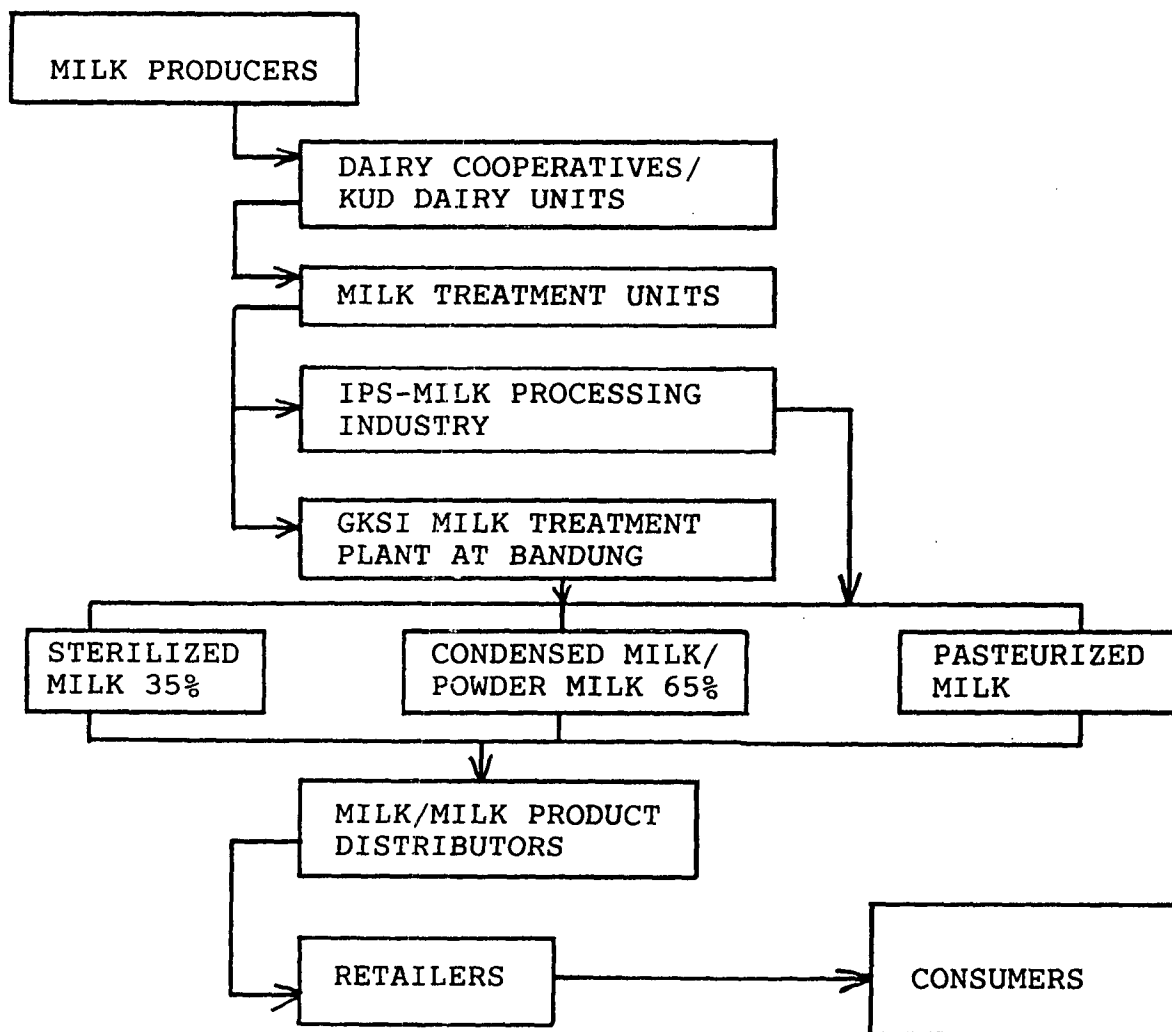
3.2 Vinyl Sheet/Plastics: Except for higher elevation locations, such as Pangalengan and Garut in the West Java, vinyl sheeting is rarely used by farmers because of the tropical climate and a higher humidity. Whatever is used, its main purpose is protective against rains. It is sometimes used to grow some delicate out-of-seasonal fruits, flowers and vegetable. The distribution of such material is through the open market. KUD have not been selling this material to the members.

3.3 Cattle-Feed: Cattle-feed is produced by several agencies in the province. Bandung alone is reported to be producing about 810,000 tons of cattle-feed. In 1994, distribution of such cattle-feed was as follows:

- Using corn as the main ingredient 310,600 tons
- Using rice bran as the main ingredient 494,000 tons

PT Agro holds nearly 45% share of the production. The rest is formulated/mixed by KUD in their mixing plants or by some individual farmers holding a higher level of cattle. As described in previous section, the average number of dairy cattle fed by each farm household is small. Accordingly the distribution of cattle-feed seems insignificant for farmers. There is a greater need for a wider distribution network duly supported by a higher level of manufacture with healthy contents.

3.4 Fresh Milk: Milk is one major commodity which is handled widely more in highland areas of the province. There were 25 milk cooperatives and 454 KUD-Milk Units in 1993 collecting nearly 205 million litres of fresh milk for despatch to milk processors. The flow chart given below explains the milk distribution system:



4. Distribution of Farm Machineries

Various types of farm machineries are available in the province. The following Table shows quantities of farm machineries by kinds. A majority of farm machineries are available within KUD sector. Nearly 93% of the farm machines available in the province are in good working condition.

Farm Machines (1994)	In Use	Damaged	Total	% in use
2-wheel tractors	11,279	783	12,062	93
4-wheel tractors (all types)	619	33	652	95
Hand sprayers	282,960	20,251	303,211	93
Other sprayers	66,171	4,552	70,723	93
Threshers etc.	204,519	1,466	205,985	99
Rice Milling Units	2,584	104	2,688	96
Water Pumps	5,342	354	5,696	94

Source: Dinas Tanaman Pangan, West Java 1994

Most of the farm machines are Japanese origin - either imported in 100% form or locally assembled. Some of the equipments were given to KUD under OECF loan and Kennedy Round Programmes. Farm machines are available in the open market. KUD do not sell bigger machines such as tractors. Hand sprayers, threshers and water pumps are sold depending on the individual contracts between the farmers and KUD. Servicing and spare parts are easily available.

Keeping in view the high level of agricultural production in the province, the level of farm machines and equipment is still very low, because of their high prices and higher levels of maintenance costs. The requirements of farm machines is expected to go up sharply as the industrial development and urbanization in the province accelerates due to shrinkage of farm lands and exodus of farm labour to city centres.

5. Production and Demand of Major Farm Products

West Java has gradually become a "profit centre" of the country because of its close approach to the national capital, Jakarta. As a consequence, rural areas of the province have now access to a very large market for supply of farm products, especially fresh vegetables, fruits, poultry and livestock products. The Table below shows production quantity of major agricultural products and its comparison of 1994 production with that of 1985.

As for vegetables, the production of cabbage, potato, leek, cucumber, yard-long beans, chinese cabbage and tomato are dominant. Except banana, mango, rambutan and pineapple show fairly large production as fruits.

Commodity	Year 1992	Year 1993	Percent
Paddy			
Province Total(T)	10,863,393	10,820,862	99.6%
-Bandung	-	615,811	5.6%
-Garut	-	554,856	5.1%
Corn			
Province Total(T)	318,775	274,181	86.0%
-Bandung	-	30,955	11.2%
-Garut	-	72,044	26.2%

Cassava				
Province	Total(T)	2,153,207	2,310,846	107.3%
-Bandung		-	152,504	6.6%
-Garut		-	306,629	13.2%
Sweet Potato				
Province	Total(T)	483,336	448,799	92.9%
-Bandung		-	51,328	11.3%
-Garut		-	68,116	15.1%
Peanuts				
Province	Total (T)	139,919	97,780	70.0%
-Bandung		-	6,076	6.2%
-Garut		-	14,854	15.1%
Soybeans				
Province	Total(T)	154,048	125,559	81.8%
-Bandung		-	4,857	3.8%
-Garut		-	42,006	33.4%
Leeks				
Province	Total(T)	137,292	138,279	100.9%
-Bandung		-	21,545	15.5%
-Garut		-	15,945	11.5%
Red Onion				
Province	Total(T)	104,989	101,759	96.9%
-Bandung		-	31,712	31.1%
-Garut		-	7,974	7.8%
Potatoes				
Province	Total(T)	209,069	205,189	98.1%
-Bandung		-	134,448	65.5%
-Garut		-	26,954	13.1%
Cabbage				
Province	Total(T)	358,600	337,971	94.2%
-Bandung		-	117,460	34.7%
-Garut		-	115,627	34.2%
Carrots				
Province	Total(T)	117,271	66,464	56.6%
-Bandung		-	14,337	21.5%
-Garut		-	3,577	5.3%
French Beans				
Province	Total(T)	28,695	62,362	217.3%
-Bandung		-	12,520	20.0%
-Garut		-	9,691	15.5%
Cucumber				
Province	Total(T)	111,569	225,077	201.7%
-Bandung		-	18,115	8.0%
-Garut		-	17,408	7.7%
Chili				
Province	Total(T)	71,508	172,635	241.4%
-Bandung		-	13,879	8.0%
-Garut		-	37,696	21.8%
Tomato				
Province	Total(T)	80,808	156,575	193.7%
-Bandung		-	56,584	36.1%
-Garut		-	29,624	18.9%
Avocado				
Province	Total(T)	38,212	43,303	113.3%
-Bandung		-	2,095	4.8%
-Garut		-	23,838	55.0%

Tangerine			
Province	Total(T)	30,235	13,242 43.7%
-Bandung		-	214 1.6%
-Garut		-	922 6.9%
Durian			
Province	Total(T)	23,878	33,208 139.0%
-Bandung		-	269 0.8%
-Garut		-	1,215 3.6%
Mangoes			
Province	Total(T)	108,551	106,205 97.8%
-Bandung		-	784 0.7%
-Garut		-	5,272 4.9%
Papaya			
Province	Total(T)	66,215	62,537 94.4%
-Bandung		-	2,156 3.4%
-Garut		-	3,820 6.1%
Banana			
Province	Total(T)	736,640	1,013,147 137.5%
-Bandung		-	98,861 9.7%
-Garut		-	46,190 4.5%
Rambutan			
Province	Total(T)	101,726	98,248 96.5%
-Bandung		-	709 0.7%
-Garut		-	1,456 1.4%

Source: West Java in Figures 1993. Statistical Office of West Java, Bandung. and Kanwil Pertanian, West Java 1994

Major marketing destinations of farm products have been Jakarta, Cirebon, Serang and some tourist areas. Cash crops like tea, coffee, cloves generally move towards Jakarta where the major buyers of these commodities operate.

Milk is one major commodity which is handled widely more in highland areas of the province. There were 25 milk cooperatives and 454 KUD-milk units in 1993 collecting nearly 205 million litres of milk for despatch milk processors.

6. Agro-Processing Activities

6.1 Paddy Processors: There are approximately 10,000,000 tons milling capacity in a year in the province. The number of facilities is shown in the following Table:

	1985	1990	1994
KUD	98	444	513
Non-KUD	14,424	18,107	19,301
Milling Qty (tons)	9,022,945	10,556,696	9,260,370

6.2 Milk Processors: The province is producing approximately 205 million litres of milk for despatch to IPS and the GKSI treatment plants. Some of the cooperatives convert excess milk into yogurt, cheese and ice cream. Major processors are Frisian Flag, Indo Milk, Ultra Jaya etc. The distribution quantity is shown in the following Table:

Table showing the Quantity of Milk Product Distributed

Particulars	Private	Dairy Federation
Milk (kg)	2,600,000	137,919,038
Condensed Milk/kg	5,987,000	-
Butter(kg)	300,000	-
Cheese (kg)	15,000,000	-
Yogurt (lt)	90,000,000	10,000
Ice cream/cup	3,000,000	-

Source: Statistic of Medium and Big Industry in West Java, 1989, 1991 and 1992

6.3 Other Agro-Processors: There are several major agro-processing enterprises in the province, but they are all in the private sector. Major of them are: Indofood, Bogasari (flour mills) and IPS units.

Some farmers have entered into agreements in association with KUD to supply fixed amount of potato to Indofood for processing into potato chips. The same system applies to tomato crop.

6.4 Slaughtering: The province had a beef slaughtering capacity of 57,281 tons in 1994. The slaughter houses are traditional in nature and in private and public sector.

7. Business Transaction for Agricultural Products

These practices are more or less fixed and traditional. Following the West Java traditions, the terms are cash-upon-delivery of goods. However, in some cases bank transfers are also acceptable.

Rice: The procurement is under the government programme. The procurement price is fixed by the government. KUD is the procurement agency. It pays to the farmers in their accounts in the cooperative. The surplus paddy/rice is sold by the farmers in the open market.

Milk: The farmer sells the milk to KUD/Milk cooperative on cash payment basis according to a pre-fixed procurement price which is determined according to a standard for fat/SNF contents and the cost of production of milk. The farmer receives the payment on a 10-day basis. KUD/Milk cooperative also receives its payment from the IPS/GKSI on monthly basis - usually in two instalment. KUD upon receipt of payment from the IPS pays in the account of farmer his due, after reducing the costs of items he has purchased from the cooperative e.g., cattle-feed etc. The farmer

has two advantages in this case: he gets temporary credit for purchase of cattle-feed on one hand; and he receives his payments for the milk supplied through his account with KUD. He is thus able to save some money in the saving account or has the freedom to withdraw all his account.

Vegetables: Indofood also adopts the same method of payment to the farmers. While dealing with wholesale traders and their agents, the terms are usually cash-and-carry from road-head. When the farmers takes his produce to the wholesale market, he brings home the cash in hand.

Cash Crops: Fairly large amount of estate crops have been cultivated in West Java such as coconut and tea. The production quantity is shown in the following Table:

Commodity/Tons	1989	1990	1991	1992	1993
Rubber	48,267	49,206	48,214	51,509	96,632
Coconut	166,755	175,133	176,379	174,619	296,785
Coffee	4,829	5,324	5,063	5,266	3,721
Tea	97,417	108,130	89,731	104,869	57,860
Cloves	4,278	5,910	6,354	13,032	3,362
Tobacco	1,316	1,899	2,631	2,573	966
Vanilla	83	84	85	108	50

Source: BPS Jawa Barat 1989-91, and Dinas Perkebunan Jawa Barat, 1992.

Except for cloves, all transaction are on cash-and-carry basis. For the price of the clove, the farmer gets part of his money in the form of a share contribution to his cooperative. The accounting system and the payment system to the farmer in the case of this commodity is rather complicated because many agencies in account settlement are involved, and the money is divided in various heads. The farmer needs a clear cash against the produce he has sold.

JICA-JAPAN INTERNATIONAL COOPERATION AGENCY
JA/ZENCHU-CENTRAL UNION OF AGRICULTURAL COOPERATIVES-JAPAN
MINISTRY OF COOPERATIVES AND SMALL ENTERPRISES DEVELOPMENT
GOVERNMENT OF THE REPUBLIC OF INDONESIA

**STUDY ON INTEGRATED DEVELOPMENT OF RURAL COOPERATIVES-KUD
IN THE REPUBLIC OF INDONESIA 1996-1997**

ECONOMIC BUSINESS OF KUD INCLUDING AGRO-PROCESSING SECTOR

04 EAST JAVA

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04 EAST JAVA

I. SUMMARY OF FINDINGS AGRO-PROCESSING, DISTRIBUTION AND KUD SITUATION

AGRO-PROCESSING & DISTRIBUTION

Major farm products of East Java are: paddy/rice, cassava, maize, soybeans, groundnut, fresh vegetables, fruits and cash crops. Paddy production has been in the region of 8.6 million tons and 8.9 million tons during the period 1992-1993. A comparison of the production levels of 1992 and 1993 is as follows: corn 112.9% increase in 1993 over the production of the year 1992, soybeans 100%, cassava 98.4%, groundnut 108%, coconut 102.7%, cloves 52.2%, garlic 103.5%, red onion 100.4%, potato 100.7%, cabbage 100%, tomato 95.9%, chilies 101.8%, avocado 102.9%, durian 112.6%, oranges 100.9%, mango 103.4%, pineapple 102.3%, banana 100.2%, rambutan 101.6% and salak 104.7%. Other crops include: coffee, cashewnut, mungbeans, sorghum, sweet potato etc.

A majority of KUD are engaged in the procurement and distribution of paddy/rice. After milling, a major portion is handed over to the Bulog for the national food stock, the remaining is disposed of in the open market and part of it is retained for home use. During 1994, a total of 285,229 tons of rice was purchased by the KUD out of which 258,340 tons (90.5%) was supplied to the Bulog/Dolog, and the remaining 26,888 tons (9.4%) was sold in the open market.

Major rice processing takes place at the KUD level which own small and medium-size rice milling units, drying floors, polishers, dryers and small warehouses. Large-size rice mills are in the private sector catering to the needs of the open market. In 1994 there were a total of 13,703 paddy processors out of which 2,949 were the rice milling units. There were 78,670 paddy threshers in the province. A total of 8.6 million tons of paddy was handled by 2,640 KUD rice milling units in the province during 1994. The facilities with the KUD are of low capacity and quantity. Because of their poor quality production, they often fail to meet with the quality standards established by the Bulog.

Fresh vegetables, especially the bananas, durian, apples and other fruits are sold in the open market. Some of the horticulture products are sold to the traders from Surabaya and Jakarta for shipment to higher consumption areas within Java itself and Bali. Although there is a high production of local apples, there are no vegetables and fruits processing units within the KUD sector.

Milk is an important commodity which has gradually become a "profit centre" of KUD and milk cooperatives. Processing of milk is done by both - cooperative and private sector. The milk

production has increased over the years. The production of milk in 1990 in East Java was 118.0 million kg, which rose to 131.7 million kg in 1994 (111.8%). The total national milk production in 1990 was 345.6 million kg, which rose to 425.3 million kg in 1994 (122.8%). A similar increase also took place in milk production through the KUD/milk cooperatives (122.3%). In 1990, the share of KUD/Milk cooperatives from East Java as compared with the total national cooperative milk production was 40.0%, in 1993 it was 35.0% and in 1994 the share was 36.5%. The share of East Java cooperative milk in the national cooperative milk production was 91.8% in 1994 if compared with the production of 1990. There was an increase in the production of milk in the province - from 125.3 million kg in 1993 to 131.7 million kg in 1994 (105.1%).

Milk is sent for processing to private milk processing companies (IPS) e.g., Nestles, Indo Milk and Fresian Flag and others. A part of milk is processed locally by the KUD/milk cooperatives and sold in the local market. Some primary processing also takes place e.g., yogurt, ice-cream and flavoured milk.

There were a total of 202 KUD/milk cooperatives in the country in 1994, out of which 65 in East Java (32.1%). More and more KUD are taking up to milk and livestock development. New business institutions have come up to participate in dairying business. KUD/milk cooperatives in Malang, Kediri and Pasuruan districts have flourished due to geographical conditions and relevant infrastructure available there. Many KUD/milk cooperatives have their own medium-size chilling centres and some fresh milk processing units. They also have their own transfer tankers and trucks. The GKSI (Union of Indonesia Dairy Cooperatives), provides business and technical support to KUD/milk cooperatives in processing, marketing and development of livestock.

There has been a significant increase in the population of livestock and meat production. During 1993 and 1994 these increases were: milch cattle 101.4%, beef cattle 102.0%, buffalo 94.6%, goat 101.2%, sheep 108.1%. The production of meat during 1993 was as follows: beef 93.7 million kg, buffalo meat 274,340 kg, mutton 19.0 million kg, sheep/domba meat 9.6 million kg, pork 8.8 million kg and horse meat 4,620 kg. Production of all types of meat also increased, from 214.6 million kg in 1993 to 218.3 million kg in 1994 (101.7%). There were 312 slaughter houses in the province in 1993 (private 100, and government 212). The facilities are traditional, except for the one operated by the Inkud in Surabaya, as a joint venture.

Poultry is an important product of the province. The increase in population of poultry was as follows: broiler 13.3 million birds in 1993, and 13.6 million in 1994 (102.0%); other hens 64.0 million birds in 1993, and 66.5 million in 1994 (103.8%); and, eggs 128.4 million kg in 1993 and 136.3 million kg in 1994 (106.1%). KUD are engaged in the collection and sale of poultry products through member-producers' group. They do not deal directly in the business. No KUD or cooperative owned any poultry processing facilities. All such facilities are in the private

sector.

The demand for cattle-feed in the province is high. There are a total of 11 major cattle-feed manufacturers, including the Puskud, in East Java. Some of the prominent producers are: PT Wirifa Sakti, PT Bama Inti Feed-mill, PT Nputraco, PT Charoen Pokphand, PT Comfeed Ind., PT Alfred C. Topfer, PT Gold Coin, PT Wonokoyo Feed-mills, PT Masura, PT Cargil and Puskud. They make use of locally-available rice bran, wheat pollard, ground nut, corn, molasses and cassava as main constituents. During 1994, Indonesia had imported nearly 1.5 million tons of corn from abroad to cover the demand for manufacture of cattle-feed.

Major agro-processing business entities include government sugar mills, food processors, e.g., Indomie, Indofood, and cattle-feed manufacturers. Many of the KUD own their own small/medium size feed-mix plants. Indofood, picks up tomato, potato and chilies from highland areas for processing. Clove is collected by the Puskud through the KUD network and retained as a part of the national buffer stock. During 1993, a total of 6,094 tons was procured.

The Puskud is engaged in some processing activity in the province e.g., salt processing at Probolinggo, cattle-feed factory at Probolinggo, coffee grading company at Malang, rice mills at Banyuwangi, tempe manufacturing units and several cloves cleaning centres.

OVERVIEW OF KUD: Economic Business

KUD in East Java are reported to be quite active in marketing and supply business. Principal economic business of the KUD consists of: distribution of fertiliser, farm inputs, production and distribution of cattle-feed, supply of paddy/rice to the national food stock, procurement and distribution of milk, fruits and vegetables, and distribution of consumer goods to members. Other economic business include: procurement of cloves, distribution of essential commodities e.g., sugar, wheat flour, kerosene oil and disbursement of farm credit.

The total turnover of KUD in East Java during 1992 was Rp 853,562 million which rose to Rp 1288,478 million in 1995 (150.8%). The level of increase in turnover in the province was almost similar to the national level of increase (148.8%). Similarly, the total surplus (SHU) in 1992 was Rp 6,698 million which was Rp 6,334 million in 1995 (94.5%).

Chemical fertiliser distribution is one of the major economic business of KUD in the province. During the year 1993, at the national level a total of 7.01 million tons of all types of chemical fertilisers were distributed, out of which the distribution in East Java was of the order of 2.33 million tons (33.2%). Chemical fertilisers are produced by several State-owned companies but the distribution is coordinated by one of them, the PT Pusri. The fertiliser is distributed through various channels

e.g., the Puskuds, KUD, Persero Niaga, private channels and PT Pertani. The allocations for fertiliser supply to the province is made according to a formula. While in 1990 a total of 992,073 tons was supplied by 656 KUD in the province, the supply by 680 KUD in 1995 was 1302,421 tons (131.2%). The KUD had distributed more urea during 1993 than in 1990 (199%). The Puskud organises transportation of fertiliser from the warehouses of PT Pusri up to the KUD/TPK points and receives a service fee for this. The price of urea are determined by the government from time to time. For the purchase of urea for paddy cultivation, the government provides credit channels to the farmers through the KUD network. The KUD receive a fee for the disbursement of fertiliser and farm credit which, in fact, forms a substantial portion of their working capital.

The distribution of farm chemicals is undertaken by the KUD purely on individual basis since these are available in the open market. While the main concentrates of farm chemicals are imported, the formulations are done in the country by various companies according to the local requirements. In 1990, 303 KUD had distributed these chemicals but in 1993, their number was 131 (43.2%).

For marketing of fertiliser by surveyed KUD indicates that this business has been a prominent one. The percentage of marketing of fertiliser as compared with the total turnover of the KUD, on an average, was 39.7%. In the case of KUD Budi Jaya it was 20.9%, KUD Budi Makmur 100%, KUD Satyam Jayate 41.1%, KUD Tulus Bhakti 5.0% and for KUD Tani Jaya it was 31.6%. The rate of commissions earned by the KUD from sales over purchases of fertiliser were as follows: Budi Jaya 1.3%, Budi Makmur 24.8%, Satyam Jayate 6.3%, Tulus Bhakti 3.1%, and Tani Jaya 5.3%. The Puskud, in 1995, had earned Rp 719.7 million as fertiliser transportation fee - 5.5% of its total turnover.

Distribution of seeds is open. Paddy seeds are produced by a government company and several authorised private enterprises. No KUD are reportedly engaged in seeds multiplication business. Seeds are certified by 99 government Seeds Certification Centre as to ensure their quality. During the years 1990-1993 the distribution of various seeds was as follows: In 1990, the number of KUD supplying seeds was 234, and in 1993, the number was 101 KUD (43.1%). Paddy seeds - 1990 a total of 6.01 million kg and in 1993, a total of 993,103 kg (16.4%), Corn in 1990, 357,137 kg and in 1993 a total of 49,304 kg (13.8%), and for soybean in 1990, a total of 32,643 kg and in 1993 a total of 40,560 kg (124.2%). The farmers are now able to purchase their seeds requirements from the open market. Only 20-30% of the farmers use certified seeds.

The KUD help procure paddy/rice from the members for the national food stock. The members supply the maximum which they can but still the preference of the farmer remains to sell the produce in the open market at a higher price than the procurement price fixed by the government. The procurement price is determined by the government from season to season. KUD get credit from the

government to purchase rice. While during the year 1988-89, 457 KUD had procured 270,047 tons of paddy/rice, 452 KUD procured a total of 189,333 tons (70.1%). East Java KUD had procured 24.0% of the national procurement in 1994-95. The supply of rice to Bulog in 1988-89 by 507 KUD was 737,561 tons, whereas in 1994-95, a total of 305 KUD (60.1%) had supplied 151,247 tons (20.5%) to the Bulog. The procurement and distribution of rice in the province by the KUD has gone down. This is mainly due to: i) partial opening of rice trade; ii) drop in the production of paddy during the period 1990-92, and iii) limiting the purchase of rice by Bulog.

Except for a few KUD, marketing of vegetables and fruits is done by the members through the KT's. KUD Satyam Jayate vegetable marketing business formed 26.2% of its 1995 total turnover. These commodities are sent to the capital town of Surabaya, Bali and other destinations on Java. Horticulture business is undertaken through autonomous business units.

Procurement of cloves is a government programme and is coordinated by the Puskud in association with the Inkud. Procurement of cloves was a prominent business of one KUD, KUD Tani Jaya - 144.8% of its 1995 total turnover. The rate of commission earned by this KUD from sales over purchases during 1995 was 1.5%. The kretek cigarette manufacturers are obliged to purchase their entire cloves requirements only from the national cloves buffer stock maintained by the Inkud. The total production of cloves was 6,094 tons in 1993, and the entire production went to the national buffer stock. The clove marketing business formed 5.3% of the Puskud's total business turnover of 1995.

Milk, judging from the increase in its production and the increase in the number of livestock, has become a "profit centre" of KUD/milk cooperatives in the province. The production of milk in 1990 was 118.0 million kg, which rose to 131.7 million kg in 1994 (111.8%). In 1990, the share of KUD/milk cooperatives as compared with the total national cooperative milk production was 40.0%, in 1993 35.0%, and 36.5% in 1994. The share of provincial cooperative milk in the national cooperative milk production was 91.8% in 1994 if compared with the figures of 1990. There was an increase in the production of milk in the province - from 125.3 million kg in 1993 to 131.7 million kg in 1994 (105.1%).

KUD supply their milk production to the private milk processors (IPS). There were a total of 202 KUD/milk cooperative in 1994, out of which 65 were in the province (32.1%). More and more KUD are taking up milk and livestock development business. New business institutions - secondary level business federations - have come up to participate in dairying business. One such organisation is KPUB Sapi Jaya at Kandangan with a membership of 15 KUD from Kediri and Jombang districts. Its total turnover increased by 116.8% in 1995 from that of the previous year, purchased milk worth Rp 5985.9 million and sold worth Rp 6066.1 million in 1995. KUD/milk cooperatives in Malang, Kediri, Jombang, Pasuruan areas have flourished due to geographical conditions. Milk business of KUD Tulus Bhakti formed 2.6% of its

marketing turnover in 1995 and 24.1% in the case of KUD Tani Jaya. The commissions earned by them were at the rate of 11.4% for KUD Tulus Bhakti, and 17.3% for KUD Tani Jaya. The GKSI (Union of Indonesia Dairy Cooperatives) provides technical, processing and marketing support to the KUD/Milk cooperatives in the country including the development of livestock.

More and more farmers are coming forward to undertake livestock development business - cattle-fattening and calf rearing activities.

Cattle-feed is manufactured by 11 major cattle-feed companies, including the Puskud. They make use of locally available raw material e.g., rice bran, wheat pollard, ground nut, corn, cassava. During 1994 the country had imported 1.5 million tons of corn from abroad to cover the demand for manufacture of cattle-feed. The percentage of cattle-feed business of 5 surveyed KUD during 1995 as compared with their total turnover was as follows: KUD Tulus Bhakti 2.1% and KUD Tani Jaya 4.6%.

466 KUD retail outlets were engaged in the distribution of consumer goods. The Puskud, a federation of 30 members is engaged in the distribution of fertiliser, sugar, wheat flour, cement and some Bulog material. Marketing of various commodities as compared with the total turnover of 1995 was as follows: fertiliser 5.5%, sugar 13.9%, fertiliser transportation fee received 43.8%, cement 8.0%, wheat flour 7.0%, cloves 5.3%. Its turnover was Rp 12,988 million, surplus Rp 653.3 million, own capital Rp 8,380 million and outside capital of Rp 48,806 million. Its business with the KUD was: 1995 goods purchased from the KUD Rp 8,385.2 million, and goods sold to the KUD Rp 8,797.3 million. It also deals in livestock development. It is a channelling agency for Inkud for procurement of cloves in the province.

Funds for operating economic and utilisation business is derived from various sources. These include: i) credit from government for procurement of paddy/rice, corn, cloves and service charges received for disbursement of credit; ii) service fees received for handling telephone and electricity bills; iii) credit from enterprises to purchase trucks and farm machines; and v) surplus generated from business.

HAMPERING FACTORS: **Economic Business**

Although the KUD in East Java are regarded as progressive, the diversification of business has not taken place which could have provided better purchasing and marketing opportunities to the member-farmers. KUD have been sustaining mainly on the fees and commissions received by them in implementing government programmes. The concepts of joint marketing, joint purchasing and establishing joint-use facilities like cattle-feed manufacture, milk handling and diversification in its processing, livestock development, fruits and vegetable grading, processing and transportation have not been adopted. This is mainly due to lack of initiative on the part of KUD leaders and members and lack

of information and training of managers. KUD have been operating on their own without any back-up and business collaboration and support from other KUD and their business federations/partners. No joint ventures have been established in milk, cattle-feed manufacture and processing of horticulture products. Lack of flow of business information, lack of guidance in farm management, planning, better-living and internal staff training are some other limiting factors.

These can be summed up as follows: Lack of ability to undertake marketing; joint marketing; joint capital; delayed payments including lack of members' accounts settlement systems; lack of business information; lack of marketing facilities; inadequate capital; insufficient farm guidance; insufficient business relationship such as joint ventures with vegetable/fruit processors, cattle-feed manufacturers; inadequate provision of services to members; absence of joint purchasing system; insufficient capacities for warehouses and retail outlets; lack of business collaboration with business federations and enterprises for supply of consumer goods and farm inputs and equipment. Although quality rice is grown in some parts of the province, no KUD has undertaken any steps to brand their products to establish credibility and identity.

POSSIBILITIES:

Economic Business

In order to help increase the income levels of farmer-members, KUD need to further develop their own economic business. For this the following possibilities exist: increase production of higher quality milk; provide higher technical levels of cooling capacity and speedy transfer of chilled milk to processing industries; establish technology transfer for processing of fruits and vegetables; establish methods for horticulture products price negotiations; introduce joint marketing, purchasing and joint-use facilities concepts; computerisation of accounts; establish joint ventures to overcome shortage of capital; establish grading, packaging, storing and shipping facilities including service and maintenance workshops at KUD/district level; quality improvement and expansion of cattle-feed production facilities; introduce and expand livestock/dairy cattle development and establishing calf nurseries; establish business relations with secondary level federations/private enterprises for supply of consumer goods and farm inputs and equipments; establish business information systems; expand training of KUD leaders and managers in management and farm-related subjects; training of managers through the private industry e.g., milk processing, cattle-feed manufacture, farm machine operations; and expansion of member information activities at the KUD level.

ACTIVATION MASTER PLAN:

Economic Business

In view of the ideal geographical and climatic conditions of the province, the broad-based network of KUD, and the vast potentials in farming and dairying, it is possible for the KUD to provide

better economic returns to their members. Taking advantage of the continuing positive support of the government and the infrastructure e.g., nearness to high consumption areas of Surabaya and Bali and the industrial centres, KUD can improve their economic business. Cooperative and business development climate in East Java is conducive. Some of the KUD have already introduced mechanisation in their operations e.g., milk processing, farm operations, computerisation of accounts, telecommunication facilities.

The economic business to the advantage of KUD members can be further expanded by adopting some of the following methods: introduction of concepts of joint marketing; joint purchasing; joint-use facilities e.g., cattle-feed manufacture, livestock/dairy cattle development, establishment of calf nurseries, fruits and vegetable processing; joint capital utilisation; establishing linkages with secondary level business federations and private enterprises for supply of consumer goods and farm inputs and implements; establishing joint ventures with private enterprises in fruits and vegetable collection, grading, processing and marketing; establishing business information systems; introducing members' accounts settlement systems; extensive computerisation to control accounts and production; establishing farm machine/transport maintenance workshops; providing guidance on farm management, planning and better-living; instituting management and farm-related training for leaders and managers; and expanding member education.

II . MAIN FINDINGS

AGRICULTURAL PRODUCTION

Distribution of Farm Input Material

Farm input materials include chemical and bio-fertilisers, farm chemicals e.g., insecticides, pesticides, rodenticide, fungicides and herbicides etc., and the supply of improved and quality seeds generally for key crops e.g., paddy, maize, soybeans etc. Chemical fertilizer is produced by several state-owned companies but the distribution of urea is coordinated by PT Pusri. The fertilizer is distributed from company-owned warehouses which are located at kecamatan level. This network is available throughout the country. The KUD pick up their requirements from these distribution points. The KUD, in turn, distributes the fertilizer from their own warehouses or through the TPK on the basis of pre-arranged delivery schedules.

The distribution of farm chemicals is through KUD or private channels. The main producers of these farm chemicals are Bayers, Ciba, PT Petrokemia Kayaku and others. While the main concentrates are imported, the formulations are done in Indonesia according to the local conditions and requirements.

The distribution of farm inputs by KUD in East Java was as follows:

Farm Inputs	Year 1990		Year 1993	
	National	E.Java	National	E.Java
<u>FERTILISER</u>				
No. of KUD	3,550	656	4,461	639
Urea (Tons)	1706,547	592,054	3737,760	1180,975
All others (Tons)*	1341,910	396,997	2293,965	755,863
PPC & ZPT (lt)	-	-	928,811	380,123
Others (Tons)	33,224	3,022	56,503	18,200
<u>FARM CHEMICALS</u>				
No. of KUD	1,647	303	934	131
Insec.Lqd. '000lt	6,782	839	361,155	27,302
-"-not lqd. (Tons)	3,992	926	2588,977	611,608
Rodenticide (Tons)	2,496	1,970	9,001	1,115
Fungicides (Tons)	827	60	100,363	87,724
Herbicide (Tons)	243	30	15,869	377

*includes: TSP, DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta.

The distribution of urea through the KUD in East Java in 1993 was 31.5% of the urea distributed nationally. The KUD had distributed more urea during 1993 than in 1990 (199%). Because of extensive cultivation of paddy, palawija and other cash crops in the

province the farmers have been using widely bio-fertilizer as well.

The distribution of seeds by KUD in East Java during the years 1990 and 1993 has been as follows:

Type of Seeds	Year 1990		Year 1993	
	National	E.Java	National	E.Java
No. of KUD	980	234	545	101
Paddy (kg)	26,351,795	6019,036	5336,522	993,103
Corn (kg)	635,324	357,137	479,911	49,304
Soybeans (kg)	610,344	32,643	1442,920	40,304
Others (kg)	3290,037	357,361	1068,673	814,754

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

The cooperatives distributed 18.6% of the paddy seeds in East Java as compared with the seeds distributed in the country. It was, however, 16.4% of the seeds distributed in 1990. Seeds of paddy are developed and distributed by PT Sanghianseri, a state-owned company, using KUD channels. Seeds of palawija and horticulture crops are obtained by the farmers from the open market. The government, however, operates several seeds certification stations, as to certify their quality.

Dissemination of Farm Machinery

Over the years the use of farm machinery in the province has increased significantly. The following table indicates the availability of farm machinery in East Java in the years 1984, 1993 and 1994.

Type of Farm Machinery	1984	1993	1994	% of 1993
2-Wheel Tractors	1,345	4,542	5,673	124.9
Tractors/all types	398	257	272	105.8
Hand Sprayers	99,280	192,224	188,007	97.8
Other Pest Control Eqpt	9,782	11,293	12,144	107.5
Threshers	7,846	74,314	78,670	105.8
Paddy Processors	8,638	14,941	13,703	91.7
(Out of which, RMU)	--	(2,848)	(2,949)	(103.5)
Water Pumps	--	2,681	1,932	72.0

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

The acquisition of farm machines in the province had increased over the years. It was 422% (5,673) in 1994 as compared with the number of 2-wheel tractors (1,345) in 1984. Similarly the hand sprayers were 189%, and 155% of the paddy processors in 1994 as compared with the numbers in 1984. A majority of farm machines are within the KUD sector, mostly owned by farm households. Some of the equipments have been imported, and some have been locally assembled. Nearly all the KUD owned paddy drying platforms and

small godowns to hold paddy and rice. Many of the KUDs own transportation vehicles. Cooperatives, except for milk cooperatives, are reported not owning any processing or cold storage facilities or any other agro-processing units. Some of the milk cooperatives and the KUD milk units own cooling facilities, transfer tankers and milk-related equipment.

PROCESSING AND DISTRIBUTION OF FARM PRODUCTS

Demands of Major Farm Products (Item, Form of Processing and Consumption)

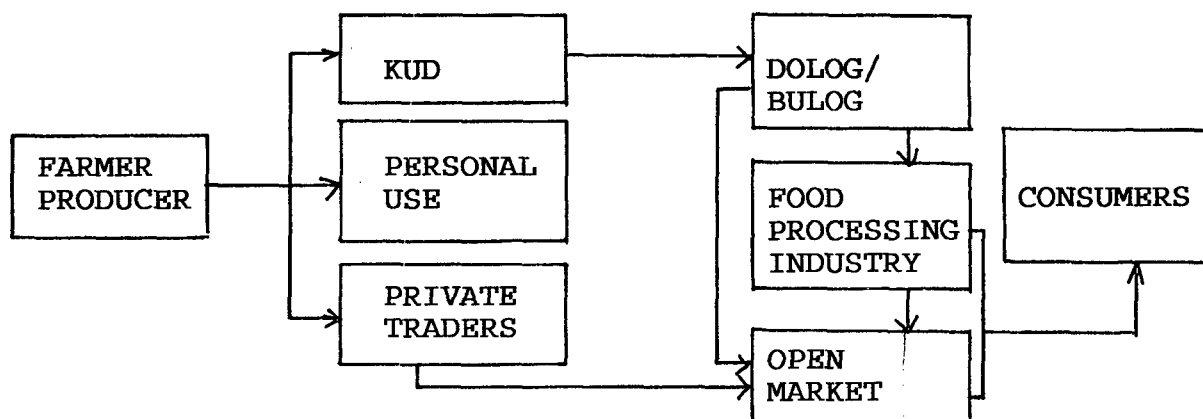
Major items of agricultural products in East Java have been paddy, maize, cassava, sweet potato, vegetables and fruits, coconut, coffee, cloves, milk and livestock. The following table shows the production of various commodities in 1992 and 1993:

Commodity (Tons)	1992	1993	Percent
Paddy/Rice	8,606,850	8,975,865	104.2%
Maize	2,676,401	3,023,344	112.9%
Sweet Potato	293,105	246,969	83.6%
Soybeans	568,167	568,177	100.0%
Cassava	4,408,867	4,340,700	98.4%
Groundnut	152,557	164,896	108.0%
Mungbeans	75,750	74,928	98.9%
Sorghum	15,831	8,428	53.2%
Cashewnut	7,317	7,239	98.9%
Coconut	197,648	203,082	102.7%
Coffee	37,443	32,883	87.8%
Cloves	11,666	6,094	52.2%
Capok	22,632	22,794	100.7%
Garlic	28,150	28,988	103.5%
Red Onion	151,800	152,435	100.4%
Potato	128,978	130,364	100.7%
Cabbage	153,979	154,031	100.0%
Tomato	14,208	13,637	95.9%
Chilies	105,600	107,702	101.8%
Avocado	33,800	34,678	102.9%
Apple	52,366	51,615	98.5%
Durian	14,200	15,995	112.6%
Oranges	100,700	101,624	100.9%
Mango	380,555	393,907	103.4%
Pineapple	550,777	564,278	102.3%
Banana	460,768	461,757	100.2%
Rambutan	45,854	46,591	101.6%
Salak	23,809	24,949	104.7%

Source:-Statistik Pertanian, Kanwil Pertanian, East Java, Surabaya and Jawa Timur Dalam Angka, BPS, Surabaya

It may be noted from the above that production of some of the farm products has gone down. The main reasons for this drop during these two years have been: i) draught conditions, and ii) shift from farm products to cash crops and dairy business.

The distribution of rice is done in two ways: a part of it goes to the Bulog, while the remaining is disposed of in the local market and retained by the farmers for their own use. In the case of other crops, if there is a procurement drive by the government for any specific crops, then the distribution takes place accordingly. Otherwise, farmers are assisted by the KUD to sell their produce. A FLOW CHART on distribution of rice in the province is given below:



Fresh vegetables and some fresh fruits, especially banana are sold in the open market. Wholesale traders, generally from wholesale markets and processing industries, purchase vegetables for shipment to wholesale markets and processing industries.

All cash crops move to the processing industries within Java where a majority of processing factories are located, for further processing. Whatever quantity of clove is produced in the province (6,094 tons in 1993), it is procured by the KUD-Puskud for the national cloves buffer stock.

The following table shows the poultry position in the province:

Item		Production (Number)	Distribution out of Province	
Local Hen	1993	13,340,327	4,200,000	31.4%
Egg Layers	"	33,047,209	8,300,000	25.1%
Broilers	"	31,011,984	3,900,000	12.5%
Duck	"	2,152,131	-NA-	-
Eggs (all) Tons	"	116,138	-NA-	-

Technical Level of Major Agro-Processing

Major agro-processing is rice milling, sugarcane crushing, processing of cassava, coconut, coffee, cattle-feed manufacture, tahu tempe manufacturing and dairying. Except for government

sugar mills, all other processing is in private and cooperative sector. The rice milling units range from 0.5 to 1 ton per hour. There are 11 cattle-feed formulators in the province.

Major Agro-Processing Entity, Volume of Production, Facilities

A total of 8.6 million tons of paddy was handled by 2,640 rice milling units in the province during 1994. The byproduct - rice bran - was used for manufacture of cattle-feed. The rice was supplied to Bulog and open market.

Processing of fruits and vegetable is done by the private companies. There is no processing activity of vegetables and fruits in the cooperative sector. Similarly, the processing of cash crops like coconut, coffee, cashewnut is also done in the private sector.

Processing of milk is done by both - cooperative and private sector. Milk production in the province is within the cooperative sector. The supply of milk by milk cooperatives and KUD milk units was as follows:

1989	1990	1992	1993	% of 1989
106.3 M.kg	118.0	123.1	125.3	117.9%

The livestock situation and processing facilities in the province in the year 1993 were as under:

Commodity	Numbers	Meat Production (kg)
Dairy cattle	105,657	-
Beef Cattle	3,163,096	93,772,712
Buffalo	166,491	274,340
Goat	2,237,024	19,053,050
Sheep/Domba	1,072,326	9,623,063
Pig	64,243	8,896,910
Horse	37,032	4,620

Source: Buku Statistik. Regional Livestock Service,
Surabaya, East Java.1994

There were a total of 312 slaughter houses in the Province in 1993 (Private 100, government 212). These are all traditional facilities.

Major Shipping Areas, Distribution System and Facilities by Commodities

For agricultural products e.g., vegetables, fruits and some cash crops, the major destinations for shipping were within the province itself. The destination for paddy/rice is government and

the general market.

The farm households or the KUD have not established any significant joint handling, joint marketing or joint shipment facilities. The only exception is handling of milk and its shipment from collection centres. Some of the milk cooperatives and KUD milk units have established their own cooling units and possess transfer tankers.

Business Customs, Pricing, Accounts Settlement

In most cases the business is transacted between the farmer and the agents of the traders. The transactions are highly cash-oriented. The word of mouth remains supreme in the first negotiations which do not involve very high values or expensive assets e.g., lands and buildings. In the case of agricultural produce, the agents of the traders keep on tracking the producers of the required commodities. The farmers are offered, in many cases, advance payments for the next crop.

In the context of farmers' dealing with the KUD, the transactions are mostly on cash basis (around 50%), the remaining being on credit basis, generally in respect of purchase of fertilisers, and other requirements. While dealing with the agents and traders, the cash advances are reduced at the time of settlement of final accounts. Advances received by the farmer appear advantageous and look attractive in the initial states but at the time of the final settlement the farmer tends to loose because of the disadvantageous prices at which he had sold his crop. Since cash is needed always by the farmer, a small disadvantage does not seem to harm him.

The pricing of agricultural products is determined by various factors e.g., the cost of inputs, labour inputs and a reasonable margin of profit. This is true of horticulture, poultry and livestock products. The prices of urea are determined by the government. Fertiliser other than urea is generally open for sale.

The accounts are settled based on the conditions laid down by the KUD and agreed upon between the KUD and the members. In the case of agricultural producers of East Java, the members can purchase their requirements from the KUD on credit basis which are settled against the supplies received by them from the KUD. the system of accounts settlement is generally the same all over the province and is generally acceptable to both - the members and the KUD.

Others

The distribution of agricultural products and items of daily use is also carried out through a network of retail shops (waserdas) in East Java, although the number of such shops and the merchandise range is low.

The provincial federation of the KUD - the Puskud - undertakes some business activities. The business relationship between the two is still thin. There is no horizontal and vertical integration between the two tiers in the province. The only visible business relationship between the KUD and the Puskud is on few commodities e.g., procurement of cloves, distribution of fertiliser, sugar and wheat flour. The Puskud could activate its business relations with the KUD and initiate an active marketing information system to provide logistic support to its affiliates in the province.

BUSINESS MANAGEMENT OF KUD AND RELATING LEGAL SYSTEM

Situation of Business

Purchasing and Marketing Business

purchasing Business System, Commodities and Turnover

To meet the needs of farmer-members, the KUD network has met the input needs to some extent in the province. The government programmes which have been assigned to the KUD, further reinforce their business operations. The government programmes include: distribution of chemical fertiliser, agricultural credit, distribution of essential commodities e.g., sugar, rice, soybeans, kerosene oil etc. The members, therefore, not only purchase their input needs through the KUD but also their consumption needs.

Fertilizer distribution: In East Java, PT Pusri distributes chemical fertiliser through various channels e.g., the Puskud, KUD, PT Pertani and private channels. The distribution of fertiliser in the province during 1990-95 was as follows:

Particulars	1990	1992	1993	1995	% of '92
No. of KUD	656	646	639	680	103.6
Fertiliser (Tons All types)	992,073	389,924	2335,161	1302,421	131.2

Source: Department of Cooperatives-RI, Jakarta

During the period 1990/1993, fertiliser (urea) was distributed in the country as is seen in the following table:

Particulars	1990-91	1992-93
Total National distribution (Tons)	2,810,539	3,031,971
Allocated by PT Pusri for distribution by:		
-Puskud	0.2%	0.1%
-KUD	80.9%	80.3%
-Persero Niaga	1.6%	3.2%
-PT Pertani	11.6%	8.8%

Chemical fertiliser is produced by several government companies including the PT Pusri, but the distribution is coordinated by PT Pusri. PT Pusri, in turn, allocates quota for distribution among various agencies including the Puskuds. PT Pertani, a government company, distributes fertiliser for the plantations. Farmers obtain their farm chemicals from the KUD or from the open market.

Seeds distribution: Distribution of seeds is open. Paddy seeds are produced by a government company and several authorised private enterprises. The Department of Agriculture encourages farmers to take up seeds multiplication as an additional income source. Seeds are certified by a government Seeds Certification Centre as to their quality. During 1990-93 the following quantities of various seeds were distributed in the province:

Year	No. KUD	Paddy	Corn	Soybeans	Others
1990/kg	234	6019,036	357,137	32,643	357,361
1993/kg	101	993,103	49,304	40,560	814,754

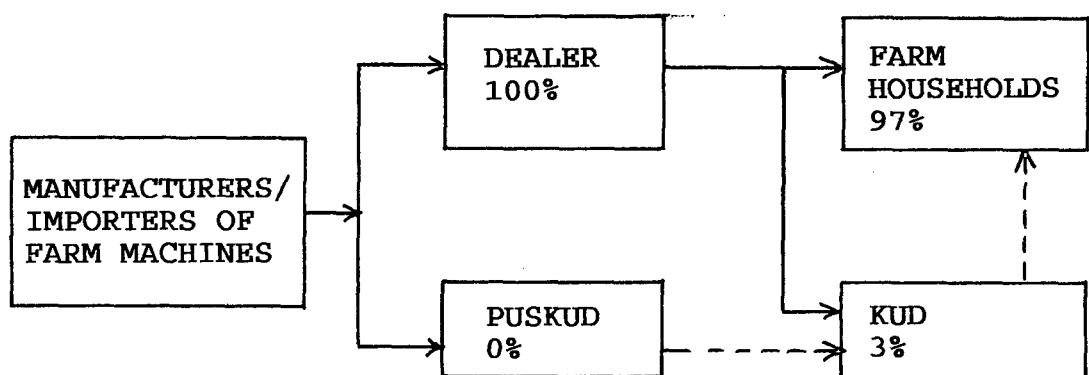
The distribution of seeds was deregulated after 1990-91. The farmers were able to purchase their requirements from the open market, hence the sudden drop during 1993. In East Java only 20-30% of the farmers use certified seeds.

Farm Machines and Agricultural implements: In the province the farmers use farm machines as well as the farm cattle. The table below shows the availability of various farm implements in the province during the years 1993 and 1994:

Type of Machine	1993	1994	Percent
2-Wheel Tractors	4,542	5,673	124.9
Tractors/all type	257	272	105.8
Hand Sprayers	192,224	188,007	97.8
Other Pest Control Eqpt	11,293	12,144	107.5
Threshers	74,314	78,670	105.8
Paddy Processors	14,941	13,703	91.7
(Out of which, RMU)	(2,848)	(2,949)	(103.5)
Water Pumps	2,681	1,932	72.0

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

The **Flow Chart** below explains the distribution channels of farm machines in the province:



The acquisition of farm machines in the province has increased over the year. A majority of farm machines are within the cooperative sector. Some of the equipment have been imported and some have been locally assembled. During the period 1987-1991 a number of machines such as power tillers, water pumps, paddy harvesters and threshers, corn shellers were supplied under OECF and Kennedy Round Programmes.

The farmers purchase their farm implements either through the KUD or from the open market. KUD procure the equipments from the wholesale dealers.

Retail Outlets (waserda) and TPK (kiosks): Farmers purchase their farm inputs and consumer goods from the waserdas and TPK. Each KUD operates on an average 4-5 TPK located close to the farm operational areas. Some of the TPK are operated by the farmer-members as their private enterprise but selling farm inputs.

The position of retail outlets in 1994 and 1995 in the province was as follows:

Particulars	1994	1995	Percent
No. of waserdas	389	399	102.5
Working Capital (M.Rp)	1,763.0	3,200.0	181.5
Turnover (M.Rp)	2,565.0	3,776.0	147.2

Source: Ministry of Cooperatives-RI, Jakarta 1996

Turnover: The total turnover of KUD in East Java during the year 1992 to 1995 is given in the table below:

Particulars	1992 (M.Rp)	1994 (M.Rp)	1995 (M.Rp)	% of 1992
East Java	853,562	812,378	1288,478	150.8
National	3807,639	4837,683	5669,411	148.8

Major Source of Procurement of commodities

Chemical fertiliser distribution is coordinated by the PT Pusri which has its warehouses located throughout the country and even

at the kecamatan level from where the KUD get their supplies through the Puskud. The government provides credit to the farmers through the KUD to purchase the urea. Other chemical fertiliser formulations are available in the open market. Similarly, bio-fertilisers, farm chemicals are obtained from the open market. One of major urea manufacturing companies is located in the province itself.

Seeds, except for paddy, are procured from the open market. Paddy seedlings are produced and distributed by PT Sangianseri. The government operates a number of seeds certification centres throughout the country in order to ensure seeds quality.

Merchandise for sale through the TPK and retail outlets is obtained from the open market. There is no wholesale cooperative agency which sells or coordinates the supply of consumer goods to these outlets. Only recently an effort has been made by the Puskud in collaboration with PT Goro to supply consumer goods on wholesale prices.

Marketing Business System by Commodities and Turnover

Major marketing activities in the province have been: Paddy, rice, corn, cassava, soybeans and others. The KUD help procure paddy/rice from its members for the national food stock and try to fill the target set for it for the supply of rice to Dolog. the members supply the maximum which they can but still the preference of the farmer remains to sell the produce in the open market at a higher price than fixed by the government. The procurement price of paddy/rice is determined by the government every season. KUD gets credit from the government to purchase rice.

The marketing of paddy/rice by the members in East Java during 1988-89 and 1994-5 is given in the table below:

Particulars	1988-89		1994-95	
	National	East Java	National	East Java
<u>Paddy/Rice Procured</u>				
By KUD (Nos)	2,018	457	1,993	452
Procured (Tons)	1096,212	270,047	786,066	189,333
<u>Sold to Bulog</u>				
By KUD (Nos)	2,120	507	1,133	305
Sold (Tons)	2023,952	737,561	509,919	151,247

Source: Department of Cooperatives-RI, Jakarta 1996

It is noticed from the above that the procurement and distribution of rice in the province by KUD has gone down. This is mainly due to: i) partial opening of rice trade; ii) drop in the production of paddy during the period 1990-1992; and iii) limiting the purchase of rice by Bulog.

Other main products of the province as compared with the two selected districts - Kediri and Pasuruan - are given in the table below:

Commodity	1992	1993	% of Prov. Total '93
PADDY/RICE			
Province Total (T)	8606,850	8975,865	-
-Kediri	-	351,332	3.9%
-Pasuruan	-	366,656	4.0%
MAIZE			
Province Total (T)	3023,344	2676,401	-
-Kediri	-	143,457	5.3%
-Pasuruan	-	93,416	3.4%
CASSAVA			
Province Total (T)	4408,867	4340,700	-
-Kediri	-	152,833	3.5%
-Pasuruan	-	143,427	3.2%
SWEET POTATO			
Province Total (T)	293,105	246,969	-
-Kediri	-	5,318	2.0%
-Pasuruan	-	8,630	3.6%
SOYBEANS			
Province Total (T)	568,167	568,177	-
-Kediri	-	10,566	1.9%
-Pasuruan	-	40,069	7.0%
CASHEWNUT			
Province Total (T)	7,317	7,239	-
-Kediri	-	308	4.2%
-Pasuruan	-	181	2.5%
COCONUT			
Province Total (T)	197,648	203,082	-
-Kediri	-	7,354	3.4%
-Pasuruan	-	1,600	0.9%
COFFEE			
Province Total (T)	37,443	32,883	-
-Kediri	-	528	1.6%
-Pasuruan	-	612	1.8%
CLOVES			
Province Total (T)	11,666	6,094	-
-Kediri	-	74	1.2%
-Pasuruan	-	168	2.7%
LIVESTOCK AND POULTRY			
MILCH COWS			
Province Total (No)	102,235	105,657	-
-Kediri	-	4,740	4.7%
-Pasuruan	-	38,913	36.7%
BEEF COWS			
Province Total (No)	3135,688	3163,096	-
-Kediri	-	116,636	3.6%
-Pasuruan	-	90,523	2.8%

GOAT			
Province Total (No)	2244,936	2237,044	-
-Kediri	-	111,434	4.9%
-Pasuruan	-	74,100	3.3%
LOCAL HENS			
Province Total (No)	30,675,160	31,011,984	-
-Kediri	-	1,476,846	4.7%
-Pasuruan	-	1,185,434	3.8%

Source: Jawa Timur Dalam Angka 1993. Surabaya; and Annual Report 194-95 of Livestock Service, East Java, Surabaya

Similarly, out of a total of 128,460 tons of eggs produced in the province in 1993, the production in Kediri was 9,372 tons (7.2%), and in Pasuruan 10,005 tons (7.7%).

The total business volume and the total surplus of KUD in East Java in 1992-1995 was as follows:

Particulars	1992	1994	1995	% of 1992
Turnover (M.Rp)	853,562	812,378	1288,478	150.8
Surplus-SHU (M.Rp)	6,698	5,570	6,334	94.5

Major Market Area, Buyers

Major market areas for the produce of the farmer-members in East Java are the government (Bulog/Dolog), private processing industries (especially, food-processing, cassava processors, cattle-feed formulators). Some of the fresh vegetables, fruits and cash crops move to other parts of Java.

Procurement of Funds for Economic and Utilisation Business

Funds for operating economic and utilisation business is available from various sources:

- Credit from government for procurement of paddy/rice, corn, soybeans, cloves and the service charges the government pays to the KUD for disbursement of such credit;
- Service fee for handling telephone and electricity bills;
- Credit from private enterprises for procurement of vegetables and other farm products e.g., cassava, coconut, coffee etc.
- Credit from Puskud and dairy federation for livestock development and dairy business;
- Surplus earned from the business of the KUD.

The level and variety of such credits is inadequate in the province. As a result the expansion of business is slow.

Holding and Utilisation of Kiosks, Storage, Processing Facilities

Retail, kiosks and warehouses are operated by the KUD as a service to the members. In 1995, the situation in the KUD sector in East Java was as follows:

Total of retail shops/waserdas	...	466
Drying floors	... ..	2,010
Rice Milling Units	... ..	782
Rice Drying Units	... ..	274

Competition with Private Dealers

The KUD are neither integrated horizontally nor vertically. Each unit works on its own and develops its own business with the funds raised through its own efforts and resources. Since a majority of business units of KUD are operating within the government-supported system, the element of competition with the private dealers does not exist. Procurement of rice and clove, distribution of fertiliser, sugar, soybeans, corn, wheat flour etc. are all regulated by the government and are consequently a secure business, leaving not much scope for competition. However, in consumer goods distribution and distribution of cattle-feed there are many other private operators. In this sector the KUD face competition.

ORGANISATION, MANAGEMENT & BUSINESS OF PUSKUD Situation of Business

The PUSKUD-East Java is a business secondary level federation of KUD in the province. It was organised on 20th September 1975 and registered vide No. 3883/BH/II/1975 with 5 KUD. In 1996 its membership was 30. Its members General Meeting, which meets once a year, elects a 7-member Board of Directors for a 3-year term, a 3-member Board of Supervision also for a period of 3 years, and a 2-member Board of Guidance for a 3-year term.

The Puskud is a member of a national federation, Inkud. The main aim of Puskud is to provide business support to its member-affiliates, promote cooperative business in the rural sector in the province in accordance with the Principles of Cooperation, and to promote cooperative education and training. The business activities of the Puskud include: procurement and supply of paddy/rice, distribution of fertiliser, sugar/other essential commodities, collection of cloves and other farm products, and distribution of consumer goods among the affiliates. The Puskud has its office at Surabaya. The Puskud has 104 full-time employees including a general manager.

Situation of Business

Purchasing Business Methods, Commodities, Turnover

The Puskud East Java is a federation of 30 members (KUD and non-KUD). In commodities like the cloves and gaplek (cassava chips),

the Inkud assigns the Puskud to fulfil a specific trader order for home use or for exports. The indent specifying the quantity and quality and the time frame is passed on the Puskud for execution. The Puskud, in turn, contacts the relevant KUD and asks them to supply the required items within a specific time. Upon receipt of raw commodities, and after some semi-processing, the items are exported.

The Puskud also coordinates the procurement of commodities either for national food stocks or for distribution in the open market. Methods adopted are negotiated with the relevant agencies/suppliers, and are either on a fee basis or on a commission basis. Procurement prices of rice and cloves are regulated.

Economic situation of Puskud during 1994 and 1995 was as follows:

Membership	29	30	103.4%
Business Volume (M.Rp)	15,250.1	12,988.6	85.1%
Assets (M.Rp)	50,233.0	57,186.7	113.8%
Surplus-SHU (M.Rp)	628.0	653.3	103.9%
Own Capital (M.Rp)	7,908.6	8,380.6	105.9%
Outside Capital (M.Rp)	42,324.3	48,806.1	115.3%
Employees	110	106	96.3%

During 1994 and 1995, the Puskud-East Java purchased the following commodities:

Commodities	Purchases (M.Rp)		% of Turnover of Year 1995
	1994	1995	
TOTAL TURNOVER			Rp 12,988.6M
-Fertiliser	-	695.7	5.3%
-Paddy/Rice	928.9	857.4	6.5%
-Waserda	167.2	170.7	1.3%
-Sugar	4974.4	1661.1	12.7%
-Wheat flour	363.8	871.6	6.7%
-Cement	1286.2	1017.7	7.8%
-Maspion Goods	167.2	170.7	1.3%
-Fert.Transport	5738.4	5374.6	41.3%
-Print Shop	217.2	43.0	0.3%
-Bulog Goods	173.2	173.2	1.3%
-Warehouses Rental	1.1	4.7	-
-Clove	343.8	279.7	2.1%

The Puskud does not purchase commodities like soybeans, chemical fertiliser, cloves, but acts as a coordinator for procurement and distribution. For this service, the Puskud receives service fees from various agencies e.g., from Bulog, Clove Agency, Kopti etc.

Major Suppliers and Buyers (KUD and non-KUD)

The major suppliers of the Puskud have been the private enterprises and the state-owned chemical fertiliser company, PT Pusri. It obtains its supplies of sugar, wheat flour and soybeans from the Bulog. Farm produce e.g., paddy/rice, clove, cassava is

procured through the KUD network. The Puskud also acts as an agent of the Cement company for the supply of cement in the province.

Its major buyers are the KUD, clove holding agency through the Inkud, farm produce processing factories.

Marketing Business Methods, Commodities, Turnover

The marketing business methods include negotiations by the KUD and the basic level farmers with the Puskud, as well as the requirements of national food stock maintained by the government.

The main marketing business (sales by Puskud) during 1994 and 1995 as follows:

Commodities	Sales (M.Rp)		% of Turnover of Year 1995
	1994	1995	
TOTAL TURNOVER			Rp 12,988.6M
-Fertiliser	-	719.7	5.5%
-Paddy/Rice	986.0	908.5	6.9%
-Waserda	169.7	172.2	1.3%
-Sugar	5164.2	1807.3	13.9%
-Wheat Flour	377.5	918.3	7.0%
-Cement	1320.5	1051.3	8.0%
-Maspion Goods	169.7	172.2	1.3%
-Fert.Transport	6432.7	5,701.4	43.8%
-Print shop	248.0	84.6	0.6%
-Bulog Goods	189.7	192.2	1.4%
-Warehouses Rental	40.2	81.0	0.6%
-Clove	541.2	696.0	5.3%

Major Suppliers of Marketing Commodities and Buyers (KUD and non-KUD)

KUD and the farmer-members are the major suppliers of farm products to the Puskud. For other commodities, the suppliers are private traders, agents and the manufacturers. Major buyers of Puskud have been the Bulog and the Clove Procurement Agency (working in close collaboration with the Inkud), and the open market.

Funds for Economic Business and Operation of Joint Use Facilities

Funds for operating the business, the Puskud makes use of its own funds, its surplus (SHU) as well as resources generated from outside, mainly through Inkud contributions and loans obtained from financial institutions. It receives some fees from the cloves agency, Bulog and PT Pusri.

In addition, the Puskud has set up several subsidiary companies, as follows:

- Salt Processing Company at Probolinggo
- Cattle-feed Factory at Probolinggo
- Automotive Workshop at Malang
- Coffee Grading Company at Malang
- Rice Mill at Banyuwangi
- Tempe manufacturing company

It also have some autonomous business units which contribute to the business of the Puskud, as follows:

-TVRI-PPIT East Java Coordinating Unit	Rp 365.7 m
-Clove Procurement Unit	Rp 341.7 m
-Soybeans distribution Unit	Rp 41.1 m

It also generates funds through other means e.g., deposits, interest earning, renting of buildings and lands, savings, disposal of assets etc. During 1995 its rice mill produced 1,900 tons of rice valued at Rp 1026.0 million.

The Puskud East Java has active relationship with KUD in the province. The business related to: procurement of paddy, supply of cattle-feed, fertiliser, sugar, soybeans, farm implements, collection of cloves and coffee, and processing of paddy. The Puskud is one of 11 major cattle-feed formulators in the province. Its business with the KUD in the province during 1994 and 1995 was as follows:

Particulars	Year 1994	Year 1995
Value purchased from KUD	8,312.3 m	8,385.2 m
Value sold to KUD	9,167.7 m	8,797.3 m

The Puskud also deals in livestock development.

Situation of Operation of Kiosks, Collection Centres, Processing Facilities

The KUD are its collection centres and sales points. It procures its requirements through the KUD network. The procured items are stored in its warehouses and processed in its own processing units e.g., clove cleaning centres, soybeans processing units, coffee processing units.

Competition with Private Traders

Due to its strong economic and service presence supported by its subsidiary companies, the Puskud faces little competition in programme commodities which are backed by the government e.g., rice, cloves, fertiliser, sugar and wheat flour distribution. In cattle-feed manufacture and its distribution, the Puskud has 10 other major competitors.

RELATING LEGAL SYSTEM AND STRUCTURE

Policy for Improvement of Distribution and Processing of Farm Products and Price Support

In accordance with the declared National Policy to increase agricultural production and boost export, the government is committed to support farmers and provide them with the needed infrastructure. The government has established a number of institutions and services aimed at providing farm inputs, extension services and post-harvest technology. Also, consequently, the government aims at giving support to agro-processing activities through its own system and with the support of private enterprises. As a result, the country is witnessing the growth in agro-processing activities. More and more private companies are entering agro-processing business.

With a view to guarantee better economic returns from farm operations, the role of government agencies like the Bulog is being reviewed so that the farmers are sure to get proper prices for the farm products, especially, rice, soybeans, corn and other cash crops. Clove procurement agency, coconut development board, coffee board are some examples. For every harvesting season the government announces floor prices for key commodities.

The KUD are used increasingly by the government to procure food items for national food stocks and distribute essential commodities in the country. The KUD are also used to disburse agricultural credit among the farmers. The Puskuds through the Inkud are planned to serve as gross distributors of consumer items through the Waserdas and TPK.

Taking advantage of the fertile land, farming potentials and a reasonably good infrastructure, the provincial government has aimed at achieving "Self-Supporting Food Stuff" through 'intensification, extensification, diversification and land restoration'. KUD and non-KUD are seen by the government to stabilise prices and assist in processing and distribution of farm products in the province.

FINDINGS OF THE DETAILED FIELD SURVEY [Of 5 KUD in the Province]

Purchasing and Marketing Business

Situation of Establishment of Commodity-wise Groups

The 5 KUD surveyed in East Java were: KUD Budi Jaya (M), KUD Budi Makmur (CM), KUD Satyam Jayate (M) in Pasuruan district and KUD Tulus Bhakti (M) and KUD Tani Jaya (MI) in Kediri district. Except for KUD Tulus Bhakti which is in low-land area, all others are in highland areas.

The main activities of KUD have been: production, processing and distribution of paddy, maize, cassava, fruits and vegetables besides dairying, raising livestock and poultry. KUD have

provided marketing and purchasing services to the farmer-members in various commodities e.g., fertiliser, farm chemicals, seeds, credit disbursement, essential commodities distribution, milk handling, cattle-feed supply through the network of waserdas and TPK. The KUD have contributed significantly to national food stock. The farmers have been organised into Kelompok Tani (KT), members' groups, women and youth groups, and commodity groups. The number of members and KT is given below:

Cooperatives/ Category	Popula- tion	Farmers	Members	KT	Villages covered	TPK
Budi Jaya-M	34,589	8,997	3,209	80	16	10
Budi Makmur-CM	29,230	11,991	507	9	12	1
Satyam Jayate-M	16,572	11,502	2,520	23	8	4
Tulus Bhakti-M	74,595	35,440	6,645	-	13	35
Tani Jaya-MI	48,224	19,633	11,290	27	8	23

The membership of KUD is open to all residents in rural areas. The head of the household becomes the member and the whole household utilises KUD services. However, individuals have increasingly taken up the membership.

As compared the membership with the population, the percentage of farmers in the KUD is still very low e.g.:

Budi Jaya	...	...	9.2%
Budi Makmur	...	...	1.7%
Satyam Jayate	...	...	15.2%
Tulus Bhakti	...	...	8.9%
Tani Jaya	...	...	23.4%
Average	...	...	11.6%

With a view to provide services and distribute farm inputs and credit, Farmers' Groups (KT) have been organised who also serve as commodity groups. Most of the government extension programmes have been carried out through these groups. The needs of the farmer-members are met through the network of TPK in which the KTs are actively involved. These groups form an integral component of the KUD organisation at the village level. TPK (kiosks) are operated by the KUD as organic units as well as by members as their private business (non-organic units).

Purchasing Business Methods, Commodities Handled, Turnover and Commissions

While the members purchase their requirements e.g., farm inputs, from their KUD, the KUD also purchase their requirements from external sources in order to sell the final products to the members after some processing. The purchasing business of the KUD, therefore, covers the procurement and transportation of fertiliser, paddy, farm implements, equipment, seeds, sugar, sugar-cane, cattle-feed and groceries for waserda and TPK.

KUD do not show separately in their accounts the commissions received or paid. They do, however, show the service fees received or paid by them.

The table below shows the commodities purchased from various sources by the 5 surveyed KUD during 1994 and 1995:

KUD/Purchasing Business Items	Total Purchases (M.Rp)		% of KUD Turnover of Year 1995
	1994	1995	
<u>KUD BUDI JAYA</u>			Rp 2,073.4M
-Fertiliser	858.7	427.7	20.6%
-Paddy/Rice	96.1	-	-
-Sugar	-	29.5	1.4%
-Sugarcane-TRI	-	1322.1	63.7%
<u>KUD BUDI MAKMUR</u>			Rp 20.6M
-Fertiliser	-	16.5	80.9%
<u>KUD SATYAM JAYATE</u>			Rp 1,355.1M
-Fertiliser	755.3	525.1	38.7%
-Vegetables	338.6	293.8	21.6%
<u>KUD TULUS BHAKTI</u>			Rp 8,104.0M
-Fertiliser	889.2	399.9	4.9%
-Paddy/Rice	1397.6	75.8	0.9%
-Milk	167.1	192.7	2.3%
-Livestock	-	58.4	0.7%
-Waserda	54.9	57.9	0.7%
-Cattle-feed	142.5	172.2	2.1%
-Sugarcane	567.7	371.3	4.5%
-Sugar	86.1	34.5	0.4%
<u>KUD TANI JAYA</u>			Rp 4,205.2M
-Fertiliser	768.3	1261.7	29.9%
-Paddy/Rice	423.3	103.2	2.4%
-Milk	783.8	863.9	20.5%
-Waserda	326.3	220.7	5.2%
-Kiosk-TPK	78.1	59.6	1.4%
-Cattle-feed	178.0	182.2	4.3%
-Cloves	-	6000.0	142.6%
-Sugar	129.6	129.6	3.0%

Percentage of purchasing business of major commodities in 1995 has been as follows:

KUD	Fertiliser	Paddy	Sugar	Cattle-feed	Milk
Budi Jaya	20.6	-	1.4	-	-
Budi Makmur	80.9	-	-	-	-
Satyam Jayate	38.7	-	-	-	-
Tulus Bhakti	4.9	0.9	0.4	2.1	2.3
Tani Jaya	29.9	2.4	3.0	4.3	20.5
Average %	35.0	-	-	-	-

Major Suppliers of Goods and Patronage of Federations

Major suppliers of goods to the KUD have been the private traders in district headquarters or in Surabaya. fertiliser is obtained from the PT Pusri through the Puskud, sugar from the Dolog, and sugarcane and cloves from the farmer-members. Groceries for the retail shops and TPK is obtained from the wholesalers. The KUD Tani Jaya had a high collection of cloves from the members - Rp 6000 million.

The KUD Tulus Bhakti deals in cattle-development (fattening) programme, and almost all of them produce and distribute cattle-feed. The components of cattle-feed are obtained from the rice mills of respective cooperatives, plus the wheat pollard from the Dolog/flour mill (at a subsidised rate). Cattle for fattening are received from the Puskud and other companies.

Marketing Business Methods, Commodities Handled, Turnover and Commissions

The KUD market their products e.g., paddy, sugarcane, livestock etc. with their members and the processing industry or in the open market. The marketing is done as per negotiations reached between the KUD and the buyers. In many cases the KUD act as coordinating bodies e.g., agents of the government for rice procurement, collecting agencies for sugar processing factories and clove procurement agency e.g., Puskud and Inkud.

The table below shows the marketing business activities of 5 KUD surveyed in East Java:

KUD/Marketing Business Items	Total Marketing/Sales (M.Rp)		% of KUD Turnover of Year 1995
	1994	1995	
<u>KUD BUDI JAYA</u>			Rp 2,073.4M
-Fertiliser	872.6	433.6	20.9%
-Paddy/Rice	97.1	-	-
-Sugar	-	30.2	1.4%
-Sugarcane-TRI	-	1395.3	67.2%
<u>KUD BUDI MAKMUR</u>			Rp 20.5M
-Fertiliser	-	20.6	100.0%
<u>KUD SATYAM JAYATE</u>			Rp 1,355.1M
-Fertiliser	765.7	558.4	41.1%
-Vegetables	403.6	355.5	26.2%
<u>KUD TULUS BHAKTI</u>			Rp 8,104.0M
-Fertiliser	895.4	412.6	5.0%
-Paddy/Rice	1403.9	78.1	0.9%
-Milk	175.8	214.8	2.6%
-Livestock	-	61.0	0.7%
-Waserda	56.3	58.3	0.7%
-Cattle-feed	145.7	176.6	2.1%
-Sugarcane	604.2	386.7	4.7%
-Sugar	87.6	38.2	0.4%

<u>KUD TANI JAYA</u>			Rp 4,205.2M
-Fertiliser	797.1	1329.6	31.6%
-Paddy/Rice	431.8	121.7	2.9%
-Milk	965.8	1013.8	24.1%
-Waserda	347.6	240.0	5.7%
-Kiosk-TPK	80.3	62.2	1.4%
-Cattle-feed	195.4	195.3	4.6%
-Cloves	-	6090.0	144.8%
-Sugar	132.0	132.0	3.1%

The KUD accounts do not show separately the commissions received or paid. They do, however, show the service fees received or paid by them.

The percentage of marketing business of KUD of major commodities in 1995 has been as follows:

<u>KUD</u>	<u>Fertiliser</u>	<u>Paddy</u>	<u>Sugar</u>	<u>Cattle-feed</u>	<u>Milk</u>
Budi Jaya	20.9	-	1.4	-	-
Budi Makmur	100.0	-	-	-	-
Satyam Jayate	41.1	-	-	-	-
Tulus Bhakti	5.0	0.9	0.4	2.1	2.6
Tani Jaya	31.6	2.9	3.1	4.6	24.1
Average %	39.7	-	-	-	-

Given below is a summary of marketing and purchasing business of the KUD showing the commissions received by them. From the commissions received, the KUD cover their overheads and handling expenses:

<u>KUD/Items</u> <u>1995</u>	<u>Purchase</u> <u>Value/M.Rp</u>	<u>Sales</u> <u>Value/M.Rp</u>	<u>Commissions</u> <u>Earned</u>	<u>Percent</u>
<u>KUD BUDI JAYA</u>				
-Fertiliser	427.7	433.6	5.9	1.3%
-Sugar	29.5	30.2	0.7	2.3%
-Sugarcane/TRI	1322.1	1395.3	73.2	5.5%
<u>KUD BUDI MAKMUR</u>				
-Fertiliser	16.5	20.6	4.1	24.8%
<u>KUD SATYAM JAYATE</u>				
-Fertiliser*	525.1	558.4	33.3	6.3%
-Vegetables	293.8	355.5	61.7	21.0%
<u>KUD TULUS BHAKTI</u>				
-Fertiliser	399.9	412.6	12.7	3.1%
-Paddy/Rice	75.8	78.1	2.3	3.0%
-Milk	192.7	214.8	22.1	11.4%
-Livestock	58.4	61.0	2.6	4.4%
-Waserda	57.9	58.3	0.4	0.6%
-Cattle-feed	172.2	176.6	4.4	2.5%
-Sugarcane	371.3	386.7	15.4	4.1%
-Sugar	34.5	38.2	3.7	10.7%

KUD TANI JAYA

-Fertiliser	1261.7	1329.6	67.3	5.3%
-Paddy/Rice	103.2	121.7	18.5	17.9%
-Milk	863.9	1013.8	149.9	17.3%
-Waserda	220.7	240.0	19.3	8.7%
-TPK/Farm Inputs	59.6	62.2	2.6	4.3%
-Cattle-feed	182.2	195.3	13.1	7.1%
-Cloves	6000.0	6090.0	90.0	1.5%
-Sugar	129.6	132.0	2.4	1.8%

Major Buyers, Use of federations and Demand for Federations

Major buyers of products of KUD are the processing factories located in the nearby areas. Paddy/rice is sold to the Dolog as well as to the private traders, sugarcane is sold to the processing industry. Cattle-feed is sold to the farmer-members for cattle development purposes, the cattle is sold to the private cattle processing industry. The Puskud's role is limited to the transportation of fertiliser. Except for clove, none of the KUD does any major business with the Puskud. The KUD, however, expressed a strong desire that the Puskud needs to be more active in providing sales and purchase opportunities to them.

Necessary Operation Fund for Economic and Utilisation Business and its Procurement

For executing government programmes e.g., distribution of fertiliser, procurement of rice, handling a variety of KUT, handling electricity bills and telephone kiosks, the KUD get a fee or a discount. Similarly, on the purchase of some ingredients for the cattle-feed (dedak rice bran/wheat pollard) the government allows a subsidy with a view to develop dairy industry. This business is conducted by almost all the KUD.

KUD have very limited choice or range of credit lines from financial institutions. Utilisation of rice milling units, warehouses, farm machines is very low in the area because these facilities are either old or have become unserviceable. However, in East Java the number of farm machines is exceptionally high.

The Utilisation and Operation of Kiosks, Collection/Storage Facilities and Processing Facilities

A majority of kiosks are used for storing and supply of farm equipment, fertiliser, farm chemicals and other farm supplies e.g., sacks, farm implements, tubing etc.

Except for milk collecting cooperatives there are no structured processing facilities even within the KUD which deal in vegetables and fruits.

The Situation of Competition with Private Dealers

The KUD are in no position to compete with private dealers due to their weak financial and operational strength. Except for KUD Tulus Bhakti and KUD Tani Jaya, other KUD have not diversified their range of business.

FINDINGS OF THE COMMISSIONED SURVEY-I Agricultural Production

Distribution of Agricultural Input Material such as Makers and Dealers of Chemicals, Vinyl, Feed-Stuff

While the production of most of the agricultural inputs e.g., urea, other chemical fertiliser and paddy seeds remains in the hands of the government-owned companies, the majority of distribution is channelled through the KUD system. Urea is manufactured by several government companies but the coordination for its distribution is done by PT Pusri. Farm chemicals are produced by PT Petrokemia Kayaku, Bayers and Ciba but the distribution is through the open market.

Seeds for paddy are produced and distributed by PT Siangseri, a government company. It produces the seeds through national seeds farms and in collaboration with some seed farmers/progressive farmers. Seeds for other crops are available through the open market. The government operates a number of seeds certification centres throughout the province.

During 1994, the following fertiliser material was distributed in the province:

Particulars	Distributed (Tons)	Used (Tons)	Percent
Urea	711,640	662,505	93.1%
TSP	162,683	327,112	200.6%
ZA	154,065	117,859	75.9%
KCL	26,190	68,654	265.3%
TOTAL	1154,811	1176,132	101.8%

The table shows the production of seeds for distribution province during 1993 and 1994:

Particulars/kg	1993	1994
Seed Certi Centres (No)	93	99
Paddy Seeds	13,459,000	12,193,000
Maize Seeds	754,000	925,000
Soybeans	113,000	294,000
Mungbeans	8,000	6,000
Groundnut	20,000	61,000

East Java has several high altitude areas where horticulture is popular. Fruits like apple are also grown. However, the farmers are not using any vinyl sheeting. Some of the farmers in Batu area have started building plastic green houses to produce out-off-season vegetables and some flowers.

Cattle-feed is produced by a number of companies in the province. Some of the prominent producers are: PT Wirifa Sakti, PT Charoen Pokphand, PT Comfeed Ind. PT Alfred C. Topfer, PT Bama Inti Feedmill, PT Nputraco, PT Gold Coin, PT Wonokoyo Feed Mills, PT Masura, PT Cargil and Puskud-Jatim. The demand for cattle-feed is high. During 1994, Indonesia had imported nearly 1.5 million tons of corn from abroad to cover the demand for manufacture of cattle-feed in the country. The components for the concentrate e.g., molasses, corn, rice/wheat bran, cassava etc. are available within the province itself.

Distribution of Farm Machines (Makers and Dealers)

Farm machines include 2-wheel tractors, other tractors, pest control equipment, harvesters and processors. The largest number is that of hand-sprayers (167,475), followed by rat fumigators (10,167). Most of the machines and farm equipment are of Japanese origin and were procured under OECF and Kennedy Round Programmes. The KUD procures the machines from the wholesale dealers. Farm households also buy directly either from the KUD or from the wholesale open market.

Agro-Processing and Its Distribution

Demand of Major Farm Products (Commodities, Form of Processing, Consumption Areas)

Production of major commodities (agricultural, poultry, livestock and dairying) in East Java for years 1993 and 1994 has been as follows:

Commodity	Year 1993	Year 1994	Percent
Paddy/Rice (T)	8,627,784	8,621,191	99.9%
Corn (T)	2,363,252	3,041,768	128.7%
Cassava (T)	3,625,712	4,014,764	110.7%
Sweet Potato (T)	233,322	242,236	103.8%
Groundnut (T)	158,958	156,975	98.7%
Soybeans (T)	549,713	537,040	97.6%
Mungbeans (T)	74,928	77,037	102.8%
Sorghum (T)	8,428	7,895	93.6%
Red Onion (T)	152,435	174,637	115.1%
Potato (T)	130,364	80,974	62.3%
Cabbage (T)	154,031	162,370	105.1%
Tomato (T)	13,637	15,843	114.2%
Chilies (T)	107,702	133,542	124.0%

Avocado (T)	34,678	28,675	82.8%
Apple (T)	51,615	23,724	45.9%
Durian (T)	15,995	74,278	462.5%
Oranges (T)	101,624	131,673	129.4%
Mango (T)	393,907	459,192	116.5%
Banana (T)	461,757	537,999	116.5%
Rambutan (T)	46,591	66,648	143.0%
Milch Cattle (No)	105,657	107,216	101.4%
Beef Cattle (No)	3,163,096	3,228,494	102.0%
Buffalo (No)	166,491	157,541	94.6%
Goat (No)	2,237,024	2,266,420	101.2%
Sheep (No)	1,072,326	1,158,746	108.1%
Broiler (No)	13,340,327	13,609,747	102.0%
Other Hens (Nos)	64,059,193	66,524,044	103.8%
All Eggs (kg)	128,460,956	136,369,000	106.1%
Milk (kg)	125,359,250	131,766,000	105.1%
All Meat (kg)	214,687,906	218,342,000	101.7%

Sources: Commissioned Survey Report-96; Kanwil Pertanian-East Java; Dinas Livestock-East Java; GKSI-Jakarta; Statistik Indonesia-Year Book 1994-BPS, Jakarta

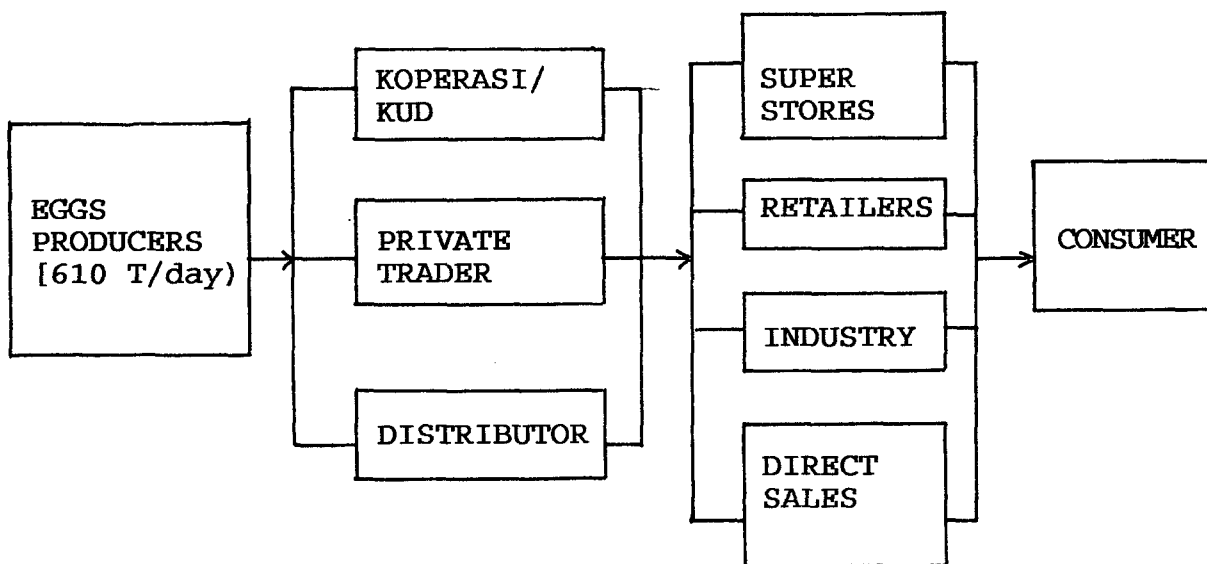
Paddy is procured by the KUD from among the farmer-members, milled and a part of rice is supplied to the government food stock (Dolog). The remaining is sold in the open market and part of it retained by the farmers for their own use. (see table below):

Particulars (Tons)	1993	1994	Percent
Purchased by KUD	813,461	285,229	35.0%
Sold to Dolog	775,731	258,340	33.3%
Sold in Open Market	25,104	26,888	107.1%

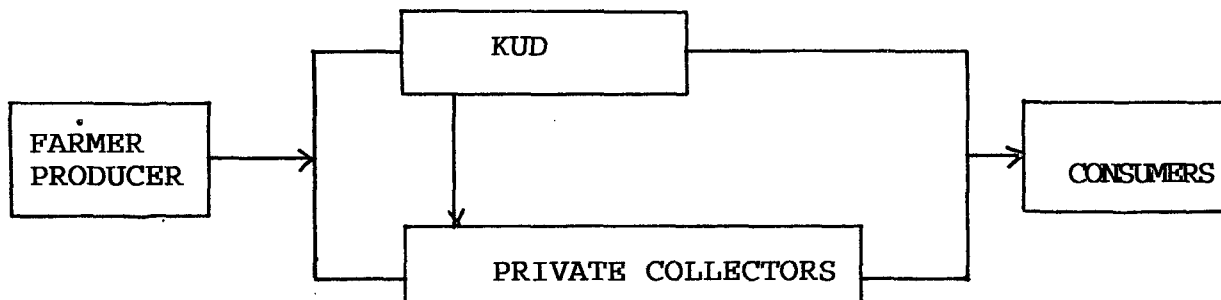
During 1994, a total of 285,229 ton of rice was purchased by KUD out of which 258,340 ton (90.5%) was supplied to the Dolog and the remaining 25,104 tons (8.8%) was sold in the open market.

A total of 8.6 million tons of paddy was handled by 2,640 rice milling units in the province during 1994. The byproduct - rice bran - was used for manufacture of cattle-feed. There are a total of 11 major cattle-feed formulators, including the Puskud, in the province.

Poultry is an important product in the province. KUD members are engaged in this business. The distribution of eggs in the province is shown in the following Flow Chart:



Other commodities e.g., fresh vegetables and fruits were supplied to the local market for consumption within the province and for other parts of Java. A Flow Chart on distribution of vegetables in the province is given below:

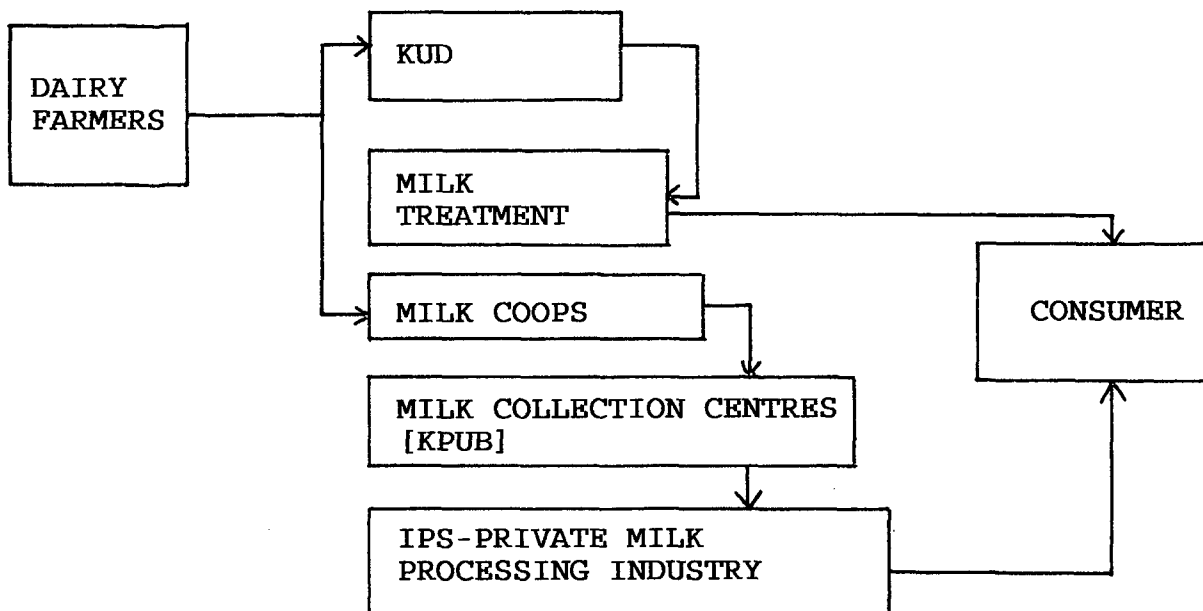


Milk is an important commodity which has become a "profit centre" of KUD and milk cooperatives in the province. Processing of milk is done by both - cooperative and private sector.

The milk production in the province during the period 1990-1994 was as follows:

Milk Production (Mil.Kg)	1990	1993	1994	% of 1990
East Java	118.0	125.3	131.7	111.8
National/Total	345.6	412.5	425.3	122.8
National/Coops	294.9	356.5	361.3	122.3
% of East Java to National/Coop	40.0%	35.0%	36.5%	91.8%

A Flow Chart on the production and distribution of milk in East Java is given below:



There were a total of 202 KUD and Milk Cooperatives in the country in 1994, out of which there were 65 in East Java (32.1%). More and more KUD are taking up to milk and livestock development. More farmers are coming forward to take up cattle-fattening and calf rearing activities. New business institutions have come up to participate in dairying business. The KPUB "Sapi Jaya" at Kandangan is a secondary level cooperative which has in its membership 9 KUD from Kediri and 6 KUD from Jombang districts. It was organised in 1984 and registered in 1990. Its main objective is to promote milk business and livestock development in two districts. It has milk unit, coolers, laboratory, shop, pasteurisation facilities of 300-500 lt/day, transfer tankers and offers credit facilities to member-farmers. Its business profile is as under:

Turnover	1994	Rp	466,667,630	
	1995	Rp	545,246,457	116.8%
Surplus-SHU	1994	Rp	21,396,026	
	1995	Rp	18,057,543	84.3%
Milk Purchased	1995	Rp	5,985,907,288	
Milk sold to PT.NI	1995	Rp	6,066,103,108	

It promotes education and training of dairy farmers and animal care programmes. It sets apart 5% of the SHU for education and development programmes.

Dairy cooperatives and KUD dealing in milk are keenly conscious of arranging training of their employees and education of their members. The facilities for such training are limited. However, the GCSI provides the needed support through its own development programmes. The GCSI does not operate any formal training or education institution to cater to the needs of dairy cooperatives in the country.

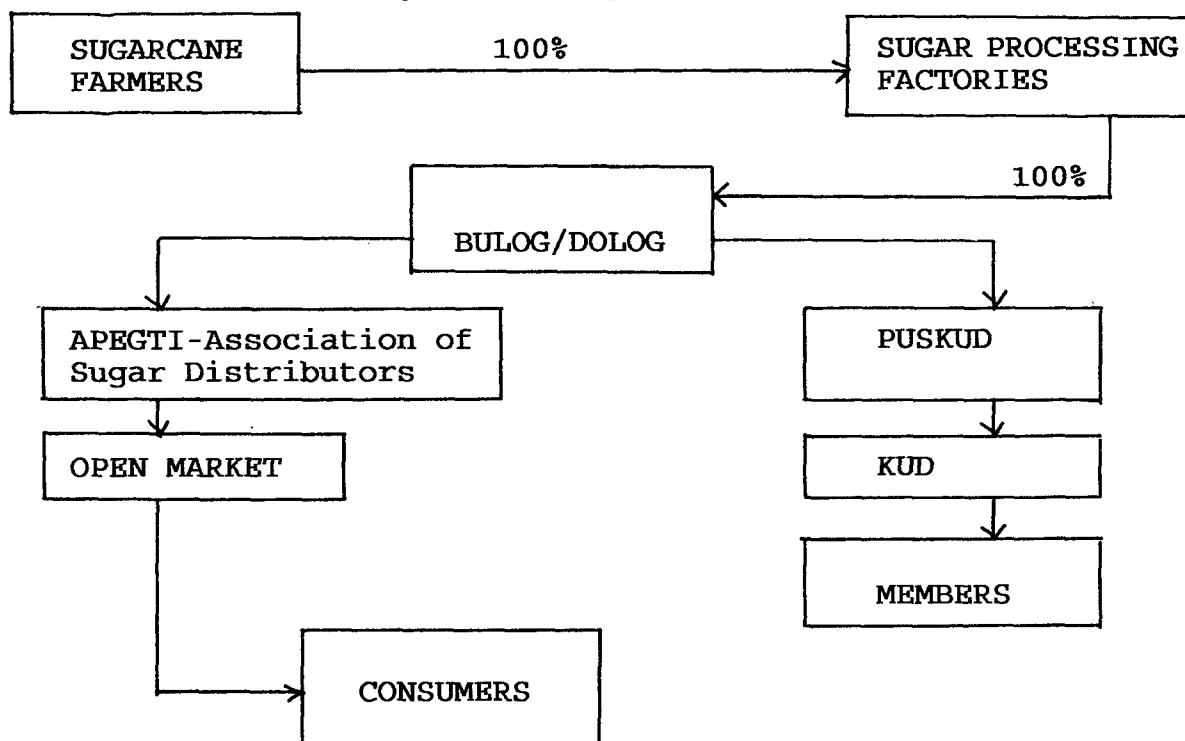
There were a total of 312 slaughter houses in the province in 1993 (private 100, government 212). These are all traditional facilities. The production of meat during 1993 was as follows:

Beef	...	...	93,772,712 kg
Buffalo meat	...	...	274,340 kg
Mutton	...	...	19,053,050 kg
Sheep/Domba meat	...	...	9,623,063 kg
Pork	...	...	8,896,910 kg
Horse meat	...	...	4,620 kg

The farm products are collected through the KUD network either at the initiative of the traders and their agents or at the behest of the KUD or its farmers' groups.

Technical Level of Major Processed Farm Products by Commodities

Major agro-processing is rice milling, sugarcane crushing, processing of cassava, coconut, coffee, cattle-feed manufacture, tahu tempe manufacture and dairying. Except for government sugar mills, all other processing is done in private and cooperative sector. Sugarcane procurement from the farmers is done partly by the KUD and partly supplied directly by the farmers to the sugar factories. 100% of the end product from the sugar factories is delivered to the national food stock (Bulog) warehouses for distribution. The distribution from the Bulog takes place through the channels of APEGTI (the sugar distributors association) and the PUSKUD. The Flow Chart given below explains the procurement and distribution of sugar in the province:



Rice milling is done by 2,640 rice milling units (0.5 to 1 ton per hour capacity). Cattle-feed is manufactured by 11 units. Milk is processed at cooperatives as well as in private sector. The processing of milk by cooperatives is restricted to only cooling

and pasteurization of a limited quantity. The processing units are of good quality but small in size.

There is no processing, including handling, grading and shipment, of fruits and vegetables in the cooperative sector. There are private major food processors in East Java, e.g., Indofood, and in other parts of Java which take up tomato, potato and chilies.

Major Agro-Processing Business Entities, Volume of Production and Facilities

Major agro-processing business entities include government sugar mills, food processors e.g., Indomie, Indofood, and cattle-feed manufacturers including the Puskud. Many of the KUD have their own small cattle-feed formulating units.

The rice milling units (2,640 units in 1994) are within the cooperative and private sector. A total of 8.6 million tons of paddy was processed by them during 1994.

The 312 slaughter houses are owned by the government (212 units) and private enterprises (100 units).

Marketing Area of Major Farm Products, Distribution System

Major marketing destinations of farm products from East Java are located within the province and other provinces on Java itself. Government food stock agency, Bulog, is a major purchaser of paddy/rice. Jakarta, the national capital, still remains a major consuming area for fruits and cash crops. Surabaya, the provincial capital, is another important consuming area and a principal export point for coffee, cashewnut. Clove is collected by Puskud on behalf of the clove national buffer stock. Bali is another important consuming area for the products from East Java.

Business Customs and Its Practice (Pricing, Accounts Settlement)

These practices are more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability or perishability. The terms are generally cash upon delivery of goods. However, for larger values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be enumerated as under:

Rice: The procurement is under the government programme, and in this case the procurement price is fixed by the government. The farmers sell their paddy/rice to the KUD against this fixed price. The KUD pays the farmers in cash and rarely through their accounts in the cooperative. The surplus paddy/rice is sold by the farmer in the open market, generally to the trader who comes to his house with cash in hand. In this case the terms are usually cash, and in many cases, a token advance payment is also made to the farmers for the next crop;

Vegetables: The transactions are usually cash-and-carry from the road-head. In the case of farmer bringing the crop to the open market, he returns home with cash in hand;

Milk: The terms are cash-upon-delivery. The farmer brings the milk to the cooperative collection centre where it is received after taking samples. The payment to the farmer is made after the cooperative receives payments from the factory, which is normally every 15 days. In the meantime the farmer can purchase cattle-feed and other supplies from the KUD on a temporary credit basis. The accounts are settled with the farmers once 15 days;

Cash crops: Except for clove, all transactions are on cash-and-carry basis; and

Poultry: Generally terms are cash upon collection from the producer. The middleman, in turn, either sells the commodity on cash terms to the retailer or on payment-after-sale basis.

FINDINGS OF COMMISSIONED SURVEY-II ACTUAL SITUATION OF AGRICULTURISTS AND THEIR DEMANDS

Situation of Holdings of Farm Machinery and Facilities

The survey covered 60 farm household families from the area of operation of three KUD in East Java (KUD Tani Jaya, KUD Budi Makmur and KUD Satyam Jayate). Major production of the area has been: vegetables, livestock, dairy and rice. On an average, the gross agricultural income of a farm household is Rp 8,366,666. The income from vegetables and fruits has been 53.6%, from livestock and dairy 25.3%, paddy/rice 10%, cash crops 7%, and from other sources 4%. The farm machines and equipment held by the farm households have been as follows: hand sprayers (40%), hand tractors (31%), threshers and sprinklers (16% each), and 4-wheel tractors (8%).

The farmers also owned some farm produce storage. On an average, there was 80.4m² of farm produce storage, 10.5m² of farm equipment garage, 33m² of cattle sheds, and 37.5m² of poultry house facilities. The farm machines, equipment and the facilities have been rather traditional, and are the minim required for cultivation of vegetables, handling of milk and maintenance of livestock.

Measures of Obtaining Production/Consumer Goods (Situation of Using KUD)

On an average, the gross agricultural income of a household constitutes 66% of its total income. 42% of the gross agricultural income is spent on production-related expenses. The break-up of the agricultural income is as follows: 53.6% from vegetables and fruits, 25.3% from livestock and dairying, 10% from paddy/rice, 7% from cash crops, and 4% from other agricultural activities (see table below).

**Break-Up (Percentage) of Agricultural Income of
Farm-Households : 3 KUD Areas in East Java**

Source of Income	TANI JAYA	BUDI MAKMUR	SAT JAYATE	Av. %
Rice	05	25	--	10.0
Livestock/Dairy	40	27	09	25.3
Fruits & Veg.	40	31	90	53.6
Cash Crops	06	14	01	7.0
Other income	09	03	--	4.0

The highest income-generating activities have been vegetables and fruits (90% from KUD Satyam Jayate), and livestock and dairying (40% from KUD Tani Jaya).

The break-up of household expenses has been as follows: on food 48.6%, education 21%, clothing 11%, housing 6.3%, ceremonies 4%, and 8.6% for general expenses (see table below).

Break-Up (Percentage) of Household Expenses

Expenses	TANI JAYA	BUDI MAKMUR	SATYAM JAYATE	Av. %
Food	46	62.6	38	48.6
Clothing	10	7.4	16	11.0
Housing	13	0.7	5	6.3
Education	23	26.0	14	21.0
Ceremonies	1	1.3	10	4.0
Others	7	1.8	17	8.6

Households have been making use of their KUD, to procure their production and consumer needs as well as for sale of their products. 65% of them purchased their fertilizer requirements from the KUD, 21.6% pesticides and insecticides, and only 2 farm households purchased their paddy seeds from the cooperative. Only 8.3% of farm households purchased their rice requirements from the KUD. While the milk was sold to the KUD milk units, vegetables were sold to the general traders.

The KUD retail shops (waserdas) have been used to purchase daily household necessities, food items and some simple farm equipments, clothing etc.

**Merchandise Ratio and Marketing Methods of Farm Products
(Situation of Using KUD)**

No specific data on the quantity of marketing of milk and vegetables was available. Among the vegetables, the major production has been of the following: KUD Satyam Jayate households produced shallots, potato, radish, cabbage and carrot; KUD Budi Makmur members produced mango, durian, and pineapple; KUD Tani Jaya members produced papaya. Although the cooperatives by themselves did not deal in the marketing of vegetables, the members, however, received assistance in the transportation of their produce to local markets. None of the households or any of

their KUD possess any grading, packaging and cold storage/warehousing facilities. The households, however, used the KUD kiosks and retail shops (waserdas) to market their produce and purchase their household needs. Members, however, felt that the facilities in the kiosks were limited, there were few items (45%), the locations were too far (23%), and needed renovations to be more effective (34%).

Intention to Introduce Farm Machinery and Facilities

Since the main products of the households have been vegetables, livestock and dairying, their intention to mechanise the farm operations has been as follows: transportation (50%), tilling (23.3%), threshing (18.3%), harvesting and milking (13.3% each), feeding machines (11.6%), and rice transplanting and drying (10% each) (see Table below - based on responses received from 60 farmers).

Intention to Mechanise	TANI JAYA	BUDI MAKMUR	SATYAM JAYATE	Responses Received	Av. %
Tilling	10	02	02	14/60	23.3
Rice Transplanting	04	02	--	06/60	10.0
Harvesting	04	04	--	08/60	13.3
Threshing	05	06	--	11/60	18.3
Drying	02	04	--	06/60	10.0
Transportation	11	07	12	30/60	50.0
Feeding Machines	05	02	--	07/60	11.6
Milking	05	03	--	08/60	13.3
Others	01	05	--	06/60	10.0

Evaluation and Demand for Business Activities (Purchasing, marketing, processing, joint shipment, joint use facilities, terms of loan, farm guidance, better-living guidance and others)

The table below gives in details the demands or expectations of the farm-households from their KUD:

Expectations of the Farm-Households from their KUD

Expectations	Average %
-Upgrading Kiosks and Waserda	34.0
-Kiosks: Expansion of Items Range	45.0
-Waserda: Expansion of Items Range	45.0
-Establishing Joint Purchasing	35.0
-Establishing Joint Marketing	35.0
-Establishing Joint-Use Facilities	35.0
-Renovate and Expand Rice Milling Facilities	20.0
-Improve/Expand Warehousing Capacity	26.6
-Improve/Expand Assembly Hall	35.0
-Expand Loan Variety	26.6
-Increase Existing Credit Limits	21.6

-Increase Farm Production Guidance ...	...	20.0
-Increase Fertilizer Guidance ...	...	20.0
-Increase Better-Living Guidance ...	...	20.0

The farm households have said that purchasing and marketing facilities, equipment including the transportation were inadequate and needed either upgrading or renovations. Kiosks and waserda (34%), expansion of range of items available (45%), needed to be brighter (33.3%), establishment of joint purchasing, joint marketing and joint use facilities (35%). There are no grading or processing activities available to the household. Need for improving rice milling facilities (20%), warehousing facilities (26.6%), and improvement of assembly hall (35%). Although most of them have expressed their satisfaction with the loan availability, the variety of loans should be expanded (26.6%), the maximum credit limit should be increased (21.6%). 20% wanted more of guidance on production, guidance on use of fertilizer and grading and packaging. No regular or formal better-living activities are being carried out for the households by any of the three cooperatives.

**HAMPERING FACTORS AND POSSIBILITIES
FOR AN INTEGRATED DEVELOPMENT OF KUD**

**Hampering Factors:
Marketing Business**

The following hampering factors were observed:

- 01 Lack of business relations among the KUD, especially the non-dairy KUD, and with the secondary level organisations;
- 02 Lack of infrastructure which could add value to the produce e.g., cold stores, milling capacity, holding capacity, grading and forwarding facilities;
- 03 Lack of capital;
- 04 KUD lack initiative to establish new business units e.g., vegetables processing, transportation services to members;
- 05 Lack of understanding and acceptance of joint marketing system;
- 06 Farm production planning in smaller KUD is not adequately supported by KUD infrastructure due to lack of employees in-charge of farm guidance;
- 07 Lack of communication and market information among the farmers on one hand, and between the farmers and the KUD, on the other;
- 08 The producer-farmers do not know clearly the standards of produce and their prices fixed by the processing/procurement agencies;

- 09 The payment to the farmers for the products delivered is late.

**Hampering Factors:
Purchasing Business**

The following hampering factors have been noticed:

- 01 Lack of business relations among KUD and secondary level cooperative organisations;
- 02 Lack of purchasing capacity among the members;
- 03 Joint purchasing system is not followed;
- 04 Inadequate supply of quality seeds, fertiliser and farm chemicals. KUD do not engage in compost/bio-fertiliser supplies;
- 05 Farm production planning is not adequately supported by KUD infrastructure due to lack of employees in-charge of farm guidance;
- 06 Cattle-feed procurement manufactured by KUD and Inkud method is still inadequate;
- 07 Due to lack of space and capital retail outlets (waserdas) and Cooperative Service Place (TPK) do not hold a larger variety of inputs and consumer goods;
- 08 KUD do not offer sufficient extension services.

**Possibilities:
Marketing Business**

In order to satisfy the purchasing needs of the farmer-members and to increase the purchasing business of the KUD in East Java, the following possibilities exist:

- 01 To help increase the income levels of farmer-members, it is possible to increase production of higher quality of milk which attracts higher prices;
- 02 To market the products efficiently it is possible for the KUD to provide higher levels of cooling capacity and a faster transfer of chilled milk at the KUD and district level to processing destinations;
- 03 To add value to members' produce, milk and vegetables, it is possible for the KUD to provide technology to in converting these products into products of local use;
- 04 KUD to directly help members to negotiate better prices for horticulture products by adopting joint marketing methods;

- 05 KUD to enter the vegetables and fruits business on a joint marketing basis;
- 06 To overcome the shortage of working capital, it is possible for the KUD to enter int joint venture arrangements with private industry on joint marketing basis;
- 07 It is possible for the KUD to introduce grading, packaging, storing and shipment facilities;
- 08 To understand and conform to the requirements of milk and vegetable industry, it is possible for the KUD to train their employees and key members in handling products e.g., milk, fruit and vegetables, with the leading industry;
- 09 More frequent extension activities are needed to keep the KT's informed of the current market situations, standards and fixation of prices for various commodities and how to qualify to achieve these set standards;
- 10 It is possible for the KUD and secondary organisations to establish a market information and communication system.

Possibilities:

Purchasing Business

In order to satisfy the purchasing needs of the farmer-members and to increase the purchasing business of the KUD in East Java, the following possibilities exist:

- 01 To increase the purchasing business it is possible for the KUD to increase the number and variety of merchandise of sales points, waserdas and TPK, by selling farm machines, implements and offering repairs and maintenance services;
- 02 With a view to provide sufficient feed/concentrates it is possible for the KUD to improve efficiency and capacity of cattle-feed mixing plants;
- 03 It is possible to establish joint use facilities e.g., machines repairs and maintenance workshops at the district level by the KUD and other secondary organisations at the provincial level;
- 04 To overcome the shortage of working capital it is possible for the KUD to tap various sources e.g., external and domestic, to obtain higher credit and financial support to members to obtain timely and sufficient quantities of inputs;
- 05 In order to enhance supplies of inputs and consumer goods it is possible for the KUD to develop a business and information network with wholesales, manufacturers and Puskud;

OUTLINE OF THE MASTER PLAN

Suggested Directions to Expand KUD Business

Purchasing Business

Establishment of Purchasing Business Method such as Joint Procurement

- 01 In order to maintain a steady and timely supply of farm inputs, and at reasonable prices, it is necessary that a joint procurement system is established by the KUD.
- 02 A comprehensive farm production plan be developed by the farmer-members with the full involvement of the KUD and the KT's with the following objectives in view:
 - estimated production of each commodity (horticulture, livestock, poultry, milk);
 - estimated farm inputs (quantity/quality) with a time frame;
 - estimated credit required.
- 03 KUD to promote supply of improved variety of seeds (especially potatoes), quality of livestock, appropriate fertiliser compositions along with quality control services.

Improvement of Purchasing Outlets

- 01 Negotiate with secondary level organisations or wholesale agencies to secure constant supply of consumer goods at reasonable prices on joint purchasing basis;
- 02 Expand quality and range of merchandise and service at the kiosks and waserdas e.g., farm implements, repairs and maintenance services;

Marketing Business

Organizing Producers' Groups (including adoption of new commodities to be promoted)

- 01 To increase the quality of farmers produce, special farmers groups e.g., dairy farmers', fruits and vegetable growers', and livestock development groups be formed;
- 02 Processing of vegetables to overcome perishability;
- 03 With a view to create market credibility to local products it is desirable that the locally produced goods be prominently branded as a KUD-CI (Corporate Identity);
- 04 The KT's and the handling managers need to be exposed to new methods and techniques through training and extension to

learn to meet with the market demands.

Establishment of Marketing Business System such as Shipment Control, Pooling Calculations

- 01 In view of perishability of milk and vegetables there is a need to create holding facilities such as: cold stores, cooling stations (for milk as well as for vegetables) and refrigerated transfer trucks to consumption destinations;
- 02 Setting up sorting, grading and packaging facilities before shipment of members produce;
- 03 The KUD to initiate and establish members' accounts through which members' accounts with the KUD are settled, providing thereby also a scope for increasing members' savings;
- 04 KUD to establish stock point and collection facilities to stabilise market and supply needs and prices;
- 05 KUD to introduce computerization for uniformity in accounts for better controls on funds and inventories.

Provision of Information on Price to Members

The KUD to develop a market information system in association with Mandiri Inti and Puskud/GKSI (Union of Dairy Cooperatives) and other secondary level institutions by using radio broadcasts.

Obtaining Contracted Buyers

Long-term contracts be developed with wholesale buyers e.g., supermarkets, private milk processors and other consumer outlets etc.

Agro-Processing Business

Improvement of Agro-Processing Technology in Highland Areas of East Java

- 01 Increasing technical level of facilities for milk handling e.g., more of chilling centres, transfer tankers, pasteurization of milk for local supplies;
- 02 Horticulture development;
- 03 Creating vegetables and fruit handling and processing facilities e.g., sorting, grading, packaging and shipment;
- 04 To overcome shortage of funds, KUD to adopt joint capital concept in association with neighbouring Mandiri Into KUD and other secondary level cooperatives;
- 05 Strengthening the dairy farming activities e.g., higher yields of milk, better health of dairy cows; increase in animal husbandry and dairy extension services; increase in

the number of dairy cattle, establishing calves' nurseries, supply of quality cattle-feed including use of tall grass;

- 06 Enhancing infrastructure for milk handling e.g., more of chilling centres, transfer tankers, pasteurization of milk for local supplies, efficient management and marketing information link-up with IPS.

Improvement of Storage and Processing Technology of Farm Products and Practices

The present level of cooling facilities for milk are the barest minimum, limiting the level of milk holding. Even the KUDs which handle fresh vegetables do not own any processing or holding capacities. It is necessary, therefore, to:

- 01 Increase milk and vegetable holding facilities including cooling, grading, warehousing and shipment;
- 02 Establish joint-use facilities like cattle-feed mixing plants, central cooling stations, pooled transportation system.
- 03 Obtain the feed ingredients from the neighbouring rice milling units on joint purchasing basis, and maintain stock points to stabilise supplies and prices.

Rationalization of Management of Relating Facilities

- 01 Establish systems for management of mixing plants, livestock development;
- 02 Provide guidance to farmers in improving the quality and quantity of their products, especially, vegetables, livestock and dairy products.
- 03 KUD to provide better-living and farm management extension;
- 04 Constant training of KUD employees and key members in business management.

Obtaining Contracted Buyers

KUD to establish joint business ventures and long-term contracts with private industry e.g., food processors, milk processors to improve their business performance.

III GENERAL REVIEW OF THE PROVINCIAL SITUATION [EAST JAVA]

1. Social Life in Rural Area

The population in East Java is 32,504,000 in 1990. As for religion, 96.86% of the inhabitants are Moslems. Social culture is very important to understand community of rural villages.

One example in Mojokuto sub district in Kediri was reported by Greertz (1977). He described that the development of the district had started in 1925 to become a wealthy area. Many activities, such as to build sugar factories in villages were initiated by the Dutch government. Many farmer groups worked as workers in the sugar estate. In 1930, there were four groups which classified the rural society in the East Java.

The first and second group are "Atasan/Priyayi" which consisted of government officials, sugarcane factory officials and traders who are wealthy enough. The third group is classified as "Wong Cilik". Most of them are farmers. The fourth group is "Wong Cino" which consisted of the Chinese. Their community way of living is different from that of the others in Java. They are a minority group.

Priyayi is the group of elite culture and political power. Their way of life was like that of a royal palace style. The agro-estate of sugarcane influenced economic growth in rural villages. The trader became stronger and they played important role in the village society in spite of them still under classified with Priyayi.

Special characteristic of Java culture are such as formalism, status consciousness, introversion and very weak in market business. The transformation of social culture is necessary along with economical growth and modernization of social life. Such a trend will bring the leadership and entrepreneurship in economical group.

Another example has been observed in Madura by Jonge (1984). The royal palace city at Sumenep functioned as a cultural and economic centre until the middle of 19th century. This palace system was wiped out when the administration by the Dutch government had begun.

The model of Madura society is dependant on family which is known as extended family system.

Many Madura people immigrated to East Java as energetic workers. They were pioneers to develop agro-estate in East Java. They are now going not only to East Java but also to Kalimantan and Sulawesi.

2. Commodities Handling and Its Legal Base

No data is available.

3. Distribution Channels of Commodities for Agricultural Production

3.1 Fertilizer: While the production of urea and other chemical fertilizers are in the hand of the State-owned companies, the majority of distribution is channelled through KUD system coordinated by PT Pusri. Urea is transferred from the production units to company-owned warehouses which are located at harbour points, Kabupaten and Kecamatan levels. From these warehouses, the material is distributed among the farmers through the KUD network. The following Table shows the quantity of fertilizers distributed in the province.

Farm Inputs	Year 1990		Year 1993	
	National	E.Java	National	E.Java
FERTILISER				
No. of KUD	3,550	656	4,461	639
Urea (Tons)	1706,547	592,054	3737,760	1180,975
All others (Tons)*	1341,910	396,997	2293,965	755,863
PPC & ZPT (lt)	-	-	928,811	380,123
Others (Tons)	33,224	3,022	56,503	18,200

3.2 Agricultural Chemicals: Farm chemicals such as insecticides, pesticides, rodenticide, fungicides and herbicides are produced by PT Petrokemia Kayaku, Bayers and Ciba but the distribution is through the open market. The quantity of farm chemicals distributed are shown in the following:

FARM CHEMICALS

No. of KUD	1,647	303	934	131
Insec.Lqd. '000lt	6,782	839	361,155	27,302
-"-not lqd. (Tons)	3,992	926	2588,977	611,608
Rodenticide (Tons)	2,496	1,970	9,001	1,115
Fungicides (Tons)	827	60	100,363	87,724
Herbicide (Tons)	243	30	15,869	377

*includes: TSP, DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta.

3.3 Vinyl Sheet/Plastics: No data available for the quantity distributed and on the distribution channel.

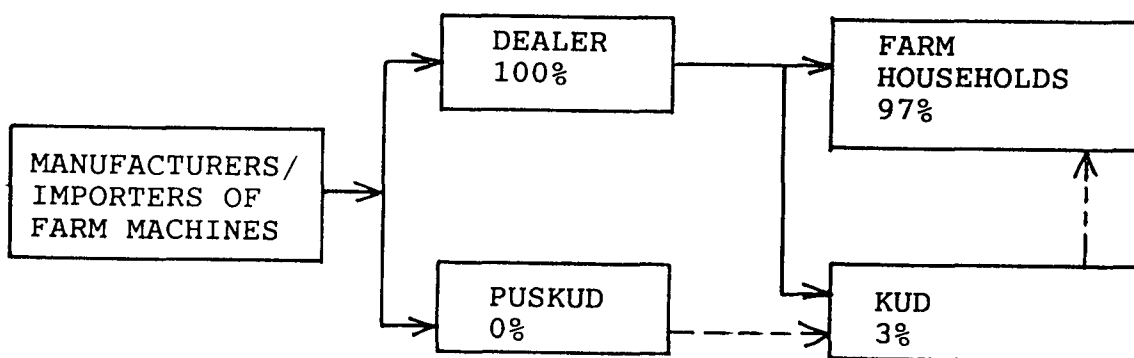
3.4 Cattle-feed: Cattle-feed is produced by a number of companies in the province. Some of the dominant producers are: PT Wirifa Sakti, PT Charoen Pokphand, PT Comfeed Ind., PT Alfred C. Topfer, PT Bama Inti Feedmill, PT Nputraco, PT Gold Coin, PT Wonokoyo Feed Mills, PT Masura, PT Cargil and Puskud-Jatim. Yearly production amounted 1,200,000 tons in 1994. Indonesia had imported nearly 1.5 million tons of corn from abroad to cover the demand for the manufacture of cattle-feed in the country. No data are available for distribution channel of cattle-feed in the province.

4. Distribution of Farm Machineries

Over the years, the use of farm machinery in the province has increased significantly. The following Table shows the availability of farm machinery in the province in the year 1985, 1990 and 1994.

Farm Machines	1985	1990	1994
Tractor	1,485	3,150	6,590
Pump	9,373	15,301	29,941
Dryer	951	218	347
Power sprayer	118,879	248,731	239,049
Threshers	15,413	54,585	81,533

The following flow chart explains the distribution channel. Almost all the farm machineries are distributed through dealers.



5. Production and Demand of Major Farm Products

The production of major commodities including paddy, palawija crops, vegetables, fruits and livestock population are summarized in the statement given below:

Commodity	1992	1993	% of Prov. Total. '93
PADDY/RICE			
Province Total (T)	8606,850	8975,865	-
-Kediri	-	351,332	3.9%
-Pasuruan	-	366,656	4.0%
MAIZE			
Province Total (T)	3023,344	2676,401	-
-Kediri	-	143,457	5.3%
-Pasuruan	-	93,416	3.4%
CASSAVA			
Province Total (T)	4408,867	4340,700	-
-Kediri	-	152,833	3.5%
-Pasuruan	-	143,427	3.2%
SWEET POTATO			
Province Total (T)	293,105	246,969	-
-Kediri	-	5,318	2.0%
-Pasuruan	-	8,630	3.6%
SOYBEANS			
Province Total (T)	568,167	568,177	-
-Kediri	-	10,566	1.9%
-Pasuruan	-	40,069	7.0%
CASHEWNUT			
Province Total (T)	7,317	7,239	-
-Kediri	-	308	4.2%
-Pasuruan	-	181	2.5%
COCONUT			
Province Total (T)	197,648	203,082	-
-Kediri	-	7,354	3.4%
-Pasuruan	-	1,600	0.9%
COFFEE			
Province Total (T)	37,443	32,883	-
-Kediri	-	528	1.6%
-Pasuruan	-	612	1.8%
CLOVES			
Province Total (T)	11,666	6,094	-
-Kediri	-	74	1.2%
-Pasuruan	-	168	2.7%

LIVESTOCK AND POULTRY

MILCH COWS

Province Total (No)	102,235	105,657	-
-Kediri	-	4,740	4.7%
-Pasuruan	-	38,913	36.7%

BEEF COWS

Province Total (No)	3135,688	3163,096	-
-Kediri	-	116,636	3.6%
-Pasuruan	-	90,523	2.8%

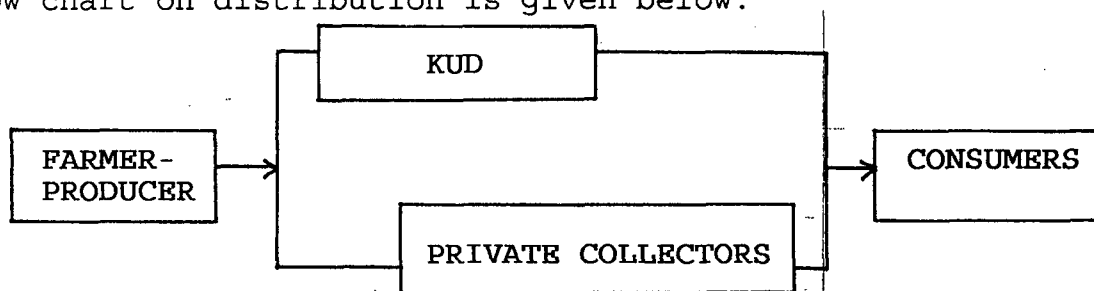
LOCAL HENS

Province Total (No)	30,675,160	31,011,984	-
-Kediri	-	1,476,846	4.7%
-Pasuruan	-	1,185,434	3.8%

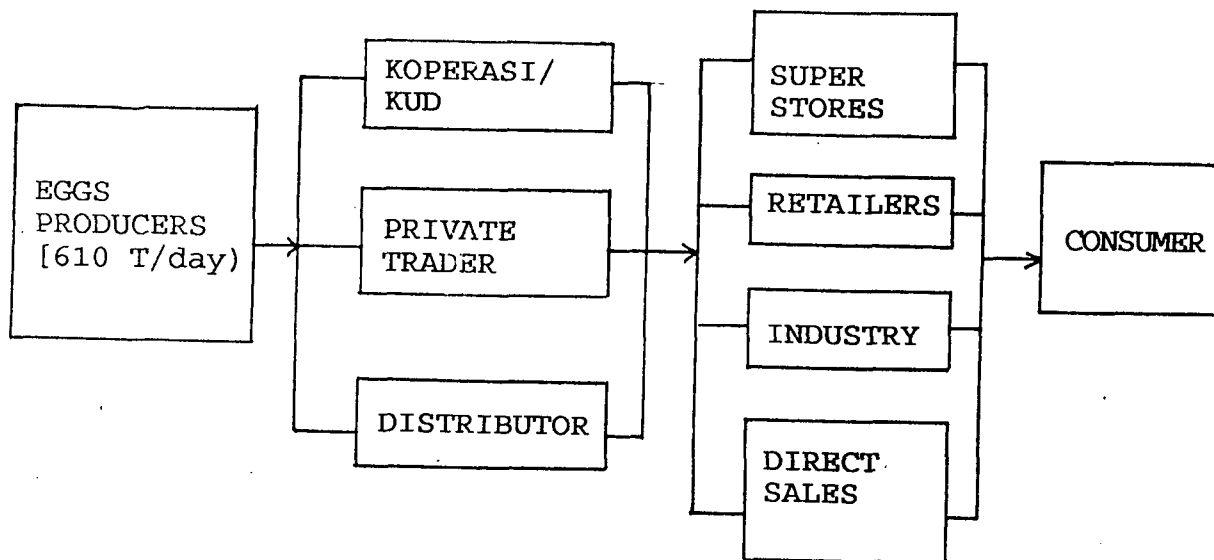
Source: Jawa Timur Dalam Angka 1993. Surabaya; and Annual Report 194-95 of Livestock Service, East Java, Surabaya

Paddy is procured by KUD from among farmer-members, milled and a part of rice is supplied to the government food stock (Bulog-Dolog). After retaining a part of it for home consumption, the remaining is sold in the open market. Procurement price of paddy/rice is determined by the government from season to season.

Fresh vegetables and fruits were supplied to the local market for consumption within the province and for other part of Java. A flow chart on distribution is given below:



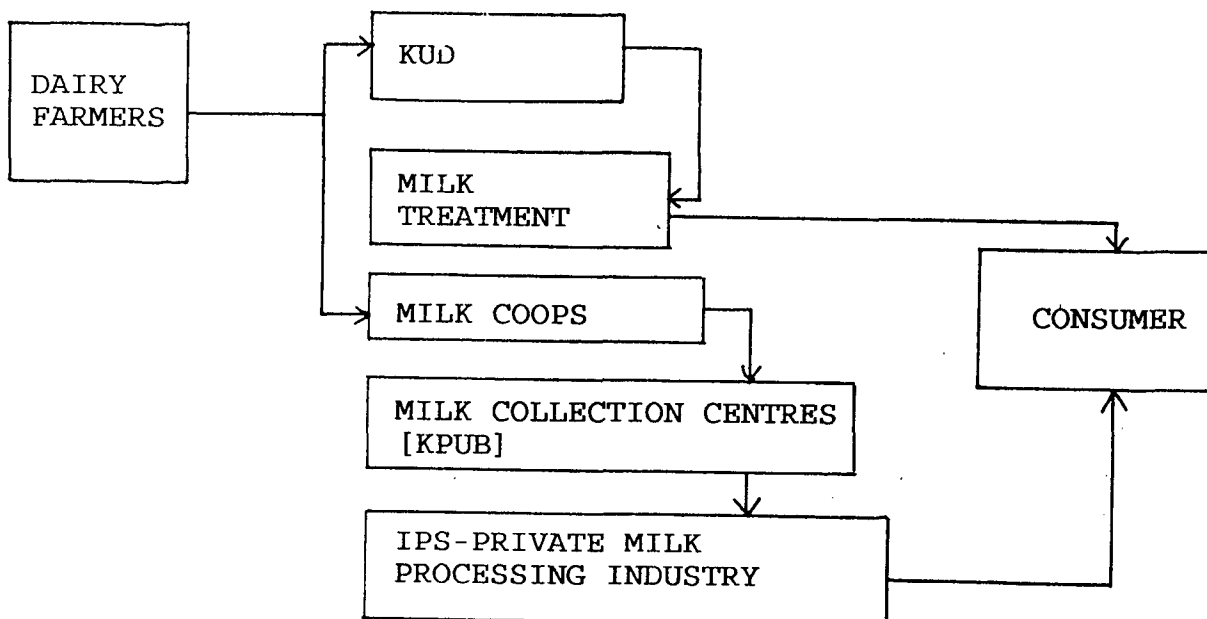
Poultry is an important product in the province. KUD members are engaged in this business. The distribution of eggs in the province is explained in the following flow chart:



Milk is also an important commodity which has become a "profit centre" of KUD and milk cooperatives in the province. Processing of milk is done by both cooperative and private sector. The quantity of milk production in the province during 1990-1994 is shown in the following Table:

Milk Production (Mil.Kg)	1990	1993	1994	Percent of 1990
East Java	118.0	125.3	131.7	111.8
National/Total	345.6	412.5	425.3	122.8
National/Coops	294.9	356.5	361.3	122.3
% of East Java to National/Coop	40.0%	35.0%	36.5%	91.8%

The distribution flow chart is given below:



6. Types of Agro-Processing

Major agro-processing in the province is rice milling, sugar factory, cassava processing and dairying. Except for governmental sugar factories, all other processing is done in private and cooperative sector.

Paddy/Rice: Rice milling is done by 2,640 milling units (0.5 to 1 ton per hour capacity) owned by both cooperative and private sectors.

Vegetables and Fruits: There is no processing, including handling and shipment, of vegetables and fruits in the cooperative sector.

Food Processing: There are private major food processors in the province. They are Indofood and Indomie.

Slaughtering: There are 312 slaughter houses in the province. Among them, 212 units are owned by the government and 100 are owned by private enterprises. These are all traditional facilities. The production of meat during 1993 is shown in the Table given below:

Beef	...	...	93,772,712 kg
Buffalo meat	...	...	274,340 kg
Mutton	...	...	19,053,050 kg
Sheep/Domba meat	...	...	9,623,063 kg
Pork	...	...	8,896,910 kg
Horse meat	...	...	4,620 kg

Milk Processing: There are a total of 202 KUD and Milk Cooperatives in the country in 1994, out of which there are 65 in the East Java (32.1%). More and more KUD are taking up to milk and livestock development. The K PUB "Sapi Jaya" at Kandangan is a secondary level cooperative which has in its membership 9 KUD from Kederi and 6 KUD from Jombang districts. It was organized in 1984 and registered in 1990. Its main objective is to promote milk business and livestock development in two districts. It has milk unit, coolers, laboratory, shop, pasteurization facilities of 300-500 litre/day, transfer tankers and offers credit facilities to member farmers.

Dairy cooperatives and KUD dealing in milk are keenly conscious of arranging of their employees and education of their members. The facilities for such training are limited. However, the GKSI (the Union of Indonesian Dairy Cooperatives) provides the needed support through its own development programmes. The GKSI does not

operate any formal training or education institution to cater to the needs of dairy cooperatives in the country.

7. Business Transaction for Agricultural Products

Rice: The procurement is under the government programme, and in this case the procurement price is fixed by the government. The farmers sell their paddy/rice to KUD against this fixed price. The KUD pays the farmers generally through their account in the cooperative. The surplus paddy/rice is sold by the farmer in the open market, generally to the trader who comes to his house with cash in hand. In this case the terms are usually cash, and in many cases, a token advance payment is also made to the farmers for the next crop.

Vegetables and Fruits: The transactions are usually cash-and-carry from the road-head. In the case of farmer bringing the crop to the open market, he returns home with cash in hand.

Cash Crops: Except for clove, all transactions are on cash-and-carry basis.

Milk: The terms are cash-upon-delivery. The farmer brings the milk to the cooperative collection centre where it is received after taking samples. The payment to the farmer is made after the cooperative receives payments from the factory, which is normally every 15 days. In the meantime the farmer can purchase cattle-feed and other supplies from KUD on a temporary credit basis. The accounts are settled with the farmers once 15 days.

Poultry: Generally the terms are cash upon collection from the producer. The middleman, in turn, either sells the commodity on cash terms to the retailer or on payment-after-sale basis.

JICA-JAPAN INTERNATIONAL COOPERATION AGENCY
JA/ZENCHU-CENTRAL UNION OF AGRICULTURAL COOPERATIVES-JAPAN
MINISTRY OF COOPERATIVES AND SMALL ENTERPRISES DEVELOPMENT
GOVERNMENT OF THE REPUBLIC OF INDONESIA

**STUDY ON INTEGRATED DEVELOPMENT OF RURAL COOPERATIVES-KUD
IN THE REPUBLIC OF INDONESIA 1996-1997**

ECONOMIC BUSINESS OF KUD INCLUDING AGRO-PROCESSING SECTOR

05 WEST NUSA TENGGARA

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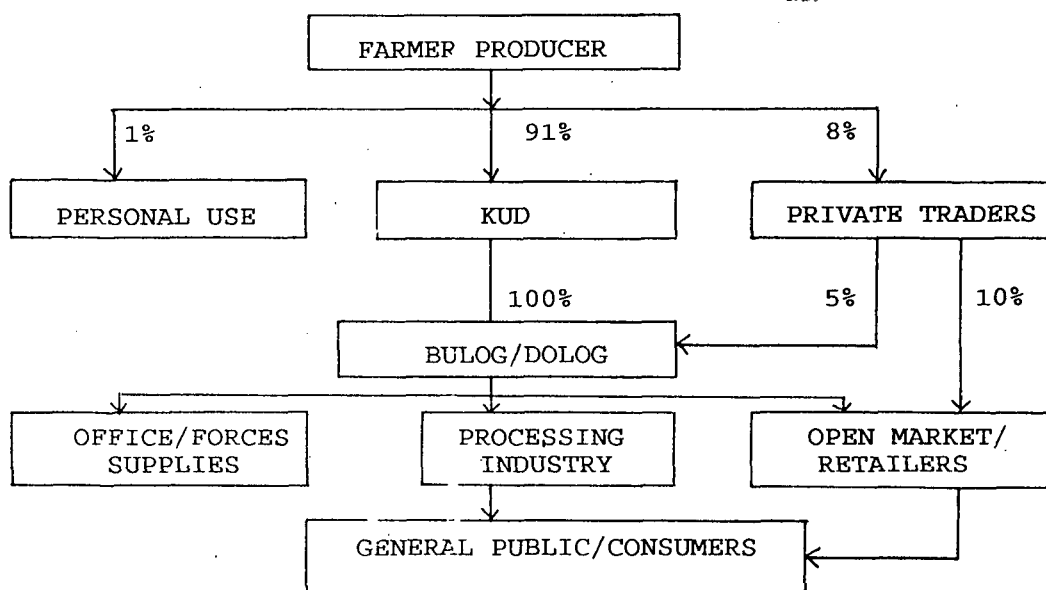
05 WEST NUSA TENGGARA

I. SUMMARY OF FINDINGS AGRO-PROCESSING, DISTRIBUTION AND KUD SITUATION

AGRO-PROCESSING & DISTRIBUTION

Major farm products of West Nusa Tenggara (WNT) province have been paddy/rice, maize, soybeans, fresh vegetables and fruits, coffee, coconut, cloves and rattan. Paddy production has been in the region of 1.1 million tons since 1992. A comparison of the production levels of various commodities during the period 1992 and 1993 is as follows: paddy/rice 103.9%, maize 137.5%, soybeans 109.5%, bananas 34.6%, tomato 35.6%, red onion 111.8%, cassava 159.8%, chilies 146.8%, coffee 122.2%, coconut 112.7%, cloves 270.8%. Other crops are tobacco, mungbeans, cashewnut and honey etc.

Rice is procured by the KUD from the farmer-members and sold to the Bulog for national food stock. The Bulog, as is the practice elsewhere in the country, releases rice for local market for consumption. In the case of WNT, the procurement and distribution of rice, is according to the flow chart given below:



The marketing of paddy/rice by the members in the province during 1988-89 and 1994-95 was as follows: In 1988-89, 98 KUD had procured 70,380 tons of rice, while in 1994-95, 79 KUD (80.6%) had procured a total of 28,948 tons (41.1%) of rice. 93 KUD in 1988-89 had sold 92,356 tons of rice to the Bulog, whereas in 1994-95 only 34 KUD (36.5%) had sold only 9,002 tons (9.7%) of rice to the Bulog. The procurement and supply of rice has gone down considerably over the years mainly because of farmers are increasingly taking to other crops, and the Bulog has also restricted its own purchases as rice trade has been partly made

open.

Major agro-processing industry in the province is the rice milling, coconut, coffee and cassava processing. Out of a total of 1,631 rice processing units in WNT in 1994, there were 882 rice milling units of 0.5 tons/hour capacity each. 261 rice milling units were within the KUD sector. The facilities with the KUD are of low capacity and quantity. Because of their poor quality production, they often fail to meet with the quality standards of the Bulog. KUD do not have sufficient warehousing capacity and facilities. Soybeans is partially processed by the soybeans cooperatives. A part of soybean is either converted into cattle-feed or exported to Java and Bali for further processing there.

Vegetables and fruits are consumed in the local market, and the remaining is shipped to Java and Bali through private trade channels. Cash crops are collected by private traders and some through KUD network. A small amount of coffee has been exported. Cashewnut is semi-processed by private traders. Tobacco is lifted fully by the cigarette manufacturers in Java. Whatever quantity of cloves is produced, 357 tons in 1994, was procured by the Puskud for the national buffer stock. The Puskud does some clove cleaning and processing. There is no milk production and livestock development or processing. There are a few small coconut and rattan processing units in the private sector.

The poultry position in the province was as follows: chicken of all types in 1992 were 2.7 million birds, which rose to 3.2 million (119.6%) in 1993; eggs production of all types in 1992 was 4,936 tons which was 4,931 tons (99.8%) in 1993. The distribution of poultry was as follows: 32.4% of the 1990 production was distributed within the province itself, in 1992 it was 26.0% and in 1994 it was 22.2% of that years production. Similarly 18.2% of the total eggs produced in 1993, were distributed within WNT. The low level of distribution within the province suggests that a larger amount of products were being sent out, mainly to Java and Bali. No processing of poultry is undertaken in the cooperative sector except that they help procure the raw material including eggs and ship it to the consumer centres in Java through traders.

The composition of livestock in the province covered: beef-cattle, buffalo, horses, goats, sheep, and pigs. A comparison of 1990 and 1994 number of slaughters was as follows: beef-cattle 111.7%, horses 111.4%, buffalo 136.3%, and goat 96.8%. Most of the slaughtering facilities are operated by the government at kabupaten level. These are traditional in character. There are no proper grading, processing, packaging, freezing and shipment facilities. The end-product is consumed locally in the province.

The Puskud has the following processing facilities: four rice milling units 0.50 to 3T/hr capacity, 4 units of cloves cleaning units with warehouses and some transportation equipment.

**OVERVIEW OF KUD:
Economic Business**

KUD economic business in the province moves around distribution of chemical fertilisers, farm chemicals, procurement and distribution of paddy/rice, distribution of consumer goods and farm implements, disbursement of farm credit, and handling some minor forest produce e.g., rattan, cashewnuts and honey. Other economic business include: procurement of cloves, distribution of essential commodities and handling telephone and electricity bills.

The total turnover of KUD in WNT during 1992 was Rp 71,644 million and in 1995 it was Rp 54,405 million (75.9%). The total surplus which was Rp 565 million in 1992 rose to Rp 792 million in 1995 (140.1%).

Chemical fertiliser distribution is one of the major economic business of KUD in the province. As compared with the use of 3.7 million tons of urea in 1993 in the country, the use in WNT was 109,484 tons (2.9%). During 1990 a total of 96 KUD supplied fertiliser while in 1993 106 KUD (110.4%) were engaged in the business. The level of fertiliser distribution in the province over the years increased: 1990 distribution was 66,147 tons and in 1995 the distribution was 90,760 tons (137.8%). The Puskud organises transportation of fertiliser from the warehouses of PT Pusri up to the KUD/TPK level and receives a service fee for this. The price of urea are determined by the government from time to time. For the purchase of urea for paddy cultivation, the government provides credit channels to the farmers through the KUD network. The KUD receive a fee for the disbursement of fertiliser and farm credit which, in fact, forms a substantial portion of their working capital.

Farm chemicals are open and the farmer-members are free to purchase their requirements either from their KUD or from the open market. However, while the number of KUD engaged in this business in 1990 was 28, in 1993 only 24 KUD undertook the business. An analysis of economic business of farm chemicals of 5 surveyed KUD indicated that nearly 12.1% was the share of their total turnover during the year 1995 e.g., Karya Utan 6.9%, Kita 25.0%, Pelita 16.6%, and Doro Cumpa 3.2%.

For marketing of fertiliser by surveyed KUD indicates that this business has been a prominent one. The percentage of marketing of fertiliser as compared with the total turnover of the KUD, on an average, was 22.1%. In the case of KUD Karya Utan it was 41.2%, KUD Kita 14.6%, KUD Pelita 20.1%, KUD Doro Cumpa 18.7% and KUD Ritam 15.9%. The rate of commissions earned by the KUD from sales over purchase of fertiliser were as follows: Karya Utan 6.9%, Kita 2.5%, Pelita 1.6%, Doro Cumpa 2.2% and KUD Ritam 2.7%.

Distribution of seeds is open. Paddy seeds are produced by a government company and several authorised private enterprises. Some of the KUD in the province e.g., KUD Olat Ojong in Sumbawa, KUD Rora Besar in Dompu, and KUD Pusaka Batur in Central Lombok

produce certified seeds of paddy, soybeans and groundnut. The total distribution of paddy seeds by KUD in 1990 was 1.5 million kg and in 1993 it was just 159,369 kg (10.3%).

The KUD help procure paddy/rice from the members for the national food stock. The members supply the maximum which they can but still the preference of the farmers remains to sell the produce in the open market at a higher price than the procurement price fixed by the government. The procurement price is determined by the government from season to season. KUD get credit from the government to purchase rice. During 1988-89 a total of 98 KUD had procured 70,380 tons of rice, whereas in 1994-95 a total of 79 KUD (80.6%) were able to procure 28,948 tons (41.13%) of rice. 93 KUD had sold 92,356 tons of rice to the Bulog during 1990, while 34 KUD (36.5%) were able to sell 9,002 tons (9.7%) of rice to the Bulog. The procurement and supply of rice has gone down considerably over the years mainly because the farmers are increasingly taking to other crops, and the Bulog has restricted its own purchases because the rice trade has partially been deregulated. The percentage of rice marketing of the 5 surveyed KUD as compared with their total turnover of 1995 was, on an average, 13.7%. For KUD Karya Utan it was 31.3%, Kita 13.7%, Pelita 14.0%, and Doro Cumpa 9.6%. The rates of commissions earned by them on sales over purchases during 1995 were as follows: Karya Utan 1.0%, Kita 4.3%, Pelita 1.4%, and Doro Cumpa 2.0%.

Farmers purchase their farm inputs and consumer needs from the retail outlets and TPK. Each KUD operates, on an average, 3-4 TPK. The retail outlets are located within the premises of the KUD or within the shopping areas of KUD towns. In 1995 there were 127 retail outlets with a working capital of Rp 901.6 million and turnover of Rp 24,811.1 million. The percentage of marketing business of KUD retail outlets over their 1995 total turnover was as follows: Karya Utan 12.8%, Pelita 1.5%, Doro Cumpa 0.8% and Ritam 4.4%.

The Puskud is engaged in the procurement of cloves for the national buffer stock. This business formed 54.9% of its 1995 total turnover.

No KUD was reportedly engaged in the production business of cattle-feed. The entire supply comes from Java, especially East Java. Livestock and dairy sectors are weak in the province.

Funds for operating economic and utilisation business is derived from various sources e.g., credit from the government for procurement of paddy and service fee received for disbursement of farm credit, service fee for handling telephone and electricity bills, and surplus generated from business.

HAMPERING FACTORS: Economic Business

KUD in West Nusa Tenggara have not been able to diversify their economic business mainly because of serious lack of working

capital, access to market, low level of rainfall, lack of irrigation facilities, serious lack of farm implements and rice processing facilities. Many of the KUD have old-dated paddy milling machines, extensively damaged paddy drying floors and lack of transportation equipment. A number of transmigrants from Bali and Java have introduced some paddy cultivation and cash crops, but their impact is too low to be economically felt. KUD leadership is inactive because of limited range of business transacted. Some of the KUD face problems of collection and processing facilities, especially in the case of rattan, cashewnut, coconut and honey. The topography is hilly and water sources scarce. No joint ventures have been established in handling and processing of main crops of the area e.g., corn, cassava, coconut to be used for cattle-feed production.

The limiting factors can be summarised as follows: Serious lack of working capital to expand current and establish new business; lack of marketing facilities; lack of understanding of joint marketing concept; serious lack of business information; delayed payments to members in the absence of members' account settlement methods; lack of understanding of joint purchasing, joint use of capital, and joint-use facilities e.g., rattan processing; insufficient guidance on farm management, planning; serious shortage of farm machines, transportation equipment, paddy processing equipment and warehousing; serious lack of training for the leaders and managers; lack of business collaboration with business federation and private enterprises to secure supplies of consumer goods and farm implements and other farm inputs.

POSSIBILITIES:

Economic Business

In order to help increase the income levels of farmer-members, KUD need to further develop their own economic business. For this the following possibilities exist: Introduce concepts of joint marketing, joint purchasing and joint-use of capital; establish joint ventures in processing to overcome shortage of capital; develop linkages with secondary level business federations/KUD and private enterprises to facilitate marketing of members' produce; establish cattle-feed production using locally available products e.g., corn, cassava, coconut; establish joint ventures in processing of rattan, cashewnut, through establishment of collection centres and transportation; improve technical condition and increase the number of rice mills and warehouses; enhance quantity and capacity of farm implements e.g., land tillers; develop business information systems in collaboration with secondary organisations; expand training of KUD leaders, managers and key members in farm-related subjects; training of managers through private industry e.g., rattan processing, farm machines operations; and substantially expand the member information and education activities at the KUD level.

ACTIVATION MASTER PLAN:

Economic Business

Taking advantage of the continuing positive support of the

government for the development of KUD and a close proximity to high consumption areas of Java and Bali, and its own tourism potentials, the KUD can improve their economic business.

The economic business to the advantage of KUD members can be further expanded by adopting some of the following methods: Introduction of concepts of joint marketing, joint purchasing, joint use of capital; establish joint-use facilities in key sectors like paddy processing, feed manufacture using local material e.g., corn, cassava, rice bran, coconut; establish joint ventures to overcome shortage of capital in sectors like rattan processing, livestock development, honey and tobacco, transportation; introduce livestock development in view of the vast land areas available; establishing linkages with secondary level business federations and private enterprises for supply of consumer goods, farm inputs like implements; establishing business information systems; introduce members' accounts settlement procedures; training of KUD leaders, key members and managers in farm-related subjects; extensive training of employees; intensive member education activities.

II. MAIN FINDINGS

AGRICULTURAL PRODUCTION

Distribution of Farm Input Materials

Farm input materials include chemical and bio-fertilisers, farm chemicals e.g., insecticides, pesticides, rodenticides, fungicides and herbicides etc., and the supply of improved and quality seeds generally for key crops e.g., paddy, maize, soybeans etc. Chemical fertilisers is produced by several state-owned companies but the distribution of urea is coordinated by PT Pusri. The fertilizer is distributed from company-owned warehouses which are located at kecamatan level. This network is available throughout the country. The KUD pick up their requirements from these distribution points. The KUD, in turn, distributes the fertilizer from their own warehouses or through the TPK on the basis of pre-arranged delivery schedules.

The distribution of farm chemicals is through KUD or private channels. The main producers of these farm chemicals are Bayers, Ciba, PT Petrokemia Kayaku and others. While the main concentrates are imported, the formulations are done in Indonesia according to the local conditions and requirements.

The distribution of farm inputs by KUD in the NTB was as follows:

Farm Inputs	Year 1990		Year 1993	
	National	NTB	National	NTB
<u>FERTILISER</u>				
No. of KUD	3,550	96	3,461	106
Urea (Tons)	1706,547	47,922	3737,760	109,484
All others (Tons)*	1341,910	18,225	2293,965	42,526
PPC & ZPT (lt)	-	-	928,811	13,800
Others (Tons)	33,224	170	56,503	
25				
<u>FARM CHEMICALS</u>				
No. of KUD	1,647	28	934	24
Insec.lqd. '000lt	6,782	95	361,155	705
-"-not lqd.(Tons)	3,992	17	2588,977	4,569
Rodenticides (Tons)	2,496	39	9,001	3
Fungicides (Tons)	827	3	100,363	28
Herbicides (Tons)	243	-	15,869	-

*includes: TSP,DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta.

As compared with the use of 3737,760 tons of urea in 1993 in the country, the use in NTB was 109,484 tons (only 2.9%). The farmers in NTB have increasingly been using bio-fertilizer.

The distribution of seeds by the KUD in NTB during 1990-93 has been as follows:

Type of Seeds	Year 1990		Year 1993	
	National	NTB	National	NTB
No. of KUD	980	26	545	22
Paddy (kg)	26,351,795	1538,733	5336,522	159,369
Corn (kg)	635,324	5,000	479,911	-NA-
Soybeans (kg)	610,344	-NA-	1442,920	20,650
Others (kg)	3290,037	1007,415	1068,673	-NA-

Source: Koperasi Unit Desa 1990 & 1993, BPS-Jakarta

The total distribution of paddy seeds by KUD in 1990 was 1538,733 kg and in 1993 it was 159,369 kg - 10.3% of 1990. Seeds of paddy are developed and distributed by PT Sanghianseri, a State-owned company using KUD channels. Seeds for palawija and horticulture crops are obtained by the farmers from the open market. The government, however, operates several seeds certification stations, as to certify their quality.

Dissemination of Farm Machinery

The following table indicates the availability of farm machinery in the NTB during the years 1984, 1993 and 1994:

Type of Farm Machines	1984	1993	1994	% of 1993
2-Wheel Tractors	28	484	813	167.9
Tractors/all type	38	42	56	133.3
Hand Sprayers	5,581	18,950	19,611	103.4
Other Pest Control Eqpt	293	642	554	86.2
Threshers	128	2,057	1,860	90.4
Paddy Processors	836	1,607	1,631	101.4
(out of which, RMU)	--	(752)	(882)	(117.2)
Water Pumps	--	173	131	75.7

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

A majority of farm machines are within the KUD sector. Some of the equipments have been imported, and some have been locally assembled. Some of the farm machines and paddy processors have been provided under various technical assistance programmes e.g., OECF-Japan and Kennedy Round Programmes. Nearly all the KUD owned paddy drying platforms and small godowns to hold paddy and rice. Cooperatives are not reported to own any cold stores or any other agro-processing units.

PROCESSING AND DISTRIBUTION OF FARM PRODUCTS

Demands of Major Farm Products (Item, Form of Processing and Consumption)

Major items of agricultural production in NTB have been rice, corn, soybeans, cassava, fresh vegetables and some cash crops. The following table shows the production of various commodities in 1994.

Table Showing Production of Selected Farm Products 1994

Commodity/1994	Production/Tons	Percent
PADDY/RICE		
Province Total	1,187,513	
-Sumbawa	217,842	18.3
-Dompu	68,528	5.8
MAIZE		
Province total	51,647	
-Sumbawa	11,909	23.0
-Dompu	2,436	3.8
CASSAVA		
Province total	108,191	
-Sumbawa	11,072	10.1
-Dompu	3,797	3.7
SOYBEAN		
Province total	130,284	
-Sumbawa	29,465	22.3
-Dompu	12,624	10.0

The distribution of rice is done in two ways: a part of it goes to the Bulog, while the remaining is disposed of in the local market and retained by the farmers for their own use. In the case of other crops, if there is a procurement drive by the government for specific crops, then the distribution takes place accordingly. Otherwise, farmers are assisted by the KUD to sell their products. Another important commodity which is widely distributed through the KUD network is sugar.

Fresh vegetables and some fresh fruits, especially banana are sold in the open market. Wholesale traders, generally from Java purchase vegetables for shipment to Jakarta or to other consuming destinations.

There are no agro-processing facilities in the province to handle fresh vegetables, fruits and cash crops. All manufacturers and processors are on Java.

The table below shows the production of fresh vegetables, fruits and some cash crops in the province:

Commodity/1994	Production (Tons)	% of Prov.
RED ONION		
Province Total	70,379	
-Sumbawa	303	0.4
-Dompu	18	-
TOMATO		
Province Total	3,605	
-Sumbawa	270	7.4
-Dompu	13	0.3
CHILIES		
Province Total	12,310	
-Sumbawa	1,059	8.6
-Dompu	28	0.2
CABBAGE		
Province Total	2,228	
-Sumbawa	369	16.5
-Dompu	10	0.4
BANANA		
Province Total	90,415	
-Sumbawa	8,689	9.6
-Dompu	21,375	23.6
MANGO		
Province Total	26,814	
-Sumbawa	4,567	17.0
-Dompu	1,417	5.2
COFFEE		
Province Total	11,642	
-Sumbawa	859	52.3
-Dompu	445	27.1
CASHEW NUT		
Province Total	1,320	
-Sumbawa	417	31.5
-Dompu	247	18.7
COCONUT		
Province Total	38,659	
-Sumbawa	1,647	4.2
-Dompu	757	1.9
TOBACCO		
Province Total	12,083	
-Sumbawa	38	0.3
-Dompu	31	0.5

All cash crops move out of the province for further processing. A small amount of coffee, especially Coffee Robusta has been exported from the province. Cashew nut is an important cash crop of the province. While 60% of this product is exported, the rest is processed in Java for domestic consumption. Tobacco is lifted fully by the cigarette manufacturers in Java. Whatever quantity of clove is produced in the province (357 tons in 1994), it is procured by the Puskud for the national buffer stock.

The province has also some poultry activity, as follows:

Item	Production	Distribution out of NTB	
Chicken			
-all type (Nos)	1990 2,708,800	880,000	32.4%
	1992 4,114,900	1,070,000	26.0%
	1994 3,240,090	720,000	22.2%
Duck	1992 577,100	NA	-
Eggs-all type (T)	1992 4,936.1	820	16.6%
	1993 4,931.7	900	18.2%

There are no systematic processing facilities in the province for grading, packing and shipment except for some traditional facilities.

Technical Level of Major Agro-Processing

The technical level of agro-processing in the province still remains to be developed. The only agro-processing is paddy/rice milling. These facilities are poor in quality and too low in capacity, as a result they often fail to meet with the quality requirements of the Bulog.

Major Agro-Processing Entity, Volume of Production, Facilities

In NTB there were 736 rice milling units in 1995 out of which there were 261 (35.4%) with the KUD sector. The facilities with the KUD are too small. The RMU with the KUD are of low capacity - 0.5 to 0.8 tons/hour capacity.

Similarly in the sector of poultry, vegetables and livestock the agro-processing facilities remain insignificant and traditional. The livestock position in NTB in 1992 was as follows:

Commodity	Numbers
Beef cattle	408,900
Buffalo	211,900
Horse	77,900
Goats	251,600
Sheep	36,300
Pigs	22,900

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

The position of meat production in the province was as follows:

Commodity	Number Slaughtered	
	1990	1994
Beef cattle ...	25,720	28,741
Horses ...	3,736	4,162
Buffaloes ...	4,856	6,622
Goat ...	7,290	7,057

Source: Dinas Peternakan, NTB, Mataram

Most of the slaughtering facilities are operated by the government at kabupaten level. These are traditional in character. There are no proper grading, processing, packaging, freezing and shipment facilities. The end-product is consumed locally in the province.

Major Shipping Areas, Distribution System and Facilities by Commodities

For agricultural products e.g., vegetables, fruits and some cash crops, the major destinations for shipping are the wholesale markets on Java and Bali Islands. The destination for paddy/rice is government and general market.

The farm households or the KUD have not established any joint handling, joint marketing or joint shipment facilities except for the provision of some transport and/or negotiating the deals.

Business Customs, Pricing, Accounts Settlement

In most cases the business is transacted between the farmer and the agents of the traders. The transactions are highly cash-oriented. The word of mouth remains supreme in the first negotiations which do not involve very high values or expensive assets e.g., lands and buildings. In the case of agricultural products, the agents of the traders keep on tracking the producers of the required commodities.

In the context of farmers' dealing with the KUD, the transactions are mostly on cash basis (around 45-50%), the remaining being on credit basis generally in respect of purchase of fertilisers, and other requirements. While dealing with the agents and traders, the cash advances are reduced at the time of settlement of final accounts. Advances received by the farmer appear advantageous and look attractive in the initial stages but at the time of the final settlement the farmer tends to lose because of the disadvantageous prices at which he had sold his crop. Since cash is needed always by the farmer, a small disadvantage does not seem to harm him.

The pricing of agricultural products is determined by various factors e.g., the cost of inputs, labour inputs, and a reasonable margin of profit. This is true of horticulture, poultry and livestock products. The prices of urea are determined by the government. Fertiliser other than urea are generally open

for sale.

The accounts are settled based on the conditions laid down by the KUD and agreed upon between the KUD and the members. In the case of agricultural producers of NTB, the members can purchase their requirements from the KUD on credit basis which are settled against the supplies received by them from the KUD. The system of accounts settlement is generally the same all over the province and is acceptable to both - the members and the KUD.

Others

Distribution of agricultural products and items of daily use is also carried out through a network of retail shops (waserda) in NTB, although the number of such shops and the merchandise range is hopelessly low.

The provincial federation of the KUD - the Puskud - undertakes some business activities. The business relationship between the two is not active. There is no horizontal and vertical integration between the two tiers in the province. The Puskud could at least provide market information to the KUD.

BUSINESS MANAGEMENT OF KUD AND RELATING LEGAL SYSTEM

Situation of Business

Purchasing and Marketing Business

Purchasing Business System, Commodities and Turnover

To meet the needs of the farmer-members, the KUD network has met the input needs to some extent in the province. The government programmes which have been assigned to the KUD further reinforce their business operations. The government programmes include: distribution of chemical fertilisers, agricultural credit, distribution of essential commodities e.g., sugar, rice, soybeans, wheat flour, kerosene oil etc. The members, therefore, not only purchase their input needs through the KUD but also their consumption needs.

Fertiliser Distribution: In NTB, PT Pusri distributes chemical fertiliser through various channels from its own warehouses located at harbour points and even down at the kabupaten levels. The distribution of fertiliser in the province during 1990-1995 is given in the following table:

Particulars	1990	1994	1995	% of 1990
No. of KUD	96	109	109	113.5
Fertiliser (Tons)	66,147	85,464	90,760	137.8

Source: Department of Cooperatives-RI, Jakarta

During the years 1990-1993, the fertiliser was distributed in the country as seen in the following table:

Particulars	1990-91	1992-93
Total National distribution (Tons)	2,810,539	3,031,971
Allocated by PT Pusri for distribution by:		
-Puskuds	0.2%	0.1%
-KUD	80.9%	80.3%
-Persero Niaga	1.6%	3.2%
-PT Pertani	11.6%	8.8%

Fertiliser is produced by several government companies including the PT Pusri, but the distribution is coordinated by PT Pusri. PT Pusri, in turn, allocates quota for distribution among various agencies including the Puskuds. PT Pertani, a government company, distributes fertiliser for the plantations and estate crop.

Farmers obtain their farm chemicals either from the KUD and from the open market.

Seeds distribution: Distribution of seeds is open, except for Paddy seeds. Paddy seeds are produced by a government company and several authorised private enterprises. Seeds are certified by a government Seeds Certification Centre as to their quality. During 1990-93 the following quantities of seeds were distributed through the KUD network:

1990	26 KUD	Paddy	1538,733 kg
		Corn	5,000 kg
		All Others	1007,415 kg
1993	22 KUD	Paddy	159,369 kg
		Soybeans	22,650 kg

The distribution of seeds was deregulated after 1990-91. The farmers were able to purchase their requirements from the open market, hence the sudden drop during 1993. According to the Seeds Certification Centre, Mataram, only 20-30% of the farmers use certified seeds. Some of the KUDs in NTB e.g., KUD Olat Ojong in Sumbawa, KUD Rora Besar in Dompu and KUD Pusaka Batur in Central Lombok produce certified seeds of paddy, soybeans and groundnut.

Farm Machines and Agricultural Implements: Because of the low levels of farm income, hilly terrain and scanty rainfall, the use of farm machines is limited. Only traditional implements, hand tractors, and farm cattle (horses and buffaloes) are used. The table below shows the availability of various farm implements in the province:

Type of Farm Machines	1993	1994	% of 1993
2-wheel tractors	484	813	167.9
Tractors (all type)	42	56	133.3
Hand Sprayers	18,950	19,611	103.4
Other Pest Control Eqpt	642	554	86.2
Threshers	2,057	1,860	90.4
Paddy Processors	1,607	1,631	101.4
(out of which RMU)	(752)	(882)	(117.2)
Water Pumps	173	131	75.7

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

A majority of farm machines are within the KUD sector. Some of the farm machines, especially the paddy processors, have been obtained under OECF and Kennedy Round Programmes. Some of these have been of Japanese origin and some have been fabricated locally in Indonesia. Nearly all the KUD owned paddy drying floors and small godowns to hold paddy and rice. Many of these existing facilities are fairly old and need replacement or the facilities need to be enhanced substantially. Cooperatives are not reported to own any cold stores or any other agro-processing units.

Retail Outlets (Waserda) and TPK (Kiosks): Farmers purchase their farm inputs and consumer needs from the waserdas and TPK. Each KUD operates on an average 3-4 TPK located close to the farm operational areas. Some of the TPK are operated by the farmer-members as their private enterprise but selling farm inputs only.

The position of retail outlets in 1994 and 1995 in the province was as follows:

Particulars	1994	1995	Percent
No of Waserda	120	127	105.8
Working Capital (M.Rp)	926.6	901.6	97.3
Turnover (M.Rp)	19,468.0	24,811.1	131.5

Source: Ministry of Cooperatives-RI, Jakarta 1996

Turnover: The total turnover of KUD in NTB during the years 1992 and 1995 is given in the following table:

Particulars	1992 (M.Rp)	1994 (M.Rp)	1995 (M.Rp)	% of 1992
NTB KUD	71,644	104,158	54,405	75.9
National KUD	3,807,639	4,837,683	5,669,411	148.8

Major Source of Procurement of Commodities

Distribution of chemical fertilisers, particularly, urea is coordinated by the PT Pusri which has its warehouses located throughout the country and even at the kecamatan level from where the KUD pick up their supplies against the delivery note issued by the Puskud. The transportation of urea is handled by the Puskud in the province from the Pusri warehouse to the KUD delivery point. The government provide credit to the farmers through the KUD for the purchase of urea. Other chemical fertiliser formulations are available in the open market. Similarly, bio-fertilisers, farm chemicals are obtained from the open market.

Seeds, except for paddy, are procured from the open market. Paddy seedlings are produced and distributed by PT Sanghianseri. The government operates a number of seeds certification centres throughout the country in order to ensure seeds quality.

Merchandise for sale through the TPK and the retail outlets is obtained from the open market. There is no wholesale cooperative agency which sells or coordinates the supply of consumer goods to these outlets. A beginning has been made by Puskud-NTB to supply consumer goods in association with PT Goro, a private enterprise.

Marketing Business System by Commodities and Turnover

This consists of marketing the produce of farmers with their KUD. Major marketing activities in the province have been: Paddy, rice, maize, soybeans, cashewnut, tobacco, rattan and others. The KUD help procure paddy/rice from its members for the national food stock and try to fill the target set for it. The members supply the maximum which they can but still the preference of the farmer remains to sell the produce in the open market at a higher price than fixed by the government. The procurement price of paddy/rice is determined by the government every season. KUD gets credit from the government to purchase rice.

The marketing of paddy/rice by the members in NTB province during 1988-89 and 1994-1995 is given in the table below:

Particulars	1988-89		1994-95	
	National	NTB	National	NTB
<u>Paddy/Rice Procured</u>				
By KUD (Nos)	2,018	98	1,993	79
Procured (Tons)	1,096,212	70,380	786,066	28,948
<u>Sold to Bulog</u>				
By KUD (Nos)	2,120	93	1,133	34
Sold (Tons)	2,023,952	92,356	509,919	9,002

Source: Department of Cooperatives-RI, Jakarta 1996

It is noticed from the above that the procurement and supply of rice has gone down considerably over the years mainly because the farmers are increasingly taking to other crops, and the Bulog has also restricted its own purchases as rice trade has been partly made open.

The total business volume and the total surplus of the KUD in the province in 1992-1995 was as follows:

Particulars	1992	1995	% of 1992
Total Turnover (M.Rp)	71,644	54,405	75.9
Total Surplus-SHU (M.Rp)	565	792	140.1

Major Market Area, Buyers

Major market areas for the produce of the farmer-members in NTB are the government (Dolog/Bulog), private processors and procurement agencies (Soybean to Koptis, rattan, cashewnuts, coffee to private collectors, cloves to Puskud). There are no processors of farm produce in the province. Fresh vegetables and fruits are consumed locally. Coconut is locally processed. Other cash crops like tobacco, coffee go to Java.

Procurement of Funds for Economic and Utilisation Business

Capital for operating economic and utilisation business is available from various sources:

- Credit from government for procurement of paddy/rice, corn, soybeans, cloves and the service charges the government pays to the KUD for disbursement of such credit;
- Service fee for handling telephone and electricity bills;
- Credit/fee from private enterprises for procurement of rattan, cashewnut etc.
- Surplus earned from the business of the KUD.

The level and variety of such credits is very low in NTB. KUD have very low financial strength and so have the farmer-members.

Holding and Utilisation of Kiosks, Storage, Processing Facilities

Retail shops, kiosks and warehouses are operated by the KUD as a service to the members. In 1995, the situation in the KUD sector in NTB was as follows:

Total of Retail shops/waserdas	...	...	127
Warehouses with drying floors	...	...	235
Rice Milling Units	...	...	261

Competition with Private Dealers

The KUD are neither integrated horizontally nor vertically. Each unit works on its own and develops its own business with the funds raised through its own efforts. Since a majority of business units of KUD are operating within the government-supported system, the element of competition with the private dealers does not exist. Procurement of rice and clove, distribution of fertiliser, sugar, soybeans, maize, wheat flour etc. are all regulated by the government and are consequently a secure business, leaving not much scope for competition.

ORGANIZATION, MANAGEMENT & BUSINESS OF PUSKUD

The PUSKUD-NTB is a secondary level business federation of KUD in the province. It was organized in July 1987 and registered on April 6 1988 vide Regn No. 395B/BH/XXII. In 1996 its membership was 126 both KUD and non-KUD. Its members General Meeting, which meets once a year, elects a 7-member Board of Directors for a 5-year term, and a 3-member Board of Supervision for a period of 5 years. It also has a 2-member Board of Guidance which is appointed by the government for a 5-year term.

The Puskud is a member of a national federation, Inkud. The main aim of Puskud is to provide business support to its member affiliates, promote cooperative business in the rural sector in the province in accordance with the Principles of Cooperation, and to promote cooperative education and training. The business activities of the Puskud include: procurement and supply of paddy/rice, distribution of fertiliser, sugar/other essential commodities, collection of cloves and other farm products, and distribution of consumer goods among the affiliates. The Puskud has its office at Mataram. The Puskud has 53 full-time employees including a manager.

Situation of Business

Purchasing Business Methods, Commodities, Turnover

The Puskud, the provincial federation of KUD, a member of the Inkud, participates in business ventures sponsored or proposed by the Inkud, besides supporting the business development of the KUD at the primary level in the province. The Puskud is a federation of 126 KUD and non-KUD in the province.

In commodities like cloves, coffee and cassava, the Inkud assigns the Puskud to fulfil a specific trader order for home use or for exports. The indent specifying the quantity and quality and the time frame is passed on the Puskud for execution. The Puskud, in turn, contacts the relevant KUD and asks them to supply the required items within a specific time. Upon receipt of raw material, and after some semi-processing, the items are exported or delivered.

The Puskud also coordinates the procurement of commodities either for national food stock or for distribution in the open market. Methods adopted are negotiated with the relevant agencies/suppliers, and are either on a fee basis or on a commission basis. Procurement prices of rice and cloves are regulated by the government.

During 1995, the Puskud purchased the following commodities:

Commodities	Purchases (M.Rp)	% of Total Purchases
TOTAL PURCHASES-1995		Rp 1,400.9M
-Paddy/Rice	27.1	1.9%
-Cloves	1,342.7	95.8%
-Sugar	45.9	3.2%

The Puskud does not purchase fertiliser and soybeans but serves as a coordinator for distribution in the province. For transportation of fertiliser, the Puskud collects a fee from the KUD which in accordance with the regulation set forth by the government. The Puskud has recently also entered a new business, procurement of pumic stone (Batu Apung) for supplying to main processors and exporters.

Major Suppliers and Buyers (KUD and non-KUD)

The major suppliers of the Puskud have been the private enterprises and the state-owned chemical fertiliser company, PT Pusri. It obtains its supplies of sugar, wheat flour and soybeans from the Bulog. Farm products e.g., paddy/rice, coffee, clove, soybean and pumic stone is procured through the KUD network.

Its main buyers are the KUD, clove holding agency through the Inkud, farm produce processing factories.

Marketing Business Methods, Commodities, Turnover

The marketing business methods include negotiations by the KUD and the basic level farmers with the Puskud, as well as the requirements of the national food stock.

The main commodities which the members of the Puskud sell to the federation are: cloves,, paddy/rice. The marketing business (sales by Puskud) of the Puskud during 1995 was as follows:

Commodities	Sales (M.Rp)	% of Total Sales
TOTAL SALES-1995		Rp 3,158.4M
-Paddy/Rice	59.7	1.8%
-Cloves	1,736.5	54.9%
-Sugar	87.8	2.7%
-Pumic Stone	74.8	2.3%

Major Suppliers of Marketing Commodities and Buyers (KUD and non-KUD)

KUD and the farmer-members are the major suppliers of farm products to the Puskud. For other commodities, the suppliers are private traders, agents and the manufacturers. Major buyers of Puskud have been the Bulog and the Clove Procurement Agency (working in close collaboration with the Inkud), and the open market.

Funds for Economic Business and Operation of Joint Use Facilities

The situation of economic business of the Puskud is given below:

Particulars	Year 1994 (M.Rp)	Year 1995 (M.Rp)	Percent
Total Purchases	588.6	1,400.9	237.8%
Total Sales	1,724.0	3,158.4	183.1%
Total Turnover	2,312.6	4,559.3	197.1%
Total SHU	231.6	282.5	121.9%
Total Assets	3,076.1	4,094.5	133.1%
Total Owned Capital	1,104.0	1,295.5	117.3%
Total Outside Capital	1,972.0	2,798.9	141.9%

Source: PUSKUD-NTB Annual Report 1995

The Puskud owns several warehouses and rice milling units spread out throughout the province, two trucks and fully-equipped office. The Puskud gets a handsome collection of fertiliser transportation fee (Rp 976.5 million in 1995). In accordance with a government regulation the Puskud transports fertiliser to all KUD in the province

Situation of Operation of Kiosks, Collection Centres, Processing Facilities

The Puskud does not operate any kiosks, collection centres and processing facilities of its own. KUD are its collection centres and sales points. Whenever needed, it hires processing, warehousing and transportation facilities from the private sources. Its current processing facilities include: Four rice milling units, 0.50 to 3 T/hr capacity, Kubota, already more than 15 years old (finding it difficult to obtain spare parts) together with 6 units of 1000 tons each capacity, 4 units of Cloves cleaning units together with warehouses, 2 heavy duty trucks (already more than 10 years old) and others.

Competition with Private Traders

Except for enjoying monopoly status in the procurement of cloves and transportation of fertiliser, sugar and wheat flour, the Puskud finds it difficult to compete with the private trade. It has recently entered in an agreement with PT Goro for

distribution of consumer goods in the province on wholesale price basis. It does not have any agro-processing facilities although vast possibilities exist in the province e.g., cashewnut, coconut, rattan processing.

RELATING LEGAL SYSTEM AND STRUCTURE

Policy for Improvement of Distribution and Processing of Farm Products and Price Support

In accordance with the declared National Policy to increase agricultural production and boost exports, the government is committed to support farmers and provide them with the needed infrastructure. The government has established a number of institutions and services aimed at providing farm inputs, extension services and post-harvest technology. Also, consequently the government aims at giving support to agro-processing activities through its own system and with the support of private enterprises. As a result, the country is witnessing the growth in agro-processing activities. More and more private companies are entering agro-processing business.

With a view to guarantee better economic returns from farm operations, the role of government agencies like the Bulog is being reviewed so that the farmers are sure to get proper prices for the farm products, especially, rice, soybeans, corn and other cash crops. Clove procurement agency, coconut development board, coffee board are some examples. For every harvesting season the government announces floor prices for key commodities.

The KUD are used increasingly by the government to procure food items for national food stocks and distribute essential commodities in the country. The KUD are also used to disburse agricultural credit among the farmers. The Puskuds through the Inkud are planned to serve as gross distributors of consumer items through the waserdas and TPK.

Taking advantage of the close proximity with Bali and Java, with vast market and processing centres, and the potentials of NTB, the provincial government has decided to accelerate the development process in the province. "Economic activities are prioritized on the ordinary people's economic sectors, namely the cooperatives and small business including informal and traditional businesses, and if it is necessary a stipulation will be made that business areas that the cooperatives and small business management successfully will not be entered by other enterprises." It has been decided to increase production of cash crops e.g., cashewnut, rattan, tobacco, including livestock development besides providing additional irrigation for paddy, palawija and fruits and vegetables.

FINDINGS OF THE DETAILED FIELD SURVEY
[Of 5 KUD in the Province]

Purchasing and Marketing Business

Situation of Establishment of Commodity-wise Groups

The 5 KUD surveyed in Nusa Tenggara Barat (NTB) were: KUD Karya Utan (M), KUD Kita (M) and KUD Pelita (M) in Sumbawa district, and KUD Doro Cumpa (MI) and KUD Ritam in Dompu district. All the KUD are situated in hilly terrain, dry areas with almost no irrigation facilities. All the KUD are situated also on the main Mataram-Bima trans-NTB highway - the farthest KUD, Doro Cumpa, is about 500 km east of Mataram. The economic condition of farmers and KUD is rather poor. Average land holding is 2.5 ha.

The main activities of KUD have been: purchasing and marketing of paddy/rice, distribution of fertiliser, sugar, kerosene oil and other farm inputs, and operating services like wartel, waserda, electricity bills handling and savings and loans. The farmers have been organised into Kelompok Tani (KT), members groups, women and youth groups, and commodity groups. The number of members and KT is given in the table below:

Cooperatives/ Category	Popula- tion	House- holds	Members	KT	Villages covered	TPK
Karya Utan-M	24,101	15,906	1,376	35	8	8
Kita-M	23,345	8,344	527	145	5	5
Pelita-M	11,921	4,734	1,300	27	3	6
Doro Cumpa-MI	11,510	3,593	1,856	66	2	5
Ritam-M	10,316	5,469	848	20	3	9

The membership of KUD is open to all residents in rural area. In most of the KUD in NTB individuals have been the members. The percentage of membership in the KUD as compared with the population has been as follows: Karya Utan 5.7%, Kita 2.2%, Pelita 10.9%, Doro Cumpa 16.1%, and Ritam 8.2%. The average membership is 8.6%.

With a view to provide services and distribute farm inputs and credit, farmers' groups (Kelompok Tani-KT) have been organised who also serve as commodity groups. Most of the government extension programmes have been carried out through these groups. The needs of the farmer-members are met through the network of TPK in which the KT are actively involved. These groups form an integral component of the KUD organisation at the village level.

**Purchasing Business Methods, Commodities
Handled, Turnover and Commissions**

While the members purchase their requirements e.g., farm inputs, from their KUD, the KUD also purchase their requirements from external sources in order to sell the final products to the

members after some processing. The purchasing business of the KUD, therefore, covers the procurement and transportation of fertiliser, paddy, farm implements/equipment, seeds, sugar, cattle-feed, and groceries for waserda and TPK.

KUD do not show separately in their accounts the commissions received or paid. They do, however, show the service fees received or paid by them.

The table below shows the commodities purchased from various sources by the 5 surveyed KUD during 1994 and 1995:

KUD/Purchasing Business Items	Total Purchases (Mil Rp)		% of KUD Turnover of Year 1995
	1994	1995	
<u>KUD KARYA UTAN</u>			Rp 411.6M
-Fertiliser	116.7	159.2	38.6%
-Paddy/Rice	231.5	128.5	31.3%
-Waserda	53.4	49.1	11.9%
-TPK	87.5	119.4	28.9%
-Wartel	-	5.5	1.4%
-Fish	-	0.3	-
<u>KUD KITA</u>			Rp 328.3M
-Fertiliser	32.3	47.1	14.3%
-TPK/Farm Chemicals	1.3	2.0	0.6%
-Paddy/Rice	28.4	44.0	13.4%
<u>KUD PELITA</u>			Rp 455.6M
-Fertiliser	102.1	90.7	27.7%
-TPK/Farm Chemicals	1.4	1.2	0.2%
-Paddy/Rice	223.6	63.3	13.8%
-Waserda	10.3	7.0	1.5%
<u>KUD DORO CUMPA</u>			Rp 673.6M
-Fertiliser	69.3	123.4	18.2%
-Paddy/Rice	79.3	64.5	9.6%
-Waserda	13.1	5.6	0.8%
-TPK/Farm Chemicals	274.4	190.2	28.1%
-Sugar	128.1	75.0	11.1%
<u>KUD RITAM</u>			Rp 112.8M
-Fertiliser	-	18.0	15.9%
-Waserda	-	3.3	2.6%
-Horticulture	-	6.2	5.3%

Consumption of fertiliser in the area is comparatively low due to the hilly terrain, inadequate irrigation facilities and low level of rainfall. However, fertiliser distribution has been an important business for the KUD. In the two districts there is very little irrigation facility. Waserda business is developing mainly because of their location on the main roads.

Percentage of purchasing business of major commodities in 1995 has been as given in the table below:

KUD	Fertiliser	Paddy	TPK	Waserda
01 Karya Utan	38.6	31.3	28.9	11.9
02 Kita	14.3	13.4	0.6	-
03 Pelita	27.7	13.8	0.2	1.5
04 Doro Cumpa	18.2	9.6	28.1	0.8
05 Ritam	15.9	-	-	2.6
Average %	22.9	13.6	11.5	3.3

Major Suppliers of Goods and Patronage of Federations

Major suppliers of goods to the KUD have been the private traders in district headquarters or in Mataram. Fertiliser is obtained from the PT Pusri through the Puskud NTB, and sugar from the Dolog. Groceries for the retail shops and TPK is obtained from the wholesalers.

Marketing Business Methods, Commodities Handled, Turnover and Commissions

The KUD market their products e.g., paddy, soybeans with their members and the processing industry or in the open market. The marketing is done as per negotiations reached between the KUD and the buyers. In many cases, the KUD acts as coordinating bodies e.g., agents of the government for rice procurement, collecting agencies for rattan for CV Berito in Sumbawa etc. The table below shows the marketing business of the 5 KUD surveyed in NTB:

KUD/Marketing Business Items	Total Marketing (Mil Rp)		% of KUD Turnover of Year 1995
	1994	1995	
<u>KUD KARYA UTAN</u>			Rp 411.6M
-Fertiliser	127.1	170.2	41.2%
-Paddy/Rice	234.0	129.9	31.3%
-Waserda	57.5	53.0	12.8%
-TPK	95.3	127.7	30.8%
-Wartel	-	10.3	2.4%
-Fish	-	0.4	-
<u>KUD KITA</u>			Rp 328.3M
-Fertiliser	33.2	48.3	14.6%
-TPK/Farm Chemicals	1.1	2.5	0.7%
-Paddy/Rice	29.8	45.9	13.7%
<u>KUD PELITA</u>			Rp 455.6M
-Fertiliser	113.0	92.2	20.1%
-TPK/Farm Chemicals	1.9	1.4	0.3%
-Paddy/Rice	228.6	64.2	14.0%
-Waserda	11.2	7.2	1.5%
<u>KUD DORO CUMPA</u>			Rp 673.6M
-Fertiliser	74.0	126.2	18.7%
-Paddy/Rice	80.6	65.8	9.6%
-Waserda	15.3	5.9	0.8%

-TPK	288.2	196.4	29.0%
-Sugar	130.6	76.9	11.4%
<u>KUD RITAM</u>			Rp 112.8M
-Fertiliser	-	18.5	15.9%
-Waserda	-	5.1	4.4%
-Horticulture	-	7.0	6.1%

KUD accounts do not show separately the commissions received or paid. They do, however, show the service fees received or paid by them.

The percentage of marketing business of KUD major commodities in 1995 is given in the table below:

KUD	Fertiliser	Paddy	TPK	Waserda
01 Karya Utan	41.2	31.3	30.8	12.8
02 Kita	14.6	13.7	0.7	-
03 Pelita	20.1	14.0	0.3	1.5
04 Doro Cumpa	18.7	9.6	29.0	0.8
05 Ritam	15.9	-	-	4.4
Average %	22.1	13.7	12.1	3.9

Given below is a summary of marketing and purchasing business of the KUD showing the commissions received by them. From the commission received, the KUD cover their overheads and handling expenses:

KUD/Items 1995	Purchase Value/M.Rp	Sales Value/M.Rp	Commissions Earned	%
<u>KUD KARYA UTAN</u>				
-Fertiliser	159.2	170.2	11.0	6.9%
-Paddy/Rice	128.5	129.9	1.4	1.0%
-Waserda	49.1	53.0	3.9	7.9%
-TPK/Farm Inputs	119.4	127.7	8.3	6.9%
-Wartel/Telecom	5.5	10.3	4.8	87.2%
<u>KUD KITA</u>				
-Fertiliser	47.1	48.3	1.2	2.5%
-TPK/Farm Inputs	2.0	2.5	0.5	25.0%
-Paddy/Rice	44.0	45.9	1.9	4.3%
<u>KUD PELITA</u>				
-Fertiliser	90.7	92.2	1.5	1.6%
-TPK/Farm Inputs	1.2	1.4	0.2	16.6%
-Paddy/Rice	63.3	64.2	0.9	1.4%
-Waserda	7.0	7.2	0.2	2.8%
<u>KUD DORO CUMPA</u>				
-Fertiliser	123.4	126.2	2.8	2.2%
-Paddy/Rice	64.5	65.8	1.3	2.0%
-Waserda	5.6	5.9	0.3	5.3%
-TPK/Farm Inputs	190.2	196.4	6.2	3.2%
-Sugar	75.0	76.9	1.9	2.5%

KUD RITAM

-Fertiliser	18.0	18.5	0.5	2.7%
-Waserda	3.3	5.1	1.8	54.5%
-Horticulture	6.2	7.0	0.8	12.9%

Major Buyers, Use of Federations and Demand for Federations

Major buyers of products of KUD are the processing factories located in the province. Paddy/rice is sold to the Dolog as well as to the open market. Rattan is supplied to CV Berito in Sumbawa.

The Puskud's role is limited to the transportation of fertiliser and sugar. None of the 5 KUD had any business with the Puskud. The KUD, however, expressed a strong desire that the Puskud needs to be more active in providing sales and purchase opportunities to them. It was however, mentioned at the Puskud as well as at some of the KUD that the Goro networking with the Puskud would create a demand and supply of consumer and farm goods among the KUD.

Necessary Operation Fund for Economic and Utilisation Business and its Procurement

For executing government programmes e.g., distribution of fertiliser, procurement of rice, handling a variety of KUT, handling electricity bills and telephone kiosks, the KUD get a fee or a discount. Also the KUD receive commission from CV Berito for the supply of raw rattan in the case of KUD Karya Utan.

KUD have very limited choice or range of credit lines from financial institutions. Utilisation of rice milling units, warehouses, farm machines is very low in the area because these facilities are either too old or have become unserviceable.

The Utilisation and Operation of Kiosks, Collection/ Storage Facilities and Processing Facilities

A majority of warehouses are old and of poor quality. These are used for holding paddy, rice and fertiliser and other material e.g, sacks, farm implements etc. The facilities in the area are the barest minimum. There is no processing of any kind of farm produce in the area. The area is dry, hilly terrain with scanty rainfall. Transportation is difficult. Farm implements and transportation facilities are absent. KUD Kita paddy drying floor is completely destroyed. KUD have no financial capacity to build/expand facilities. The area needs massive support in the form of capital, farm machines, transportation facilities and training.

The Situation of Competition with Private Traders

The KUD are in no position to compete with private dealers due to their very weak financial and operational condition. Except for KUD Doro Cumpa all others are on a mere surviving level.

FINDINGS OF THE KUD SURVEY

[A] KUD OUTLINE/KUD KARYA UTAN

Name of KUD: KARYA UTAN Category: Mandiri
Location: Province NTB, Kabupaten Sumbawa, Kecamatan Utan Rhee, Desa Motong. No of Members: 1376 (all full) (M-971 F-404)
Year Organised: 1967 Regn No:16D/BH/XXI/12 dt 09.10.1989
Mandiri Status achieved in 1995
No of Employees: 10 (8 Full-time, 2 Part-time) (M-8 F-2)
Name of Chairman: Mr A. Wahab Date of Survey: 25 Sept 1996
Name of Manager: Mr Supardi

Specific Character of Location

Site Condition: 4-40 meter above sea level. Scanty rainfall, dry land and wetland, hilly terrain, average temperature 30-35C, 300 km east of Mataram, the provincial capital, and 80 km west of Sumbawa Besar, the district capital of Sumbawa. From Mataram accessible by asphalt all-season road, and ferry, and from Sumbawa Besar by asphalt road. Partly transmigration area - from Bali and East Java.

Socio-Economic Condition: 85-90% farmers, 40-45% of them fishermen, rest traders, civil servants, farm-workers and others. The total population of 8 villages covered by the KUD is 24,101 (Male 11,808 and Female 12,293). The total population of farmers is 15,906 (Male 7,793 and Female 8,113). The total membership of the KUD is 1376 (5.7% of the population and 8.6% of the farmers). Economic standards still low, sustaining on farm income, mainly from paddy, corn, soybeans, fishery and rattan collection. Government schools, primary health centres, bank and other social institutions exist. Partly irrigated, partly electrified. Main purchasing and marketing done at Sumbawa Besar.

Type of Agriculture: Dry land and wetland agriculture, mainly paddy, corn, soybeans and some vegetables. Some farmers harvest rattan, mungbean, cashew nut and ground nut. A small technical irrigation canal available, rest depends on rainfall, which is scanty. Out of the total land area of 15,543 ha, the KUD area has 2,287 ha of paddy land, 240 ha backyards and 13,015 ha for other use.

Major Local Industries: No industry in the area.

Historical Background of KUD

To respond to the social and economic needs of the farmers, the KUD was organised in 1967 vide Registration No.16D/BH/XXI/12-67 dated 09.10.1989. The KUD was awarded the Mandiri status in 1995 vide Regn No. 16E/BH/PAD/KWK/23/VIII/1995 dated 01.08.1995 because of fulfilling the required criteria. The KUD has provided marketing and purchasing outlets to the members - farmers and fishermen and rattan harvesters - besides operating some utilization services e.g., rice milling unit, fish marketing

place and retail outlets. The KUD main office, waserda and wartel located right in the main market of the village.

Character of KUD

It is a multipurpose rural cooperative covering 8 villages. It provides marketing, purchasing and utilization services to the members through 35 KTs, 8 TPK (2 organic and 6 non-organic), 2 units of RMU (0.50 ton/per hour), 200-ton capacity warehouse, 2 units of waserda, 1 unit of wartel, one fish marketing place, one rattan handling area and one electricity bill servicing unit. The KUD enjoys the confidence of the members, the management is active and the area covered has good potentials for development - rattan handling, fish handling and food crops collection. The KUD lacks farm equipment and fish and rattan-related processing equipment.

Services of the KUD: Marketing, Purchasing, Utilization services including fish handling, rattan handling, small savings and loans programme, fertiliser, sugar, farm inputs distribution including consumer goods distribution.

Major Facilities of the KUD: Office block, waserda, TPK, Wartel, Kelompok Tani, RMU, warehouse, fish marketing place.

Business of Members: Paddy, soybeans, fish, rattan handling.

Business Condition

Total Business Volume	... ..	Rp	411.6 m	1995
Total Surplus (SHU)	... ..	Rp	7.7 m	1995
KUD-Owned Capital	... ..	Rp	57.2 m	1995
Outside Capital	... ..	Rp	142.9 m	1995
Total Assets	... ..	Rp	178.3 m	1995
Total Institutional Loans Outstanding		Rp	27.2 m	1995
Total Member Loans (Bank Channelling)		Rp	89.7 m	1995
Total Member Loans (Internal S/P)	...	Rp	61.0 m	1995
Member Savings	... ..	Rp	12.4 m	1995
-Initial Membership:	Rp 2.6 m			
-Compulsory Savings:	Rp 8.3 m			
-Voluntary Savings:	Rp 1.3 m			

Current Management Operation Condition

The KUD is headed by a 3-member Board of Directors elected for a 5-year term by the Members' General Meeting. A 2-member Board of Supervision is also elected for a 5-year term. A 5-member Board of Guidance is appointed by the Bupati for a 5-years period. The General Meeting is held once a year to take note of the report and audit report (last meeting was held on 21st January 1996, the Board of Directors meets at least once a month (last meeting held on 24th July 1996) to take business decisions and follow-up the mandate from the General Meeting. The Board of Supervision meets once in three months to undertake supervision and internal checks (last meeting held on 5th July 1996). The Board of Guidance meets as and when necessary. There is no

international audit system in the KUD. The Manager or one of the staff assists the Board of Supervision. The KUD is audited by the KJA. The KUD has a paid manager.

The Marketing and Purchasing business is hampered by a serious lack of capital and infrastructure facilities e.g., fishery handling, grading, and packaging, rattan handling, processing and shipment. The RMU is old and its production does not conform to the Bulog standards. Warehousing capacity is low. There are no transportation and farm processing equipments. Waserda and TPK do not meet the requirements of the members.

Current Problems and Solving Plans

Major problem is financial to undertake marketing, purchasing and lending services. Due to the character of the farm land as it is dry and with little rains, farm equipments of heavy duty are needed. Other major problems are: lack of inadequate fish handling facilities, rattan handling and processing facilities, transportation, farm equipment, fishing gear, savings and loans, waserda and TPK.

The KUD has plans to meet these demand through modest projects, as follows: procurement of hand tractors and 20 units of hand sprayers; installing rattan processing, storage, handling and transportation facilities, setting up a mini market, rice processing and transportation facilities, fishing gear, fish boats, nets, handling, processing and marketing facilities, enhancing members savings and loans services.

Future Plans for Development

The KUD has developed the following plans for improving its future business:

- i. 5-units of heavy duty 4-wheel tractors and 20 units of hand sprayers;
- ii. 1-unit 8-ton truck, 2 units of rattan processing equipment, warehouse, and training of 5 persons in rattan processing and handling;
- iii. 1 unit of mini market;
- iv. Improving rice milling and warehousing capacity including transportation equipment;
- v. Fishing gear, nets, fishing boats and warehousing including grading and shipment;
- vi. Increasing capital for members savings and loans services.

General Comments

The KUD membership has sufficient experience to enhance rattan, paddy and fishery processing business, if infrastructure in the

KUD is enhanced. The leadership is keen to provide additional business services to the members. The KUD needs financial and equipment support on interest-free/soft loans basis.

[B] KUD OUTLINE/KUD KITA

Name of KUD: KUD KITA Category: Mandiri
Location: NTB Province, Sumbawa District, Plampang Kecamatan, Plampang Desa. Total Members: 527 (all full) (M-497 F-30)
Year organised: 1975 Regn No: 339E/BH/XXII dt. 30.10.1981
Achieved Mandiri Status in 1993
Total Employees: 9 (6 full-time, 3 part-time)
Name of Chairman: H.Badurudin Survey Date: 26 Sep 1996
Name of Manager: Ir Syafruddin

Special Character of Location

Site Condition: The KUD is located in the eastern part of the NTB province; 420 km from Mataram, 120 km from Sumbawa; area of operation 5 villages. Average temperature 25-34 C; scanty rains, lack of water, hilly terrain, paddy and soybeans cultivation; 398 ha covered by houses and backyards, 77 ha orchards, 430 ha by small water dams, 1087 ha forests, and 2959 ha wetland paddy area.

In the KUD area 2959 ha wetland paddy area, 202 ha backyards and 826 ha by others. 5-35 meter above sea level. 60 km from Sumbawa Besar district headquarters. Connected with all-season good asphalt road.

Socio-Economic Condition: Total population of KUD area 23,345 (Male 11,813, Female 11,532), total farmers 8,344 (35.7%), (Male 4362 and Female 2982), total membership of KUD 527 (2.25% of the total population). Electricity available, no telephone connection; poor economic condition of farmers; partly transmigration area (mainly from Bali and East Java). Due to severe lack of capital and members' economic condition, farmers often borrow from private money-lender at high rates (6-10% per month). Educational institutions and primary health facilities available.

Type of Agriculture: Wetland paddy cultivation, rest depending on rains. Area mainly dry.

Major Local Industry: No industry of any kind in the area.

Historical Background of the KUD

The KUD covers an operational area of 5 villages. It was organised in January 1975 registered in 1981 and achieved Mandiri status in 1993. It responds to the economic and social needs of the inhabitants who are partly transmigrants from Bali and from East Java. The KUD has high acceptability among the members.

Character of KUD

The constitution of 527 members is: 90% farmers, 5% traders and farm workers and rest civil servants and others. There are 145 Kelompok Tani (membership averaging between 20 and 25), and 2 women member groups through whom all services of KUD are provided to the members. The KUD collects and processes paddy and delivers it to the Dolog and in the open market in Sumbawa Besar. The main business of the KUD is: rice milling, fertiliser distribution, and payment of electricity bills. It has no waserda. It has 9 TPK (5 organic and 4 non-organic). It has no savings and loans programme.

Services of KUD: Procurement of paddy, rice milling, fertiliser distribution and electricity bills payments.

Major Facilities of the KUD: Office block, one RMU, two warehouses, 9 TPK units (5 organic and 4 non-organic), destroyed paddy drying floor, and 145 KTs.

Business of Members: Paddy, soybeans and corn cultivation.

Business Condition

Total Business Volume	... ..	Rp	328.3 m	1995
Total Surplus (SHU)	... ..	Rp	5.7 m	1995
KUD-Owned Capital	... ..	Rp	39.7 m	1995
Outside Capital	... ..	Rp	66.3 m	1995
Total Assets	... ..	Rp	106.0 m	1995
Total Institutional Loans Outstanding		Rp	34.2 m	1995
Total Member Loans (Bank Channelling)		Rp	27.0 m	1995
Total Member Loans (Internal S/P)	...	Rp	0.0	
Member Savings	... ..	Rp	11.8 m	1995
-Initial Membership	Rp	0.5 m		
-Compulsory Savings	Rp	10.4 m		
-Voluntary Savings	Rp	0.8 m		

Current Management Operation Condition

The KUD is headed by a 3-member Board of Directors elected for a 3-year term by the Members Annual Meeting. A 3-member Board of Supervisors is also elected by the General Meeting for a 3-year term. A Board of Guidance of 6 persons is appointed by the Bupati which meets as and when necessary. The General Meeting meets every year (last meeting held on April 7 1996), the Board of Directors meets at least once a month (last meeting held on Sept 9 1996), and the Board of Supervisors meets every quarter (last meeting held in July 1996). The two elected boards are answerable to the General Meeting. The Board of Supervisors is assisted by the Manager and a staff of the District Cooperative Office, if needed, in the audit of the KUD. There is no internal auditor. The KUD is audited by the KJA - audit fee about Rp 1.2 million, which is quite heavy for the KUD. The KUD has a young and qualified manager (an agriculture graduate).

Marketing and purchasing business is hampered by a serious lack of funds and infrastructure facilities. The only utilization business is 0.5 tons/hour RMU using Yanmar machine which has been running well. The 20-years old sun-drying platform is already broken and out of use. No communication facilities and no office equipments.

Current Problems and Solving Plans

Major problem is capital to improve/expand marketing, purchasing and lending services. Serious manpower shortage. Great need for simple farm machines and transportation equipment. Distribution of consumer goods and farm inputs is hampered due to absence of waserda and inadequate merchandise in TPKs. The KUD is located on the main road Sumbawa Besar-Bima and has a great potential to run a successful waserda but capital has been the main problem. The main problems of the KUD have been:

- i. Lack of capital for initiating a savings and loans programme and expanding the business operations of the KUD;
- ii. Serious lack of farm equipment and transportation facilities including building a drying floor and expanding RMU;
- iii. Distribution of consumer goods and farm inputs; and
- iv. Serious lack of communication facilities for the KUD and the community.

Future Plans for Development

The KUD has developed the following plans for improving its future business:

- i. Procurement of capital for starting savings and loans programme and expanding business on interest-free/soft loan basis;
- ii. Procurement of 1 unit 6/8 ton truck, 5 units of hand tractors and 10 units of hand sprayers to overcome the shortage of manpower and to facilitate transportation of goods;
- iii. Procurement of capital for operating a waserda, wartel and increasing the merchandise of the TPK. The KUD owns a large piece of valuable land on the main road with high economic potentials.

The source of funds has not been identified. The KUD prefers interest-free/soft loans and the present good management intends to make the best use of the funds and farm machines.

General Comments

The KUD has young and good management leadership. The location of the KUD is in itself a high potential for growth if financial

position is facilitated by external loans or grants.

[C] KUD OUTLINE/PELITA

Name of KUD: KUD PELITA Category: Mandiri
Location: Province NTB, Kabupaten Sumbawa, Kecamatan Lape Lopok, Desa Dete. No of Members: 1300 (All Full) (Male 940, Female 360)
Year Organised: Dec 1978 Regn No: 202A/BH/XXII dt 12.12.1991
Achieved Mandiri Status in 1992
No of Employees: 14 (All Full-time) (Male 9 Female 5)
Name of Chairman: Mr Abdul Karim Date of Survey: 26 Sept 1996
Name of Manager: Drs Burhanuddin

Specific Character of Location

Site Condition: The KUD is located in the eastern part of NTB province, 360 km east of Mataram, 60 km east of Sumbawa Besar, the district headquarters of Kabupaten Sumbawa. 30-80 meters above sea level. It covers 3 villages. Average temperature 30-35C, dry, hilly terrain, no irrigation in the area. Paddy field cover 5,151 ha, backyards 236 ha, grazing fields 1,456 ha, hilly areas (non-cultivable) 14,204 ha and others 442 ha.

The KUD area well-connected with Mataram by an all-season asphalt road and ferry ride, and by road with Sumbawa Besar, the district headquarters.

Socio-Economic Condition: Total population from 3 villages: 11,921 (Male 5843 and Female 6078), total farm population 4734 (Male 2292 and Female 2442) and the total KUD membership 1300 - 10.9% of the total population and 27.4% of the farm population. Electricity, telephone connection, schools, primary health facility, bank and other social institutions available in the area. Poor economic condition of the farmers, manpower shortage, dry and highland area, lack of water for irrigation.

Type of Agriculture: Main production paddy, maize, soybeans, ground nuts and some vegetables. Dry land, hilly terrain, dry farming, partly depending on rains which are scanty.

Major Local Industries: No major industry in the area.

Historical Background of the KUD

The KUD covers an operational area of three (3) villages. It was organised in December 1978 and registered on 12 December 1991 vide Regn No. 202A/BH/XXII and achieved the Mandiri Status in 1992. It responds to the economic and social needs of the inhabitants of the area. The KUD has high acceptability among the members.

Character of the KUD

The KUD is a multipurpose rural cooperative institution serving the needs of the farmer-members of three villages. The main

business of the KUD is: paddy/food procurement, fertiliser and sugar distribution, rice milling, savings and loans, electricity bills handling, waserda, TPK and wartel. The KUD main office and rice milling facilities are located right on the Sumbawa-Bima main road.

Services of KUD: The main services offered by the KUD to the member-farmers and the community are: rice milling, warehousing, savings and loans, consumer goods and farm inputs distribution, kerosene distribution and other services like wartel and electricity bills handling. No agro-processing is done by the KUD.

Major Facilities of KUD: Office block, rice milling - 2 units, one 0.8 tons/hour and one 0.5 tons per hour capacity, warehouse 200 tons, drying floor, waserda, kerosene oil distribution centre, telephone kiosk, 27 Kelompok Tani (30-80 membership), 6 TPK (4 organic and 2 non-organic), and about 2 ha of land. There are 14 employees in the KUD including the manager.

Business of Members: Paddy, maize, soybeans cultivation.

Business Condition

Total Business Volume	... ..	Rp 455.6 m 1995
Total Surplus (SHU)	... ..	Rp 1.5 m 1995
KUD-Owned Capital	... ..	Rp 33.0 m 1995
Outside Capital	... ..	Rp 118.8 m 1995
Total Assets	... ..	Rp 151.9 m 1995
Total Institutional Loans Outstanding		Rp 45.6 m 1995
Total Member Loans (Bank Channelling)		Rp 53.5 m 1995
Total Member Loans (Internal S/P)	... ..	Rp 63.7 m 1995
Member Savings	... ..	Rp 11.0 m 1995
-Initial Membership	Rp 5.9 m	
-Compulsory Savings	Rp 5.0 m	
-Voluntary Savings	Rp 0.3 m	

Current Management Operation Condition

The KUD is headed by a 3-member Board of Directors elected for a 3-year term by the General Meeting. A 3-member Board of Supervision is also elected by the General Meeting for a 3-year term. A 5-member Board of Guidance is appointed by the Bupati for a 3-year term. The General Meeting consists of all full members and meets every year to take note of the report of activities and report from the Board of Supervision/Auditors (last meeting was held on 27 August 1996), the Board of Directors implements the decisions of the General Meeting and meets every month or at least 4 times a year (last meeting January 1996), and the Board of Guidance meets as and when needed. The accounts are audited by the KJA. The KUD has a paid manager. There are seven business units in the cooperative - Savings and Loans, paddy procurement, waserda, rice milling, electricity bills, kerosene oil distribution and farm inputs including machines.

Marketing and purchasing business is hampered by lack of capital and infrastructure facilities. The utilization facilities include two rice milling units - one rice milling unit (0.8 t/h) is damaged, waserda, telecom centre.

Current Problems and Solving Plans

Major problem is financial to undertake/expand marketing, purchasing and utilization business. The small Waserda is operating well, because of its location and strategic assortment. There is a acute shortage of manpower in the area. Cultivation is difficult because of natural conditions, potentials are high for livestock development, intensive cultivation with the help of farm machines. KUD finds it difficult to manage transportation of paddy, fertiliser and other goods in the absence of any transportation available to it.

Future Plans for Development

The KUD has developed plans to meet these demands through modest projects, as follows:

- i. Increasing rice milling capacity by installing a new 1-ton/hour capacity RMU including repairing the damaged one, and improving the warehousing capacity;
- ii. Increasing savings and loans programme;
- iii. Expanding the present waserda into a mini market including expanding the current TPK;
- iv. procuring 2 units of 6-8 ton trucks for transporting rice, consumer goods and other farm inputs; and
- v. Starting a cow fattening programme.

The KUD has not been able to identify any source of funding and has been looking for grants, interest-free/soft loans from external or internal sources.

General Comments

The KUD has good leadership and is willing to implement the plans in right earnest. The location of the KUD is a positive aspect.

[D] KUD OUTLINE/DORO CUMPA

Name of KUD: DORO CUMPA Category: Mandiri Inti
Location: Province NTB, Kabupaten Dompu, Kecamatan Woja, Desa Kelurahan Kandiadua.
No of Members: 1856 All Full (Male 1206 Female 650)
Year Organised: Feb 1973 Regn No: 371B/BH/XXII dt 19 March 1981
Achieved Mandiri Status in 1991 and Mandiri Inti in 1995
No of Employees: 14 (Full-Time 12 and Part-Time 2)
Name of Chairman: Mr Symsuddin Date of Survey: 27 Sept 1996
Name of Manager: Ir Syrajuddin

Special Character of Location

Site Condition: The KUD is located in the eastern part of NTB province, 500 km from Mataram, provincial capital, and 20 km west from Dompu, the district headquarters. Area of operation 2 villages; average temperature 30-35C; scanty rains; hilly terrain; little irrigation through small hill streams; 40-50 meters above sea level. Area connected by an all-season asphalt road.

Out of a total of 2722 ha cultivable land, the KUD area has 1796 ha of paddy land, 547 ha high lands, 68 ha of pasture land, 84.6 ha of backyards and 226 ha of other kind.

Socio-Economic Condition: Generally poor economic condition of farmers in the area. Total population of KUD area 11,510 (Male 5896 and Female 5614) and total number of farmers 3,593 (Male 1687 and Female 1906). The total membership of the KUD 1856 (16.1% of the population and 51.6% of the farmers). Due to poor economic situation of the KUD and members, a large number of members borrow from the local moneylenders at high rates of interest. The area has electricity, telephone, government schools, primary health centre and social institutions. A majority of population depends on farm income.

Type of Agriculture: Dry land farming, very little irrigation, mainly depends on rainfall which is scanty. Main production of the area include paddy, soybeans, corn, tobacco and some vegetables. No livestock and poultry activity in the area.

Major Local Industry: No major industry in the area.

Historical Background of the KUD

KUD covers an operational area of 2 villages. It was organised on 26th February 1973 and registered vide Regn No. 371B/BH/XXII dated 19th March 1981. It achieved its Mandiri status in 1991 and Mandiri Inti in 1995 and registered as such vide No.26/PAD/KWK.23/II/1996 dated 27th February 1996. The KUD responds to the economic and social needs of the inhabitants. The management has high acceptability among the members and it has been able to provide a number of services to its members.

Character of KUD

It is a multipurpose rural cooperative providing marketing, purchasing and utilization services to the members e.g., distribution of farm inputs and consumer goods, procurement of paddy/rice and other food crops, savings and loans etc. The membership comprising 1856 members consist of 80% farmers and farm workers and the rest others. There are 66 Kelompok Tani (membership ranging between 20 and 30), 5 TPK (1 organic and 4 non-organic), through which services of the KUD are provided to the farmer-members. In addition there are 3 women's groups and 3 youth groups. The KUD has established an identity for itself as a means of security and business identify for the community.

Services of KUD: Supply of fertiliser, farm inputs, consumer goods, procurement of paddy/rice, rice milling, savings and loans, electricity bills handling, and wartel.

Major Facilities of KUD: Office block, waserda, 2 units of RMU (0.5 t/hr each), 3 warehouses 360 ton capacity, paddy drying floor, 1 unit 6-ton truck, 66 Kelompok Tani, 5 TPK and 14 employees including manager.

Business of Members: Farming, cultivation of paddy, corn, soybeans, tobacco and some vegetables.

Business Condition

Total Business Volume	... ..	Rp 673.6 m 1995
Total Surplus (SHU)	... ..	Rp 6.7 m 1995
KUD-Owned Capital	... ..	Rp 58.1 m 1995
Outside Capital	... ..	Rp 82.0 m 1995
Total Assets	... ..	Rp 42.6 m 1995
Total institutional Loans Outstanding		Rp 16.4 m 1995
Total Member Loans (Bank Channelling)		Rp 0.0
Total Member Loans (Internal S/P)		Rp 12.5 m 1995
Member Savings	... ..	Rp 18.1 m 1995
-Initial Savings	Rp 2.6 m	
-Compulsory Savings	Rp 14.7 m	
-Voluntary Savings	Rp 0.7 m	

Current Management Operation Condition

The KUD is the only Mandiri Inti in the district and has been regarded as a good management organisation. Its economic condition is still poor and needs assistance to expand/establish new services. The KUD is headed by a 5-member Board of Directors which is elected for a 3-year term by the Members General Meeting. The BOD meets once at least once a month. The General Meeting also elects a 3-member Board of Supervision for a 3-year term which meets once in three months. In addition a 4-member Board of Guidance is appointed by the Bupati for a 3-year term. The General Meeting takes note of the activity report and the audit report (the last meeting was held on 31st March 1996). The last meeting of the BOD was held on 13 Sept 1996, the Board of Supervision in January 1996 and of the Board of Guidance in January 1996. The audit of the KUD is done by KJA. The KUD has a paid manager and 14 employees (12 full time and 2 part time) including the manager.

Marketing, purchasing and utilization business of the KUD is seriously hampered by lack of capital. The only utilization services are: rice milling, warehousing, waserda, wartel, electricity bills handling. The truck is out of use.

Current Problems and Solving Plans

Although the KUD is a mandiri inti, yet its main problem has been the lack of capital for improving/expanding its business. There have been heavy demands on the KUD to provide more services.

Year Organised: 1986 Regn No. 761/BH/XXII dated 13 February 1988
Achieved Mandiri Status in January 1993
No of Employees: 14 (Full-Time 8, Part-time 6)
Name of Chairman: Mr Muhd Said Abdollah Survey date: 27 Sep 1996
Name of Manager: Mr Abdul Harris

Special Character of Location

Site Condition: The KUD is located in the eastern part of NTB province. 480 km east of Mataram, province capital of NTB, and 50 km west from Dompu, the district headquarters. The KUD is well connected by an all-season asphalt road with the provincial capital and district headquarters. The KUD covers three (3) villages. Average temperature 28-32C; 30-40 meters above sea level, hilly terrain, mainly dry with scanty rainfall. No irrigation in the area.

The KUD area has a total of 2689 ha of farm land consisting of 643 ha for paddy, 24 ha orchards, 116 ha backyards, 1515 ha pasture land, and 378 ha for other purposes.

Socio-Economic Condition: The total population of KUD area is 10,316 (Male 5280 and Female 5036), and the total number of farmers is 5469 (Male 3285 and Female 2184). The total membership of the KUD is 848 (8.2% of the total population and 15.5% of the farm population). Electricity, government school, primary health centre, and other social institutions available. No telephone at the KUD. Poor economic condition of the farmers and KUD members. Due to acute shortage of capital at the KUD and in the absence of banking institutions members often borrow money from local money lenders at high rates of interest.

Type of Agriculture: Dry land cultivation, largely dependent on rainfall which is scanty. Main products of the area: paddy, soybeans, corn, tobacco and big animal livestock development.

Major Local Industry: No major local industry in the area.

Historical Background of the KUD

The KUD "RITAM" (Rinjani Tambora) covers three (3) villages. It was organised on 4th October 1986 and registered vide No.761/BH/XXII dated 13th February 1988. The KUD achieved the Mandiri Status in 1993 and registered vide No. 32/PAD/KWK.23/II dated 25 January 1993. It responds to the economic and social needs of the inhabitants of the area.

Character of KUD

KUD is a multipurpose rural cooperative. The composition of the current 848 membership is: 85% farmers and farm labour, 10% civil servants and others, and the remaining traders and casual workers. There are 20 kelompok tani, (average membership 10-15 persons), 5 women and other groups (mainly handicrafts), 9 TPK (1 organic and 8 non-organic), through whom all the services are provided by the KUD.

Services of KUD: The KUD main services have been: procurement of paddy/rice and other food-grains, savings and loans, waserda and other services e.g., distribution of consumer goods, farm inputs, rice milling, handling electricity bills and farm machines. The KUD main office is located right on the main road which makes it easily accessible. No agro-processing.

Major Facilities of KUD: Office block, rice milling 1 unit of 0.5 t/hr, waserda 1 unit, 9 TPK, 1 unit tractor, 1 unit truck, warehouse of 50 ton capacity, and 14 employees including the manager (8 full-time and 6 part-time).

Business of Members: Cultivation of paddy, corn, soybeans, tobacco and some chilies. Some farmers are engaged in livestock rearing.

Business Condition

Total Business Volume	... ..	Rp 112.8 m 1995
Total Surplus (SHU)	... ..	Rp 3.9 m 1995
KUD-Owned Capital	... ..	Rp 62.7 m 1995
Outside Capital	... ..	Rp 64.9 m 1995
Total Assets	... ..	Rp 127.7 m 1995
Total Institutional Loans Outstanding		Rp 12.0 m 1995
Total Member Loans (Bank Channelling)		Rp 0.0
Total Member Loans (Internal S/P)	... ..	Rp 6.6 m 1995
Member Savings	... ..	Rp 10.8 m 1995
-Initial Savings	Rp 0.8 m	
-Compulsory Savings	Rp 10.0 m	
-Voluntary Savings	Rp 0.0	

Current Management Operation Condition

The KUD is headed by a 5-member Board of Directors elected for a 3-year term by the Members' General Meeting. A 3-member Board of Supervision is also elected by the General Meeting for a 3-year term. A 3-member Board of Guidance for a 5-year term is appointed by the Bupati. The General Meeting, which is held every year, takes note of the report of activities and the audit report and lays down broad guidelines/plans for organisation and business development (last meeting held on 28 March 1996), the BOD meets once a month or at least four times a year to implement the business and development plans laid down by the General Meeting (last meeting held on 16 August 1996), and the Board of Guidance meets as and when needed. The KUD is audited by the KJA and a routine supervision is done by the Board of Supervisors - both of them are assisted by the Manager and other staff members. There is no internal auditor in the cooperative. The KUD has a paid manager and has three main business units: Credit Unit, General Services and Waserda Unit (including electricity bill handling, rice milling and farm input trading, leasing farm machines), and Food Procurement Unit (paddy collection, milling and marketing).

Marketing, purchasing and utilization business is seriously hampered due to lack of capital and infrastructure facilities.

The only utilization business is: rice milling and use of truck. No communication facilities are available with the KUD.

Current Problems and Solving Plans

Major problem of the KUD has been a serious lack of capital to undertake/expand marketing and purchasing business. Waserda and RMU have been operating with some success but the volume is so low to be economically advantageous. The area presents good potential for livestock development due to large tracts of open fields for grazing. A number of farmers have been engaged in cattle fattening with some economic benefits. The present level of rice milling, paddy drying floor and warehousing is very low. The conditions in the area are suitable for horticulture development. Farmers need support by way of farm machines and transportation, and expansion of savings and loans activities.

The KUD has plans to meet these needs through the implementation of modest projects, as follows: i. setting-up an integrated RMU with drying floor and warehousing facilities; ii. production and marketing of horticulture products; iii. procurement of farm machines e.g., tractors, trucks; iv. procurement of capital for enhancing savings and loans, wartel and horticulture activities; and v. setting up of cattle fattening programme.

Future Plans for Development

The KUD has developed the following plans for expansion and improving its future business:

- i. One unit of integrated rice mill together with paddy drying floor and warehousing facilities;
- ii. One unit of heavy duty 4-wheel tractor, one 6-8 ton truck, and a few paddy harvesters;
- iii. Capital for expansion of savings and loans activities, wartel and horticulture activities including improving the working capital of the KUD; and
- iv. Establishing a cattle fattening (livestock development) programme for the members.

The source of funding for the above activities has not been identified. However, the KUD would expect interest-free/soft loan to implement the above proposals.

General Comments

The KUD has a good management and good intentions to implement the above mentioned proposals. The KUD is willing to provide land and local resources to match the external funding.

FINDINGS OF THE COMMISSIONED SURVEY-I Agricultural Production

Distribution of Agricultural Input Material such as Makers and Dealers of Chemical, Vinyl, Feed-stuff

While the production of most of the agricultural inputs e.g., urea, other chemical fertiliser and paddy seeds remains in the hands of the government-owned companies, the majority of distribution is channelled through the KUD system. Farm inputs for plantation/estate crops is done through the PT Pertani.

Farm chemicals, vinyl sheets, feed-stuff are brought in from East Java and Bali. There are few producers of cattle-feed, mainly for fisheries and poultry. The distribution of these products is done through the private trade and, in a limited way, through the KUD TPK. Livestock and dairy sectors are weak in the province.

Description of Farm Machinery (Makers and Dealers)

The following table indicates the availability of farm machines in NTB during 1993 and 1994:

Farm Machines	1993	1994	% of 1993
2-wheel Tractors (all types)	484	813	167.9%
Tractors/all others	42	56	133.3%
Hand Sprayers	18,950	19,611	103.4%
Other Pest Control Eqpt	642	554	86.2%
Threshers	2,057	1,860	90.4%
Paddy Processors	1,607	1,631	101.4%
(out of which RMU)	(752)	(882)	(117.2%)
Water Pumps	173	131	75.7%

Source: Statistik Indonesia-Year Book 1994. BPS Jakarta.

Most of the farm machines are of Japanese origin while some were locally produced or made in Surabaya. Some of the farm machines and paddy processing equipment were given under OECF and Kennedy Round Programmes.

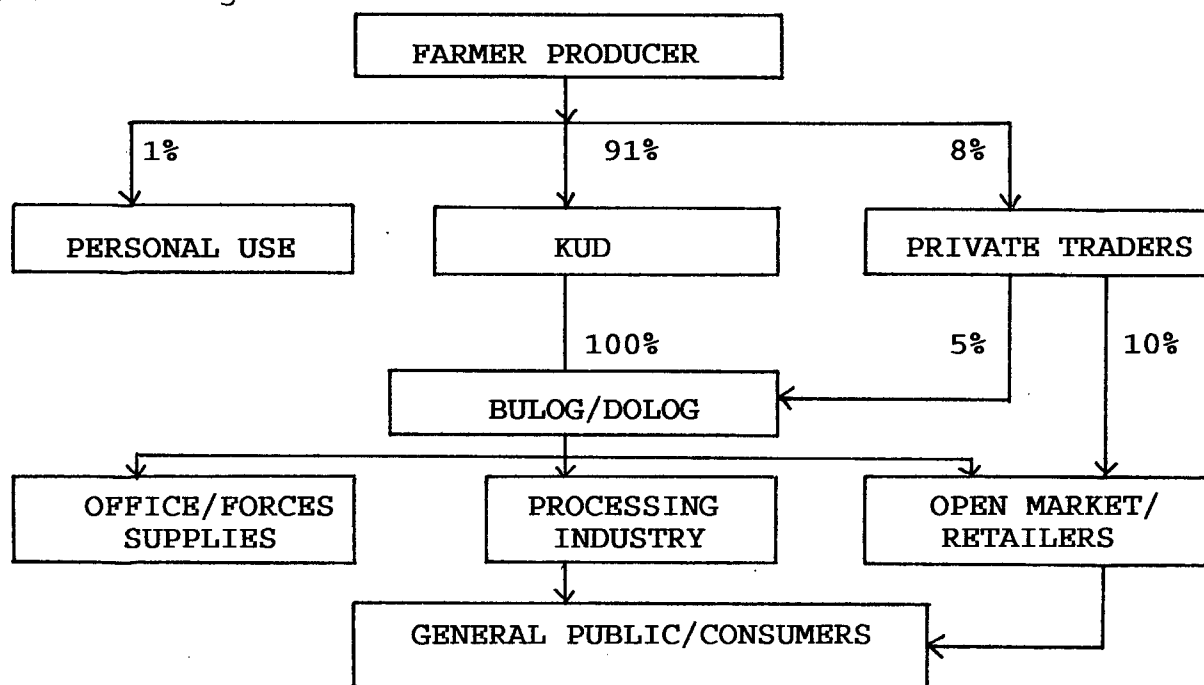
Agro-Processing and Its Distribution

Demand of Major Farm Products (Commodities, Form of Processing, Consumption Areas)

Major farm products of the NTB province during 1994 have been the following:

Paddy/Rice	...	...	...	1,187,500 Tons
Soybean	...	...	...	130,300 Tons
Cassava	...	...	...	108,200 Tons
Maize	...	...	...	51,600 Tons
Mungbean	...	...	...	16,500 Tons

Except for Cassava and mungbean, rest of the products come under national food procurement programme. Rice is procured by the KUD from the farmer-members and sold to the Bulog for national food stock. The Bulog/Dolog, in turn, releases rice for open market as well as for supplies to offices and forces. It releases most of its stock in the open market to maintain supplies and prices. A FLOW CHART on the procurement and distribution of rice in the province is given below:



The processing of these products is done locally. Except for some rice milling, there is no other agro-processing activity in the province. Soybean is processed in tahu and tempe. Rest of the items move out of the province for various formulations e.g., cattle-feed, cassava chips.

Other agricultural products include vegetable, and some cash crops. Most of the products are sold to wholesalers for shipment to East Java and Bali. The balance is consumed within the province itself.

Commodity	1992	1993	Percent
Paddy/Rice (Tons)	1,141,300	1,186,926	103.9%
Maize(T)	37,548	51,650	137.5%
Soybeans (T)	121,176	132,752	109.5%
Chicken (all type) Units	2,708,800	3,240,090	119.6%
Eggs (all type) (T)	4,936	4,931	99.8%
Banana (T)	63,090	21,840	34.6%
Tomato (T)	13,272	4,730	35.6%
Red Onion (T)	38,519	43,086	111.8%
Cassava (T)	77,862	124,464	159.8%
Chilies/Cabe (T)	10,047	14,759	146.8%

Coffee (T)	1,343	1,642	122.2%
Coconut (T)	33,450	37,700	112.7%
Cloves (T)	120	325	270.8%

The farm products are collected through the KUD network either at the initiative of the traders and their agents or at the behest of the KUD or its farmers groups.

Technical Level of Major Processed Farm Products by Commodities

Rice is the major farm product followed by vegetables and some cash crops. Rice production is distribute in the open market and the national food-stock (Bulog).

Vegetables are consumed in the local market, and the remaining is shipped to Java through private traders. Cash crops are collected by private traders and some through the KUD network. There is no agro-processing industry in the cooperative sector in the province. Milk production is insignificant, and whatever is produced is consumed locally.

No processing of poultry is undertaken in the cooperative sector, except that they help procure the raw material including eggs, and ship it to the consumer centres in Java through traders.

Major Agro-Processing Business entities Volume of Production and Facilities

Major agro-processing industry in the province is the rice milling, coconut, coffee and cassava processing. Out of a total of 1,631 rice processing units in NTB in 1994, there were 882 rice milling units of 0.5 ton/hour capacity each.

Marketing Area of Major Farm Products, Distribution System

Major marketing destinations of farm products from NTB have been Bali, Java and NTB itself. Cash crops and vegetables generally move into Java.

Business Customs and its Practice (Pricing, Accounting Settlement)

These practices are more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability. The terms are generally cash upon delivery of goods. However, for larger values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be enumerated as under:

Rice: The procurement is under the government programme, and in this case the procurement price is fixed by the government season to season. The farmers sell their paddy/rice to the KUD against this fixed price. The KUD pays the farmers in cash and rarely

through their accounts in the cooperative. The surplus paddy/rice is sold by the farmer in the open market generally to the trader who comes to his house first with cash in hand. In this case the terms are usually cash, and in many cases, a token advance payment is also made to the farmers for the next crop.

Vegetables: The transactions are usually cash and carry from the road-head. In the case of farmer bringing the crop to the open market, he returns home with cash in hand. The KUD in the province do not deal in vegetable business. The transactions are between the KT's/households and the traders. In some cases the KUD organises contacts between the traders and the farmers.

Cash Crops: Except for clove, all transactions are on cash-and-carry basis.

FINDINGS OF COMMISSIONED SURVEY-II ACTUAL SITUATION OF AGRICULTURISTS AND THEIR DEMANDS

Situation of Holdings of Farm Machinery and Facilities

The survey covered 60 farm households from the area of operation of three KUD in West Nusa Tenggara (NTB), (KUD KITA, KUD KARYA UTAN, and KUD DORO CUMPA). Major production of the area has been paddy/rice. On an average, income of a farm household from rice has been 66.6%, livestock (3.3%) and from other sources (12.6%). Consequently the farmers have not invested much in farm machines. In order to carry on with the traditional farming, the households have some simple farming tools: 4-wheel tractors 6 units, 28 units of hand tractors and hand sprayers, 13 units of mist blowers, and threshers. Other equipments included: 5 containers, and 7 oxcarts. The farmers also possessed on an average: farm produce storage (27.45m²), cattle sheds (13.6m²), and poultry houses (33.3m²).

Measures for Obtaining Production/Consumer Goods (Situation of Using KUD)

On an average the gross agricultural income of the household constitutes 81.6% of its total income. 26.3% of the gross agricultural income goes on production expenses. The break-up of the agricultural income of a household is as follows:

Break-Up (Percentage) of Agricultural Income of Farm Households : 3 KUD Areas in West Nusa Tenggara (NTB)

Source of Income	KITA	KARYA UTAN	DORO CUMPA	Average %
Rice	51.2	71.0	78.0	66.6
Livestock/Dairy	--	3.0	6.0	3.0
Fruits and Veg.	--	1.0	--	--
Cash Crops	--	3.0	--	--
Others	--	22.0	16.0	12.6

The breakdown of the household expenses is as follows:

Expenses	KITA	KARYA UTAN	DORO CUMPA	Av. %
Food	54.0	60.0	63.0	59.0
Clothing	11.0	13.0	09.0	11.0
Housing	06.0	07.0	08.0	07.0
Education	14.0	12.0	12.0	12.06
Ceremonies	09.0	05.0	04.0	06.0
Others	06.0	03.0	04.0	04.3

On an average 59% goes towards food expenses; clothing 11%; education 12.6%; 7% towards housing, ceremonies 6%; and 4.3% towards other general expenses.

Households have been making use of their KUD, to some extent, to procure their production and consumer needs as well as for sale of their products. 93.3% of the households purchased their chemical fertilizer, and 71.6% pesticides from their KUD. Very few of them purchased their farm machines from the cooperatives. 58.6% of the members purchased their paddy seeds requirements from the KUD. Other purchases made included: rice, fish and other foodstuffs. The KUD retail shop has been used to purchase the daily needs, some simple farm equipment, clothing etc.

Merchandise Ratio and Marketing Methods of Farm Products (Situation of Using KUD)

Not all the households used their KUD to market their farm products. The major marketing commodities have been: 65.6% of paddy/rice and 27.3% of other produce e.g., pulses, beans.

None of the households or any of their KUD owned any grading, packaging and warehousing facilities. Households have expressed that the KUD-owned TPK and waserdas need upgrading. Members have suggested their renovations and expansion (80%), too far a location (23.3), too old (36.6%), and the range of items available was limited (80%).

Intention to Introduce Farm Machinery and Facilities

The households suggested mechanization of certain steps of agriculture i.e., tilling (56.6%), threshing (33.3%), rice transplantation (26.6%), and harvesting (20%). (see table below):

Farm Households' Intention to Mechanise Farm Operations

Intention to Mechanise	KITA	KARYA UTAN	DORO CUMPA	Responses Received	Av. %
Tilling	12	17	05	34/60	56.6
Rice Transplanting	08	03	05	16/60	26.6
Harvesting	02	04	06	12/60	20.0
Threshing	15	01	04	20/60	33.3

Evaluation and Demand for Business Activities (Purchasing, marketing, processing, joint shipment, joint-use facilities, terms of loan, farm guidance, better-living guidance and others)

The farm households have said that purchasing and marketing facilities, equipments including the rice milling units were inadequate and needed either renovations or upgrading. A summary of the expectations of the households from their KUD is given in the table below:

Expectations of the Farm Households From Their KUD

Expectations	Average %
-Upgrading Kiosks and Waserda	80.0
-Kiosks: Expansion of Items Range	43.3
-Waserda: Expansion of Items Range	55.0
-Establishing Joint Purchasing	26.6
-Establishing Joint Marketing	65.0
-Establishing Joint-Use Facilities	26.6
-Renovate & Expand Rice Milling Capacity	43.3
-Improve/Expand Warehousing Capacity	26.6
-Improve/Expand Assembly Hall	43.3
-Expand Loan Variety	60.0
-Increase Existing Credit Limits	58.0
-Increase Farm Production Guidance	55.0
-Increase Fertilizer Guidance	30.0
-Increase Guidance on Grading & Packaging	60.0
-Increase Better-Living Guidance	21.6

Kiosks and waserda (80% wanted renovations), expansion of range of items (80%). There are no processing or warehousing facilities. 65% households suggested adoption of joint marketing 26.6% joint-use facilities through the KUD. 60% suggested increasing the variety of loans, and 58% asked for increasing the credit limit of loans. 55% wanted more of farm production guidance, 30% more guidance on fertilizer, and 60% wanted more extension and guidance on grading and packaging. 43.3% wanted expansion of assembly hall and meeting facilities. No regular or formal better-living activities (21.6%) were being carried out for the household farmers.

HAMPERING FACTORS AND POSSIBILITIES FOR AN INTEGRATED DEVELOPMENT OF KUD

**Hampering Factors:
Marketing Business**

The following hampering factors were observed:

- 01 Lack of understanding and acceptance of joint marketing especially in rice, rattan, cashewnut, groundnut, fish and honey;

- 02 Serious lack of capital;
- 03 Disadvantageous location of KUD for market access;
- 04 Serious lack of warehousing, transportation and other utilisation facilities;
- 05 Farm planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-charge of farm guidance;
- 06 Due to outdated and low capacity rice milling units, KUD often fail to meet the Bulog quality standards for rice procurement;
- 07 Value addition is weak due to lack of technology, especially in rattan and cashew handling;
- 08 Lack of business relations among the KUD and with secondary level organisations.

**Hampering Factors:
Purchasing Business**

The following hampering factors have been noticed:

- 01 Lack of understanding and acceptance of joint purchasing system;
- 02 Acute shortage of capital;
- 03 Due to inadequate space and shortage of capital inadequate supplies farm inputs and consumer goods at waserdas and TPK;
- 04 Disadvantageous location of KUD for market access;
- 05 Serious shortage of warehousing, transportation and utilisation facilities;
- 06 Farm planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-charge of farm guidance;
- 07 Lack of supply of quality seeds.

**Possibilities:
Marketing Business**

In order to assist the farmer-members to obtain higher incomes from their marketing with their KUD, the following possibilities exist:

- 01 By providing guidance from KUD it is possible to increase quality and quantity of paddy, cassava, beef cattle, rattan, cashewnut and tobacco to obtain higher economic

returns;

- 02 The province has vast pasture lands. It is possible to increase livestock development activities;
- 03 By improving KUD management, it is possible for the KUD to provide a higher level of utilisation facilities like warehousing, transportation and processing;
- 04 By introducing improved technology it is possible for the KUD to provide 'value addition' in processing farm products especially rice, rattan, cashewnut, groundnut, coconut;
- 05 Orientation and training of handling managers and key members in handling specific products e.g., rattan, cashewnut, coconut, coffee, with leading concerned industry to understand the needs of the processors and to conform to their requirements;
- 06 With a view to overcome the shortage of capital, it is possible for the KUD to enter into joint venture arrangements with private enterprises on joint marketing basis;
- 07 It is possible for the Puskud to help establish a reliable market information system.

Possibilities:

Purchasing Business

In order to satisfy the purchasing needs of the farmer-members and to increase the purchasing business of the KUD in NTB, the following possibilities exist:

- 01 In view of large paddy processing, cultivation of cassava and potential for livestock development, it is possible for KUD to establish cattle-feed formulation plants and supply the feed to the farmers;
- 02 In order to enable the farmer-members to expand farming operations it is possible for the KUD to supply more of farm machines, transport and processing equipment and set up at district level a farm machines maintenance station;
- 03 In order to satisfy the purchasing needs of the farmer-members it is possible for the KUD to increase the number of waserdas and TPK and merchandise range;
- 04 With a view to supply goods at reasonable prices to the farmer-members it is possible for the KUD to adopt joint purchasing system and develop a business network with Puskud, wholesales and manufacturers;
- 05 In order to obtain higher credit and financial support for the farmers to obtain timely and sufficient quantities of inputs, it is possible for the KUD to tap various

external/domestic sources;

- 06 Training of managers and key members in the techniques of assessing the needs of the consumers/farmers.
- 07 Since the Puskud has established a business relationship with a wholesale agency, it is possible for the Puskud and the KUD to establish a business information/communication system.

THE RECOGNITION OF SPECIFIC CHARACTER OF KUD IN WEST NUSA TENGGARA/NTB

There are 134 KUD in NTB as of 31st December 1995. All the 134 KUD are KUD Mandiri which is 163.9% of the national average of KUD Mandiri which is 60.7%.

[1] Relatively larger scale of management and higher ratio of membership coverage.

- a. The average number of members of KUD is 1,799 which is 124% of the national average;
- b. The average number of employees is 10.33 which is 124% higher than of national average of 8.30;
- c. On an average the total business volume is Rp 690.7 million per KUD which is 112% of the national average of Rp 616.2 million;
- d. The average assets for KUD is Rp 175.3 million, which is 76% of the national average of Rp 229.8 million;
- e. The SHU on an average is Rp 5.6 million per KUD, which is 83% of the national average of Rp 6.7 million.

The province is regarded as the best in recovery of loans.

[2] The main business is fertiliser distribution, paddy procurement and rice milling. Rice mills are of low capacity. Warehousing capacity is low. Drying floors are in bad shape. Other business include: sale of consumer goods, telephone kiosks, electricity bills handling, procurement of rattan and cloves. Some of the KUD are engaged in salt and fishery business.

[3] All KUD are keen and positive to develop additional business, such as: livestock, rattan, cashewnut, tobacco and coconut, but due to shortage of capital are unable to do so. Transport equipment is inadequate.

- a. Almost all chairmen requested to provide them with working capital on soft loan basis to undertake new business;
- b. One KUD requested for working capital or equipment to undertake rattan processing;

- c. All KUD requested for expansion of rice milling capacity, farm machines, especially hand tractors and transport equipment.

OUTLINE OF THE MASTER PLAN

Suggested Directions to Expand KUD Business

Purchasing Business

Establishment of Purchasing Business Method such as Joint Procurement

- 01 In order to maintain a steady and timely supply of farm inputs and at reasonable prices in NTB, it is necessary that a joint procurement system is established by the KUD at the district level and by the Puskud at the provincial level;
- 02 A comprehensive farm production plan be developed by the farmer-members with the full involvement of the KUD and the KTs with the following objectives in view:
- Estimated production of each commodity (paddy, livestock, poultry, cassava, cashewnut, coconut, groundnut);
 - Estimated needs of fertiliser, seeds, farm machines particularly tractors, tillers and guidance with a time-frame;
 - Estimated credit required.

Improvement of Purchasing Outlets

- 01 Set up a farm machines service station at the district level;
- 02 Expand quality and range of merchandise and services at waserda and TPK.

Marketing Business

Organising Producers' Groups (including adoption of new commodities to be promoted)

- 01 To adopt joint marketing method;
- 02 To increase the quality of farmers' produce, special farmers' groups e.g., paddy, corn-growing, rattan, tobacco growers', cashewnut growers' and honey farmers be organised;
- 03 Farmers to diversify farm products e.g., coffee, tobacco, fruits and vegetables, cashewnut, coconut;

- 04 Emphasis be laid on rearing livestock and poultry;
- 05 The KT's and the handling managers need to be exposed to new methods and techniques through training and extension to learn to meet the market demands.

Establishment of Marketing Business Systems such as Shipment Control, Pooling Calculations

- 01 Increase transportation facilities e.g., trucks for movement of raw materials, rattan and farmers' produce;
- 02 KUD to produce cattle-feed by using corn, cassava and rice bran for supply to the farmers to encourage livestock development;
- 03 KUD to encourage pooling of members' produce and negotiate with the processing industries on pooling calculations esp., corn, rattan, cashewnut and coffee;
- 04 KUD to initiate and establish members' accounts through which members' accounts with the KUD are settled, providing thereby also a scope for increasing members' savings;
- 05 KUD to establish stock point and collection facilities to stabilise market and supply needs and prices especially in respect of paddy and rattan.

Provision of Information on Prices to Members

KUD in association with Mandiri Inti and Puskud, to develop a market information system using radio broadcasts.

Obtaining Contracted Buyers

Long-term contracts be developed with local processors to ensure a constant marketing of farm produce e.g., with rattan, cashew, tobacco and coconut processing industries.

Agro-Processing Business

Improvement of Rice Milling Technology

- Improve and replace existing rice milling facilities including construction of new drying floors and expanding warehousing capacities;

Improvement of Storage and Processing Technology of Farm Products and Practices

The present level of processing, warehousing and transportation is very low in the two districts of NTB. It is, therefore, necessary to:

- 01 Increase proper type of trucks and proper warehouse/facilities e.g., corn shellers;

- 02 Provide financial and technical assistance (through no-interest/low interest soft loans, and equipment) from external/domestic sources to KUD to set up and improve these facilities;
- 03 Overcome the shortage of funds, adoption of joint capital concept by a few neighbouring KUD with the assistance and experience of KUD Mandiri Inti or the secondary organisations.

Rationalisation of Management of Relating Facilities

- 01 Establish system for management of rice mills, rattan and cashewnut handling facilities by creating suitable training programmes at district and KUD levels;
- 02 KUD to provide better-living and farm management extension;
- 03 Constant training of KUD employees and key members in business management.

Obtaining Contracted Buyers

KUD to seek joint business ventures with private industry to improve their business performance.

III GENERAL REVIEW OF THE PROVINCIAL SITUATION [WEST NUSA TENGGARA]

1. Social Life in Rural Area

The population in the province of West Nusa Tenggara (NTB) is 3,370,000 according to the Statistical Yearbook of Indonesia, 1994 published by the Central Statistic Bureau (BPS).

Total working population is 1,536,000 people of which 888,000 people are engaged in agriculture. The ratio of population engaged in agriculture is 57.8% which means agriculture, a highly labour intensive industry, is the most important industry in the province.

The ratio of religious followers in the province is as follows:

1. Moslems	...	...	95.9%
2. Hindus	...	...	2.9%
3. Protestants	...	...	0.6%
4. Roman Catholics	...	...	0.4%
5. Buddhists	...	...	0.1%

Social life in the province has greatly been influenced by Moslems customs particularly on farmers' living style. When the first thunderstorm come to the province, farmers cultivate small land in paddy field and fill up irrigation water. Then farmer bring paddy seed from storage and add with "kunyit" and gold ring/nutmeg and put them together in water for 1 to 3 nights.

Farmers put "pandan leaf" at the corner of paddy field. Farmers often use cows or buffaloes for the first ploughing on a special date. Before planting paddy seedling farmer will have traditional ceremony called "Roah" which is made of popo from bamboo trees with special decorations.

After planting small seedling, farmers go to paddy field with special "mantra" and pray that the paddy will mature (yellow color) until harvesting. Planting season will mostly start from "Sawal month" or July in every year. The day just before harvesting, farmer have a traditional wear and walk around the paddy field for three times. Next morning after "Subuh praying" farmer used to put in cooked egg into paddy field as a symbol of "paddy-mother".

After harvesting, paddy is tilted in special place with the first harvested one in the top and submit a small quantity of paddy for social donations. Before all paddy is transferred to paddy storage, farmer will have special ceremony with small cake made of rice and put it in paddy storage.

2. Legal Bases for Handling of Farm Products

Although no data are available from the commission survey report,

the situation is estimated to be almost the same as with other provinces.

3. Distribution of Commodity for Agricultural Production

3.1 Agricultural Chemicals: The main producers of farm chemicals such as insecticides, pesticides, rodenticides, fungicides and herbicides are Bayers, Ciba, PT Petrokemia Kayaku and others. The distribution of farm chemicals is through KUD or private channels. While the main concentrates are imported, the formulation are done in Indonesia according to the local conditions and requirements.

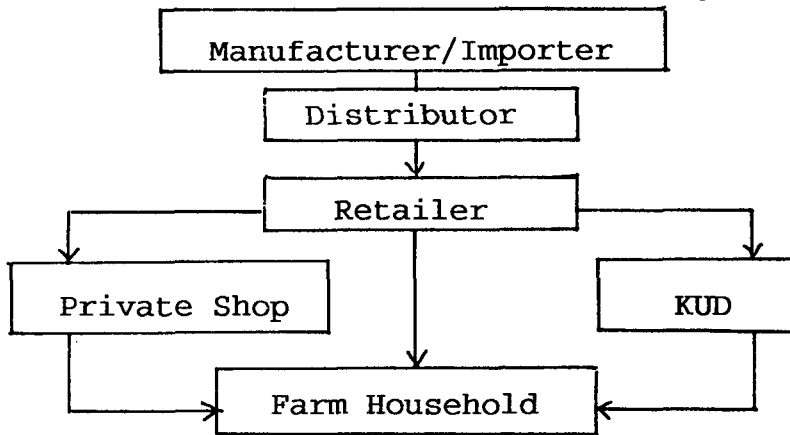
Chemical fertilizer is produced by several State-owned companies but the distribution of urea is coordinated by PT Pusri. The fertilizer is distributed from company-owned warehouse which are located at Kecamatan level. The Table below shows quantities of fertilizers and farm chemicals distributed in the province.

Farm Inputs	Year 1990		Year 1993	
	National	NTB	National	NTB
FERTILISER				
No. of KUD	3,550	96	3,461	106
Urea (Tons)	1706,547	47,922	3737,760	109,484
All others (Tons)*	1341,910	18,225	2293,965	42,526
PPC & ZPT (lt)	-	-	928,811	13,800
Others (Tons)	33,224	170	56,503	25
FARM CHEMICALS				
No. of KUD	1,647	28	934	24
Insec.lqd. '000lt	6,782	95	361,155	705
-"-not lqd.(Tons)	3,992	17	2588,977	4,569
Rodenticides (Tons)	2,496	39	9,001	3
Fungicides (Tons)	827	3	100,363	28
Herbicides (Tons)	243	-	15,869	-

*includes: TSP,DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta.

A flow chart of farm chemical distribution is given below:



3.2 Vinyl Sheet/Plastics: Although no data are available from the commission survey report, the quantity should be very small even if it is used by the farmers.

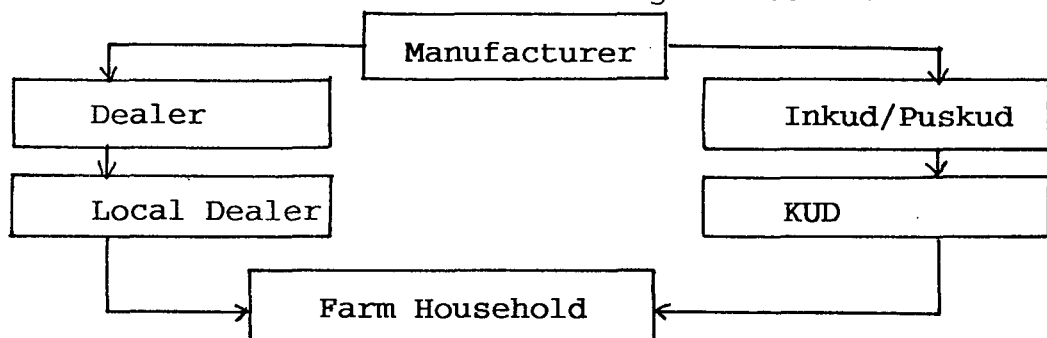
3.3 Cattle-Feed: The livestock husbandry except buffalo and local chicken is very weak in the province and there is no figure for the population of dairy cattle from the statistic. There are few feed producers for fisheries and poultry. Almost the entire cattle-feed is brought in from the East Java and Bali.

4. Distribution of Farm Machineries

The Table given below shows the availability of farm machineries in the province during 1993 and 1994. Most of the farm machineries are of Japanese origin while some were locally produced or made in Surabaya. Some of the farm machineries and paddy processing equipment were given under the OECF loan and Kennedy Round Programmes.

Type of Farm Machines	1984	1993	1994	% of 1993
2-Wheel Tractors	28	484	813	167.9
Tractors/all type	38	42	56	133.3
Hand Sprayers	5,581	18,950	19,611	103.4
Other Pest Control Eqpt	293	642	554	86.2
Threshers	128	2,057	1,860	90.4
Paddy Processors	836	1,607	1,631	101.4
(out of which, RMU)	--	(752)	(882)	(117.2)
Water Pumps	--	173	131	75.7

The flow chart of farm machineries is given below:



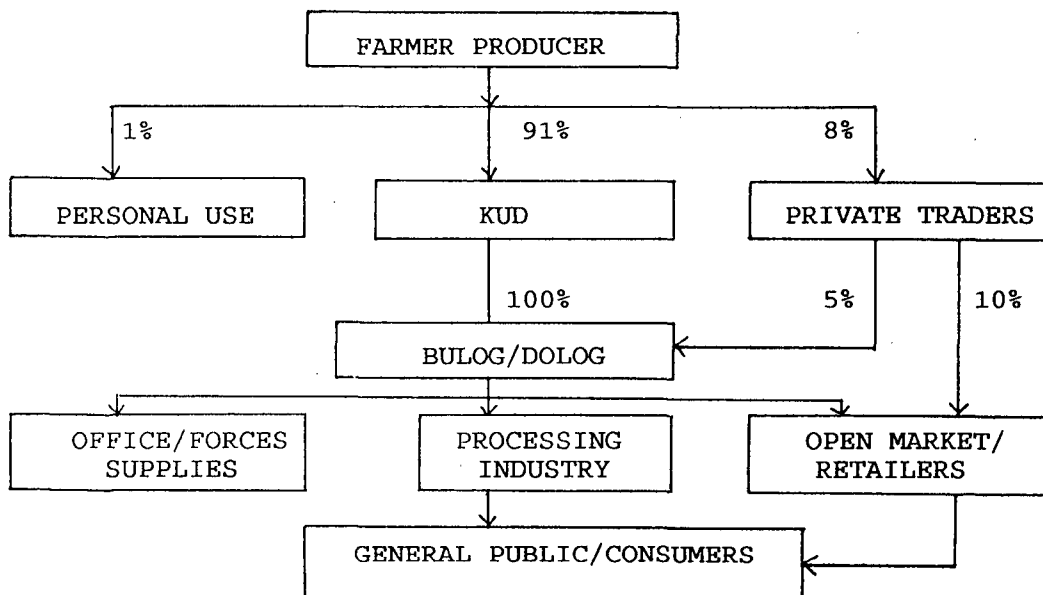
5. Production and Demand of Major Farm Products

Major farm products of the province in 1993 and 1994 are shown in the following Table. The characteristic is fairly large amount of soybean production. It is cultivated as the rotation crop in paddy field. The production of vegetables, fruits and estate crops are not so large as compared with those of other provinces.

TABLE SHOWING PRODUCTION OF SELECTED FARM PRODUCTS 1994

Commodity/1994	Production/Tons	%
PADDY/RICE		
Province Total	1,187,513	
-Sumbawa	217,842	18.3
-Dompu	68,528	5.8
MAIZE		
Province total	51,647	
-Sumbawa	11,909	23.0
-Dompu	2,436	3.8
CASSAVA		
Province total	108,191	
-Sumbawa	11,072	10.1
-Dompu	3,797	3.7
SOYBEAN		
Province total	130,284	
-Sumbawa	29,465	22.3
-Dompu	12,624	10.0

A flow chart on the procurement and distribution of rice in the province is given below:



A major portion of vegetables and fruits are consumed in the local market. The remaining is shipped to the East Java and Bali through private traders.

6. Agro-Processing Activity

Major agro-processing industry in the province is the rice milling, coconut, coffee and cassava processing. There were 1,631 rice processing units in the province in 1994, out of which 882 were rice milling units of 0.5 tons/hour capacity each. Soybean is processed in tofu and tempe in household industry. There is no other agro-processing activity in the province.

No data is available for milk production and distribution in the province from the commission survey report. Milk production is very small and it is insignificant. The number of animals slaughtered in 1994 is only available which is shown in the following:

Horse	Cow	Buffalo	Goat	Sheep
4,162	28,741	6,622	7,057	942

7. Business Transactions for Agricultural Products

The practice is more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability.

The terms are generally cash upon delivery of goods. However, for large values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be summarized as follows:

Rice: The procurement is under the government programme. In this case the procurement price is fixed by the government season to season. The farmers sell their paddy/rice to KUD against this fixed price. KUD pays the farmers generally through their account in the cooperative. The surplus paddy/rice is sold by the farmer in the open market generally to the trader who comes to his house first with cash in hand. In this case the terms are cash, and in many cases, a token advance payment is also made to the farmers for the next crop.

Vegetables and Fruits: The transactions are usually cash and carry from the road-head. In the case of farmer bringing the crop to the open market, he returns home with cash in hand. KUD in the province do not deal in vegetable/fruit business. The transactions are between KT/households and traders. In some cases KUD organise contacts between traders and farmers.

Cash Crops: Except for clove, all transactions are on cash-and-carry basis.

JICA-JAPAN INTERNATIONAL COOPERATION AGENCY
JA/ZENCHU-CENTRAL UNION OF AGRICULTURAL COOPERATIVES-JAPAN
MINISTRY OF COOPERATIVES AND SMALL ENTERPRISES DEVELOPMENT
GOVERNMENT OF THE REPUBLIC OF INDONESIA

**STUDY ON INTEGRATED DEVELOPMENT OF RURAL COOPERATIVES-KUD
IN THE REPUBLIC OF INDONESIA 1996-1997**

ECONOMIC BUSINESS OF KUD INCLUDING AGRO-PROCESSING SECTOR

06 SOUTH KALIMANTAN

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III.	General Review of Provincial Situation ...	39

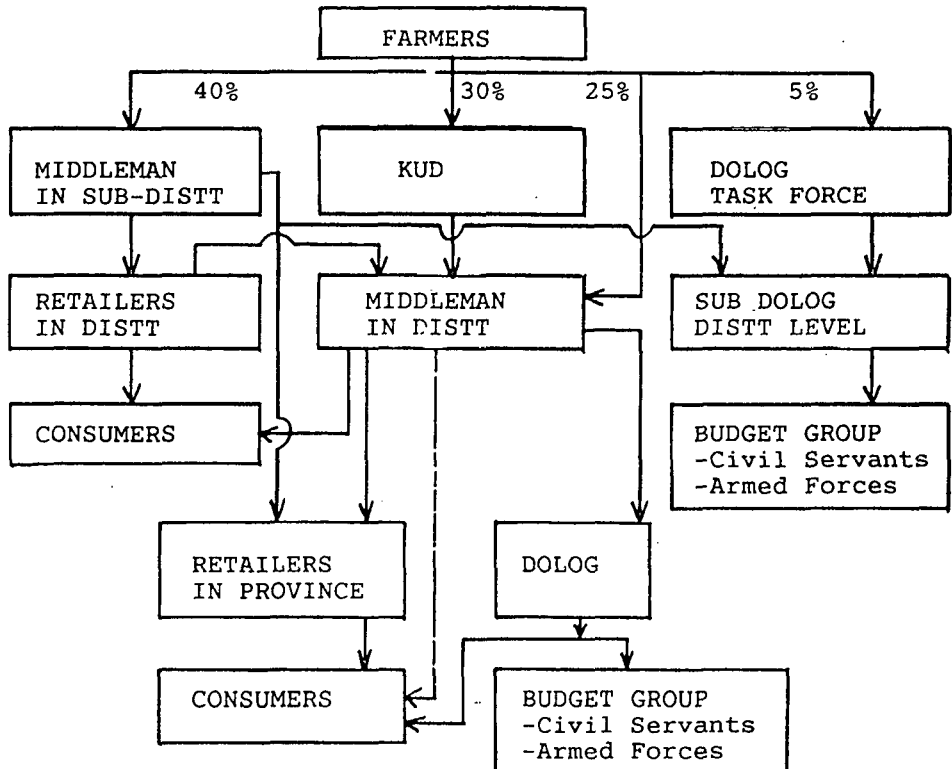
06 SOUTH KALIMANTAN

I. SUMMARY OF FINDINGS AGRO-PROCESSING, DISTRIBUTION AND KUD SITUATION

AGRO-PROCESSING & DISTRIBUTION

Major items of agricultural products in South Kalimantan have been: rice, cassava, corn, groundnut, vegetables, fruits and cash crops e.g., rubber, cloves etc. Paddy production has been in the region of 1.1 million tons in 1993 and 1994. A comparison of the production levels of 1990 and 1994 is as follows: paddy/rice an increase of 114.3% in 1994 of the production of 1990, cassava 94.8% of 1990 production, maize 111.7%, soybeans 233.3%, groundnut 107.6%, all vegetables 123.8%, cucumber 133.3%, chilies 464.2%, all fruits 235.8%, durian 127.2%, bananas 84.2%, oranges 120.7%, mango 168.3%, rubber 121.4%, coconut 214.8%, coffee 121.8%, cloves 786.0% and pepper 312.9%. South Kalimantan has rich natural resources e.g., timber, coal, petroleum, and forest products like horse rash (a tall grass used for making mats).

A majority of KUD are engaged in the procurement and distribution of paddy/rice. After milling, a major portion is handed over to the Bulog for the national food stock, the remaining is disposed of in the open market and part of it is retained for home use. A flow chart on procurement and distribution of rice in the province is given below:



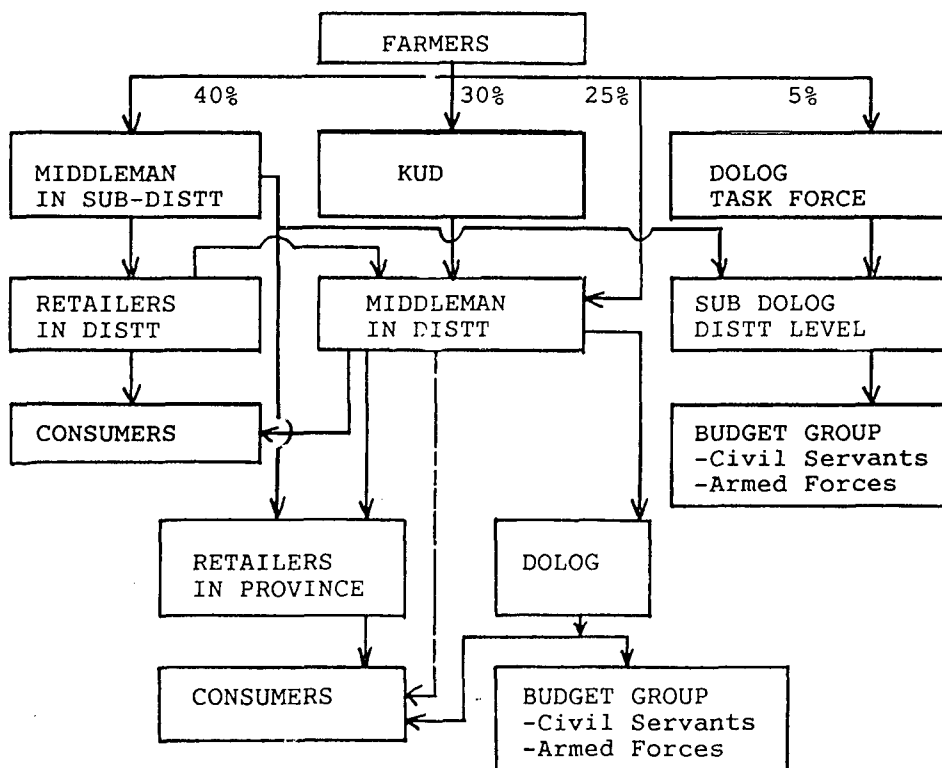
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The technical level of agro-processing in the province still remains to be developed. The only agro-processing is paddy/rice milling in view of the demand for clean rice from Bulog as well as from the open market. Rice milling units are too small and ineffective to produce quality rice. In 1985 there were a total of 1,196 rice milling units out of which 18 (1.5%) were with the KUD, in 1990 out of a total of 1,377 units the KUD had 39 units (2.8%), and in 1994 the total number was 1,598 out of which KUD RMU were 63 units (3.9%). While their total milling in 1985 was 418,736 tons, in 1994 the total paddy milled was 592,869 tons (141.5%). The facilities with the KUD are too small. A majority of larger rice mills are in the private sector (non-KUD) which cater to the open market needs.

In 1988-89, 31 KUD in the province had procured a total of 1,300 tons of paddy/rice from their member-farmers, while in 1994-95, 54 KUD (174.1%) had procured a total of 4,396 tons (338.1%). The procurement of rice in 1994-95 was 0.5% of the national procurement by the KUD. In 1988-89, a total of 39 KUD had sold 6,083 tons of rice to the Bulog, while in 1994-95 only 2 KUD (5.1%) had sold 49 tons (0.8%) of rice to the Bulog. While the quantity of procurement had gone up in 1994-95, the supply to the Bulog had gone down tremendously.

There is some production of poultry and livestock in the province. The provincial government has declared the development of broilers as one of the 'strategy commodities'. The production of local hen eggs in 1985 was 1,669 tons which rose to 2,033 ton (121.8%) in 1994, broilers 1.7 million units in 1985 went up to 4.1 million units (234.4%) in 1994, local chicken 2.4 million units in 1985 went up to 5.4 million units (219.3%) in 1994, milk production which was 31,614 lt in 1990 rose to 77,760 lt (216.6%) in 1994, and beef production in 1990 was 2,607 and in 1994 it was 2,525 tons (96.8%).

No processing of poultry is undertaken in the province in the cooperative sector. KUD do help procure these items for the private traders for shipment to Java and Bali. On beef slaughtering the government holds 84% of share, 16% by individuals (in 1994, government slaughter houses handled 13,579 heads and the individuals handled 2,567 heads). The slaughtering activity in 1993 was as follows: beef-cattle - number slaughtered 13,985, meat produced 2.7 million kg; buffalo - number slaughtered 1,664, meat produced 378,400 kg; goat - number slaughtered 164, meat produced 152,570 kg; sheep - number slaughtered 63, meat produced 9,020 kg; and pigs - number slaughtered 1,397, and meat produced 125,450 kg.

There is no other agro-processing activity in the province for vegetables, fruits, coffee, etc.

OVERVIEW OF KUD: Economic Business

Principal economic business of the KUD consists of: distribution of fertiliser, farm chemicals, procurement and distribution of

paddy/rice to national food stock, and distribution of consumer goods. Other economic business include: procurement of cloves, distribution of essential commodities, farm credit, coal mining etc.

The total turnover of KUD in South Kalimantan in 1992 was Rp 34,303 million which went up to Rp 44,362 million (129.3%) in 1995. Similarly, the total surplus (SHU), which in 1992 was Rp 926 million had risen to Rp 1,626 million (175.5%) in 1995.

In addition to paddy/rice procurement and marketing, fertiliser distribution is one of the major economic business of KUD in the province. Chemical fertilisers are produced by several State-owned fertiliser companies but the distribution of the material is coordinated by one of them, the PT Pusri. The fertiliser is distributed through various channels e.g., the Puskud, KUD, Persero Niaga, private channels and PT Pertani. The allocations for distribution in the provinces is based on a formula. The distribution of urea in South Kalimantan by the KUD was 0.6% of the material distributed in the country. The urea distributed in the province in 1990 was 6,132 tons by 75 KUD, while during 1993, 91 KUD (121.3%) had distributed a total of 25,734 tons (419.6%). The prices of urea are determined by the government from time to time. For purchase of urea for paddy cultivation, the government provides credit channels to the farmers through the KUD network. The KUD receive a fee for the distribution of fertiliser and disbursement of farm credit, which, in fact, forms a substantial portion of their working capital.

The distribution of farm chemicals is deregulated. Farmers can obtain their supplies either from their KUD or from the open market. In 1990 a total of 46 KUD were engaged in the farm chemicals business, and in 1993 only 31 KUD (67.3%) were selling these materials.

Fertiliser and farm chemical distribution form a major portion of marketing business of KUD in the province. On an average, fertiliser business formed 50.1% of the total turnover of the KUD. An analysis of fertiliser marketing as compared with the total turnover of 5 surveyed KUD during 1995 was as follows: KUD Tungkung Pandang 97.0%, KUD Bima Sena 31.5%, KUD Hidup Baru 52.8%, KUD Tunas Karya 64.0% and KUD Harapan Pertama 5.3%. An analysis of commissions earned by these KUD from sales over purchase of fertiliser during the year 1995 is as follows: Tungkung Pandang 1.5%, Bima Sena 1.7%, Hidup Baru 2.9%, Tunas Karya 1.2% for fertiliser and 20.0% for farm chemical, and Harapan Pertama 80.2%. One of the surveyed KUD, the KUD Tungkung Pandang has emerged as a major supplier of chemical fertiliser. The Puskud is not so actively engaged in the distribution and transportation of fertiliser business.

Distribution of seeds is open, except for paddy seeds. The distribution of seeds deregulated after 1990-91. In 1990, 14 KUD had distributed 614,164 kg of paddy seeds and in 1993 the same number of KUD had supplied 313,325 kg (51.0%), distribution of soybeans seeds in 1990 was 1,537 kg and in 1993 it was 6,858 kg

(446.1%). 15-25% of the farmers use certified seeds. No KUD are involved in seeds multiplication business.

In 1988-89, a total of 1,300 tons of paddy/rice was procured by 31 KUD from the farmer-members, while during the year 1994-9, 54 KUD (174.1%) had procured a total of 4,396 tons (338.1%). The procurement of rice in 1994-95 was 0.5% of the national procurement by the KUD. In 1988-89, a total of 39 KUD had sold 6,083 tons of rice to the Bulog, while in 1994-95 only 2 KUD (5.1%) had sold just 49 tons (0.8%) of rice to the national food stock. While the quantity of procurement had gone up in 1994-95, the supply to the Bulog had gone down. An analysis of paddy/rice marketing business by the 5 surveyed KUD as compared with their total turnover for 1995 indicates that on an average, paddy/rice business formed 17.1% of the total marketing business e.g., KUD Tungtung Pandang 0.3%, Bima Sena 52.6%, Hidup Baru 15.0%, and Harapan Pertama 17.8%. The rate of commissions earned by these KUD on paddy/rice business was as follows: Tungtung Pandang 8.1%, Bima Sena 22.8%, and KUD Harapan Pertama 46.2%.

Farmer-members purchase their farm inputs and consumer goods from the retail outlets (waserdas) and TPK. In 1994 there were a total of 196 retail outlets which rose to 221 (112.7%) in 1995, the working capital Rp 1,213 million in 1994 went up to Rp 1,900 million (156.6%) in 1995, and their turnover of Rp 2,920 million in 1994 rose to Rp 3,831 million (131.1%) in 1995. An analysis of retail outlet business of 5 surveyed KUD indicates that in 1995 it formed 19.8% of their total turnover e.g., KUD Tungtung Pandang 1.3%, Bima Sena 57.8%, Hidup Baru 28.3%, Tunas Karya 10.0%, and Harapan Pertama 1.7%. The rate of commissions earned by them during 1995 on retail outlet business was as follows: KUD Tungtung Pandang 10.5%, Hidup Baru 7.9%, and Harapan Pertama 16.6%. Consumer goods and other farm inputs/implements are obtained by the KUD from private suppliers. The Puskud is not engaged in the supply of consumer goods and farm inputs.

A total of 6,823 tons of cloves was procured by the Puskud through the KUD and private channels and was assigned to the national cloves buffer stock maintained by the Inkud in collaboration with the Puskud.

The Puskud is a secondary level federation of 160 KUD in the province. Its main business is procurement of cloves for the national stock. It did not take any significant purchasing and marketing activities during 1995. Its total turnover in 1995 was Rp 1426 million, total assets of Rp 1319 million, and its total surplus (SHU) Rp 64 million.

The sources of funds for operating economic and utilisation business include: i) credit from government for procurement of paddy/rice, cloves and service charges received for disbursement of such credit and distribution of chemical fertilisers, ii) service fee for handling telephone and electricity bills, and iii) surplus generated from business.

HAMPERING FACTORS:

Economic Business

Although a majority of KUD are engaged in the procurement, processing and supply of paddy/rice, yet the grading, processing and marketing has neither been upgraded nor diversified. KUD have been sustaining mainly on the fees and commissions received by them in implementing government-supported programmes e.g., paddy/rice procurement and supply, fertiliser distribution and procurement of cloves. The basic concepts, which can help members to market their produce better e.g., joint marketing, joint purchasing, joint-use facilities and joint use of capital, have neither been understood nor applied. This is mainly due to lack of initiative on the part of KUD leaders and members and lack of information and training of managers. KUD in the province are operating on their own without any back-up business support from their secondary federations. Access to market is difficult due to lack of infrastructure facilities and the quality of goods sought to be marketed. No joint ventures have been established, even in prominent commodities e.g., rice processing, fruit processing, livestock development and manufacture of cattle-feed. The role of Puskud is very insignificant. Lack of flow of business information, lack of guidance in farm management, planning, better-living and internal staff training are some other factors.

These can be summed up as follows: Lack of investment/working capital; insufficient ability to market members' produce; lack of marketing facilities; lack of understanding and application of joint marketing, joint purchasing, joint use facilities and joint-use of capital concepts; lack of business information; lack of member accounts' settlement procedures; insufficient guidance on farm management, planning and better-living; lack of service to members; and lack of business relations with business enterprises; low technology in rice handling and processing; lack of livestock development; lack of warehouses, transportation equipment; lack of training and development of KUD leaders and managers; and serious lack of member education.

POSSIBILITIES:

Economic Business

In order to increase the income levels of farmer-members, KUD need to further develop their own economic business. For this, the following possibilities exist: Introduce basic concepts of joint marketing, joint purchasing, joint-use facilities and joint-use of capital; mobilise capital through joint ventures; strengthen business linkages with KUD and secondary level business federation/enterprises; introduce market/business information systems; introduce members' accounts settlement systems; encourage production/processing and local material e.g., horse rash, fruits and vegetables; enhance shipment facilities e.g., motor boats; strengthen producers' groups; improve supplies for retail outlets through joint procurement; strengthen training of KUD leaders and employees; and member education to secure their higher business participation in their KUD.

**ACTIVATION MASTER PLAN:
Economic Business**

Recognising the vast potentials of KUD in South Kalimantan like rice procurement, fertiliser consumption, processing of locally-grown fruits e.g., oranges, production of cash crops like coffee, cloves, rattan and handling stone lime and coal, several of their business activities could be further expanded and improved to provide higher economic returns for the members. Although there is a high level of cattle population and poultry activity, no KUD is engaged in their handling and processing. The provincial government has declared the development of broilers as one of the 'strategy commodities'.

The activation master plan could emphasise on the following factors: Development of collection and processing facilities for rice, coffee and rattan; poultry and livestock development programmes; introduction of cattle-feed production; handling and processing of corn and horse rash, expansion of transportation equipment e.g., motor boats, warehousing capacities, training of leaders, managers and key members, and an intensive education of members.

II . MAIN FINDINGS

AGRICULTURAL PRODUCTION

Distribution of Farm Input Materials

Farm input materials include chemical and bio-fertilisers, farm chemicals e.g., insecticides, pesticides, rodenticide, fungicides and herbicides etc., and the supply of improved and quality seeds generally for key crops e.g., paddy, maize, soybeans etc. Chemical fertilizer is produced by several state-owned companies but the distribution of urea is coordinated by PT Pusri. The fertilizer is distributed from company-owned warehouses which are located at kecamatan level. This network is available throughout the country. The KUD pick up their requirements from these distribution points. The KUD, in turn, distributes the fertilizer from their own warehouses or through the TPK on the basis of pre-arranged delivery schedules.

The distribution of farm chemicals is through KUD and private channels. The main producers of these farm chemicals are Bayers, Ciba, PT Petrokemia Kayaku and others. While the main concentrates are imported, the formulations are done in Indonesia according to the local conditions and requirements.

The distribution of farm inputs by KUD in South Kalimantan was as follows:

Farm Inputs	Year 1990		Year 1993	
	National	S.Kali	National	S.Kali
<u>FERTILISER</u>				
No. of KUD	3,550	75	3,461	91
Urea (Tons)	1706,547	6,132	3737,760	25,734
All Others (Tons)*	2293,910	5,672	2293,965	15,755
PPC & ZPT (lt)	-	-	928,811	6,659
Others (Tons)	33,224	73	56,503	14
<u>FARM CHEMICALS</u>				
No. of KUD	1,647	46	934	31
Insec.Lqd. ('000lt)	6,782	21	361,155	3,179
-"-not lqd. (Tons)	3,992	3	2588,977	1,100
Rodenticide (Tons)	2,496	13	9,001	2,922
Fungicides (Tons)	827	8	100,363	4
Herbicides (Tons)	243	-	15,869	16

*includes: TSP, DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta.

The distribution of urea in South Kalimantan by the KUD was 0.6% of the material distributed in the country. It was, however, 433% in 1993 of the urea distributed in 1990. The farmers in South Kalimantan have increasingly been using bio-fertilizer.

The distribution of seeds by the KUD in South Kalimantan during the years 1990 and 1993 has been as follows:

Type of Seeds	Year 1990		Year 1993	
	National	S.Kali	National	S.Kali
No. of KUD	980	14	545	14
Paddy (kg)	26,351,795	614,164	5336,522	313,325
Corn (kg)	635,324	-	479,911	410
Soybeans (kg)	610,344	1,537	1,442,920	6,858
Others (kg)	3290,037	5	1068,673	-

Source: Koperasi Unit Desa 1990 & 1993, BPS-Jakarta.

The distribution of paddy seeds in South Kalimantan by KUD in 1993 was 5.8% of the seeds distributed in the country. It was, however, 50.9% in 1993 of the seeds distributed in 1990. The farmers have been obtaining their seeds supplies from the open market. Seeds of paddy are developed and distributed by PT Sanghianseri, a State-owned company using KUD channels. Seeds for palawija and horticulture crops are obtained by the farmers from the open market. The government operates several seeds certification stations, as to certify their quality.

Dissemination of Farm Machinery

Over the years the use of farm machinery in the province has increased. The following table indicates the availability of farm machinery in South Kalimantan in the years 1984, 1993 and 1994.

Type of Farm Machines	1984	1993	1994	% of 1993
2-Wheel Tractors	31	110	124	112.7
Tractors/all types	92	122	134	109.8
Hand Sprayers	6,111	13,667	14,764	108.0
Other Pest Control Eqpt	390	1,633	1,513	92.6
Threshers	36	1,662	1,722	103.6
Paddy Processors	13,301	29,895	26,984	90.2
(out of which, RMU)	--	(489)	(546)	(111.6)
Water Pumps	--	1,287	359	27.8

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

A majority of farm machines are within the KUD sector, mostly owned by farm households. Some of the equipments have been imported, and some have been locally assembled. Some of the farm machines and equipment was made available under OECF and Kennedy Round Programmes. Nearly all the KUD owned paddy drying platforms and small godowns to hold paddy and rice. Some transportation vehicles are also owned by the KUD. Cooperatives are not reported to own any cold stores or any other agro-processing units.

PROCESSING AND DISTRIBUTION OF FARM PRODUCTS

Demands of Major Farm Products (Items, Form of Processing and Consumption)

Major items of agricultural products in South Kalimantan have been rice, cassava, corn, ground nut, vegetables, fruits and cash crops e.g., rubber, clove etc. The following table shows the production of various commodities in 1994:

Commodity (Tons)	1990	1993	1994	% of 1990
Paddy/Rice	982,167	1138,140	1123,082	114.3
Cassava	97,104	103,445	92,426	94.8
Maize	16,972	18,690	18,755	111.7
Soybeans	3,499	7,048	6,781	233.3
Ground Nut	12,883	12,671	13,595	107.6
Vegetables (all)	21,156	25,738	25,990	123.8
Cucumber	3,100	3,480	4,172	133.3
Chilies	612	1,860	2,841	464.2
Fruits (all)	53,426	100,800	125,477	235.8
Durian	11,491	27,271	13,682	127.2
Banana	18,534	22,634	16,246	84.2
Oranges	-	15,448	18,660	120.7
Mango	2,120	1,972	3,570	168.3
Rubber	42,397	45,814	51,306	121.4
Coconut	47,189	50,995	101,049	214.8
Coffee	2,430	2,757	2,960	121.8
Cloves	868	7,375	6,823	786.0
Pepper	317	945	992	312.9

Source: Statistik Pertanian 1989-94, Kanwil Pertanian South Kalimantan, Banjarmasin 1996

The distribution of rice is done in two ways: a part of it goes to the Bulog, while the remaining is disposed of in the local market and retained by the farmers for their own use. In the case of other crops, if there is a procurement drive by the government for any specific crops, then the distribution takes place accordingly. Otherwise, farmers are assisted by the KUD to sell their produce.

Fresh vegetables and some fresh fruits, especially banana are sold in the open market. Wholesale traders, generally from Java, purchase vegetables for shipment to Java Island or to other consuming destinations. A small quantity of oranges are sent to Java. However, the volume of production is so low as to permit any despatch out of the province.

All cash crops move out of the province for further processing. Groundnut, coconut, rubber and coffee is procured by the agents of the processing industry for shipment to processing units within South Kalimantan or on Java Island. Whatever quantity of

clove is produced in the province (6,823 tons in 1994), it is procured by the Puskud for the national buffer stock.

The province has some poultry activity. The following table shows the number of broilers and local chicken in South Kalimantan:

Item		Production (Numbers)	Distribution Out of Province	
Local Chicken	1992	4,436,500	1,150,000	25.9%
	1993	4,796,634	1,640,000	34.1%
Broilers	1992	845,100	200,000	23.6%
	1993	375,941	NA	-
Duck	1992	2,423,700	450,000	18.5%
	1993	2,546,987	660,000	25.9%
Eggs (all) (kg)	1993	16,370,583	NA	-

There are no processing facilities in the province for grading, packing and shipment except for some traditional facilities.

Technical Level of Major Agro-Processing

The technical level of agro-processing in the province still remains to be developed. The only agro-processing is paddy/rice milling in view of the demand for clean rice from Bulog as well as from the open market. Rice milling units are too small and ineffective to produce quality rice.

Major Agro-Processing Entity, Volume of Production, Facilities

A number of rice processing units exist in the province, as given in the table below:

Year	KUD-RMU	NON-KUD RMU	Milling (Tons)
1985	18	1,178	418,736
1990	39	1,338	464,307
1994	63	1,535	592,869
% of 1985	350.0%	130.3%	141.5%

The facilities with the KUD are too small. A majority of large-size rice mills are in the private sector (Non-KUD) which cater to the open market requirements.

Similarly in the sector of poultry, vegetables and livestock the agro-processing facilities remain insignificant and traditional.

The livestock situation and processing facilities in the province in 1993 was as under:

Commodity 1993	Numbers	Number Slaughtered	Meat Production Production (Kg)
Beef cattle	134,327	13,985	2706,346
Buffalo	46,804	1,664	378,400
Horse	2,504	NA	NA
Goat	62,324	164	152,570
Sheep	3,800	63	9,020
Pig	12,791	1,397	125,450

Source: Dinas Peternakan, South Kalimantan

Most of slaughtering facilities are operated by the government at Kabupaten level. These are traditional in character. There are no proper grading, processing, packaging, freezing and shipment facilities. The end-product is consumed locally in the province.

Major Shipping Areas, Distribution System and Facilities by Commodities

For agricultural products e.g., vegetables, fruits and some cash crops, the major destinations for shipping are the wholesale markets in Java. The destination for Paddy/Rice is government and general market.

The farm households or the KUD have not established any joint handling, joint marketing or joint shipment facilities expect for the provision of some transport and/or negotiating the deals.

Business Customs, Pricing, Accounts Settlement

In most cases the business is transacted between the farmer and the agents of the traders. The transactions are highly cash-oriented. The word of mouth remains supreme in the first negotiations which do not involve very high values or expensive assets e.g., lands and buildings. In the case of agricultural produce, the agents of the traders keep on tracking the producers of the required commodities. The farmers are offered, in many cases, advance payments for the crops, given some incentives like seeds, some fertiliser and even advance payments for purchase of farming equipment.

In the context of farmers' dealing with the KUD, the transactions are mostly on cash basis (around 50-55%), the remaining being on credit basis generally in respect of purchase of fertilisers, and other requirements. While dealing with the agents and traders, the cash advances are reduced at the time of settlement of final accounts. Advances received by the farmer appear advantageous and look attractive in the initial stages but at the time of the final settlement the farmer tends to loose because of the disadvantageous prices at which he had sold his crop. Since cash is needed always by the farmer, a small disadvantage does not

seem to harm him.

The pricing of agricultural products is determined by various factors e.g., the cost of inputs, labour inputs, and a reasonable margin of profit. This is true of horticulture, poultry and livestock products. The prices of urea are determined by the government. Fertiliser other than urea is open for sale.

The accounts are settled based on the conditions laid down by the KUD and agreed upon between the KUD and the members. In the case of agricultural producers of South Kalimantan, the members can purchase their requirements from the KUD on credit basis which are settled against the supplies received by them from the KUD. The system of accounts settlement is generally the same all over the province and is acceptable to both - the members and the KUD.

Others

Distribution of agricultural products and items of daily use is also carried out through a network of retail shops (waserda) in South Kalimantan, although the number of such shops and the merchandise range is very low.

The provincial federation of the KUD - the Puskud - undertakes some business activities. The business relationship between the two is not active, and there is no horizontal and vertical integration between the two tiers in the province. The Puskud could at least provide market information to the KUD.

BUSINESS MANAGEMENT OF KUD AND RELATING LEGAL SYSTEM

Situation of Business

Purchasing and Marketing Business

Purchasing Business System, Commodities and Turnover

To meet the needs of the farmer-members, the KUD network has met the input needs to some extent in the province. The government programmes which have been assigned to the KUD, further reinforce their business operations. The government programmes include: distribution of chemical fertilisers, agricultural credit, distribution of essential commodities e.g., sugar, rice, soybeans, wheat flour, kerosene oil etc. The members, therefore, not only purchase their input needs through the KUD but also their consumption needs.

Fertiliser Distribution: In South Kalimantan, PT Pusri distributes chemical fertilisers through various channels e.g., the Puskud, KUD, PT Pertani and private channels. The distribution of fertiliser in the province during 1990-95 is given in the following table:

Particulars	1990	1992	1993	1995	% of 1992
No. of KUD	75	28	91	28	100
Fertiliser (Tons) All types	6,132	12,137	25,734	29,839	250

Source: Department of Cooperatives-RI, Jakarta

During the period 1990-1993, the fertiliser was distributed in the country as is seen in the following table:

Particulars	1990-91	1992-93
Total National distribution (Tons)	2,810,539	3,031,971
Allocated by PT Pusri for distribution by:		
-Puskuds	0.2%	0.1%
-KUD	80.9%	80.3%
-Persero Niaga	1.6%	3.2%
-PT Pertani	11.6%	8.8%

Fertiliser is produced by several government companies including the PT Pusri, but the distribution is coordinated by PT Pusri. PT Pusri, in turn, allocates quota for distribution among various agencies including the Puskuds. PT Pertani, a government company, distributes fertiliser for the plantations and estate crops.

Farmers obtain their farm chemicals from the KUD or from the open market.

Seeds Distribution: Distribution of seeds is open. Paddy seeds are produced by PT Sanghianseri, a government company, and several authorised private enterprises. Seeds are certified by a government Seeds Certification Centre as to their quality. During 1990/1993 the following quantities of various seeds were distributed in the province:

Year	No. KUD	Paddy (kg)	Corn (kg)	Soybeans (kg)
1990	14	614,164	-	1,537
1993	14	313,325	410	6,858

The distribution of seeds was deregulated after 1990-91. The farmers were able to purchase their requirements from the open market, hence the sudden drop during 1993. In South Kalimantan only 15-25% of the farmers use certified seeds.

Farm Machines and Agricultural Implements: Because of the low levels of farm income and the vast open character of the area, the use of farm machines is limited. Only traditional implements,

hand tractors and farm cattle are used.

The table below shows the availability of various farm implements in the province:

Type of Farm Machines	1993	1994	Percent
2-wheel Tractors	110	124	112.7
Tractors/All Types	122	134	109.8
Hand Sprayers	13,667	14,764	108.0
Other Pest Control Eqpt	1,633	1,513	92.6
Threshers	1,662	1,722	103.6
Paddy Processors	29,895	26,984	90.2
(out of which, RMU)	(489)	(546)	(111.6)
Water Pumps	1,287	359	27.8

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

A majority of farm machines are within the KUD sector, mostly owned by farm households. Some of the equipments have been imported, and some have been locally assembled. Nearly all the KUD owned paddy drying platforms and small godowns to hold paddy and rice. Some of the equipment have been given to the KUD under OECF and Kennedy Round programmes. KUD are not reported to own any cold stores or any other agro-processing units.

The farmers purchase their farm implement requirements either through the KUD or from the open market. KUD procure the equipments from the wholesale dealers.

Retail Outlets (waserda) and Cooperative Service Place (TPK/kiosks): Farmers purchase their farm inputs and consumer goods from the waserdas and TPK. Each KUD operates, on an average, 3-4 TPK located close to the farm operational areas. Some of the TPK are operated by the farmer-members as their private enterprise but selling farm inputs.

The position of retail outlets in 1994 and 1995 in the province was as follows:

Particulars	1994	1995	Percent
No. of waserdas	196	221	112.7
Working Capital (M.Rp)	1,213.0	1,900.0	156.6
Turnover (M.Rp)	2,920.0	3,831.0	131.1

Source: Ministry of Cooperatives-RI, Jakarta 1996

Turnover: The total turnover of KUD in South Kalimantan during the year 1992 to 1995 is given in the table below:

Particulars	1992 (M.Rp)	1994 (M.Rp)	1995 (M.Rp)	% of 1992
South Kalimantan	34,303	43,224	44,362	129.4
National	3807,639	4837,683	5669,411	148.8

Major Source of Procurement of Commodities

Chemical fertiliser distribution is coordinated by the PT Pusri which has its warehouses located throughout the country and even at the kecamatan level from where the KUD get their supplies through the Puskud. The government provides credit to the farmers through the KUD for purchase of urea. Other chemical fertilizer formulations are available in the open market. Similarly, bio-fertilisers, farm chemicals are obtained from the open market.

Seeds, except for paddy, are procured from the open market. Paddy seedlings are produced and distributed by PT Sanghianseri. The government operates a number of seeds certification centres throughout the country in order to ensure seeds quality.

Merchandise for sale through the TPK and retail outlets is obtained from the open market. There is no wholesale cooperative agency which sells or coordinates the supply of consumer goods to these outlets.

Marketing Business System by Commodities and Turnover

This consists of marketing the produce of farmers with their KUD. Major marketing activities in the province have been: Paddy, rice, corn and others. The KUD help procure paddy/rice from its members for the national food stock and try to fill the target set for it for the supply of rice to Dolog. The members supply the maximum which they can but still the preference of the farmer remains to sell the produce in the open market at a higher price than fixed by the government. The procurement price of paddy/rice is determined by the government every season. KUD gets credit from the government to purchase rice.

The marketing of paddy/rice by the members in South Kalimantan province during 1988-89 and 1994-95 is given in the table below:

Particulars	1988-89		1994-95	
	National	S.Kalimantan	National	S.Kalimantan
<u>Paddy/Rice Procured</u>				
By KUD (Nos)	2,018	31	1,993	54
Procured (Tons)	1096,212	1,300	786,066	4,396
<u>Sold to Dolog/Bulog</u>				
By KUD (Nos)	2,120	39	1,133	2
Sold (Tons)	2023,952	6,083	509,919	49

Source: Department of Cooperatives-RI, Jakarta 1996

It is noticed from the above that the paddy/rice procurement and distribution in the province has gone down.

Other main products of the province are: cassava, corn, vegetables, fruits and cash crops, as is seen in the table below:

Commodity	1990	1993	1994	% of Prov. Total.94
PADDY				
-Province Total (T)	982,167	1138,140	1123,082	-
-Barito Kuala	-	-	211,638	18.8%
CASSAVA				
-Province Total (T)	97,104	103,445	92,426	-
-Barito Kuala	-	-	3,050	3.2%
MAIZE				
-Province Total (T)	16,972	18,690	18,755	-
-Barito Kuala	-	-	112	0.5%
SOYBEANS				
-Province Total (T)	3,499	7,048	6,781	-
-Barito Kuala	-	-	71	1.0%
GROUND NUT				
-Province Total (T)	12,883	12,671	13,595	-
-Barito Kuala	-	-	13	-
VEGETABLES (ALL)				
-Province Total (T)	21,156	25,738	25,990	-
-Barito Kuala	-	-	1,166	4.4%
RAMBUTAN				
-Province Total (T)	5,783	7,899	11,153	-
-Barito Kuala	-	-	9,501	85.1%
DURIAN				
-Province Total (T)	11,491	27,271	13,682	-
-Barito Kuala	-	-	159	1.6%
BANANA				
-Province Total (T)	18,534	22,634	16,246	-
-Barito Kuala	-	-	7,344	45.2%
RUBBER				
-Province Total (T)	42,397	45,814	51,306	-
-Barito Kuala	-	-	-	-
COCONUT				
-Province Total (T)	47,189	50,995	101,049	-
-Barito Kuala	-	-	14,491	14.3%
CLOVES				
-Province Total (T)	868	7,375	6,823	-
-Barito Kuala	-	-	89	1.3%

Source: Statistik Pertanian 1989-94 issued by Kanwil Pertanian, South Kalimantan, Banjarmasin 1996

The total business volume and the total surplus of KUD in South Kalimantan in 1992-1995 was as follows:

Particulars	1992	1994	1995	% of 1992
Total Turnover (M.Rp)	34,303	43,224	44,362	129.3%
Total Surplus-SHU (M.Rp)	926	1,400	1,626	175.5%

Major Market Area, Buyers

Major market areas for the produce of the farmer-members in South Kalimantan are the government (Bulog), private processing industries (especially, rubber and cassava). Some of the farm products e.g., fresh vegetables, fruits and cash crops like coffee and rubber move to Java Island.

Procurement of Funds for Economic and Utilisation Business

Funds for operating economic and utilisation business is available from various sources:

- Credit from government for procurement of paddy/rice, corn, soybeans, cloves, and the service charges the government pays to the KUD for disbursement of such credit;
- Service fee for handling telephone and electricity bills;
- Credit from private enterprises for procurement of vegetables and other farm products e.g., cassava;
- Surplus earned from the business of the KUD.

The level and variety of such credits is very low in the province. KUD have very low financial strength and so have the farmer-members.

Holding and Utilisation of Kiosks, Storage, Processing Facilities

Retail shops, kiosks and warehouses are operated by the KUD as a service to the members. In 1995, the situation in the KUD sector in South Kalimantan was as follows:

Total of Retail shops/waserdas	...	221
Warehousing with Drying floors	...	33
Rice Milling Units	...	29
Rice Dryer Units	...	70

Competition with Private Dealers

The KUD are neither integrated horizontally nor vertically. Each unit works on its own and develops its own business with the funds raised through its own efforts and resources. Since a majority of business units of KUD are operating within the

government-supported system, the element of competition with the private dealers does not exist. Procurement of rice and clove, distribution of fertiliser, sugar, soybeans, corn, wheat flour etc. are all regulated by the government and are consequently a secure business, leaving not much scope for competition.

ORGANISATION, MANAGEMENT & BUSINESS OF PUSKUD

Situation of Business

The PUSKUD-KALSEL is a secondary level business federation of KUD in the province. It has a history of 35 years when several business unions e.g., rubber cooperative union, agricultural cooperative union, fisheries cooperative union, consumer cooperative unions were working in the province. In 1975 they all amalgamated to form the PUSKUD-South Kalimantan and registered vide No. 6596.B/12-67 on 30th September 1975. In 1996 its membership was 160 KUD. Its members General Meeting, which meets once a year, elects a 5-member Board of Directors for a 5-year term, and a 3-member Board of Supervisors also for a 5-year term.

The Puskud is a member of a national federation, INKUD. The main aim of Puskud is to provide business support to its member-affiliates, promote cooperative business in the rural sector in the province in accordance with the Principles of Cooperation, and to promote cooperative education and training. The business activities of the Puskud include: procurement and supply of paddy/rice, distribution of fertiliser and sugar and procurement of clove. The Puskud has its office at Banjarmasin. The Puskud has 19 full time employees including a manager.

Situation of Business

Purchasing Business Methods, Commodities, Turnover

The Puskud, the provincial federation of KUD, a member of the Inkud, participates in business ventures sponsored or proposed by the Inkud, besides supporting the business development of the KUD at the primary level in the province. The Puskud is a federation of 160 KUD in the province.

The Puskud procures cloves from the farmers on behalf of the Inkud for the national buffer stock. It also coordinates the procurement of other commodities for national food stock or for distribution in the open market. Methods adopted are negotiated with the relevant agencies/suppliers, and are on a fee/commission basis. Procurement prices of rice and cloves are regulated by the government.

During 1995 the Puskud did not undertake any significant purchasing activity.

The total purchases were Rp 78,816,425 which was 5.5% of the total turnover (Rp 1426.3 million). However it collected fees from clove business (Rp 92.4 million - 6.4% of the turnover), and sugar (Rp 50.0 m - 3.5% of the turnover). The business condition of the Puskud is very weak.

Major Suppliers and Buyers (KUD and non-KUD)

It obtains its supplies of sugar, wheat flour and other essential commodities from the Bulog/Dolog. Farm products e.g., cloves is procured from the KUD network.

Its main buyers are the KUD, clove holding agency through the Inkud, and farm produce processing industry.

Marketing Business Methods, Commodities, Turnover

The marketing business methods include negotiations by the KUD with the Puskud, as well as the requirements of the national food stock maintained by Bulog.

For the present clove is the main commodity which the members sell to the federation.

During 1995 the Puskud did not undertake any significant marketing business. The total sales of the Puskud during 1995 was Rp 81,332,602 which was 5.6% of the total turnover.

Major Suppliers of Marketing Commodities and Buyers (KUD and non-KUD)

Major buyers of the Puskud have been the Dolog/Bulog and the Clove Procurement Agency (working in close collaboration with the Inkud), and the open market.

Funds for Economic Business and Operation of Joint Use Facilities

Economic situation of the Puskud during 1994 and 1995 was as follows:

Particulars	Year 1994	Year 1995	%
Membership	158	160	101.2%
Total Business Volume	3522,283,316	1426,352,689	40.4%
Total Assets	1693,300,842	1319,912,774	77.9%
Initial Deposits	7,850,000	7,950,000	101.2%
Compulsory Deposits	11,174,000	13,274,000	118.7%
Surplus-SHU	40,952,180	64,295,291	157.0%

For its economic business the funds are generated from fertiliser, wheat flour and sugar transportation services which are very low. As a result the Puskud has not been able to expand its business.

Situation of Operation of Kiosks, Collection Centres, Processing Facilities

It has a rice milling unit, a small warehouse, two trucks and a facility for collection of cloves and rubber.

Competition with Private Traders

Except for enjoying monopoly status in the procurement of cloves and transportation of fertiliser, sugar and wheat flour, the Puskud finds it difficult to compete with the private trade. It does not have any agro-processing facilities although vast possibilities exist in the province e.g., rubber, distribution of consumer goods and farm machines and equipment.

RELATING LEGAL SYSTEM AND STRUCTURE

Policy for Improvement of Distribution and Processing of Farm Products and Price Support

In accordance with the declared National Policy to increase agricultural production and boost export, the government is committed to support farmers and provide them with the needed infrastructure. The government has established a number of institutions and services aimed at providing farm inputs, extension services and post-harvest technology. Also, consequently, the government aims at giving support to agro-processing activities through its own system and with the support of private enterprises. As a result, the country is witnessing the growth in agro-processing activities. More and more private companies are entering agro-processing business.

With a view to guarantee better economic returns from farm operations, the role of government agencies like the Bulog is being reviewed so that the farmers are sure to get proper prices for the farm products, especially, rice, soybeans, corn and other cash crops. Clove procurement agency, coconut development board, coffee board are some examples. For every harvesting season the government announces floor prices for key commodities.

The KUD are used increasingly by the government to procure food items for national food stocks and distribute essential commodities in the country. The KUD are also used to disburse agricultural credit among the farmers. The Puskuds through the Inkud are planned to serve as gross distributors of consumer items through the Waserdas and TPK.

Taking advantage of the fertile land and farming potentials, the provincial government has planned to vastly expand paddy cultivation, increase production of fruits and vegetables, grains, cash crops, poultry. "The implementation of cooperative development will be carried out through: an increase of share and access to the market; expansion of access to capital sources, strengthening of capital structure, and improvement of ability to utilise the capital; an increase of the cooperatives' organisational and management capabilities; an increase of access to technology and the ability to use it; and an establishment of business partnership."

FINDINGS OF THE DETAILED FIELD SURVEY
[Of 5 KUD in the Province]

Purchasing and Marketing Business

Situation of Establishment of Commodity-wise Groups

The five (5) KUD surveyed in South Kalimantan were: KUD Tungtung Pandang (MI), KUD Bima Sena (M), KUD Hidup Baru (CM), KUD Tunas Karya (M), and KUD Harapan Pertama (CM), all in Barito Kuala (Batola) Kabupaten.

The main activities of KUD have been: procurement, processing and distribution of paddy, maize and some local products e.g., limestone and charcoal. KUD have provided marketing and purchasing services to the farmer-members in various commodities e.g., fertiliser, farm chemicals, seeds, credit disbursement, essential commodities distribution through the waserdas and TPK. The farmers have been organised into Kelompok Tani (KT), members' groups, women and youth groups, and commodity groups, as is seen from the table below:

Cooperatives/ Category	Popula- tion	Farmers	Members	KT	Villages covered	TPK
Tungtung Pandang (MI)	6,387	2,562	2,025	62	17	8
Bima Sena (M)	2,143	1,100	212	24	4	1
Hidup Baru (CM)	3,563	2,192	88	12	3	NA
Tunas Karya (M)	2,556	1,470	401	16	3	NA
Harapan Pertama (CM)	7,253	1,502	50	20	5	NA

The membership of the KUD is open to all residents in rural areas. The head of the household becomes the member and the whole household utilises KUD services. However, individuals have increasingly taken up the membership.

As compared the membership with the population, the percentage of farmers in the KUD is still very low, as follows:

Tungtung Pandang	...	...	31.7%
Bima Sena	...	...	09.8%
Hidup Baru	...	...	02.4%
Tunas Karya	...	...	15.6%
Harapan Pertama	...	...	0.6%

The average percentage of membership to the population is 12.0%. The highest percentage is that of the KUD Tungtung Pandang (31.7%) which is a Mandiri Inti.

With a view to provide services and distribute farm inputs and credit, Farmers' Groups (KT) have been organised who also serve as commodity groups. Most of the government extension programmes have been carried out through these groups. The needs of the farmer-members are met through the network of TPK in which the

KTs are actively involved. These groups form an integral component of the KUD organisation at the village level.

Purchasing Business Methods, Commodities Handled, Turnover and Commissions

While the members purchase their requirements e.g., farm inputs, from their KUD, the KUD also purchase their requirements from external sources in order to sell the final products to the members after some processing. The purchasing business of the KUD, therefore, covers the procurement and transportation of fertiliser, paddy, farm implements, equipment, seeds, sugar, and groceries for waserda and TPK.

KUD do not show separately in their accounts the commissions received or paid. They do, however, show the service charges/fees received or paid by them.

The table below shows the commodities purchased from various sources by the 5 surveyed KUD during 1995:

<u>KUD/Purchasing Business Items</u>	<u>Total Purchases (M.Rp)</u>	<u>% of KUD Turnover</u>
<u>KUD TUNGTUNG PANDANG</u>		Rp 2,346.2M
-Fertiliser	2,242.1	95.5%
-Paddy/Rice	8.6	0.3%
-Limestone	16.9	0.7%
-Waserda	28.4	1.1%
-Sugar	6.8	0.3%
<u>KUD BIMA SENA</u>		Rp 18.9M
-Fertiliser	5.7	31.5%
-Paddy/Rice	8.3	42.1%
-Waserda	10.7	57.8%
<u>KUD HIDUP BARU</u>		Rp 52.5M
-Fertiliser	26.8	50.9%
-Paddy/Rice	7.9	15.0%
-Waserda	13.8	26.4%
<u>KUD TUNAS KARYA</u>		Rp 50.1M
-Fertiliser	31.7	62.0%
-Farm Chemicals	2.0	4.0%
-Paddy/Rice	17.0	34.0%
-Waserda	5.0	10.0%
<u>KUD HARAPAN PERTAMA</u>		Rp 55.5M
-Fertiliser	1.5	3.5%
-Paddy/Rice	6.7	12.5%
-Waserda	1.2	1.7%

Percentage of purchasing business of major commodities handled by KUD in 1995 has been as follows:

KUD	Fertiliser	Paddy/Rice	Waserda
Tungtung Pandang	95.5	0.3	1.1
Bima Sena	31.5	42.1	57.8
Hidup Baru	50.9	15.0	26.4
Tunas Karya	62.0	34.0	10.0
Harapan Pertama	3.5	12.5	1.7
Average %	48.6	20.7	19.4

The KUD Tungtung Pandang has the distinction of being a major supplier of fertiliser in the area.

Major Suppliers of Goods and Patronage of Federations

Major suppliers of goods to the KUD have been the private traders in district headquarters. Fertiliser is obtained from the PT Pusri through the Puskud, sugar from the Dolog and paddy from the farmers. Groceries for the retail shops and TPK is obtained from the wholesalers/local traders.

KUD Tunas Karya deals in cattle fattening programme, but only in a limited way. The Puskud plays no role in the purchasing business development of any of the cooperatives.

Marketing Business Methods, Commodities Handled, Turnover and Commissions

The KUD market their products with their members and the processing industry or in the open market. The marketing is done as per negotiations reached between the KUD and the buyers. KUD act as coordinating bodies e.g., agents of the government for rice procurement, and collecting agents of limestone.

The table below shows the marketing business activities of the 5 KUD surveyed in South Kalimantan:

KUD/Marketing Business Items	Total Marketing (M.Rp)	% of KUD Turnover
<u>KUD TUNGTUNG PANDANG</u>		Rp 2,346.2M
-Fertiliser	2276.2	97.0%
-Paddy/Rice	9.3	0.3%
-Limestone	19.8	0.8%
-Waserda	31.4	1.3%
-Sugar	7.3	0.2%
<u>KUD BIMA SENA</u>		Rp 18.9M
-Fertiliser	5.8	31.5%
-Paddy/Rice	10.2	52.6%
-Waserda	10.7	57.8%
<u>KUD HIDUP BARU</u>		Rp 52.5M
-Fertiliser	27.6	52.8%
-Paddy/Rice	7.9	15.0%
-Waserda	14.9	28.3%

<u>KUD TUNAS KARYA</u>		Rp	50.1M
-Fertilizer	32.1		64.0%
-Farm Chemicals	2.4		4.0%
-Waserda	4.7		10.0%
<u>KUD HARAPAN PERTAMA</u>		Rp	55.5M
-Fertiliser	2.7		5.3%
-Paddy/Rice	9.8		17.8%
-Waserda	1.4		1.7%

The KUD accounts do not show separately the commissions received or paid. They do, however, show the service charges/fees received or paid by them.

The percentage of marketing business of KUD of major commodities in 1995 has been as follows:

<u>KUD</u>	<u>Fertilizer</u>	<u>Paddy/Rice</u>	<u>Waserda</u>
Tungtung Pandang	97.0	0.3	1.3
Bima Sena	31.5	52.6	57.8
Hidup Baru	52.8	15.0	28.3
Tunas Karya	64.0	-	10.0
Harapan Pertama	5.3	17.8	1.7
Average %	50.1	17.1	19.8

Given below is a summary of marketing and purchasing business of the KUD showing the commissions received by them. From the commissions received, the KUD cover their overheads and handling expenses:

<u>KUD/Items</u> <u>1995</u>	<u>Purchase</u> <u>Value/M.Rp</u>	<u>Sales</u> <u>Value/M.Rp</u>	<u>Commissions</u> <u>Received</u>	<u>Percent</u>
<u>KUD TUNGTUNG PANDANG</u>				
-Fertiliser	2242.1	2276.2	34.1	1.5%
-Paddy/Rice	8.6	9.3	0.7	8.1%
-Limestone	16.9	19.8	2.9	17.1%
-Waserda	28.4	31.4	3.0	10.5%
-Sugar	6.8	7.3	0.5	7.3%
<u>KUD BIMA SENA</u>				
-Fertiliser	5.7	5.8	0.1	1.7%
-Paddy/Rice	8.3	10.2	1.9	22.8%
-Waserda	10.7	10.7	0.0	-
<u>KUD HIDUP BARU</u>				
-Fertiliser	26.8	27.6	0.8	2.9%
-Paddy/Rice	7.9	7.9	0.0	-
-Waserda	13.8	14.9	1.1	7.9%
<u>KUD TUNAS KARYA</u>				
-Fertiliser	31.7	32.1	0.4	1.2%
-Farm Chemicals	2.0	2.4	0.4	20.0%

KUD HARAPAN PERTAMA

-Fertiliser	1.5	2.7	1.2	80.0%
-Paddy/Rice	6.7	9.8	3.1	46.2%
-Waserda	1.2	1.4	0.2	16.6%

Major Buyers, Use of Federations and Demand for Federations

Major buyers of the products of the KUD are the government, processing industry and the general community. Paddy/rice is sold to the government (Dolog) and in the open market, and limestone is sold to the contractors and general public. Major buyers of fertilisers are the farmer-members. There is no other major commodity which calls for any major buyers. The Puskud's role is limited to the transportation of fertiliser, that too is restricted because the KUD Tungtung Pandang has emerged as a major supplier of this commodity. None of the 5 KUD does any business with the Puskud. The KUD, however, expressed a strong desire that the Puskud needs to be more active in providing sales and purchase opportunities to them.

Necessary Operation Fund for Economic and Utilisation Business and its Procurement

For executing government programmes e.g., distribution of fertiliser, procurement of rice, handling a variety of KUT, handling electricity bills and the telephone kiosks, the KUD get a fee or a discount. The KUD Tunas Karya although deals in livestock development, it does not process or distribute cattle-feed as a major business.

KUD have very limited choice or range of credit lines from financial institutions. As a consequence there is an acute shortage of capital to expand or initiate any new business. Utilisation of rice milling units, warehouses, farm machines and transport, is very low in the area because these facilities are either old or have become unserviceable.

The Utilisation and Operation of Kiosks, Collection/Storage Facilities and Processing Facilities

A majority of kiosks, which are of poor quality and of low capacity, are used for storing and supply of farm equipments, fertiliser, farm chemicals and other farm supplies e.g., sacks, spare parts, tubing etc.

The facilities in the area are the barest minimum. There is no agro-processing activity of any kind in the KUD sector. The area lacks simple farm machines e.g., hand tractors, sprayers etc.

The Situation of Competition with Private Dealers

The KUD are in no position to compete with private dealers due to their very weak financial, organisational and operational

position. Except for KUD Tungtung Pandang (its main business is bulk supply of fertiliser), rest of the KUD are on a mere surviving level.

FINDINGS OF THE COMMISSIONED SURVEY-I Agricultural Production

Distribution of Agricultural Input Material such as Makers and Dealers of Chemicals, Vinyl, Feed-Stuff

While the production of most of the agricultural inputs e.g., urea, other chemical fertiliser and paddy seeds remains in the hands of the government-owned companies, the majority of distribution is channelled through the KUD system. Farm inputs for plantation/estate crops is done through the PT Pertani.

The vinyl sheeting is not used in South Kalimantan.

There is no significant livestock development or dairy activity in the province. However, some individuals own livestock. They obtain their feed-stuff supplies from the local market. The cattle-feed is imported generally from East Java. There are no local cattle-feed formulators in the province.

Distribution of Farm Machinery (Makers and Dealers)

Over the years the use of farm machinery in the province has increased. The following table indicates the availability of farm machinery in South Kalimantan in the years 1993 and 1994.

Type of Farm Machines	1993	1994	% of 1993
2-wheel tractors	110	124	112.7
Tractors/all types	122	134	109.8
Hand Sprayers	13,667	14,764	108.0
Other Pest Control Eqpt	1,633	1,513	92.6
Threshers	1,662	1,722	103.6
Paddy Processors	29,895	26,984	90.2
(out of which, RMU)	(489)	(546)	(111.6)
Water Pumps	1,287	359	27.8

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

A majority of farm machines are within the KUD sector, mostly owned by farm households. Some of the equipments have been imported, and some have been locally assembled. Some of the farm machines have been acquired under OECF and Kennedy Round programmes. Nearly all the KUD owned paddy drying platforms and small godowns to hold paddy and rice. Some transportation vehicles are also owned by the KUD. Cooperatives are not reported to own any cold stores or any other agro-processing units.

Agro-Processing and Its Distribution

Demand of Major Farm Products

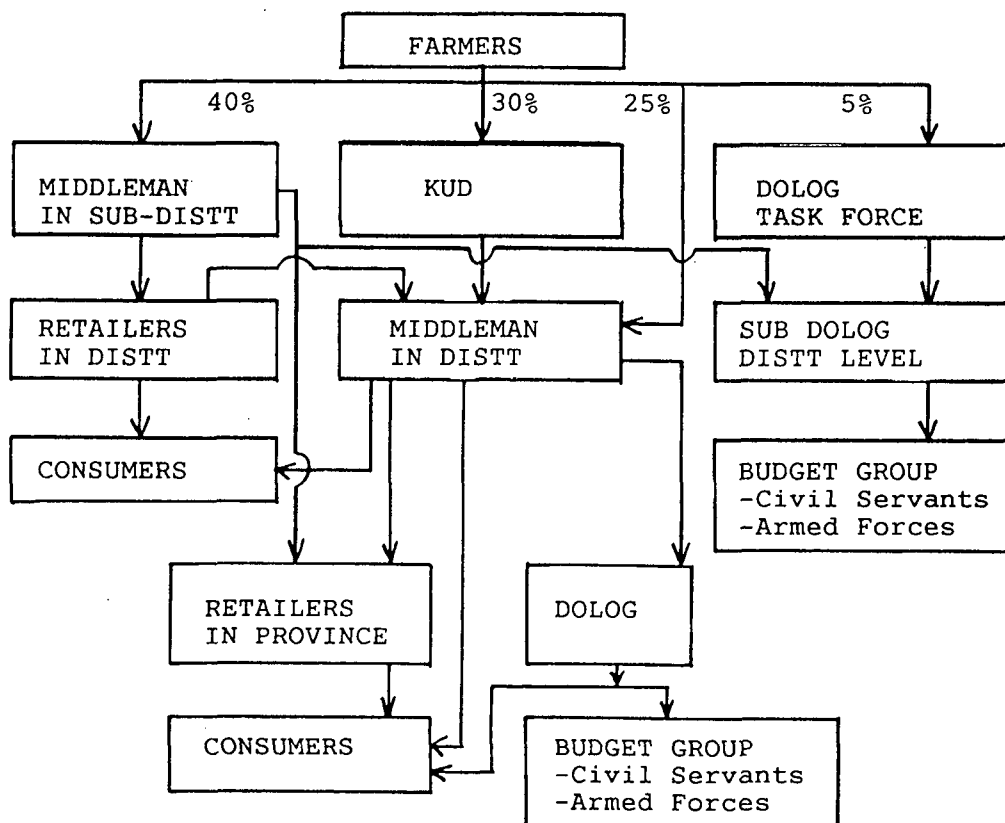
(Commodities, Form of Processing, Consumption Areas)

Production of major commodities of South Kalimantan in 1985, 1990 and 1994 has been as follows:

Particulars	1985	1990	1994	% of 1985
Paddy/Rice	875,097	982,167	1125,443	129.5
All Vegetables	11,163	21,156	25,900	236.3
All Fruits	105,969	53,426	125,477	117.9

Source: South Kalimantan in Figures, 1995, Banjarmasin

Except for paddy/rice, part of which is delivered to the Bulog, rest of the farm products are entirely consumed within the province. A Flow Chart on the distribution of rice in the province is given below:



The production of some selected vegetables in the province has been as follows:

Particulars	1985	1990	1994	% of 1985
All Vegetables	11,163	21,156	25,900	236.3
Cucumber	3,736	5,501	4,172	111.6
Chilies	785	1,982	2,841	361.9

Source: South Kalimantan in Figures, 1995, Banjarmasin

Except for rice milling there is no other agro-processing activity in the province. The rice milling capacity is given below:

Particulars	1985	1990	1994	% of 1985
KUD-Facilities	18	39	63	350.0
Non-KUD Facilities	1,178	1,338	1,535	130.3
Total Milling (Tons)	418,736	464,307	592,869	141.5

Source: South Kalimantan in Figures, 1995, Banjarmasin

The farm products are collected through the KUD network either at the initiative of the traders and their agents or at the behest of the KUD or its farmers' groups.

Some of KUD in the province are also engaged in coal mining activity and horse rash (a tall grass used for making mats) collection and processing.

Technical Level of Major Processed Farm Products by Commodities

Rice is the major farm product followed by vegetables and some cash crops. Rice is distributed in the open market and to the national food-stock (Bulog). Vegetables are consumed in the local market. Cash crops are collected by private traders and some through the KUD network. There is some orange production which is collected by the KUD and shipped to Jakarta and other parts of Java. There is no agro-processing industry within the cooperative sector. Milk production is insignificant, and whatever is produced is consumed locally.

There is some production of poultry and livestock in the province. The provincial government has declared the development of broiler as one of the "strategy commodities", as seen in the table below:

Particulars	1985	1990	1994	% of 1985
Local Hen Eggs (T)	1,669	1,840	2,033	121.8
Broilers (Nos)	1776,025	3764,620	4163,603	234.4
Local Chicks (No)	2468,625	2994,325	5414,641	219.3
Milk (Lt)	35,500	31,614	77,760	216.6
Beef (Tons)	-	2,607	2,525	96.8

Source: South Kalimantan in Figures, 1995, Banjarmasin

Major Agro-Processing Business Entities, Volume of Production and Facilities

No processing of poultry is undertaken in the province in the cooperative sector, except that they help procure the raw material including eggs and ship it to the consumer centres of Java and Bali through traders. Some slaughtering of cattle takes place in the province mostly in the government-operated slaughter houses. On beef slaughtering the government holds 84% of share, 16% by individuals (in 1994, government slaughter houses handled 13,579 heads and the individuals handled 2,567 heads).

In 1993, the following was the slaughtering activity in the province:

Particulars	No. Slaughtered	Meat Production (kg)
Beef Cattle	13,985	2,706,346
Buffalo	1,664	378,400
Goat	164	152,570
Sheep	63	9,020
Pig	1,397	125,450

Marketing Area of Major Farm Products, Distribution System

Major marketing destinations of farm products from South Kalimantan have been Bali and Java. Cash crops, vegetables and fruits generally move into Java Island.

Business Customs and Its Practice (Pricing, Accounting Settlement)

These practices are more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability. The terms are generally cash upon delivery of goods. However, for larger values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be enumerated as under:

Rice: The procurement is under the government programme. The procurement price is fixed by the government. The farmers sell their paddy/rice to the KUD against the fixed price. The KUD pays the farmers in cash and rarely through their accounts in the cooperative. The surplus paddy/rice is sold by the farmer in the open market, generally to the trader who comes to his house with cash in hand. In this case the terms are usually cash, and in many cases, a token advance payment is also made to the farmers for the next crop.

Vegetables: The transactions are usually cash and carry from the road-head. In the case of farmer bringing the crop to the open market, he returns home with cash in hand. The KUD in the province do not deal in vegetable business. The transactions are

between the KT/households and the traders. In some cases the KUD organises contacts between the traders and the farmers.

Cash Crops: Except for clove, all transactions are on cash-and-carry basis.

Poultry: Generally terms are cash upon collection from the producer. The middleman, in turn, either sells the commodity on cash terms to the retailer or on payment-after-sale basis;

Contracted Business: Where the KUD are engaged in coal mining, they receive the delivery fee from the coal contractors. For some of the KUD this business is the profit centre.

FINDINGS OF COMMISSIONED SURVEY-II

ACTUAL SITUATION OF AGRICULTURISTS AND THEIR DEMANDS

Situation of Holdings of Farm Machinery and Facilities

The survey covered 60 farm households from the area of operation of three KUDs in South Kalimantan (KUD Harapan Pertama, KUD Tuntung Pandang and KUD Hidup Baru). Major production of the area has been paddy/rice and some vegetables and fruits. On an average, income of a farm household from paddy/rice has been 83% of the gross agricultural income. The production expenses of a farm household, on an average, have been 41.6% of the gross agricultural income, leaving 58.4% as the net agricultural income. The investment of the farmers in agricultural implements have not been significant. The highest concentration of farm machines and equipment has been the KUD Hidup Baru area of operation.

A break-up of the farm machines available with the 60 farm households is as follows: Fan mills-30 units; Containers-23 units; Threshers-22 units; Comb Threshers-22 units; Hand sprayers-10 units; 4-wheel tractor-01 unit; 2-wheel tractor-01 unit; Carts-03 units.

The farmers also possessed, on an average, 22m² of farm produce storage, 2.2m² of cattle-shed, and 9.5m² of poultry house space. The farm machines, equipment and the facilities have been rather traditional, and are the minimum required for cultivation of paddy and vegetables.

The farmers hold, on an average, 3-4 heads of beef cattle, 13-14 pigs, 210 of local chicken and 3-4 ducks. The highest concentration of cattle and poultry has been among the households of the KUD Tuntung Pandang area of operation.

Measures for Obtaining Production/Consumer Goods **(Situation of Using KUD)**

On an average, the gross agricultural income of a household constitutes 78.3% of the total income. (see the table below):

**Break-Up (Percentage) of Agricultural Income of
Farm Households : 3 KUD Areas in South Kalimantan**

Source of Income	HARAPAN	TUNGTUNG	HIDUP BARU	Av. %
Rice	85.0	75.9	88.0	83.0
Livestock/Dairy	-	2.8	-	-
Fruits & Veg.	7.0	16.2	12.0	11.6
Cash Crops	8.0	0.6	-	-
Other income	-	-	-	-

41.6% of the gross agricultural income is spent on production-related expenses. The breakdown of the agricultural income is as follows: 83% is derived from paddy/rice, and 11.6% from the vegetables and fruits cultivation. The highest income-generating sector has been paddy/rice.

The breakdown of household expenses is as follows: on an average 60% goes towards food expenses; 13% clothing; 12% housing; 6% education; 5% ceremonial activities; and 4% towards other expenses. (see table below):

Break-Up (Percentage) of Household Expenses

Expenses	HARAPAN	TUNGTUNG	HIDUP BARU	Av. %
Food	51.0	63.0	67.0	60.0
Clothing	12.0	16.0	12.0	13.0
Housing	12.0	9.0	17.0	12.0
Education	5.0	9.0	5.0	6.0
Ceremonies	12.0	2.0	3.0	5.0
Others	7.0	3.0	2.0	4.0

Households have been making use of their KUDs, to some extent, to procure their production and consumer needs as well as for sale of their products. 60% of the farm households purchased their fertilizer and farm chemicals requirements from the retail shops and TPKs of their KUD. 6.6% purchased their farm machines and implements, 31.6% food requirements and 21.6% clothing from the KUD. Other purchases made included: fish and paddy seeds.

**Merchandise Ratio and Marketing Methods of Farm Products
(Situation of Using KUD)**

Nearly all the farm households used their KUDs to market their farm products, in this case, paddy/rice, 66.6%. Vegetables and fruits were sold by them in the open market.

None of the households or any of their KUDs possessed any grading, packaging and cold storage/warehousing facilities. The KUDs, however, operate outlets (kiosks) from which the farmers purchase their agricultural inputs and implements, but the range has been limited. Members have suggested their renovations and expansion (55-57%), too far a location (33%), range of items

available was limited.

Intention to Introduce Farm Machinery and Facilities

Since the main occupation and earning source of the farm households has been paddy/rice and vegetable & fruits cultivation, the emphasis on anticipated mechanization has been on the following: Threshing (57%), rice transplanting (26.6%), tilling (25%), transportation (23.3%), harvesting (20%). The table below summarises the intentions of the farm households:

Farm Households' Intention to Mechanise Farm Operations

Intention to Mechanise	HARAPAN	TUNGTUNG	HIDUP BARU	Responses Received	Av. %
Tilling	3	7	5	15/60	25.0
Rice Transplanting	1	8	7	16/60	26.6
Harvesting	3	3	6	12/60	20.0
Threshing	16	10	8	34/60	56.6
Drying	--	2	2	04/60	6.6
Transportation	9	2	3	14/60	23.3
Feeding Machines	1	1	-	02/60	3.3
Milking	-	-	-	--	--
Others	-	-	-	--	--

The farm households have given highest priority to threshing as a factor for mechanisation followed by rice transplanting and tilling.

Evaluation and Demand for Business Activities (Purchasing, marketing, processing, joint shipment, joint-use facilities, terms of loans, farm guidance, better-living guidance and others)

The farm households have indicated that purchasing and marketing activities, equipments including the RMUs were inadequate and needed either renovations or upgrading. (see table below):

Expectations of the Farm Households from their KUD

Expectations	Average %
-Upgrading Kiosks and Waserda	83.0
-Kiosks: Expansion of Items Range	57.0
-Waserda: Expansion of Items Range	60.0
-Establishing Joint Purchasing	26.6
-Establishing Joint Marketing	26.6
-Establishing Joint-use Facilities	92.0
-Renovate & Expand Warehousing Capacity	52.3
-Improve/Expand Assembly Hall	93.3
-Expand Loan Variety	88.3
-Increase Existing Credit Limits	88.3
-Increase Farm Production Guidance	48.3
-Increase Fertilizer Guidance	41.6

-Increase Guidance on Grading & Packaging	...	46.6
-Increase Better-Living Guidance	...	20.6

Kiosks and retail shops were too small and did not have enough range of merchandise (83%), assembly halls for community use were either not available or were too small (93.3%), transport facilities utilization fee was too high and were also inadequate (56.6%), TPKs were too small and did not have variety of goods and farm inputs (57%), joint purchasing and joint marketing (26.6%), joint use facilities (92%). Although getting a loan was comparatively easy (86%), its variety and credit limit should increase (88.3%). 48.3% wanted more farm production guidance, 41.6% more on guidance on fertilizer, 46.6% wanted guidance on grading and packaging, and 20.6% on better-living guidance.

HAMPERING FACTORS AND POSSIBILITIES FOR AN INTEGRATED DEVELOPMENT OF KUD

Hampering Factors: Marketing Business

The following hampering factors were observed:

- 01 Lack of understanding and acceptance of joint marketing system among the KUD and secondary level organisations especially on rice, corn and cassava;
- 02 Serious lack of capital;
- 03 Disadvantageous location of KUD for access to market;
- 04 Serious lack of warehousing, transportation and other utilisation facilities;
- 05 Farm planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-charge of farm guidance;
- 06 Due to outdated and low capacity rice milling units, KUD often fail to meet the Bulog quality standards for rice procurement;
- 07 The quality of rice processed is low;
- 08 Value addition is weak due to lack of technology;
- 09 Lack of business relations among KUD and secondary organisations.

Hampering Factors: Purchasing Business

The following hampering factors have been noticed:

- 01 Lack of understanding and acceptance of joint purchasing

system;

- 02 Lack of capital;
- 03 Due to inadequate space and lack of capital, supply of farm inputs and consumer goods at waserdas and Cooperative Service Place (TPK/kiosks), are often low;
- 04 Serious shortage of warehousing, transportation, processing and other utilisation facilities;
- 05 Lack of information because of isolated location of KUD;
- 06 Farm planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-charge of farm guidance;
- 07 Lack of supply of quality seeds;
- 08 Lack of business relations among KUD and with secondary level organisations;

Possibilities:

Marketing Business

In order to assist the farmer-members to obtain higher incomes from their marketing with their KUD, the following possibilities exist:

- 01 The farmers in the province produce paddy, corn, cassava, soybeans and other cash crops like coconut, rubber, cloves. In order to facilitate marketing of these products it is possible to set up joint marketing and joint-use facilities to obtain higher income. These facilities may include processing, grading, packaging and shipment etc.;
- 02 The movement of paddy/rice is hampered because of lack of transport equipment. It is possible for the KUD to provide additional trucks, motor boats to facilitate marketing of such products;
- 03 With a view to further develop marketing activities, it is possible to enhance orientation and training of handling managers and key members in handling specific products e.g., coconut with leading concerned industry to understand the needs of the processors and to conform to their requirements;
- 04 With a view to overcome the shortage of capital, it is possible for the KUD to enter into joint venture arrangements with private enterprises on joint marketing basis;
- 05 To increase extension activities to keep the KT's informed of the current market situations, standards and fixation of prices for various commodities and how to qualify to

achieve these set standards;

Possibilities:

Purchasing Business

In order to satisfy the purchasing needs of the farmer-members and to increase the purchasing business of the KUD in South Kalimantan, the following possibilities exist:

- 01 KUD maintain several sales points e.g., waserdas and TPK. The number and range of merchandise, esp. fertiliser, is low. It is possible to expand purchasing business by increasing their number and merchandise range;
- 02 The movement of gravel/lime stone and fertiliser is hampered because of lack of transport equipment. It is possible for the KUD to provide additional trucks and motor boats to improve this business;
- 03 With a view to enhance supply of and services, it is possible to adopt joint purchasing concept. KUD management and members need information and training on joint purchasing concept and develop a business and information network with Puskud and wholesale agents and manufacturers;
- 04 It is possible to tap various sources (external and domestic) to obtain higher credit and financial support to members to obtain timely and sufficient quantities of inputs;
- 05 There is a need for farm mechanisation. It is possible for the KUD to establish at the district level joint-use facilities for supplies, repairs and maintenance of farm machines;
- 06 Farmers need information, knowledge and skills on technical aspects. It is possible to establish special training programmes/centre at the district level for the KUD employees to follow technical aspects of farm technology and farm business.

OUTLINE OF THE MASTER PLAN

Suggested Directions to Expand KUD Business

Purchasing Business

Establishment of Purchasing Business Method such as Joint Procurement

- 01 In order to maintain a steady and timely supply of farm inputs and at reasonable prices in South Kalimantan, it is necessary that a joint procurement system is established by the KUD at the district level and by Puskud at the provincial level;

02 A comprehensive farm production plan be developed by the farmer-members with the full involvement of the KUD and the KTs with the following objectives in view:

- Estimated production of each commodity (rice, corn, soybeans, poultry, cassava);
- Estimated needs of fertiliser, seeds, farm machines and implements, and guidance with a time-frame; and
- Estimated credit required.

03 KUD and/or secondary level organisations to establish joint-use facilities like auto-workshops at the district level for repairs and maintenance of farm machines and agricultural implements;

04 KUD to establish members' accounts.

Improvement of Purchasing Outlets

KUD to increase the number of TPK/waserda, and quality and range of merchandise and services;

Obtaining Contracted Buyers

01 KUD to establish a joint-purchasing system in feed;

02 The KUD, in association with secondary level business organisations, could help negotiate long-term agreements with the buyers.

Marketing Business

Organising Producers' Groups (including adoption of new commodities to be promoted)

01 To adopt joint marketing method;

02 To increase the quality of farmers' produce, special farmers groups e.g., paddy, orange growers' groups may be organised;

03 Farmers should diversify farm products e.g., cash crops, fruits (esp oranges) and vegetables, coconut;

04 Emphasis be laid on rearing poultry;

Establishment of Marketing Business Systems such as Shipment Control, Pooling Calculations

01 KUD to produce poultry-feed by using corn, cassava and rice bran for supply to the farmers;

02 Increase transportation facilities e.g., trucks and motor boats for movement of raw material and farmers products;

- 03 KUD to initiate and establish members' accounts through which members' accounts with the KUD are settled, providing thereby also a scope for increasing members' savings.
- 04 KUD to establish stock point and collection facilities to stabilise market and supply needs and prices.

Provision of Information on Prices to Members

KUD in association with Mandiri Inti and Puskud, to develop a market information system by using radio broadcasts.

Obtaining Contracted Buyers

Long-term contracts be developed with local processors to ensure a constant marketing of farm produce.

Agro-Processing Business

Improvement of Rice Milling Technology

- Improve and replace existing rice milling facilities including construction of new drying floors and expanding warehousing capacities;

Improvement of Storage and Processing Technology of Farm Products and Practices

The present level of processing, warehousing and transportation is very low in the surveyed districts of South Kalimantan. It is, therefore, necessary to:

- 01 Provide financial and technical assistance through no-interest/low interest soft loans, and equipment from external/domestic sources to KUD to set up and improve these facilities;
- 02 Overcome the shortage of funds, adoption of joint capital concept by a few neighbouring KUD with the assistance and experience of KUD Mandiri Inti;
- 03 Provide guidance to farmers in improving the quality and quantity of their products, especially, rice, corn, livestock.

Rationalisation of Management of Relating Facilities

- 01 Establish system for management of rice mills, cattle-feed manufacture joint use facilities by creating suitable training programmes at district and KUD levels;
- 02 KUD to provide better-living and farm management extension;
- 03 Constant training of KUD employees and key members in business management.

Obtaining Contracted Buyers

KUD to seek joint business ventures with private industry to improve their business performance.

III GENERAL REVIEW OF THE PROVINCIAL SITUATION [SOUTH KALIMANTAN]

1. Village Society and Economy

Village Customs/Ceremonies and Social Life in South Kalimantan: The population in the Province of South Kalimantan is 2,680,398 according to the population registration in the middle of 1994. The total area is around 36,985.5 square km and the density of the population is 72/square km. South Kalimantan has succeeded to develop trade sectors but still weak in industrial sectors. Generally speaking, it is resources-oriented because there are still many natural resources which are not yet fully exploited in the South Kalimantan.

Commonly, the South Kalimantan society could be regarded as "Agricultural Society". In this direction, we can see obviously their way of life where the element of solidarity is very strong among them. They are very candid and feel easy to discuss everything about their life. Another characteristic in the South Kalimantan society are: relationship to the nature is very close, conservative on the way of life and high solidarity with the members who are suffering. Traditional influence is very dominant to maintain social stability and social cohesiveness.

Most of the population in South Kalimantan stayed in the village, with relatively lower living standard, education and health. Although most of them are farmers, especially in the tidal area, and some living on the swamp area, all of them are permanent farmers (just a few as shifting cultivators). Besides paddy cultivation, fishery and livestock husbandry are also popular among the people living in the village. About 60% farm households do not have their own land. Due to such circumstances, many village people do not pay much attention to their farm management.

Another characteristic of the South Kalimantan society is: they have a trend to go out from village during hot season. Usually most of the young generation leave their villages and go to the urban areas, especially in the capital city, Banjarmasin. They try to get seasonal job in the city, and in the end of hot season they come back again to village. However, some of them continue to stay in the city.

There are traditional traders who will make business with high profit, for example, if the rubber prices go high, all of them move their business to handle rubber. When rattan business booms, most of them try to make a business regarding rattan. This situation will not be advantageous to agricultural sector because when their business goes down, they do not have anything to do with their farms. This explains that not much of farming has developed in the province.

The other interesting social life in the villages of South Kalimantan is: when finishing harvest, they have a trend to be the consumers. They buy a lot of secondary goods such as TV, radio etc. If such goods do not suit with their social economy, they sell again at the end of hot season with lower price.

Based on the above evidence, almost all the villages have problems such as human resources, especially among those with high education. If they have a good education, they have a trend to leave their villages because they think farmer cannot have a good life. This is one of the reasons why they go to the cities.

To develop human resources in the village is the most important besides developing their income and health conditions. For example, farmers in South Kalimantan had contributed successfully to achieve surplus in rice production since 1984 until now, but their standards of life had not much improved. Their real income does not balance with a favourable life condition, so most of them still remain poor. Village society is subsidy population in urban area. At present, farmers need improvement of their living standards, social life, education, housing and healthy circumstances. Also they are thinking how to improve their real income through integrated programmes.

There are some traditional ceremonies in the villages of South Kalimantan, such as "bathing" (mandi-mandi) for women who will have wedding ceremony. It is observed that most of wedding ceremonies have been carried out after harvest season because they can get much money after harvesting compared with before harvesting.

Besides traditional ceremonies above mentioned, there are some more ceremonies which are closely connected with religion, especially Muslim religion. At least two times in a year such religious ceremonies are held to which farmers invite their neighbours and relatives for joint celebrations.

Generally speaking, religion has very strong influence in the life of village society in South Kalimantan. Almost all their activities are based on Muslim religion because about 98% of the population in the province is Muslim.

Other characteristics of village society in South Kalimantan are briefly described as follows:

- The life based on the Muslim religion.
- Deep trust in the people from outside of village if the new comer is intelligent and polite.
- Very high level of solidarity.
- Highly respectful to aged people.

The data regarding population by age group and educational status obtained from the statistic office in the province is summarized in the following Table:

Age Group	No/Not study yet	Level of education			No more Study	Total
		Primary school	Junior high school	Senior High School		
5 - 9	114.552	215.970	-	-	2.117	332.639
10-14	3.694	234.536	68.798	-	45.182	352.210
15-19	2.865	3.657	56.034	71.422	181.293	315.271
20-29	8.337	-	-	22.192	459.860	490.337
30-39	22.749	-	-	1.001	413.832	437.852
40-49	29.877	-	-	216	249.328	279.421
50-59	43.005	-	-	-	131.195	174.200
60-0p	59.044	-	-	-	75.124	134.168
Grand Total	284.123	454.163	124.832	94.779	1.557.931	2.515.828

Source : statistical office of Kal-Sel 1994

It is apparent that still many people have not receive education yet which amounts to 284,123 persons. This is equivalent to 11.3% of the total population. Especially, many of the compulsory education age from 5 to 14 years old generation do not receive education yet which amounts to 118,246 children, an equivalent of 17.27% of the same age group.

Economy: Generally speaking, almost all the economic activities are being allowed in the province. The following Table shows about various types of commodities and its legal bases in the province.

Commodities	Organisation to Handle	Legal Bases
1. Sugar	KUD and private company	Ministry decree
2. Fertilizer license	KUD and private company	Distributor
3. Cloves	KUD	Private company
4. Sugar cane intensification	KUD and sugar factory	Ministry decree
5. Coal	KUD and private company	Ministry decree

Sugar commodity is distributed by National Food Stock Agency (Bulog), but its marketing is carried out by KUD and private company. For the distribution of sugar, KUD have been designated by the Ministry of Cooperative and Small Scale Enterprises. A private company is selected by Bulog as a wholesaler. Retailing can be done by anyone.

Fertilizer commodity has been handled by the government. The government has selected PT. Pupuk Sriwijaya, which is also one of the producers, as a single distributor, and KUD and a private company as the second distributors.

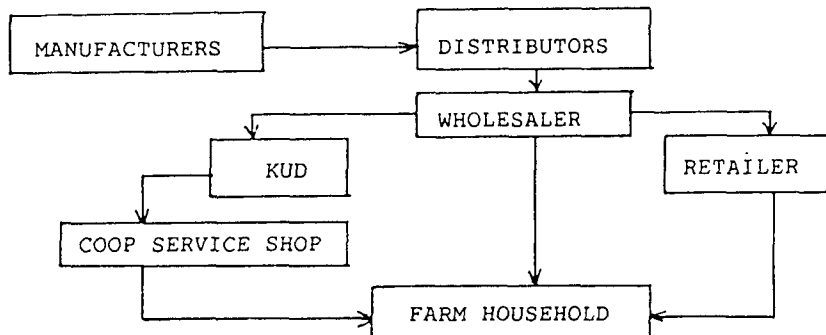
As for clove commodity marketing, the government has selected a private company, BPPC (Badan Penyangga dan Pemasaran Cengkeh) as supply buffer of clove at the national level, and KUD is selected as the only buyer from farmers. In this case, KUD has to sell all the clove to BPPC. Procurement of clove is coordinated by the Inkud through the network of Puskuds and the KUD. KUD receive a fee for procurement and handling of cloves. The kretek cigarette manufacturers buy all their cloves requirements from the BPPC.

Sugarcane intensification has been carried out in the estate sector. First of all, in the field, sugarcane is handled by KUD, and, secondly a cooperation system has been developed between the KUD and the sugarcane processing factories.

A small scale of coal mining is carried out by KUD after obtaining permission from the Ministry of Mining and Energy.

2. Agricultural Production Materials

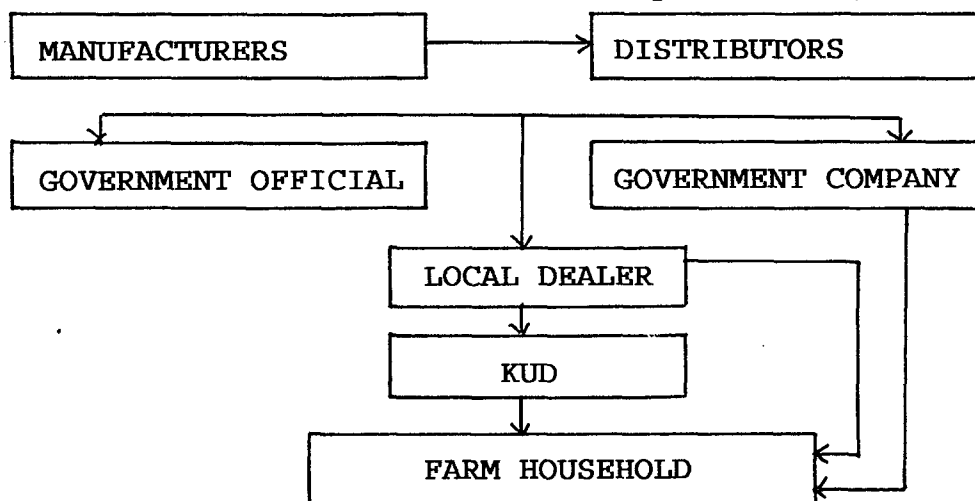
A Flow chart on Distribution of chemical fertiliser and agricultural chemical is given below:



Vinyl Sheet/Plastics: The distribution of these material follows almost the same method as for the distribution of agricultural

chemicals, as given above.

Agricultural Machineries: The flow chart below explains the distribution of farm machines in the province:



Cattle-feed: Livestock husbandry is not so significant in the province except local chicken and duck. The provincial government has declared the development of broiler as one the "strategy commodities". There is no cattle-feed milling facility in the province. There is some beef-cattle slaughtering house owned 84% share by the government and 16% by individuals but no frozen truck available in the province.

Type of Dealers at Provincial, Kabupaten level including KUD

Agricultural Chemicals: In the provincial level, wholesaler and dealers sell their commodities directly to retailers and KUD on cash basis. Besides, wholesaler can sell directly to farm household in the provincial level. In this case, farmers come to the capital city buying by themselves. Accordingly, wholesaler do not need to open the shop in Kabupaten or district level.

In the kabupaten/district level, there are no dealers but already handled agricultural chemicals by KUD and retailers.

Vinyl Sheet/Plastics: The requirement of vinyl sheet plastics in the South Kalimantan is very limited, actually almost negligible. Farmers are not accustomed to use vinyl sheet/ plastics at their farm. KUD has almost nothing for the transaction.

Cattle-feed: The dealers distribute animal-feed to KUD and retailers in terms of cash upon delivery in the provincial level. KUD and retailers sell animal-feed directly to the farm households.

Provincial Policy on Supply of Agricultural Materials: Agricultural policy in Indonesia is to develop agri-business based on agricultural products. This is the strategy for agricultural development. Agri-business characteristics are to increase efficiency and make it comparatively advantageous for

utilizing agricultural resources and ultimately contribute to develop village economy.

To support the strategy, the government has to develop relationship between farmers and private companies in a mutually profitable and advantageous situation in the following sectors:

Seed/Seedling Supply: The supply of seeds has to fulfil the provincial requirement. If not enough it should be imported from outside of South Kalimantan, such as from Java. To fulfil the requirement the provincial government develop a group or individual to allocate "Penangkar Benih" (a person who has much experience and knowledge regarding good seed selection) in every Kabupaten. When realized, each farmer can find seed/seedling easily with lower price and of good quality. The quality of "Penangkar Benih" shall be improved through; short course of study to other province, then hopefully, their knowledge could be increased.

In addition to the above, the provincial government also support private companies to be involved in seed supply business. So far, very few private companies have been involved in seed supply.

At present, no KUD is involved directly in supplying seed in a large quantity. The agricultural department of the provincial government decrees about certification on seed, as is well known by "Green Mark Seed" which is produced by Balai Penangkaran dan Pensertificasian Benih" (BSPB). Every province has established the BSPB in accordance with a request of the central government. Only 27% farmers are known to have been using the green mark seeds. The provincial government now encourages farmers to use green mark seed and to increase yield of agricultural products.

Fertilizer supply: Fertilizer supply in the province is done in accordance with the central government policy, because the production and distribution system has already been outlined by the Ministry of Industry and Trade (MIT). Recently, the MIT announced through its decision letter Number: 38/MPP/Kep/3/1996 dated March 6, 1996 the procedures regarding availability and supply of fertilizer for agricultural sector. The contents of the decision letter is as follows:

- KUD, cooperatives, government company and private company could be the suppliers which is decreed by PT Pupuk Sriwijaya (PT Pusri).
- The fertilizer for agriculture only shall be supplied by KUD as a retailer which is decreed by PT. Pupuk Sriwijaya.

Agricultural Machineries Supply: There is some policy settled by the provincial office of the Ministry of Cooperative for the supply of agricultural machineries. That is the soft loan credit to purchase tractors provided through PT Pertamina. Proposals for 16 tractors have accordingly been submitted to the PT Pertamina.

3. Agricultural Production and Its Distribution

Agricultural Production

Livestock Production is given in the following table:

Particulars	1985	1990	1994	% of 1985
Local Hen Eggs (T)	1,669	1,840	2,033	121.8
Broilers (Nos)	1776,025	3764,620	4163,603	234.4
Local Chicks (No)	2468,625	2994,325	5414,641	219.3
Milk (Lt)	35,500	31,614	77,760	216.6
Beef (Tons)	-	2,607	2,525	96.8

Source: South Kalimantan in Figures, 1995, Banjarmasin

Vegetables Production: The following table shows production of some selected vegetables in the province. The production quantity is still very small compared with that of other provinces:

Particulars	1985	1990	1994	% of 1985
All Vegetables	11,163	21,156	25,900	236.3
Cucumber	3,736	5,501	4,172	111.6
Chilies	785	1,982	2,841	361.9

Source: South Kalimantan in Figures, 1995, Banjarmasin

Fruits Production: Fruits production is not so dominant in the province except Rambutan and oranges.

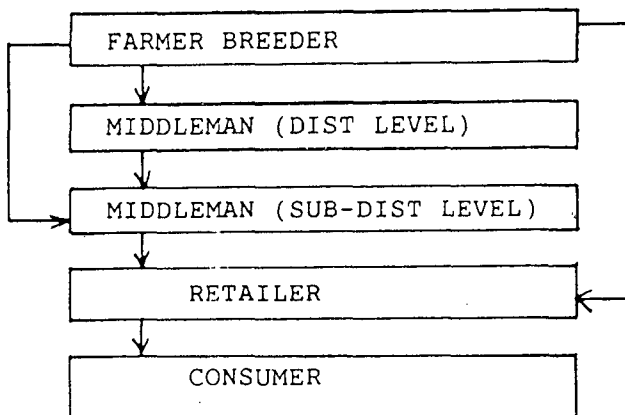
Paddy Production: The table below shows the production of paddy in the province:

Particulars	1985	1990	1994	% of 1985
Paddy/Rice	875,097	982,167	1125,443	128.5
All Vegetables	11,163	21,156	25,900	236.3
All Fruits	105,969	53,426	125,477	117.9

Source: South Kalimantan in Figures, 1995, Banjarmasin

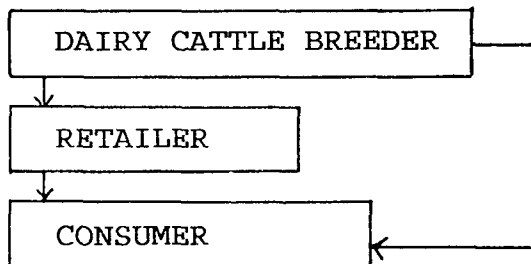
The Flow of Commodities for Distribution

Egg from Local Chicken: Generally speaking, eggs from local chicken are sold by farmers (breeders) without any processing at all. The egg is very famous for its good taste in the provincial society. The price is relatively high as compared with other varieties of eggs. The distribution pattern is as follows:



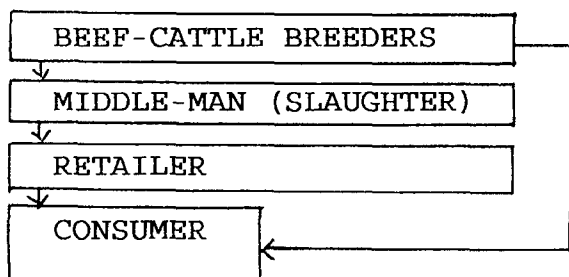
Broiler: Broiler is not common for farmers, because feeding is not so efficient to manage due to the small scale of this business. Most broilers are fed by private companies and individuals. Their feeding location is relatively close to the city which this makes feeding more efficient. Usually, the broiler is slaughtered by the middleman in the Kabupaten or by the retailer in the city. The middleman functions not only as a slaughter but also as a collector.

Milk: Most of milk is delivered to the consumers directly. Marketing of milk is relatively short as compared with other commodities. The retailer functions for pasteurization. The distribution pattern is as follows:

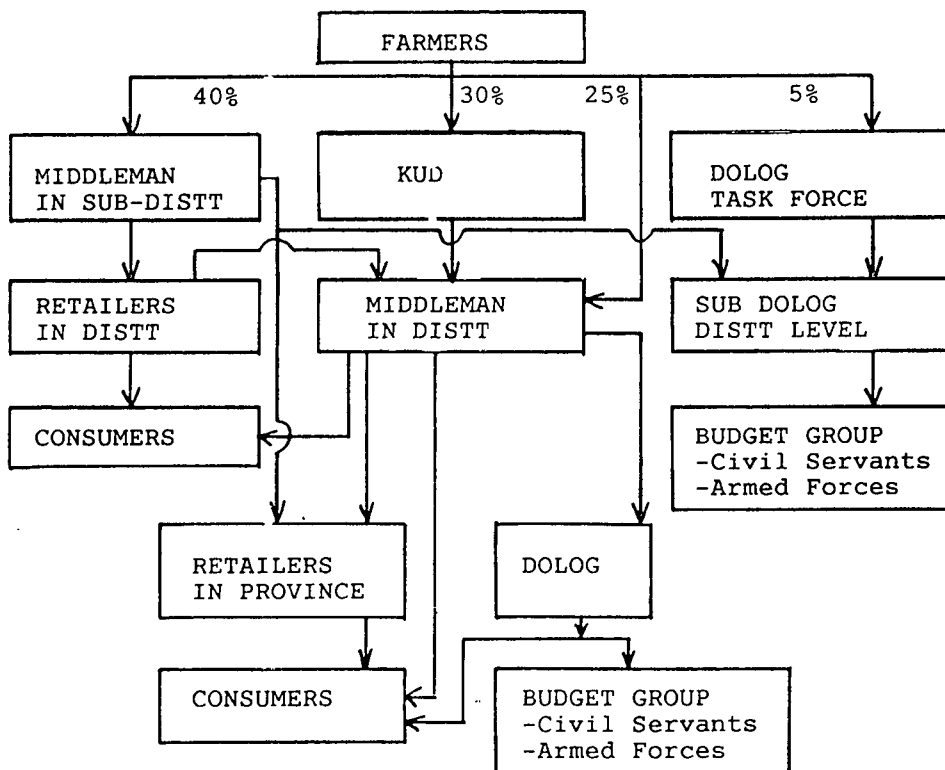


Fruits: There is no factory to process fruits. Most fruits are sold as fresh. The prices fluctuate very often - in harvest season price is very low and in off season the price is very high. Middleman functions as a collector in district and Kabupaten. The retailer functions as a grader before selling the product to the consumer.

Beef: Beef is one of the most perishable commodity. There are no freezing trucks in the province. Quick marketing is very important to avoid perishable risk. Cattle-breeders sell their cattle either to the middleman, retailer or directly to the consumer. The distribution pattern is as follows:



Rice: As compared with other commodities, rice has been well-managed for processing after harvesting. Distribution and pricing are relatively stable because the government decides the floor price of rice. The distribution pattern is as follows:



- Cooperative function is to process paddy through drying, milling and storage prior to its sale to Dolog/Sub Dolog and others.
- Middleman in the district or Kabupaten function almost in the same way as cooperative except they can sell to consumer directly.
- Function of Dolog task-force is to support the floor price of rice when the price falls below the floor price.
- Sub Dolog in the Kabupaten and the Dolog in the province function as rice buffer in national stock. The Dolog also distributes rice to the civil servants and armed forces.
- The Dolog operates to stabilize the price of rice when the market price become unusually high.

Transaction Method for Agricultural Products

Generally speaking, the pricing and payments are decided by agreement between the seller and the buyer and are usually on

cash payment at delivery. Since they are not so accustomed to fix prices before selling in the province, bargaining process is very common.

Egg of Local Chicken: Eggs of local chicken are not so difficult to sell to the consumers because of good taste among the society in the province. Transaction is by cash. Although pricing depend on bargaining between sellers and buyers, the price of this egg is relatively stable. Sellers usually sell per egg and not accustomed to sell by kilogram unit. Sellers do not do any grading before selling, and all eggs are of the same price!

Broiler: All prices from the farmers to middleman, and retailers to consumers shall be paid in cash on delivery. There are two kinds of payments from middleman to the retailers. One is cash payment after selling by retailer, and another is cash payment just after delivery.

Milk: All transaction shall be paid in cash.

Vegetables: There are two kinds of payments from the farmers to the middleman. One is cash payment after sale by the middleman, and another is cash payment on delivery.

Retailer to consumer should be paid by cash.

Fruits: There are two kinds of payments from the farmers to the middle man/retailer and middleman to the retailer. One is cash payment after sale by the middleman/retailer and another is cash payment on delivery.

Beef: All transaction should be paid in cash on delivery.

Rice: The price of rice in the province is relatively stable because almost the whole year the harvesting is carried out in different area. Price has been decided between farmers and buyers and the payment is commonly by cash.

4. Types of Agro-processing, Level of Processing

There is no agro-processing industry within the cooperative sector except rice-milling. Milk production is insignificant, whatever is produced is consumed locally. The following table shows rice milling capacity in the province. Mostly their capacity is 0.5 tons/hour and has a conventional system.

JICA-JAPAN INTERNATIONAL COOPERATION AGENCY
JA/ZENCHU-CENTRAL UNION OF AGRICULTURAL COOPERATIVES-JAPAN
MINISTRY OF COOPERATIVES AND SMALL ENTERPRISES DEVELOPMENT
GOVERNMENT OF THE REPUBLIC OF INDONESIA

**STUDY ON INTEGRATED DEVELOPMENT OF RURAL COOPERATIVES-KUD
IN THE REPUBLIC OF INDONESIA 1996-1997**

ECONOMIC BUSINESS OF KUD INCLUDING AGRO-PROCESSING SECTOR

07 SOUTH SULAWESI

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07 SOUTH SULAWESI

I. SUMMARY OF FINDINGS AGRO-PROCESSING, DISTRIBUTION AND KUD SITUATION

AGRO-PROCESSING & DISTRIBUTION

Major items of farm products in South Sulawesi have been rice, cassava, corn, ground nut, sweet potato, soybean, various kinds of vegetables and fruits and cash crops e.g., coconut, coffee, cashewnut, cloves etc. Paddy production has been in the region of 3.4 million tons (1992) and 3.9 million tons (1994), 114.1% of 1992. There has been an all round increase in the production of various commodities e.g., corn 101.6% of 1992, soybean 125%, cassava (96.9%), groundnut 112.9%, potato (111.5%), red onion 126.9%, cabbage 179.4%, tomato (111.7%), cucumber 175%, durian 354.5%, papaya 129.6%, banana 173.5%, mango (154.2%), coffee/Robusta (92.8%), coffee/Arabika (125%), and cashewnut (125%). The profit centre of the province is paddy cultivation. Other important products of the province have been: cocoa, sugarcane, vanilla, cotton, tobacco, and rattan. In the province silkworms are also reared to produce natural silk.

A part of rice goes to the Bulog, while the remaining is disposed of in the local market. In the case of other crops, if there is a procurement drive by the government for any specific crops, then the distribution takes place accordingly. Otherwise, the farmers are assisted by the KUD to sell their produce. Fresh vegetables and fruits, especially banana are sold in the open market. Markissa, a local fruit, is also grown widely in the province. Wholesale traders, generally from the provincial capital, Ujung Pandang, purchase vegetables and fruits. Major rice processing takes place at the KUD level which own medium size rice milling units, drying floors, polishers, dryers and small warehouses. Large-size rice mills are in the private sector, who also cater to the needs of the open market.

All cash crops move out of the province for further processing. Groundnut, coconut and coffee is procured by the agents of processing industry for shipment to processing units within South Sulawesi or on Java Island. Whatever quantity of clove is produced in the province (8,336 tons in 1994), it is procured by the Puskud through the KUD network for the national buffer stock. Some of the agricultural products e.g., cassava chips, Markissa syrup, coffee, cocoa, cashewnut, pepper, rubber, tea, molasses and copra have been exported.

During 1994, the situation of poultry production was as follows: local chicken 9,945 tons, broilers 2,192 tons, and eggs 44,983 tons. 47.9% of the eggs were distributed outside the province. The production of poultry has increased between 1990 and 1994 -

local chicken from 8,273 to 9,945 tons (120.2%), broilers from 1,419 tons to 2,192 (154.4%) and eggs from 30,049 tons to 44,983 tons (149.6%).

There are no facilities for grading, processing, packing and shipment even for livestock, vegetables and fruits. The only processing activity for production of Markissa fruit syrup at a factory which is a joint venture established by the Puskud. A majority of all other fruits and vegetables are consumed locally, except for some shipment to Java and Bali.

As compared with 1992, the livestock situation in 1994 was not so encouraging: beef-cattle 63.5% of 1992, buffalo 59.6%, horse 74.3%, goat 67.9%, sheep 14.9%, and duck 58.3%. There were 59 government-owned slaughter houses including one in the private sector. The facilities are traditional. There were 12 units of freezer trucks in 1994. There were 6 cattle markets and 4 mini-ranches. The production of meat during 1994 was as follows: beef 8,106 tons, buffalo 4,529 tons, and pig meat 1,815 tons. A part of production is sent to Java and Bali. The remaining, a bulk of it, is consumed locally.

The only major agro-processing is paddy milling in view of the demand for cleaner rice from Bulog as well as from the open market. Rice milling units are too small and ineffective to produce quality rice. There were 12,849 paddy processors and 5,975 rice milling units in 1994 in KUD and non-KUD sectors. KUD have not yet introduced any branding of rice. The facilities within the KUD sector are small. Large-sized mills are in the private sector.

There were 213 other processing units in the province in 1994 e.g., sugar processing-2, cotton processing-2, rubber processing-4, coffee-seed processing-155, cocoa processing-41 and others. South Sulawesi coffee, especially from Tanah Toraja, is in high demand in overseas markets. The Puskud undertakes a partial processing of coffee and executes orders received from abroad, especially from Japan.

The Puskud Hasanuddin has been one of the active business federations. It has been active in various business activities e.g., agro-processing, participation in subsidiary companies, export of commodities especially gaplek (cassava chips), coffee, cocoa, and fish to Holland, Singapore, Japan and Germany. It operates rice milling units, coffee and cassava processing units, warehouses and transportation equipment. It has joint venture with PT Markissa Segar to produce markissa syrup for local and foreign markets.

OVERVIEW OF KUD: Economic Business

Outside Java, the KUD in South Sulawesi, are reported to be quite active not only in rice procurement but also in marketing and supply business. To meet the needs of the farmer-members, the KUD network has met the input needs to some extent in the province.

The government programmes which have been assigned to the KUD, further reinforce their business operations. The government programmes include the supply of essential commodities - nine commodities have been listed e.g., rice, salted fish, cooking oil, sugar, salt, kerosene oil, washing soap, textiles of daily use, and some batik material. The members, therefore, not only purchase their input needs through the KUD but also their consumption needs.

The total turnover of KUD in South Sulawesi during 1992 was Rp 207,407 million which rose to Rp 339,329 million in 1995 (163.7%). Similarly, the total surplus (SHU) which in 1992 was Rp 1,871 million rose to Rp 5,192 million in 1995 (277.4%).

In addition to paddy/rice procurement and marketing, fertiliser distribution is one of the major economic business of KUD in the province. During the year 1993, nearly 8.3% of the national chemical fertiliser distribution took place in the province. Chemical fertilisers are produced by several State-owned fertiliser companies but the distribution is coordinated by one of them, the PT Pusri. The fertiliser is distributed through various channels e.g., the Puskuds, KUD, Persero Niaga, private channels and PT Pertani. The allocations for the fertiliser supply to the provinces is based on a formula. For 1992-93, the allocations made were: 0.1% through the Puskuds, 80.3% through the KUD, 3.2% through Persero Niaga and 8.8% through the PT Pertani. As compared with the distribution of 3.7 million tons of urea in 1993 in the country through the KUD, the use in the province was 174,628 tons (4.7%). However, there was an increase in the distribution of urea in 1993 as compared with the year 1990 (253%). While in 1990 a total of 111,866 tons of all types of fertilisers was distributed by 258 KUD, it was 212,943 tons (190.1%) by 228 KUD in 1995. The number of KUD supplying chemical fertiliser had declined. The prices of urea are determined by the government from time to time. For the purchase of urea for paddy cultivation, the government provides credit channels to the farmers through the KUD network. The KUD receive a fee for the distribution of fertiliser/farm credit, which, in fact, forms a substantial portion of their working capital.

The distribution of farm chemicals is undertaken by the KUD purely on individual basis since these are now available in the open market. While the main concentrates of farm chemicals are imported, the formulations are done in the country by various companies according to the local requirements. In 1990 these chemicals were distributed by 115 KUD, and in 1993 only 28 KUD dealt in these commodities.

Marketing of fertiliser by surveyed KUD indicate that this business has been a prominent one. An analysis of 1995 fertiliser marketing business of 5 KUD as compared with their total business volume is as follows: KUD Semangat 41.9%, Siptuwo 43.5%, Matutu 10.9%, Bilopa 12.3%, and Lamasi 5.1%. On an average, fertiliser business is 22.7% of the business volume. The analysis of commissions earned by the 5 KUD from sales over purchases during the year 1995 is as follows: KUD Semangat 1.5%, Siptuwo 2.8%,

Matutu 1.9%, Bilopa 5.6% and Lamasi 2.9%. The Puskud is not engaged in fertiliser business - supply or transportation.

Since the deregulation of seeds distribution, less and less KUD are undertaking this business. The distribution of paddy seeds which was 744,562 kg in 1990 went down to 178,059 kg in 1993 (23.9%), Soybean reduced from 18,500 kg to 1,000 kg, and others from 44,765 to 660 kg only. Farmers were buying their seeds requirements from the open market. Improved seeds are distributed by government agencies and private enterprises. Paddy seedlings are distributed by the State-owned company, PT Sang Hyangseri. The government also operated 55 seeds certification stations (in 1994) as to certify their quality. KUD are not engaged in seeds multiplication programmes.

The KUD help procure paddy/rice from the members for the national food stock. They try to fill the target set for each season. The members supply the maximum which they can but still the preference of the farmer remains to sell the produce in the open market at a higher price than the procurement price fixed by the government. The procurement price is determined by the government every season. KUD get credit from the government to purchase rice. While during 1988-89, 243 KUD procured a total of 141,536 tons of paddy/rice, 229 KUD in 1994-95 had procured a total of 191,837 tons (135.5%). While the procurement of paddy from the farmers was increasing, its supply to the Bulog has decreased. In South Sulawesi during 1988-89, 258 KUD had supplied a total of 273,483 tons to the Bulog, in 1994-95 the 203 KUD had supplied only 146,676 tons (only 17.0%). An analysis of paddy/rice marketing activities in 1995 of 5 KUD reveal that on an average this formed 75.8% of their total business volume e.g., KUD Semangat 107.1%, Sipatuwo 47.9%, Matutu 61.7%, Bilopa 77.2% and Lamasi 85.4%. The commission earned by these KUD from sales over purchases during 1995 was as follows: KUD Semangat 1.5%, Matutu 0.7%, Bilopa 7.6% and Lamasi 0.8%.

The production of cloves in the province has been between 8,000 - 9,000 tons per year. KUD and the Puskud have been engaged in the procurement of cloves for the BPPC -the national cloves buffer stock. The Puskud is a designated stock-holder of the buffer stock in the province. The kretek cigarette manufacturers are obliged to purchase their clove requirements only from the buffer stock. This business formed 8.2% of the total business turnover of KUD Bilopa. The Puskud, a provincial federation of 425 KUD and non-KUD, is active in cloves procurement business. Cloves business formed 62.8% of the total sales of the Puskud during 1995. The Puskud works in collaboration with the Inkud in the procurement of cloves.

For distribution of consumer goods and farm inputs, the KUD in the province operate TPK and retail outlets (waserdas). In 1995 there were 274 retail outlets. The business performance is not significant as can be seen from the sales as compared with the total turnover of 5 KUD surveyed: KUD Semangat 0.4%, and KUD Lamasi 0.1%. Similar position for Puskud for the year 1995 was: sugar 28.1%, wheat flour 1.1% and fish 0.1%. The Puskud has,

however, been engaged in the export of some of the commodities. The value of exports during 1995 of some selected commodities was as follows: Cassava chips worth US\$ 7.3 million, Markissa syrup US\$ 0.18 million, Wheat pollard US\$ 8.44 million, Coffee/Arabika US\$ 4.41 million, Coffee/Robusta 1.45 million and cocoa worth US\$ 134.1 million. The Puskud has been executing foreign orders directly and in collaboration with the Inkud. Out of the export business, if undertaken at the instance of the Inkud, the Puskud receives 60% of the value which, it also passes on to the KUD to cover the costs of procurement and initial processing. The Inkud retains 40% of the value for its own development and expansion of business.

Other KUD insignificant businesses are: milk, livestock development, poultry, cashewnut, rattan. KUD are also not engaged in the distribution and maintenance of transportation equipment and farm machines. Farmers obtain their farm machines and equipment either as a part of the loan or purchase on their own. KUD do not own any major farm machines, except for rice milling units, drying floors, polishers and some crop protection equipments.

The provincial federation of KUD, the Puskud, undertakes some business activities, mainly procurement of cloves and distribution of fertiliser and sugar. The business relationship between the two is very thin. It does not provide any business information to its affiliates.

The sources of funds for operation economic and utilisation business include: i) credit from government for procurement of paddy/rice, corn, cloves and the service charges received for disbursement of such credit; ii) distribution of subsidised wheat pollard; iii) service fee for handling telephone and electricity bills; iv) credit from enterprises for purchase of trucks and farm machines; and) surplus generated from business.

Since a majority of business operate within the government-supported programmes, the element of competition with private dealers does not exist. Rice procurement, clove procurement, fertiliser distribution, are all regulated and are consequently a secure business, leaving not much room for competition.

HAMPERING FACTORS: Economic Business

Although a majority of KUD are involved in the production, procurement and distribution of paddy/rice, yet the grading, processing and marketing has not been diversified and upgraded. KUD have been sustaining mainly on the fees and commissions received by them in implementing government programmes e.g., paddy/rice procurement, fertiliser distribution and procurement of cloves. The concepts, which can help members to market their produce better, e.g., joint marketing, joint purchasing, joint-use facilities and joint use of capital, have neither been understood nor applied. This is mainly due to lack of initiative on the part of KUD leaders and members and lack of information

and training of managers. KUD have been operating on their own without any back-up and business collaboration and support from other KUD and their business federations/partners. No significant joint ventures have been established. Lack of flow of business information, lack of guidance in farm management, planning, better-living and internal staff training are some other factors.

These can be summed up as follows: Lack of capital; lack of understanding and application of joint marketing, joint purchasing, joint-use facilities, joint-use of capital; lack of marketing access and facilities; low technology in rice handling and processing; problems of member accounts settlement; lack of farm machines and implements servicing; absence of branding; insufficient guidance on farm management, planning, and better-living; inadequate services to members; insufficient capacities for warehouses and retail outlets; lack of business information systems; and lack of business collaboration with their business federations. Although quality rice is grown in some parts of the province, no KUD has undertaken any steps to brand their products to establish credibility and identity.

POSSIBILITIES:

Economic Business

In order to increase the income levels of farmer-members, KUD need to further develop their own economic business. For this, the following possibilities exist: improve quality and quantity of paddy/rice by providing higher levels of technology in production, processing and marketing; joint ventures in processing of local fruits and cash crops e.g., markissa, coffee, cocoa, coconut etc.; establish methods of price negotiations; introduce joint marketing, purchasing and joint-use facility concepts; increase business collaborations/joint ventures with private enterprises to overcome capital shortage; establish maintenance services for transport equipments and farm machines at KUD/District levels; introduce cattle-breeding and enhance cattle-feed manufacture using local materials e.g., corn, rice bran/straw; collaborations with private enterprises to secure quality and timely supplies of consumer goods and farm inputs for retail shops and TPK; establish business information systems; introduce computerisation for business management; expand training of KUD leaders and managers in management and farm-related subjects; and expansion of member information/education activities at KUD level.

ACTIVATION MASTER PLAN:

Economic Business

Recognising the vast potentials of the KUD in the province in sectors like rice production, fertiliser consumption, production of cash crops like coffee, coconut, cloves, cocoa, and rattan, several of their programmes could be further improved to provide higher economic returns for the farmer-members. The province has been the largest contributor of rice to national food stock from outside Java. Taking advantage of the current positive support from the government for the development of the province as a main

food producer for the eastern part of Indonesia, KUD network can be activated further.

The activation plan could emphasise on the following factors: Development of collection and processing facilities for rice, coffee, cocoa and rattan through technological inputs and up-gradation of existing facilities; Intensification of poultry and livestock development programmes; Improvement and expansion of cattle-feed production using locally available raw material e.g., rice bran/straw, corn; Introduce quality branding of members' produce; Increasing numbers and quality of farm machines and their maintenance centres at KUD/District levels; Introducing basic concepts of joint marketing, joint purchasing and joint-use facilities; Establishing joint ventures; and intensification of leaders/staff training and member education activities.

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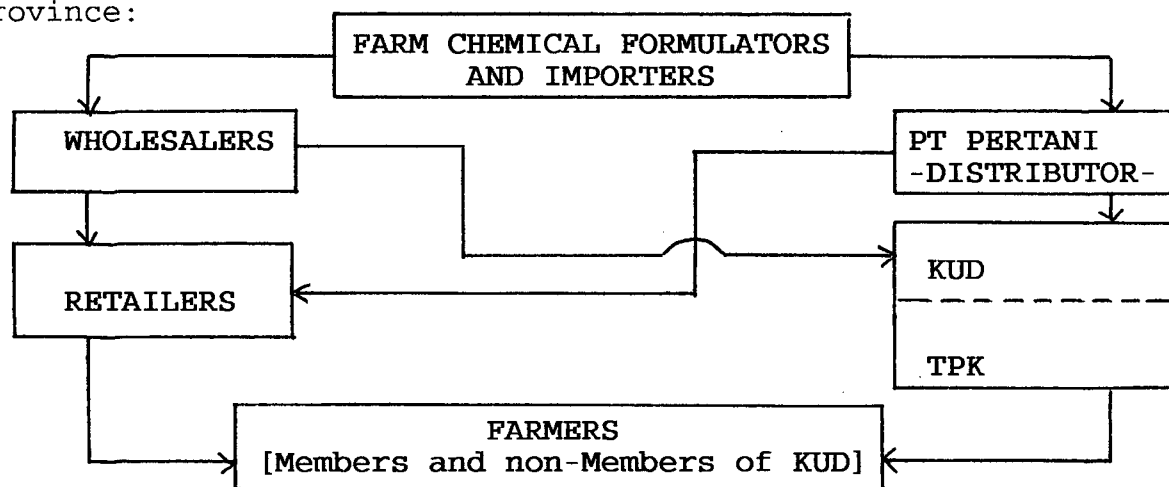
II . MAIN FINDINGS

AGRICULTURAL PRODUCTION

Distribution of Farm Input Materials

Farm input materials include chemical and bio-fertilisers, farm chemicals e.g., insecticides, pesticides, rodenticide, fungicides and herbicides etc., and the supply of improved and quality seeds generally for key crops e.g., paddy, maize, soybeans etc. Chemical fertilizer is produced by several state-owned companies but the distribution of urea is coordinated by PT Pusri. The fertilizer is distributed from company-owned warehouses which are located at kecamatan level. This network is available throughout the country. The KUD pick up their requirements from these distribution points. The KUD, in turn, distributes the fertilizer from their own warehouses or through the TPK on the basis of pre-arranged delivery schedules.

The distribution of farm chemicals is through KUD or private channels. The main producers of these farm chemicals are Bayers, Ciba, PT Petrokemia Kayaku and others. While the main concentrates are imported, the formulations are done in Indonesia according to the local conditions and requirements. The following Flow Chart explains the distribution of farm chemical in the province:



The distribution of farm inputs by KUD in South Sulawesi in the years 1990 and 1993 was as follows:

Farm Inputs	Year 1990		Year 1993	
	National	S.Sulawesi	National	S.Sulawesi
FERTILISER				
No. of KUD	3,550	258	3,461	244
Urea (Tons)	1706,547	68,937	3737,760	174,628
All Others (Tons)*	1341,910	41,361	2293,965	77,544
PPC & ZPT (lt)	-	-	928,811	-
Others (Tons)	33,224	1,568	56,503	1

FARM CHEMICALS

No. of KUD	1,647	115	934	28
Insec.Lqd ('000lt)	6,782	974	361,155	314
-"-not Lqd. (Tons)	3,992	681	2588,977	1,695
Rodenticide (Tons)	2,496	42	9,001	157
Fungicides (Tons)	827	7	100,363	67
Herbicides (Tons)	243	3	15,869	22

*includes: TSP, DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

As compared with the distribution of 3737,760 tons of urea in 1993 in the country through the KUD, the use in South Sulawesi was 174,628 tons (only 4.7%). However, there was increase in the distribution of urea in 1993 as compared with the year 1990 (253%). The farmers in South Sulawesi have increasingly been using bio-fertilizer.

The distribution of seeds by the KUD in South Sulawesi during 1990 and 1993 has been as follows:

Type of Seeds	Year 1990		Year 1993	
	National	S.Sulawesi	National	S.Sulawesi
No. of KUD	980	79	545	27
Paddy (kg)	26,351,795	744,562	5336,522	178,059
Corn (kg)	635,324	20,843	479,911	-
Soybeans (kg)	610,344	18,500	1442,920	1,000
Others (kg)	3,290,037	44,765	1068,673	660

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta.

As is seen from the above, the distribution business of seeds through the KUD network has gone down since 1991-92 since the business has been deregulated and the farmers can purchase their requirements from the open market. As compared with the national distribution of 5336,522 kg of paddy seeds in 1993, the distribution in South Sulawesi was 178,059 kg (3.3%). However, the distribution of seeds in 1993 was 23.8% as compared with the year 1990. Seeds of paddy are developed and distributed by PT Sanghianseri, a State-owned company. Seeds of palawija and horticulture are available in the open market. The government, however, operates a number of seeds certification stations throughout the province.

Dissemination of Farm Machinery

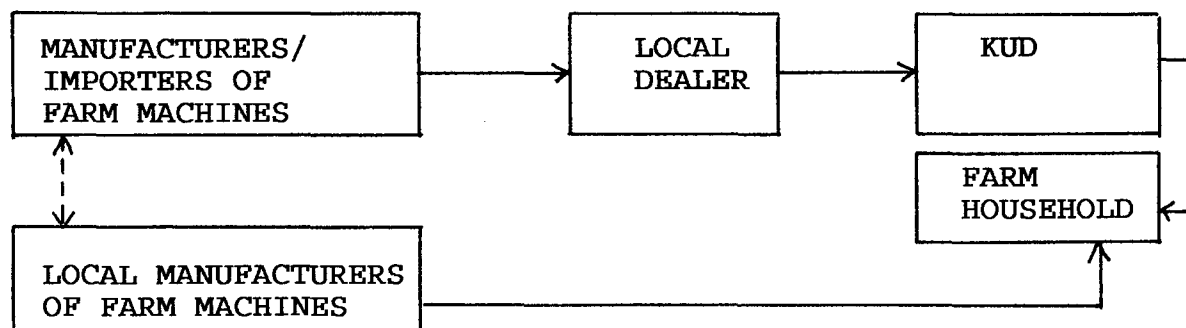
The following table indicates the availability of farm machinery in South Sulawesi during the year 1984, 1993 and 1994:

Type of Farm Machinery	1984	1993	1994	% of 1993
2-Wheel Tractors	33	7,416	8,235	110.0
Tractors/all types	1,015	419	566	135.0

Hand Sprayers	38,086	120,577	131,714	109.2
Other Pest Control Eqpt	2,587	1,924	3,356	174.4
Threshers	179	1,531	13,510	882.4
Paddy Processors	5,640	13,212	13,799	104.4
(out of which, RMU)	--	(5,785)	(6,242)	(107.8)
Water Pumps	--	1,053	851	80.8

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

The following Flow Chart explains the procurement and distribution of farm machines in the province:



A majority of farm machines are within the KUD sector. Some of the equipments have been imported and some have been locally assembled. The KUD had also received some farm machines, rice processors and other equipment under OECF and Kennedy Round programmes. Nearly all the KUD owned paddy drying platforms and small godowns to hold paddy and rice. Cooperatives are not reported to own any cold stores or any other agro-processing units.

PROCESSING AND DISTRIBUTION OF FARM PRODUCTS

Demands of Major Farm Products (Items, Form of Processing and Consumption)

Major items of agricultural products in South Sulawesi have been rice, cassava, corn, ground nut, Sweet potato, soybean, various kinds of vegetables and fruits and cash crops e.g., coconut, coffee, cashewnut, cloves etc.

The following table shows the production of various commodities in 1992, 1993 and 1994:

Commodity (Tons)	1992	1993	1994	% of 1992
Paddy	3,472,456	3,303,591	3,963,516	114.1
Corn	592,631	533,577	602,611	101.6
Soybeans	88,191	77,146	109,663	125.0
Cassava	560,093	635,735	542,895	96.9
Groundnut	61,651	49,036	70,483	112.9
Potato	26,345	27,979	28,640	111.5
Red Onion	26,441	28,540	32,647	126.9
Cabbage	34,158	51,825	61,431	179.4
Tomato	17,255	18,174	19,120	111.7

Cucumber	4,453	6,207	7,130	175.0
Durian	10,944	37,183	39,315	354.5
Papaya	27,181	33,473	34,622	129.6
Banana	458,344	702,329	794,634	173.5
Mango	128,529	169,201	198,950	154.2
Coffee/Rebusta	14,086	15,129	12,824	92.8
Coffee/Arabika	4,278	5,035	4,833	125.0
Cloves	9,686	9,030	8,336	80.0
Cashewnut	12,151	13,848	14,740	125.0
Coconut	127,549	132,558	124,288	96.8

Source:-Statistik Indonesia-Year Book 1994. BPS Jakarta
-Annual Report 1995/96 Kanwil Pertanian, SulSel

The profit centre of the province is paddy cultivation. Other important products of the province in 1994 have been: Cocoa (77,873 T), sugarcane (43,889 T), vanilla (41 T), cotton (2,795 T), tobacco (652 T), kemiri (17,274 T), sagu (14,834), Palm Oil (8,441 T), and rubber (5,855 Tons). Rattan is another important product of the province.

The distribution of rice is done in two ways: a part of it goes to the Bulog, while the remaining is disposed of in the local market and retained by the farmers for their own use. In the case of other crops, if there is a procurement drive by the government for any specific crops, then the distribution takes place accordingly. Otherwise, farmers are assisted by the KUD to sell their produce.

Fresh vegetables and fresh fruits, especially banana are sold in the open market. Wholesale traders, generally from the provincial capital, Ujung Pandang, purchase vegetables and fruits.

All cash crops move out of the province for further processing. Groundnut, coconut and coffee is procured by the agents of the processing industry for shipment to processing units within South Sulawesi or on Java Island. Whatever quantity of clove is produced in the province (8,336 tons in 1994), it is procured by the Puskud through the KUD network for the national buffer stock.

Some of the agricultural products of the province were exported. The situation of exports during 1994 and 1995 was as follows:

Commodity	Volume Exported (T)			Value Exported (US\$)		
	1994	1995	%	1994	1995	%
Cassava Chips	61,094	51,600	15.5	6.19m	7.37m	18.9
Markisa Syrup	144	198	37.7	0.10m	0.18m	84.8
Wheat Pollard	70,021	95,247	36.0	5.23m	8.44m	61.2
Coffee/Arabika	2,963	1,331	55.0	11.07m	4.41m	60.1
Coffee/Robusta	4,440	477	89.2	9.54m	1.45m	84.7
Cocoa	146,130	119,277	18.3	150,56m	134.16m	10.8

Other commodities exported were: Cashewnut, pepper, rubber, tea, molasses, copra.

The Province has some poultry activity. The following table shows the number of broilers and local chicken in South Sulawesi:

Item	Production (Tons)		Distribution out of SulSel	
Local Chicken	1990	8,273	NA	-
	1994	9,945	NA	-
Broilers	1990	1,419	NA	-
	1994	2,192	NA	-
Eggs (all)	1990	30,049	17,307	57.5%
	1994	44,983	21,552	47.9%

There are no processing facilities in the province for grading, packing and shipment except for some traditional facilities.

Similarly in the sector of livestock, vegetable and fruits processing, the facilities remain traditional and insignificant.

The livestock situation and processing facilities in South Sulawesi are as under:

Commodity (Nos)	1992	1994	Percent
Beef Cattle	1,235,900	785,396	63.5
Buffalo	539,000	321,326	59.6
Horse	224,800	167,139	74.3
Goat	642,100	436,599	67.9
Sheep	11,600	1,732	14.9
Duck	3,846,900	2,244,225	58.3

Source: -Statistik Indonesia-Year Book 1994. BPS-Jakarta
-Annual Report 1995/96. Kanwil Pertanian, SulSel

There were 59 government-owned slaughter houses in the province including one in the private sector. The slaughter houses are traditional in character with no professional processing, handling and packaging facilities. There were 12 units of freezer trucks in the Province during 1994. In addition, there are 6 cattle markets and 4 mini-ranches.

Given below is the production of meat in the province during the year 1994:

Particulars	No. Slaughtered		Production
Beef	...	50,530 heads	...
Buffalo Meat	...	26,338 heads	...
			8,106 Tons
			4,529 Tons

Horse Meat	...	2,016 heads	...	251 Tons
Sheep/Domba Meat		6,848 heads	...	78 Tons
Pig Meat	...	32,671 heads	...	1,815 Tons

Technical Level of Major Agro-Processing

The technical level of agro-processing in the province still remains to be developed. The only major agro-processing is paddy milling in view of the demand for clean rice from Bulog as well as from the open market. Rice milling units are too small and ineffective to produce quality rice.

Major Agro-Processing Entity, Volume of Production, Facilities

In 1994 the rice processing units in the province were as follows:

Paddy Processors	...	12,849
Rice Milling Units	...	5,975

The rice processing units are within the KUD and non-KUD sector. These are of 0.5 ton to 4 tons per hour capacity. At the end of 1993 the position of rice milling units in the province was as under:

Year	Total Units	Units in KUD	Units in Non-KUD
1990	5,932	171	5,761
1993	1,800	178	1,622

The facilities with the KUD are too small. A majority of large-size rice mills are in the private sector.

There were 213 other agro-processing units in the province in 1994, as follows:

Sugar processing factories	...	...	03
Cotton processing factories	...	...	02
Rubber processing factories	...	...	04
Palm Oil processing unit	...	...	01
Coffee seeds processing units	...	...	155
Sugarcane processing units	...	...	04
Cocoa processing units	...	...	41
Other processing units	...	...	3

Processing of coffee in the province is an important activity. Coffee beans from Tanah Toraja are in high demand overseas, especially in Japan.

Major shipping Areas, Distribution System and Facilities by Commodities

For agricultural products e.g., vegetables, fruits and some cash crops, the major destinations for shipping are the wholesale markets in Java, as well as within the province itself.

The farm households or the KUD have not established any joint handling, joint marketing or joint shipment facilities except for the provision of some transport and/or negotiating the deals.

Business Customs, Pricing, Accounts Settlement

In most cases the business is transacted between the farmer and the agents of traders. The transactions are highly cash-oriented. The word of mouth remains supreme in the first negotiations which do not involve very high values or expensive assets e.g., land and buildings. In the case of agricultural produce, the agents of the traders keep on tracking the producers of the required commodities. The farmers are offered, in many cases, advance payments for the crops, given some incentives like seeds, some fertiliser and even advance payments for purchase of farming equipment.

Use of computers in handling accounts and KUD business is still limited.

In the context of farmers' dealing with the KUD, the transactions are mostly on cash basis (around 40-45%), the remaining being on credit basis generally in respect of purchase of fertilisers, and other requirements. While dealing with the agents and traders, the cash advances are reduced at the time of settlement of final accounts. Advances received by the farmer appear advantageous and look attractive in the initial stages but at the time of the final settlement the farmer tends to lose because of the disadvantageous prices at which he had sold his crop. Since cash is needed always by the farmer, a small disadvantage does not seem to harm him.

The pricing of agricultural products is determined by various factors e.g., the cost of inputs, labour inputs, and a reasonable margin of profit. This is true of horticulture, poultry and livestock products. The prices of urea are determined by the government. Fertiliser other than urea is open for sale.

The accounts are settled based on the conditions laid down by the KUD and agreed upon between the KUD and the members. In the case of agricultural producers of South Sulawesi, the members can purchase their requirements from the KUD on credit basis which are settled against the supplies received by them from the KUD. The system of accounts settlement is generally the same all over the province and is generally acceptable to both - the members and the KUD.

Others

Distribution of agricultural products and items of daily use is also carried out through a network of retail shops (waserda) in South Sulawesi, although the number of such shops and the merchandise range is very low.

The provincial federation of KUD - the Puskud - undertakes some business activities, mainly procurement of cloves and distribution of fertiliser and sugar. The business relationship between the two is not active, and there is no horizontal and verticle integration between the two tiers in the province. The Puskud of South Sulawesi is fairly active as compared with other Puskuds. Besides activating business relations with the KUD, the Puskud could initiate a strong marketing information system for its affiliates.

BUSINESS MANAGEMENT OF KUD AND RELATING LEGAL SYSTEM

Situation of Business Purchasing and Marketing Business

Purchasing Business System, Commodities and Turnover

To meet the needs of the farmer-members, the KUD network has met the input needs to some extent in the province. The government programmes which have been assigned to the KUD, further reinforce their business operations. The government programmes include: distribution of chemical fertilisers, agricultural credit, distribution of essential commodities e.g., sugar, rice, soybeans, kerosene oil etc. The members, therefore, not only purchase their inputs needs through the KUD but also their consumption needs.

Fertiliser distribution: In South Sulawesi, PT Pusri distributes chemical fertiliser through various channels e.g., the Puskud, KUD, PT Pertani and private channels. The distribution of fertiliser in the province during 1990-95 is given in the following table:

Particulars	1990	1992	1993	1995	% of 1992
No. of KUD	258	189	244	228	88.3
Fertiliser (T) All Types	111,866	71,610	252,173	212,943	190.1

Source: Department of Cooperatives-RI, Jakarta

During the years 1990-1993, the fertiliser was distributed in the country as is seen in the following table:

Particulars	1990-91	1992-93
Total National distribution (Tons)	2,810,539	3,031,971
Allocated by PT Pusri for distribution by:		
-Puskuds	0.2%	0.1%
-KUD	80.9%	80.3%
-Persero Niaga	1.6%	3.2%
-PT Pertani	11.6%	8.8%

Fertiliser is produced by several government companies including the PT Pusri, but the distribution is coordinated by PT Pusri. PT Pusri, in turn, allocates quota for distribution among various agencies including the Puskuds. PT Pertani, a government company, distributes fertiliser for the plantations. Farmers obtain their farm chemicals from the KUD and from the open market.

Seeds distribution: Distribution of seeds is open. Paddy seeds are produced by a government company, PT Sanghianseri, and several authorized private enterprises. Seeds are certified by government-operated Seeds Certification Centres as to their quality. During 1990-1993 the following quantities of various seeds were distributed in the province:

Commodity	By KUD	1990	By KUD	1993
Paddy Seeds kg	79	744,562	27	178,059
Corn kg		20,843	-	-
Soybeans kg	-	18,500	-	1,000
Others kg	-	44,765	-	660

The distribution of seeds was deregulated after 1990-91. The farmers were able to purchase their requirements from the open market, hence the sudden drop during 1993. In South Sulawesi only 20-25% of the farmers use certified seeds. In 1994 there were 55 seeds certification centres in the province which are responsible for development and certification of paddy, palawija and horticulture seeds.

Farm Machines and Agricultural Implements: The table below shows the availability of various farm implements in the province:

Type of Farm Machines	1993	1994	% of 1993
2-wheel tractors	7,416	8,235	110.0
Tractors/all types	419	566	135.0
Hand Sprayers	120,577	131,714	109.2
Other Pest Control Eqpt	1,924	3,356	174.4
Threshers	1,531	13,510	882.4

Paddy Processors	13,212	13,799	104.4
(out of which, RMU)	(5,785)	(6,242)	(107.8)
Water Pumps	1,053	851	80.8

A majority of farm machines are within the KUD sector, mostly owned by farm households. Some of the equipments have been imported, and some have been locally assembled. Nearly all the KUD owned paddy drying platforms and small godowns to hold paddy and rice. Some of the equipments have been given to the KUD under OECF and Kennedy Round programmes. KUD are not reported to own any cold stores or any other agro-processing units.

The farmers purchase their farm implement requirements either through the KUD or from the open market. KUD procure the equipments from the wholesale dealers.

Retail Outlets (waserdas) and TPK (kiosks): Farmers purchase their farm inputs and consumer goods from the waserdas and TPK. Each KUD operates on an average 3-4 TPK located close to the farm operational areas. Some of the TPK are operated by the farmer-members as their private enterprises but selling farm inputs.

The position of retail outlets in 1994 and 1995 in the province was as follows:

Particulars	1994	1995	Percent
No of Waserdas	200	274	137.0
Working Capital (M.Rp)	1,334.0	1,318.0	98.8
Turnover (M.Rp)	3,924.0	3,709.0	94.5

Source: Department of Cooperatives-RI, Jakarta 1996

Turnover: The total turnover of KUD in South Sulawesi during the year 1992 and 1995 is given in the table below:

Particulars	1992 (M.Rp)	1994 (M.Rp)	1995 (M.Rp)	% of 1992
South Sulawesi	207,407	278,593	339,329	163.6
National	3807,639	4837,683	5669,411	148.8

Major Source of Procurement of Commodities

Chemical fertiliser distribution is coordinated by the PT Pusri which has its warehouses located throughout the country and even at the kecamatan level from where the KUD get their supplies through the Puskud. The government provides credit to the farmers through the KUD to purchase urea. Other chemical fertiliser formulations, are available in the open market. Similarly, bio-fertilisers, farm chemicals are obtained from the open market.

Seeds, except for paddy, are procured from the open market. Paddy seedlings are produced and distributed by PT Sanghianseri. The government operates a number of seeds certification centres throughout the province in order to ensure seeds quality.

Merchandise for sale through the TPK and retail outlets is obtained from the open market. There is no wholesale cooperative agency which sells or coordinates the supply of consumer goods to these outlets. Recently a working arrangement has been made for distribution of consumer goods through the PT Goro in the province, in association with Puskud.

Marketing Business System by Commodities and Turnover

This consists of marketing the produce of farmers with their KUD. Major marketing activities in the province have been: Paddy, rice, corn, maize, ground nut, soybeans and others. The KUD help procure paddy/rice from its members for the national food stock and try to fill the target set for it for the supply of rice to Dolog. the members supply the maximum which they can but still the preference of the farmer remains to sell the produce in the open market at a higher price than fixed by the government. The procurement price of paddy/rice is determined by the government every season. KUD gets credit from the government to purchase rice.

The marketing of paddy/rice by the members in South Sulawesi during 1988-89 and 1994-95 is given in the table below:

Particulars	1988-89		1994-95	
	National	S.Sulawesi	National	S.Sulawesi
<u>Paddy/Rice Procured</u>				
-By KUD (Nos)	2,018	243	1,993	229
-Procured (Tons)	1096,212	141,536	786,066	191,837
<u>Sold to Bulog</u>				
-By KUD (Nos)	2,120	258	1,113	203
-Sold (Tons)	2,023,952	273,483	509,919	146,676

Source: Department of Cooperatives-RI, Jakarta 1996

Some of the major products of the province as compared with Sidrap and Luwu districts are given below:

Commodity	Year		% of Prov. Total '93
	1992	1993	
<u>PADDY/RICE</u>			
Province Total (T)	3,472,456	4,152,884	-
-Sidrap	-	386,764	9.3%
-Luwu	-	532,187	12.8%
<u>CORN</u>			
Province Total (T)	592,631	533,577	-

-Sidrap	-	741	0.1%
-Luwu	-	4,082	0.7%
SOYBEANS			
Province Total (T)	98,780	77,146	-
-Sidrap	-	161	0.2%
-Luwu	-	10,931	14.1%
CASSAVA			
Province Total (T)	568,120	635,735	-
-Sidrap	-	1,552	0.2%
-Luwu	-	13,411	2.1%
POTATO			
Province Total (T)	26,345	27,979	-
-Sidrap	-	-	-
-Luwu	-	-	-
TOMATO			
Province Total (T)	17,255	18,174	-
-Sidrap	-	180	0.9%
-Luwu	-	289	1.5%
CUCUMBER			
Province Total (T)	4,453	6,207	-
-Sidrap	-	180	2.8%
-Luwu	-	149	2.4%
BANANA			
Province Total (T)	458,344	702,329	-
-Sidrap	-	4,099	0.5%
-Luwu	-	15,422	2.1%
DURIAN			
Province Total (T)	10,944	37,183	-
-Sidrap	-	52	0.1%
-Luwu	-	643	1.7%
COCONUT			
Province Total (T)	127,549	132,558	-
-Sidrap	-	4,220	3.1%
-Luwu	-	15,815	11.9%
CLOVES			
Province Total (T)	9,686	9,030	-
-Sidrap	-	428	4.7%
-Luwu	-	2,137	23.6%
CASHEWNUT			
Province Total (T)	12,151	13,848	-
-Sidrap	-	2,560	18.4%
-Luwu	-	6	-
POULTRY SITUATION			
	YEAR 1990	YEAR 1994	
LOCAL CHICKEN			
Province Total (T)	8,273	9,945	-
-Sidrap	-	383	3.8%
-Luwu	-	135	1.3%
EGGS (ALL)			
Province Total (T)	36,049	44,983	-
-Sidrap	-	10,163	22.5%
-Luwu	-	1,988	4.4%

Source: -Statistik Indonesia-Year Book 1994, BPS-Jakarta

The total business volume and the total surplus of KUD in South Sulawesi in 1992-1995 was as follows:

Particulars	1992	1994	1995	% of 1992
Total turnover (M.Rp)	207,407	278,593	339,329	163.7%
Total Surplus-SHU (M.Rp)	1,871	3,378	5,192	277.4%

Major Market Area, Buyers

Major market areas for the produce of the farmer-members in South Sulawesi are the government (Bulog), private processing industries (especially coffee and coconut processing units). Some of the fresh vegetables and fruits and cash crops move to Java Island for further processing and marketing.

Procurement of Funds for Economic and Utilisation Business

Funds for operating economic and utilisation business is available from various courses:

- Credit from government for procurement of paddy/rice, corn, soybeans, cloves and the service charges the government pays to the KUD for disbursement of such credit;
- Service fee for handling telephone and electricity bills;
- Credit from private enterprises for procurement of vegetables and other farm products e.g., cassava, coconut, coffee;
- Surplus earned from the business of the KUD.

The level and variety of such credits is very low in the province. KUD have low financial strength and so have the farmer-members to undertake diversified products and agro-processing business.

Holding and Utilisation of Kiosks, Storage, Processing Facilities

Retail shops, kiosks and warehouses are operated by the KUD as a service to the members. In 1995, the situation in the KUD sector in South Kalimantan was as follows:

Total of Retail shops/waserdas	...	...	274
Drying floors	...	...	680
Rice Milling Units	...	...	296
Rice Drying Units	...	...	208

Competition with Private Dealers

The KUD are neither integrated horizontally nor vertically. Each unit works on its own and develops its own business with the funds raised through its own efforts and resources. Since a majority of business units of KUD are operating within the government-supported system, the element of competition with the private dealers does not exist. Procurement of rice and cloves, distribution of fertiliser, sugar, soybeans, corn, wheat flour etc. are all regulated by the government and are consequently a secure business, leaving not much scope for competition.

ORGANISATION, MANAGEMENT & BUSINESS OF PUSKUD

The PUSKUD-HASANUDDIN South Sulawesi is a secondary level business federation of KUD in the province. It was organised on 12th December 1974 and registered vide No. 8136.E/BH/IV/67. At the end of 1995, its membership was 425 institutions (415 KUD and 10 non-KUD). Its members General Meeting which meets once a year, elects a 5-member Board of Directors for a 5-year term, and a 3-member Board of Supervision also for a 5-year term.

The Puskud is a member of a national federation, INKUD. The main aim of Puskud is to provide business support to its member-affiliates, promote cooperative business in the rural sector in the province in accordance with the Principles of Cooperation, and to promote cooperative education and training. The business activities of the Puskud include: trading and providing services and credit in various sectors e.g., trading, services, cultivation, animal husbandry, fisheries, processing industry. It has several subsidiary companies and hold shares in other industries including the Inkud. The Puskud undertakes exports business. The Puskud has its office at Ujung Pandang. It has 276 full-time employees including the General Manager and branch offices in almost all districts in the province.

Situation of Business:

Purchasing Business Methods, Commodities, Turnover

The Puskud, the provincial federation of KUD, a member of the Inkud, participates in business ventures sponsored or proposed by the Inkud, besides supporting the business development of the KUD at the primary level in the province. The Puskud is a federation of 425 KUD and non-KUD in South Sulawesi.

The Puskud procures cloves from the farmers on behalf of the Inkud for the national buffer stock. It also coordinates the procurement of other commodities for national food stock or for distribution in the open market or exports. Methods adopted are negotiated with the relevant agencies/suppliers, and are on a fee/commission basis. Procurement prices of rice and cloves are regulated by the government, while for others depends on the current market prices.

Economic situation of the Puskud during 1994 and 1995 was as follows:

Particulars	Year 1994	Year 1995	%
Membership	409	425	103.9
Business Volume	60,828,558,019	109,245,569,115	178.6
Assets	71,023,632,860	81,047,560,036	114.0
Initial Deposits	40,418,064	41,700,000	105.0
Compulsory Deposits	194,953,984	1,114,410,845	574.2
Voluntary Savings	10,000	10,000	100.0
Total Sales	54,517,757,023	93,757,514,631	170.9
Total Purchases	50,808,576,493	92,860,285,360	182.3

Source: Annual Report 1995, Puskud Hasanuddin, Ujung Pandang

The Puskud Hasanuddin South Sulawesi has been one of the active business federations. It has been active in various business activities e.g., agro-processing, participation in subsidiary companies, and export of commodities, especially gaplek (cassava chips), coffee, cocoa, and fish to Holland, Singapore, Japan and Germany.

It also operates a mini super market, rice milling units, coffee and cassava processing units, and owns warehouses and transportation equipment. It holds majority shares in subsidiary companies/autonomous units e.g., PT KAT (livestock breeding business), credit union, Puskud Taxi (transportation), KLP (rural electric company), PT Niaga Hasanuddin (distribution and retail business), and UTNC (clove trading system). It has joint ventures with: PT Markisa Segar, PT Berdikari, PT Rabaport, PT Batara Sakti and PT Djado Wahanasutera Pratama.

The main lines of business of Puskud are: Telecommunication, transportation, rice milling, silk processing, distribution of consumer goods, support of cultivation of yellow corn, oil palm, silk worms, and livestock and poultry development.

The Puskud undertook the following purchasing business during the year 1995:

Commodities	Purchases (M.Rp)	% of Total Purchases
TOTAL PURCHASES-1995		Rp 92,860.2M
-Fertiliser	1,828.8	1.9%
-Paddy/Rice	384.4	0.4%
-Wheat Flour	1,055.1	1.1%
-Cassava Chips	3,361.3	3.6%
-Yellow Corn	627.3	0.6%
-Soybeans	312.5	0.3%
-Sugar	26,269.9	28.2%
-Cloves	58,883.4	63.4%
-Fish	95.0	0.1%
-Silk	38.0	-
-Cement	4.2	-

The percentage of total purchases (Rp 92,860.2 million) to total turnover (Rp 109,245.5 million) in 1995 was: 85.0%.

Major Suppliers and Buyers (KUD and non-KUD)

Major suppliers of the Puskud have been the private enterprises and the state-owned chemical fertiliser company, PT Pusri. It obtains its supplies of sugar, wheat flour and soybeans from the Bulog. Farm products e.g., paddy/rice, coffee, clove, cassava is procured from the farmers through the KUD network. The Puskud also acts as an agent of the Indocement for the supply of cement in the province. Its major buyers are the KUD, clove holding agency through the Inkud, farm produce processing factories.

Marketing Business Methods, Commodities, Turnover

The marketing business methods include negotiations by the KUD and the basic level farmers with the Puskud, as well as the requirements of national food stock maintained by the government.

The Puskud sells a variety of commodities and services to the members and in the open market. There are various channels through which the commodities and services are sold e.g., mini super market, telecommunication centre, transport services, processing units and exports.

The position of marketing business (sales by Puskud) of the Puskud was as follows:

Commodities	Sales (M.Rp)	% of Total Sales
TOTAL SALES-1995		Rp 93,757.5M
-Fertiliser	1,894.0	2.0%
-Paddy/Rice	415.1	0.4%
-Wheat Flour	1,072.9	1.1%
-Cassava Chips	3,791.5	4.0%
-Yellow Corn	852.3	0.9%
-Soybeans	335.7	0.3%
-Sugar	26,352.6	28.1%
-Cloves	58,883.4	62.8%
-Fish	96.7	0.1%
-Silk	57.7	-
-Cement	5.1	-

The percentage of total sales (Rp 93,757.5 million) to total turnover of the Puskud (Rp 109,245.5 million) in 1995 was: 85.8%.

Major Suppliers of Marketing Commodities and Buyers (KUD and non-KUD)

KUD and farmer-members are the major suppliers of farm products to the Puskud. For procurement of commodities like cloves, cassava chips, yellow corn, silk, the Puskud contacts the KUD and assigns them the quota. The KUD, in turn, contacts the KUD who

procure the commodities from the farmers and supply them to the Puskud. The Puskud gives credit to the KUD for procurement of commodities. For other commodities, the suppliers are private traders, agents and the manufacturers. Major buyers of Puskud have been the Bulog and the Clove Procurement Agency (working in close collaboration with the Inkud), and the open market.

Funds for Economic Business and Operation of Joint Use Facilities

Funds for operating business of the Puskud are generated through credit from the Inkud and from its own reserves, deposits, surplus earned and exports. Some of the rewarding business of the Puskud have been: marketing of cassava chips (gaplek), clove procurement, yellow corn, distribution of fertiliser, sugar and wheat flour, and general transportation.

During 1995 its outside capital was Rp 74,741.4 million against its own capital - Rp 5,633.3 million (7.5%). Its assets and goodwill are a good source of raising outside capital for operating its business.

Situation of Operation of Kiosks, Collection Centres, Processing Facilities

The Puskud has its operational network in all the districts of the province. Some of the facilities of the Puskud are as follows:

- Rice Milling Unit 500 Tons/month; Coffee and gaplek processing centre; Cocoon dryer (2,330 kg/month); silk show room; wholesale depot; fertiliser and sugar warehouses, and its own office block together with a mini super market.

Competition with Private Traders

Except for enjoying monopoly status in the procurement of cloves and transportation and distribution of fertiliser, sugar and wheat flour, the Puskud finds it difficult to compete with the private trade. Its ventures on silk production is still at a low level because of the low quality of cocoon and sharp fluctuations in silk prices. It has a successful venture on processing of markisa syrup.

RELATING LEGAL SYSTEM AND STRUCTURE

Policy for Improvement of Distribution and Processing of Farm Products and Price Support

In accordance with the declared National Policy to increase agricultural production and boost export, the government is committed to support farmers and provide them with the needed infrastructure. The government has established a number of institutions and services aimed at providing farm inputs, extension services and post-harvest technology. Also,

consequently, the government aims at giving support to agro-processing activities through its own system and with the support of private enterprises. As a result, the country is witnessing the growth in agro-processing activities. More and more private companies are entering agro-processing business.

With a view to guarantee better economic returns from farm operations, the role of government agencies like the Bulog is being reviewed so that the farmers are sure to get proper prices for the farm products, especially, rice, soybeans, corn and other cash crops. Clove procurement agency, coconut development board, coffee board are some examples. For every harvesting season the government announces floor prices for key commodities.

The KUD are used increasingly by the government to procure food items for national food stocks and distribute essential commodities in the country. The KUD are also used to disburse agricultural credit among the farmers. The Puskuds through the Inkud are planned to serve as gross distributors of consumer items through the Waserdas and TPK.

Taking advantage of the fertile land and farming potentials, the provincial government of South Sulawesi has planned to vastly expand paddy cultivation, increase production of fruits and vegetables, grains, cash crops, poultry. "Cooperatives are developed by allowing them increased access to markets and market shares, increased access to sources of capital, strengthened capital structure and improved capacities in utilising capital. Programmes also call for improvements to the organisational and managerial capacities of cooperatives, increased access to technology and the application thereof as well as promotion of business partnership." The government also plans to enhance agro-processing activity in the province. The province also has a vast tourist potential.

FINDINGS OF THE DETAILED FIELD SURVEY [Of 5 KUD in the Province]

Purchasing and Marketing Business

Situation of Establishment of Commodity-wise Groups

The 5 KUD surveyed in South Sulawesi province were: KUD Semangat (M), KUD Sipatuwo (M), KUD Sipatuwo (M) in Sidrap District and KUD Bilopa ((M) and KUD Lamasi (MI) in Luwo district. All the KUD are situation in low plain areas. The main activities of KUD have been: production, processing and distribution of paddy/rice, maize, cassava, rattan and clove procurement, distribution of fertiliser and sugar besides vegetables and raising of poultry and livestock. KUD have provided marketing and purchasing services to the farmer-members in various commodities e.g., fertiliser, farm chemicals, seeds, credit disbursement, essential commodities distribution through a network of waserdas and TPK. The KUD have contributed significantly to national food stock. The farmers have been organised into Kelompok Tani (KT), members' groups, women and youth groups, and commodity groups. The number

of members and KT is given below:

Cooperatives/ Category	Popula- tion	Farmers	Members	KT	Villages covered	TPK
Samangat-M	8,567	1,041	1,158	16	4	4
Sipatuwo-M	4,022	1,920	731	13	2	7
Matutu-M	11,347	3,587	4,035	34	6	14
Bilopa-M	29,413	3,448	959	-	7	-
Lamasi-MI	34,441	6,035	2,299	28	13	12

The membership of KUD is open to all residents in rural areas. The head of the household becomes the member and the whole household utilises KUD services. However, individuals have increasingly taken up the membership.

As compared the membership with the population, the percentage of farmers in the KUD is still very low, as follows:

KUD Semangat	...	...	13.5%
KUD Sipatuwo	...	...	18.1%
KUD Matutu	...	...	31.5%
KUD Bilopa	...	...	3.2%
KUD Lamasi	...	...	6.6%

The average percentage of membership to the population is 14.7%.

With a view to provide services and distribute farm inputs and credit, Farmers' Groups (KT) have been organised who also serve as commodity groups. Most of the government extension programmes have been carried out through these groups. The needs of the farmer-members are met through the network of TPK in which the KTs are actively involved. These groups form an integral component of the KUD organisation at the village level.

Purchasing Business Methods, Commodities Handled, Turnover and Commissions

The purchasing business of the KUD covers the procurement and transportation of fertiliser, paddy, farm implements, seeds, sugar, cattle-feed, and groceries for waserda and TPK.

KUD do not show separately in their accounts the commissions received or paid. They do, however, show the service fees received or paid by them.

The table below shows the commodities purchased from various sources by the 5 surveyed KUD during 1995:

KUD/Purchasing	Purchases (M.Rp) 1995	% of KUD Turnover
KUD SEMANGAT		Rp 1377.8M
-Fertiliser	568.7	41.2
-Farm Chemicals	33.7	2.4
-Paddy/Rice	1454.0	105.5
-Waserda	6.7	0.5
KUD SIPATUWO		Rp 720.6M
-Fertiliser	305.3	42.3
-Paddy/Rice	345.6	48.0
-Corn	0.3	-
KUD MATUTU		Rp 2023.4M
-Fertiliser	220.3	10.8
-Paddy/Rice	1257.0	62.1
-Cloves	546.0	26.9
KUD BILOPA		Rp 939.6M
-Fertiliser	109.7	11.7
-Paddy/Rice	673.8	71.7
-Cloves	78.2	8.2
KUD LAMASI		Rp 2506.9M
-Fertiliser	124.8	4.9
-Farm Chemicals	6.8	0.2
-Paddy/Rice	2125.2	84.6
-Waserda	2.2	-

Percentage of purchasing business of 1995 has been as follows:

KUD	Fertiliser	Farm Chem	Paddy/Rice	Groceries
Semangat	41.2	2.4	105.5	0.5
Sipatuwo	42.3	-	48.0	-
Matutu	10.8	-	62.1	-
Bilopa	11.7	-	71.7	-
Lamasi	4.9	0.2	84.6	-
Average %	22.18	-	74.3	-

Major Suppliers of Goods and Patronage of Federations

Major suppliers of goods to the KUD have been the private traders in district headquarters or in Ujung Pandang and the farmer-members. Fertiliser (Urea) is obtained from the PT Pusri through the Puskud and sugar from the Dolog. Groceries for the retail shops and TPK is obtained from the wholesalers.

Marketing Business Methods, Commodities Handled, Turnover and Commissions

The KUD market their products with their members and the processing industry or in the open market. The marketing is done as per negotiations reached between the KUD and the buyers. In many cases the KUD act as coordinating bodies e.g., agents of the

government for rice procurement, collecting agencies for processing industry.

The table below shows the marketing business activities of 5 KUD surveyed in South Sulawesi province:

KUD/Marketing Business Items	Marketing/Sales (M.Rp)	% of KUD Turnover
KUD SEMANGAT		Rp 1377.8M
-Fertiliser	577.5	41.9
-Farm Chemicals	37.5	2.7
-Paddy/Rice	1476.0	107.1
-Waserda	6.0	0.4
KUD SIPATUWO		Rp 720.6M
-Fertiliser	314.1	43.5
-Farm Chemicals	0.5	-
-Paddy/Rice	345.6	47.9
-Corn	0.5	-
-Rice Bran/dedak	8.4	1.1
KUD MATUTU		Rp 2051.2M
-Fertiliser	224.5	10.9
-Paddy/Rice	1265.8	61.7
-Cloves	560.9	27.6
KUD BILOPA		Rp 939.6M
-Fertiliser	115.9	12.3
-Paddy/Rice	725.5	77.2
-Cloves	77.7	8.2
-KUD LAMASI		Rp 2506.9M
-Fertiliser	128.5	5.1
-Farm Chemicals	8.0	0.3
-Paddy/Rice	2143.0	85.4
-Waserda	2.7	0.1

The KUD accounts do not show separately the commissions received or paid. They do, however, show the services fees received or paid by them.

The percentage of marketing business of KUD of major commodities in 1995 has been as follows:

KUD	Fertiliser	Farm Chem	Paddy/Rice	Groceries
Semangat	41.9	2.7	107.1	0.4
Sipatuwo	43.5	-	47.9	-
Matutu	10.9	-	61.7	-
Bilopa	12.3	-	77.2	-
Lamasi	5.1	0.3	85.4	0.1
Average %	22.7	-	75.8	-

Given below is a summary of marketing and purchasing business of the KUD showing the commissions received by them. From the

commissions received, the KUD cover their overheads and handling expenses:

KUD/Items 1995	Purchase Value/M.Rp	Sales Value/M.Rp	Commissions Received	Percent
KUD SEMANGAT				
-Fertiliser	568.7	577.5	8.8	1.5%
-Farm Chemicals	33.7	37.5	3.8	11.2%
-Paddy/Rice	1454.0	1476.0	22.0	1.5%
-Waserda	6.7	6.0	(-0.7)	-10.4%
KUD SIPATUWO				
-Fertiliser	305.3	314.1	8.8	2.8%
-Paddy/Rice	345.6	345.6	0.0	-
-Corn	0.3	0.5	0.2	66.6%
KUD MATUTU				
-Fertiliser	220.3	224.5	4.2	1.9%
-Paddy/Rice	1257.0	1265.8	8.8	0.7%
-Cloves	546.0	560.9	14.9	2.7%
KUD BILOPA				
-Fertiliser	109.7	115.9	6.2	5.6%
-Paddy/Rice	673.8	725.5	51.7	7.6%
-Cloves	78.2	77.7	(-0.5)	-0.6%
KUD LAMASI				
-Fertiliser	124.8	128.5	3.7	2.9%
-Farm Chemicals	6.8	8.0	1.2	17.6%
-Paddy/Rice	2125.2	2143.0	17.8	0.8%
-Waserda	2.2	2.7	0.5	22.7%

Major Buyers, Use of Federations and Demand for Federations

Major buyers of products of KUD are the processing factories. Paddy/rice is sold to the Dolog as well to the private traders, clove is sold to the cloves procurement agency through the Puskud. The Puskud's role is limited to the transportation of fertiliser. None of the 5 KUD does any other business with the Puskud. The KUD, however, expressed a strong desire that the Puskud needs to be more active in providing sales and purchase opportunities to them.

Necessary Operation Fund for Economic and Utilisation Business and its Procurement

For executing government programmes e.g., distribution of fertiliser, procurement of rice, handling a variety of KUT, handling electricity and telephone kiosks, the KUD get a handling fee or a discount. For instance, KUD Sipatuwo earned some money out of other business e.g., handling electricity bills - Rp 39.2 million, transportation business Rp 19.8 m, water pump Rp 11.1 m, tractor Rp 3.1 m, rice milling Rp 2.7 m. It earned Rp 8.4 million from the sale of dedak (rice bran) from its rice mill. KUD Matutu earned Rp 33.2 m from transportation business.

KUD have very limited choice or range of credit lines from financial institutions. Utilisation of rice milling units, warehouses, farm machines is low in the area because these facilities are either old or have become unserviceable.

The Utilisation and Operation of Kiosks, Collection/Storage Facilities and Processing Facilities

A majority of kiosks, which are of poor quality, are used for storing and supply of farm equipment, fertiliser, farm chemicals and other farm supplies e.g., sacks, farm implements, tubing etc.

The Situation of Competition with Private Dealers

The KUD are in no position to compete with private dealers due to their very weak financial and operational position. Except for KUD Lamasi, Bilopa and Matutu, the business operations of others is weak.

FINDINGS OF THE COMMISSIONED SURVEY-I Agricultural Production

Distribution of Agricultural Input Material such as Makers and Dealers of Chemicals, Vinyl, Feed-stuff

While the production of most of the agricultural inputs e.g., urea, other chemical fertilisers and farm chemicals and paddy seeds remains in the hands of the government-owned companies, the distribution is channelled through the KUD system. Supply of farm inputs for estate crops is done through the PT Pertani. The vinyl sheeting is not used in South Sulawesi.

There is no significant dairy livestock development or dairy activity in the province. However, there is a large number of cattle mainly for farming and meat production purposes. These are owned by private individuals and some companies. They obtain their feed-stuff supplies from the local market. There are no major cattle-feed formulators in the province. The cattle-feed is generally imported from Java.

Distribution of Farm Machinery (Makers and Dealers)

The situation of farm machinery in the province is as follows:

Type of Farm Machinery	1993	1994	% of 1993
2-Wheel Tractors	7,416	8,235	110.0
Tractors/all types	419	566	135.0
Hand Sprayers	120,577	131,714	109.2
Other Pest Control Eqpt	1,924	3,356	174.4
Threshers	1,531	13,510	882.4
Paddy Processors	13,212	13,799	104.4
(out of which, RMU)	(5,785)	(6,242)	(107.8)
Water Pumps	1,053	851	80.8

A majority of farm machines are within the KUD sector. Some of the equipments have been imported and some have been locally assembled. Some of the farm machines have been acquired under OECF and Kennedy Round programmes. Nearly all the KUD owned paddy drying platforms and small godowns to hold paddy and rice. Some transportation vehicles are also owned by the KUD. Cooperatives are not reported to own any cold stores or any other agro-processing units.

Agro-Processing and Its Distribution

Demand of Major Farm Products

(Commodities, Form of Processing, Consumption)

Major farm products of the province have been rice, corn, cassava, fruits and cash crops. The production of major commodities of South Sulawesi in 1992, 1993 and 1994 has been as follows:

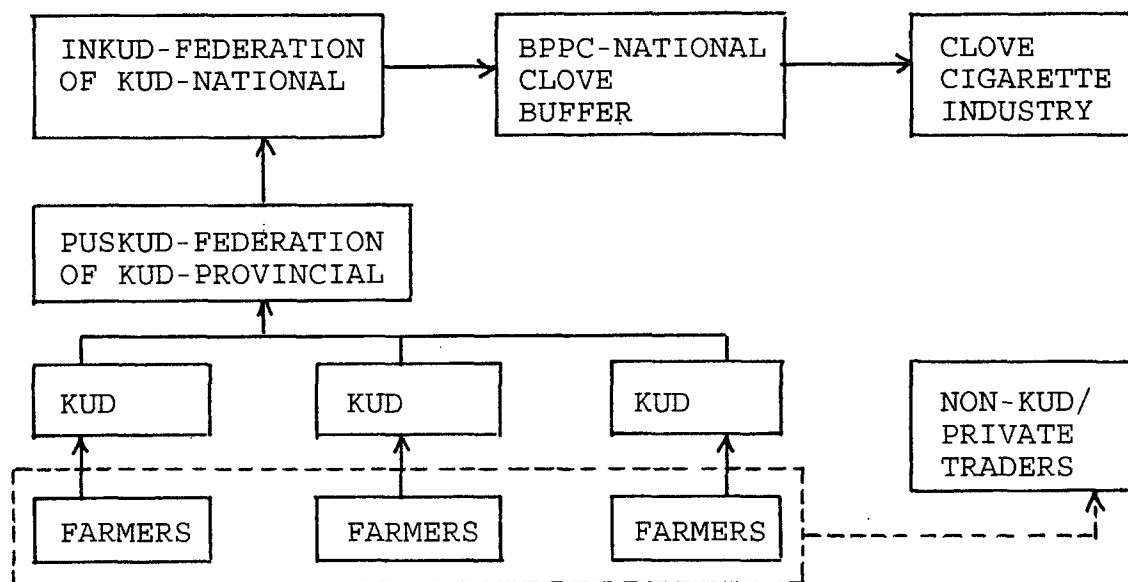
Commodity (Tons)	1992	1993	1994	% of 1992
Paddy	3,472,456	3,303,591	3,963,516	114.1
Corn	592,631	533,577	602,611	101.6
Soybeans	88,191	77,146	109,663	125.0
Cassava	560,093	635,735	542,895	96.9
Groundnut	61,651	49,036	70,483	112.9
Potato	26,345	27,979	28,640	111.5
Red Onion	26,441	28,540	32,647	126.9
Cabbage	34,158	51,825	61,431	179.4
Tomato	17,255	18,174	19,120	111.7
Cucumber	4,453	6,207	7,130	175.0
Durian	10,944	37,183	39,315	354.5
Papaya	27,181	33,473	34,622	129.6
Banana	458,344	702,329	794,634	173.5
Mango	128,529	169,201	198,950	154.2
Coffee/Robusta	14,086	15,129	12,824	92.8
Coffee/Arabika	4,278	5,035	4,833	125.0
Cloves	9,686	9,030	8,336	80.0
Cashewnut	12,151	13,848	14,740	125.0
Coconut	127,549	132,558	124,288	96.8

Source:-Statistik Indonesia-Year Book 1994. BPS Jakarta
-Annual Report 1995/96 Kanwil Pertanian, SulSel

Other important products of the province in 1994 have been: Cocoa (77,873 T), sugarcane (43,889 T), vanilla (41 T), cotton (2,795 T), tobacco (652 T), kemiri (17,274 T), sagu (14,834), Palm Oil (8,441 T), and rubber (5,855 Tons).

The production of cloves in the province has been in the region of 8,000-9,000 tons per year. KUD and the Puskud have been engaged in the procurement of cloves for the National Cloves

Buffer Stock (BPPC). The procurement of clove is shown in the flow chart, as follows:



[KUD have been designated as units for procurement of cloves for the national buffer stock. To meet the demands of the open market, non-KUD and private traders procure cloves from the farmers. The BPPC is the sole supplier of cloves to the clove cigarette manufacturers.]

Some of the agricultural products of the province were exported. The situation of exports during 1994 and 1995 was as follows:

Commodity	Volume Exported (T)			Value Exported (US\$)		
	1994	1995	%	1994	1995	%
Cassava Chips	61,094	51,600	15.5	6.19m	7.37m	18.9
Markisa Syrup	144	198	37.7	0.10m	0.18m	84.8
Wheat Pollard	70,021	95,247	36.0	5.23m	8.44m	61.2
Coffee/Arabika	2,963	1,331	55.0	11.07m	4.41m	60.1
Coffee/Robusta	4,440	477	89.2	9.54m	1.45m	84.7
Cocoa	146,130	119,277	18.3	150,56m	134.16m	10.8

Other agricultural commodities exported from the province included: Cashewnut, pepper, rubber, tea, molasses, copra.

Rice is the major farm product followed by vegetables and some cash crops. Rice is distributed in the open market and to the national food stock (Bulog). Vegetables are consumed in the local market. Cash crops are collected by private traders and some through the KUD network. There is some production of 'markisa' fruit which is converted into syrup by several companies including by a joint venture in which the Puskud also holds shares. There is no major agro-processing industry within the cooperative sector. Milk production is insignificant, and whatever is produced is consumed locally.

The Province has some poultry activity. The following table shows the number of broilers and local chicken in South Sulawesi:

Item	Production (Tons)		Distribution out of SulSel	
Local Chicken	1990	8,273	NA	-
	1994	9,945	NA	-
Broilers	1990	1,419	NA	-
	1994	2,192	NA	-
Eggs (all)	1990	30,049	17,307	57.5%
	1994	44,983	21,552	47.9%

There are no processing facilities in the province for grading, packing and shipment except for some traditional facilities.

Similarly in the sector of livestock, vegetable and fruits processing, the facilities remain traditional and insignificant. The livestock situation and processing facilities in the province are as under:

Commodity (Nos)	1992	1994	Percent
Beef Cattle	1,235,900	785,396	63.5
Buffalo	539,000	321,326	59.6
Horse	224,800	167,139	74.3
Goat	642,100	436,599	67.9
Sheep	11,600	1,732	14.9
Duck	3,846,900	2,244,225	58.3

Source: -Statistik Indonesia-Year Book 1994. BPS-Jakarta
-Annual Report 1995/96. Kanwil Pertanian, SulSel

There were 59 government-owned slaughter houses in the province including one in the private sector. The slaughter houses are traditional in character with no professional processing, handling and packaging facilities. There were 12 units of freezer trucks in the Province during 1994. In addition, there are 6 cattle markets and 4 mini-ranches.

Given below is the production of meat in the province during the year 1994:

Items	Numbers	Quantity
Beef ...	50,530 heads	8,106 Tons
Buffalo Meat ...	26,338 heads	4,529 Tons
Horse Meat ...	2,016 heads	251 Tons
Sheep/Domba Meat ...	6,848 heads	78 Tons
Pig Meat ...	32,671 heads	1,815 Tons

Technical Level of Major Agro-Processed Farm Products by Commodities

The technical level of agro-processing in the province still remains to be developed. The only major agro-processing is paddy milling in view of the demand for clean rice from Bulog as well as from the open market. Rice milling units are too small and ineffective to produce quality rice.

Major Agro-Processing Business Entities, Volume of Production and Facilities

In 1994 there were 12,849 paddy processors, and 5,975 rice milling units in the province.

The rice processing units are within the KUD and non-KUD sector. These are of 0.5 ton to 4 tons per hour capacity. At the end of 1993 the position of rice milling units in the province was as under:

Year	Total Units	Units in KUD	Units in Non-KUD
1990	5,932	171	5,761
1993	1,800	178	1,622

The facilities with the KUD are too small. A majority of large-size rice mills are in the private sector. There were 213 other agro-processing units in the province in 1994, as follows:

Sugar processing factories	...	...	03
Cotton processing factories	...	...	02
Rubber processing factories	...	...	04
Palm Oil processing unit	...	...	01
Coffee seeds processing units	...	...	155
Sugarcane processing units	...	...	04
Cocoa processing units	...	...	41
Other processing units	...	...	3

Marketing Area of Major Farm Products, Distribution System

For agricultural products e.g., vegetables, fruits and some cash crops, the major destinations for shipping are the wholesale markets in Java, as well as within the province itself.

The farm households or the KUD have not established any joint handling, joint marketing or joint shipment facilities except for the provision of some transport and/or negotiating the deals.

Business Customs and Its Practice (Pricing, Accounts Settlement)

These practices are more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability

and perishability. The terms are generally cash-upon-delivery of goods. However, for larger values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be enumerated as under:

Rice: The procurement is under the government programme. The procurement price is fixed by the government. The farmers sell their paddy/rice to the KUD against this fixed price. The KUD pays the farmers in cash and rarely through their accounts in the cooperative. The surplus paddy is sold by the farmer in the open market, generally to the trader who comes to his house with cash in hand. In this case the terms are cash, and in many cases, a token advance payment is also made to the farmers for the next crop.

Vegetables: The transactions are usually cash-and-carry from the road-head.

Cash Crops: Except for clove, all transactions are on cash-and-carry basis. The price for cloves procurement is fixed by the government, and the payments to the farmers are made through the cooperative.

Poultry: Generally the terms are cash upon collection from the producer. The middleman, in turn, either sells the commodity on cash terms to the retailer or on payment-after-sale basis.

FINDINGS OF COMMISSIONED SURVEY-II ACTUAL SITUATION OF AGRICULTURISTS AND THEIR DEMANDS

Situation of Holding of Farm Machinery and Facilities

75% of the 60 farm households surveyed in the area of operation of three KUDs (KUD SEMANGAT, KUD LAMASI and KUD MATUTU) were engaged in farming. The main family income is also from farming. On an average 88-89% of the family income is derived from paddy rice cultivation. Other crops are fruits and vegetables and some cash crops which are economically not so significant. The farmer-members have acquired some farm machineries, equipment and facilities. Among the most expensive ones are 5 units of 4-wheel tractors and 5 units of hand-tractors. There were 24 hand sprayers, 13 mist blowers and 12 power sprayers besides other items e.g., threshers, fan mills, comb threshers. The highest concentration of farm machinery has been in KUD Matutu household families.

Produce storage facilities owned by the household members of the three KUDs include: produce storage 853m²; farm equipment garage 20m²; cattle shed 186m²; and poultry house 373.3m².

Except for the 4-wheel tractors, rest of the farm machinery and equipment is locally assembled in Indonesia. Almost 90% of the farm machinery and equipment have been purchased by the members from private traders. Only 21.6% of the 60 households surveyed had purchased farm equipment from their KUDs.

**Measures for Obtaining Production/Consumer Goods
(Situation of Using KUD)**

Farmer-members have obtained their production/consumer goods through various channels. The KUDs have been used by the members to sell bulk of their paddy at government guaranteed prices. The KUDs have also been used by the members to purchase some of the controlled commodities which are sold by the KUD at regulated prices. Otherwise the farmers have been free to use any channel which appears to them to be more economically-advantageous. 86.6% of the members purchased chemical and organic fertilizer from their KUDs, but only 20 members (33.3%) purchased their requirements on 100% basis from the cooperative. 42 members (70%) purchased their pesticides and only 11 members had purchased their 100% requirements from their KUDs. These requirements include: paddy seeds, farm machines, consumption items like rice, fish, other food stuff and some clothing. The highest utilization of the KUD facilities has been to purchase fertilizer and farm chemicals including some seeds.

On an average farmers get 89.6% of their agricultural income from rice cultivation; 3% from livestock, 2.6% from cash crops, 1% from fruits and vegetables and 3% from other agricultural operations. (see the table given below).

**Break-Up (Percentage) of Agricultural Income of
Farm Households: 3 KUD Areas in South Sulawesi**

Source of Income	KUD SEMANGAT	KUD LAMASI	KUD MATUTU	Av. %
Rice	98.4	89.0	82.0	89.6
Livestock/Dairy	1.0	1.8	7.0	3.0
Fruits and Veg.	--	2.1	1.1	1.0
Cash Crops	--	2.0	6.0	2.6
Other Income	0.5	5.3	4.5	3.0

The most prominent source of income for the households has been rice cultivation only.

The farm households have been making use of the small consumer stores, waserdas or kiosks owned by their 3 KUDs. The variety of expenses incurred by the households on various items has been on food, education, clothing and others. (see table below).

Break-Up (Percentage) of Household Expenses

Expenses	SEMANGAT	LAMASI	MATUTU	Average%
Food	55.37	51.0	43.0	49.8
Clothing	11.6	12.0	16.0	13.3
Housing	3.0	7.5	9.1	6.6
Education	20.0	20.3	22.8	21.0
Ceremonies	3.76	6.0	3.1	4.2
Others	6.12	3.2	6.1	5.1

Although the members have expressed their satisfaction with the existence of the waserdas (retail sales outlets) and kiosks, they have made some comments on their operations. Some of the observations have been: these are too small; need to be brighter; should have a wider range of goods; the price range has to be advantageous; and some need renovations.

In addition, the farm households have made use of the purchasing business facilities of their KUD in the form of kiosks and warehouses. Members have found these to be good but expressed that they all needed improvements.

Merchandise Ratio and Marketing Methods of Farm Products (Situation of Using KUDs)

Main crops, which are on procurement list of the government for purposes of national food stock, are generally offered by the farmer-members to their KUDs. These are sold by the members at government-designated prices. Whatever is left behind, the members sell the surplus in the open market on "cash-and-carry" basis because they needed money for their own use and for next cultivation.

In the case of cash crops, fruits and vegetables, poultry and dairy products, the members sold their products directly to the concerned dealers because the prices they received was always in cash. Some of the members carried their farm products themselves to the nearby town centres and sold them there against cash.

Intention to Introduce Farm Machinery and Facilities

Some of the members have been using power-driven farm equipment e.g., hand tractors, power sprayers, portable pumps etc. In the recent past, the number of farm equipment has also increased. The trend to mechanize farm operations has been set in motion in view of the need to grow more food of quality which is safer and healthier for human beings. Machines also try to overcome the problem of farm labour shortage. In response to the survey, the farm household members had indicated the mechanization of some segments of farm operations. (see table below):

Farm Households' Intention to Mechanise Farm Operations

Intention to Mechanise	SEMANGAT	LAMASI	MATUTU	Responses Received	Av.%
Tilling	8	7	5	20/60	33.3
Rice transplantation	8	10	8	26/60	43.3
Harvesting	5	7	6	18/60	30.0
Threshing	3	2	4	09/60	15.0
Drying	8	4	2	14/60	23.3
Transportation	3	-	3	06/60	10.0
Feeding Machines	3	3	1	07/60	11.6
Milking	-	2	-	02/60	3.3
Others	-	-	1	01/60	1.6

With the increase of farm machines and the projected mechanization of farm operations, there would also be the need for setting up farm machines service centres/automobile workshops. There will also be the need for providing appropriate training to the farm machine operators besides instituting some vocational training to the members of household.

Evaluation and Demand for Business Activities (Purchasing, marketing, processing, joint shipment, joint use facilities, terms of loan, farm guidance, better-living guidance and others)

In the light of the results of the farm household surveys carried out on a selected group of members of three KUDs, it has been found that the members desire to enhance the operations of their KUDs so that the members are able to get better and timely economic services (see the table below).

Expectations of the Farm Households From their KUD

Expectations	Average %
-Upgrading Kiosks and Waserdas	42.2
-Kiosks: Expansion of Items Range	36.3
-Waserda: Expansion of Items Range	36.3
-Establishing Joint Purchasing	30.0
-Establishing Joint Marketing	28.0
-Establishing Joint-Use Facilities	30.0
-Renovate and Expand Rice Milling Facilities	26.0
-Improve/Expand Warehousing Capacity	25.0
-Improve/Expand Assembly Hall	21.0
-Expand Loan Variety	25.0
-Increase Existing Credit Limits	25.0
-Increase Farm Production Guidance	20.0
-Increase Fertiliser Guidance	20.0
-Increase Better-Living Guidance	16.0

Warehousing and kiosks facilities are too small and need expansion (25% and 42%); range of goods and their quality need improvement (36%); waserdas are too small and need further expansion and improvement (36%); joint marketing through KUDs need to be encouraged (28%); variety of loans extended and the maximum credit limit to be increased (25%); to help overcome the problem of low fertility of land and proper shipment of agricultural produce, intensive farm guidance activities need to be instituted, e.g., better farming techniques, grading and packaging (20-16%); to promote a greater interaction with the members and their family members, the assembly halls need expansion and improvement (21%). At present there are no better-living guidance activities available to the farmers.

HAMPERING FACTORS AND POSSIBILITIES FOR AN INTEGRATED DEVELOPMENT OF KUD

Hampering Factors: Marketing Business

The following hampering factors were observed:

- 01 A lack of business relations among the KUD and the secondary level organisations;
- 02 A lack of capital;
- 03 Lack of understanding and acceptance of joint marketing systems especially in rice, poultry products, cattle-feed, rattan, cashewnut, ground nut, and silk worm rearing;
- 04 Serious lack of warehousing, transportation, rattan processing and other utilisation facilities;
- 05 Farm planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-charge of farm guidance;
- 06 Due to outdated and low capacity rice milling units, KUD often fail to meet the Bulog quality standards for rice procurement;
- 07 The quality of rice processed is low;
- 08 Disadvantageous location of KUD for market access due to long distances, lack of communication system/equipment, and lack of transportation facilities.

Hampering Factors: Purchasing Business

The following hampering factors have been noticed:

- 01 Lack of business relations among the KUD and with the secondary level organisations;
- 02 Lack of capital;
- 03 Due to inadequate space and shortage of capital, inadequate supplies of farm inputs and consumer goods at waserdas and Cooperative Service Place (TPK/kiosk);
- 04 Lack of understanding and acceptance of joint purchasing systems;
- 05 Shortage of warehousing, transportation, rattan handling and processing and other utilisation facilities;
- 06 Farm planning is not adequately supported by KUD infrastructure due to inadequate number of employees in-

charge of farm guidance;

07 Lack of supply of quality seeds;

08 Lack of business information and communication facilities.

Possibilities:

Marketing Business

In order to assist the farmer-members to obtain higher incomes from their marketing with their KUD, the following possibilities exist:

- 01 The farmers in the province have been producing quite a variety of agricultural produce e.g., paddy, and other cash crops like cashewnut, rattan, coconut, cloves, silk worm rearing. In order to facilitate marketing of these products it is possible to set up joint marketing and joint-use facilities e.g., a composite rice handling centre, a poultry handling centre with adequate infrastructure facilities to obtain higher income. These facilities may include processing, grading, packaging and shipment etc.;
- 02 The province has sufficient quantity of livestock and poultry population. With a view to generate additional demands for quality products, it is possible to establish joint marketing and joint-use facilities e.g., livestock/poultry handling, grading, processing and shipment facilities and cattle-feed production using the paddy straw, rice bran and other components;
- 03 The province has sufficient potential for handling a variety of agricultural products e.g., coffee, cloves, vegetables, rattan etc. The KUD facilities are inadequate to provide the required facilities. It is possible to establish infrastructure facilities e.g., warehousing, transportation, rattan handling and processing;
- 04 Technological level to add value to products is weak. It is possible for the KUD to establish new facilities for further processing of by-products e.g., paddy straw, rice bran;
- 05 It is possible for the KUD to encourage farmer-members to diversify range of farm products;
- 06 With a view to further develop marketing activities, it is possible to enhance orientation and training of handling managers and key members in handling specific products e.g., rice, beef-cattle and cattle-feed, rattan, coconut, coffee, with leading concerned industry to understand the needs of the processors and to conform to their requirements;
- 07 With a view to overcome the shortage of capital, it is possible for the KUD to enter into joint venture

arrangements with private enterprises and to adopt joint marketing strategies;

- 08 In view of the large amount of rice procurement by Bulog and the role played by the KUD, it is possible to increase extension activities to keep the KTs informed of the current market situations, standards and fixation of prices for various commodities and how to qualify to achieve these set standards;
- 09 The Puskud-South Sulawesi has marketing potential of a variety of farm products collected from the farmers through KUD for shipment to urban areas. It is possible for the Puskud to establish a reliable market information system for its affiliates.

Possibilities:

Purchasing Business

In order to satisfy the purchasing needs of the farmer-members and to increase the purchasing business of the KUD in South Sulawesi, the following possibilities exist:

- 01 KUD maintain several sales points e.g., waserdas and TPK. The number and range of merchandise is low. It is possible to expand purchasing business by increasing their number and merchandise range e.g., farm machines, implements;
- 02 With a view to enhance supply of better goods and services, it is possible to adopt joint purchasing concept by training and education of employees and key members by establishing new facilities or expanding the existing training facilities at district and provincial level;
- 03 In view of large paddy processing and potential for livestock development, it is possible for the secondary cooperative organisation to establish cattle-feed formulation plants and supply the feed;
- 04 To over the shortage of capital it is possible to tap various sources, external/domestic, to obtain higher credit and financial support for the members to obtain timely and sufficient quantities of inputs;
- 05 It is possible to develop a business information and communication network with the e.g., Puskud, wholesalers, and manufacturers to ensure constant supply of farm inputs, farm machines, agricultural implements and consumer supplies;
- 06 In anticipation of farm mechanisation, an increase in the use of farm machines, agricultural implements and transportation equipment is expected. It is possible for the KUD, at the primary level, or at the secondary level, to establish joint-use facilities for repairs and maintenance of such machines and implements;

- 07 In view of the widespread rice processing activity in the province, a lot of byproducts are generated. It is possible to make use of the byproducts like rice bran, broken rice, paddy-straw for the manufacture of cattle-feed;

OUTLINE OF THE MASTER PLAN

Suggested Directions to Expand KUD Business.

Purchasing Business

Establishment of Purchasing Business

Method such as Joint Procurement

- 01 In order to maintain a steady and timely supply of farm inputs and at reasonable prices in South Sulawesi, it is necessary that a joint procurement system is established by the KUD.
- 02 A comprehensive farm production plan be developed by the farmer-members with the full involvement of the KUD and the KTs with the following objectives in view:
- Estimated farm inputs, farm machines, farm implements, (quality/quantity) with a time-frame;
 - Estimated credit required.
- 03 KUD in association with Mandiri Inti KUDs in one or two districts and other business cooperatives e.g., KJUB (district level cooperative business federations/unions) to establish joint-use facilities like workshops at the district level for repairs and maintenance of farm machines and agricultural implements;
- 04 Enhance management skills of maintenance of farm machines, especially tractors, hand-tractors, crop protection equipment, water pumps, soil/water testing facilities;
- 05 KUD to establish members' accounts.
- 06 Enlist collaboration of secondary level organisations or wholesale agencies to secure constant supply of goods at reasonable prices joint purchasing basis.

Improvement of Purchasing Outlets

- 01 The number, quality and range of merchandise and service at waserdas and TPK needs further improvement e.g., farm machines, composite fertiliser with proper guidance services;
- 02 Introduce joint purchasing systems together with appropriate stock-point, market and information/communication systems for livestock-feed.

Obtaining Contracted Buyers

The province has a good population of beef-cattle and poultry. The requirements of feed is high. The local production is low. There is high availability of corn, rice bran and paddy straw for the manufacture of feed. The KUD have not been engaged in the production and supply of feed thereby losing a lot of business to private enterprises. It is, therefore, necessary to:

- 01 Establish a joint purchasing system in feed, corn processing, cassava processing, rattan handling;
- 02 The KUD, in association with secondary level business organisations, could help negotiate long-term agreements with the sellers.

Marketing Business

Organising Producers' Groups (including adoption of new commodities to be promoted)

- 01 Farmer-members should concentrate on production of high quality rice by using better seeds and adopting improved methods and tools for cultivation;
- 02 Instead of laying emphasis on growing traditional crop, farmers should also diversify farm products e.g., soybeans;
- 03 Emphasis be laid on rearing poultry, eggs and livestock;
- 04 Estimated production of each commodity (rice, poultry, cassava, groundnut, rattan and horticulture);
- 05 The KTs and the handling managers need to be exposed to new methods and techniques through training and extension to learn to meet the demands of the current consumers;
- 06 With a view to create market credibility to local products, it is desirable that the locally produced goods be prominently branded as a KUD/CI (Corporate Identity).

Establishment of Marketing Business Systems such as Shipment Control, Pooling Calculations

- 01 Establish joint-use facilities e.g., a rice centre for marketing rice with a common KUD brand;
- 02 KUD to initiate and establish members' accounts through which members' accounts with the KUD are settled, providing thereby also a scope for increasing members' savings;
- 03 KUD to introduce computerization for uniformity and speed in accounts for better controls on funds and inventories;
- 04 KUD should encourage pooling of members' produce through the KUD.

Provision of Information on Prices to Members

KUD in association with Mandiri Inti and secondary level organisations e.g., Puskud, should develop a business information and communication system by using radio broadcasts and other means.

Obtaining Contracted Buyers

Long-term contracts/joint business agreements be developed with local processors to ensure a constant marketing of farm produce e.g., rice, rattan and others.

Agro-Processing Business

Improvement of Rice Milling Technology

The Survey concentrated on two districts of South Sulawesi, Sidrap and Luwu with irrigation facilities as a typical agro-eco area. Main products are: paddy, corn and soybeans. All the KUD are engaged in procurement and processing of paddy. The operational condition of RMU, dryers, paddy drying floors is inadequate. The technology used is outdated with old and low capacity machines and methods. The KUD undertake their business independently without the organisational and technical assistance of their secondary organization or any other business federation.

The Study identified the following areas for a special development emphasis:

- 01 Improvement and replacement of existing rice milling equipment including construction of drying floors and expanding warehousing capacities with emphasis on improving the rice quality and yield;
- 02 Introduce to the farmer-members the methods and techniques of using and supply of improved varieties of rice seeds, farm machines and harvesting equipment;
- 03 Improve business relations among the KUD and with the secondary level organisations.

Improvement of Storage and Processing Technology of Farm Products and Practices

The present level of processing, warehousing and transportation is very low in the two districts of South Sulawesi. It is, therefore, necessary to:

- 01 Increase proper type of trucks and proper warehouse/facilities;
- 02 Provide more of crushed corn to the members as a basic ingredient for feed, increase number of corn shellers;

- 03 Provide financial and technical assistance through no-interest or low interest soft loans and equipment from external or domestic sources to KUD to set up and improve these facilities;
- 04 To overcome the shortage of funds, adoption of joint capital concept by a few neighbouring KUD with the assistance and experience of Mandiri Into or the secondary organisations.

Rationalisation of Management of Relating Facilities

- 01 Establish system for management of rice centres for joint marketing of KUD brand product;
- 02 Provide training of KUD employees in management of product handling facilities e.g., rice, poultry, livestock, rattan processing, packaging technology;
- 03 KUD to provide better-living and farm management extension.

Obtaining Contracted Buyers

KUD to seek joint business ventures with private industry to improve their business performance.

III. GENERAL REVIEW OF THE PROVINCIAL SITUATION [SOUTH SULAWESI]

1. Social Life in Rural Areas

The population in the Province of South Sulawesi in 1994 was 6,982,000 according to the Statistical Yearbook of Indonesia, 1994 published by the Central Statistic Bureau (BPS).

General traditional customs in rural areas of the province are dependant on each tribes' custom such as Bugis tribe, Makassar tribe, Mandar tribe and Toraja tribe. Their distribution in each Kabupatens are as follows:

Bugis tribe: Kabupatens Bulukumba, Sinjai, Bone, Wajo, Sidrap, Pinrang, Enrekang, Luwu, Pare-Pare, Barru, Pangkep, Soppeng and Maros; Makassar tribe: Kabupatens Gowa, Takalar, Jeneponto, Jntaeng and Selayar; Mandar tribe: Kabupatens Polmas, Majene and Mamuju; Toraja tribe: Kabupaten Tanah Toraja.

Traditional customs which are popular in Makassar, Mandar and Toraja are as follows:

- Life philosophy: Belief in one God.
- Gotong Royong: Working together for the community.
- Customs before planting paddy seed: Tudang Sipulung, Mappalili Empo Siapatangareang, Mabbulosibatang
- Wedding customs: Send money from man to woman; Night ceremony before wedding; Wedding ceremony; Visiting each others families.
- Funeral customs: Special funeral custom in Tanah Toraja.
- Traditional architecture: Bugis and Toraja tribes have characteristic housing.

The ratio of religious followers in the province are as follows:

- Moslems	...	...	...	96.27%
- Protestants	...	...	...	1.73%
- Roman Catholics	...	...	...	0.69%
- Hindus	...	...	...	1.29%
- Buddhists	...	...	...	0.04%

2. Legal Bases for Handling of Farm Products

Generally speaking, almost all economic activities are being allowed in the province. The following Table shows about various types of commodities and their legal bases in the province.

Commodities	Organisation	Legal Base
1. Paddy/rice	KUD Private/Non KUD	Presidential Decree
2. Fertilizer	KUD BUMN/PT Pertani	Ministry of Industry and Trade Decree
3. Clove	KUD Puskud/Inkud BPPC	same as above
4. Cacao	KUD Farmer group Puskud Private company (members of Ascindo)	Local Government Decree
5. Coffee	KUD Farmer group Puskud Private company (members of AEKI)	Local Government Decree
6. Cassava	KUD Farmer group Puskud Private company (members of ASPEMTI)	Ministry of Industry and Trade Decree
7. Rattan	KUD Puskud Private company	Local Government Decree
8. Silk	KUD Farmer group Private company (PT Jadowanasutera) BUMN/Perum INHUTANI (Silk Development Centre owned by the government)	Local Government Decree

Paddy/rice commodity distribution channel is decided by Bulog. KUD is selected by the Ministry of Cooperatives for the procurement of rice for the National Food Stock. To succeed this programme, the government prepares a special credit which is called "Food Credit".

Fertilizer commodity handled by the government through PT Pusri, a State Company which regulate the price and its distribution system. KUD is a single distributor from PT Pusri to farmers.

Clove commodity marketing system is regulated by the government at the national level. The government has designated KUD as the only buyer from farmers. The procurement of cloves is coordinated by the Inkud through the network of Puskuds and KUD. KUD must sell those cloves to BPPC. Clove cigarette manufacturers are the largest consumers of clove. The companies buy their requirement from the Clove Buffer Stock maintained by BPPC. For the procurement of cloves, KUD get a fee and service charge.

3. Distribution of Commodity for Agricultural Production

Agricultural Chemicals: The main producers of farm chemicals such as insecticides, pesticides, rodenticide, fungicides and herbicides are Bayers, Ciba, PT Petrokemia Kayaku and others.

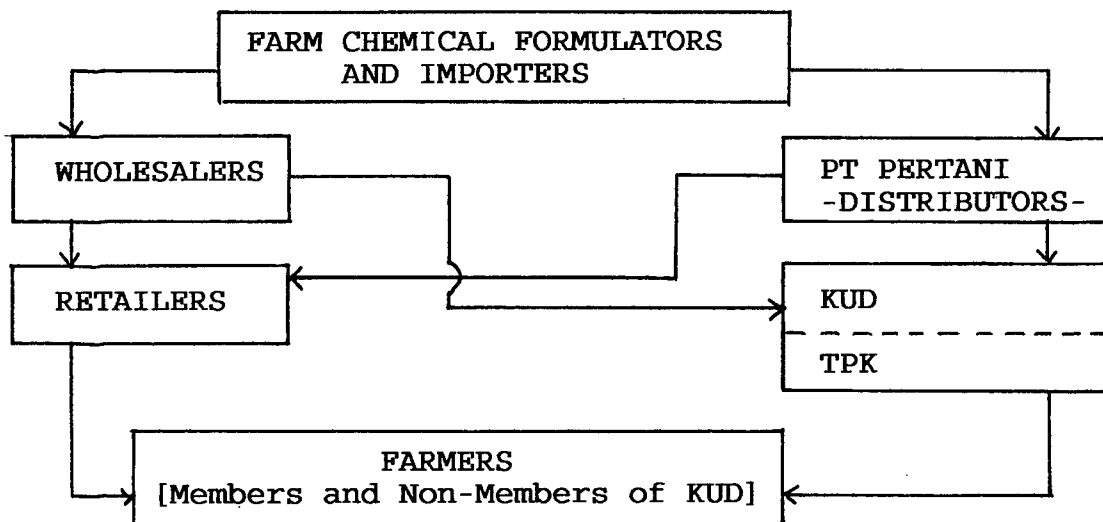
Chemical fertilizer is produced by several State-owned companies but the distribution of urea is coordinated by PT. Pusri. The fertilizer is distributed from company-owned warehouse which are located at Kecamatan level. The following Table shows quantities of fertilizers and farm chemicals distributed in the province in 1990 and 1993.

Farm Inputs	Year 1990		Year 1993	
	National	S.Sulawesi	National	S.Sulawesi
FERTILISER				
No. of KUD	3,550	258	3,461	244
Urea (Tons)	1706,547	68,937	3737,760	174,628
All Others (Tons)*	1341,910	41,361	2293,965	77,544
PPC & ZPT (lt)	-	-	928,811	-
Others (Tons)	33,224	1,568	56,503	1
FARM CHEMICALS				
No. of KUD	1,647	115	934	28
Insec.Lqd ('000lt)	6,782	974	361,155	314
-"-not Lqd. (Tons)	3,992	681	2588,977	1,695
Rodenticides (Tons)	2,496	42	9,001	157
Fungicides (Tons)	827	7	100,363	67
Herbicides (Tons)	243	3	15,869	22

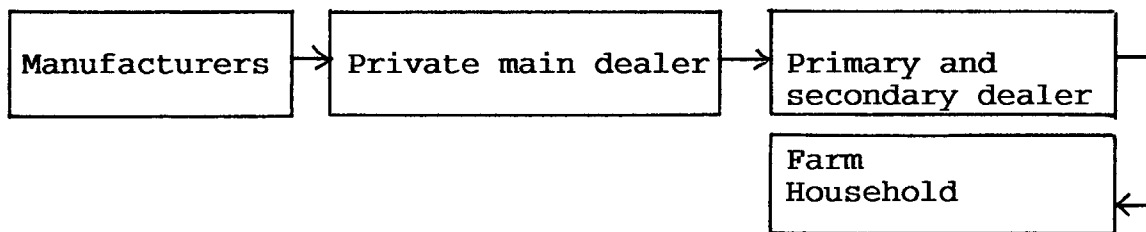
*includes: TSP, DAP, ZA, KCL & NPK.

Source: Koperasi Unit Desa 1990 & 1993. BPS-Jakarta

The Table below shows a flow chart for the distribution of farm chemicals.

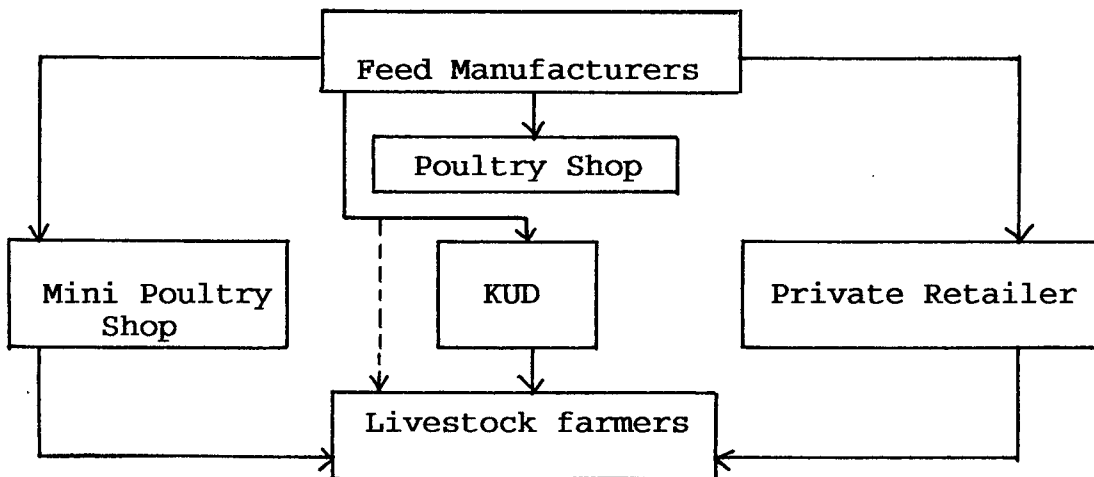


Vinyl Sheet/Plastics: The distribution channel is shown in the following Table. Data on the quantity distributed is not available.



Cattle-Feed: There is no significant dairy livestock development or dairy activity in the province. However, there is a large number of cattle mainly for farming and meat production purpose. These are owned by private individuals and some companies. They obtain their feed-stuff supplies from the local market. There are no major cattle-feed formulators in the province except for poultry. The distribution channel is shown in the following Table:

Flow Chart of Animal Feed Distribution



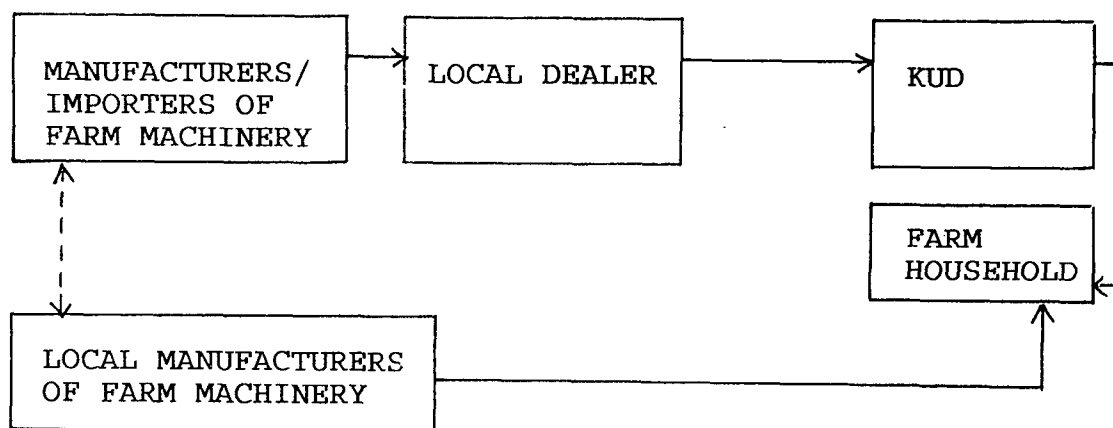
4. Distribution of Farm Machineries

The Table below shows the availability of farm machineries in the province. Some of the equipments have been imported and some have been locally assembled.

Type of Farm Machinery	1984	1993	1994	% of 1993
2-Wheel Tractors	33	7,416	8,235	110.0
Tractors/all types	1,015	419	566	135.0
Hand Sprayers	38,086	120,577	131,714	109.2
Other Pest Control Eqpt	2,587	1,924	3,356	174.4
Threshers	179	1,531	13,510	882.4
Paddy Processors	5,640	13,212	13,799	104.4
(out of which, RMU)	--	(5,785)	(6,242)	(107.8)
Water Pumps	--	1,053	851	80.8

Source: Statistik Indonesia-Year Book 1994. BPS-Jakarta

The Table given below shows distribution flow of farm machineries.



5. Production and Demand of Major Farm Products

Major farm products of the province have been rice, maize, cassava, fruits and cash crops. The production of major commodities in 1992, 1993 and 1994 are summarized in the following Table:

Commodity (Tons)	1992	1993	1994	% of 1992
Paddy	3,472,456	3,303,591	3,963,516	114.1
Corn	592,631	533,577	602,611	101.6
Soybeans	88,191	77,146	109,663	125.0
Cassava	560,093	635,735	542,895	96.9
Groundnut	61,651	49,036	70,483	112.9
Potato	26,345	27,979	28,640	111.5
Red Onion	26,441	28,540	32,647	126.9
Cabbage	34,158	51,825	61,431	179.4
Tomato	17,255	18,174	19,120	111.7
Cucumber	4,453	6,207	7,130	175.0
Durian	10,944	37,183	39,315	354.5
Papaya	27,181	33,473	34,622	129.6
Banana	458,344	702,329	794,634	173.5
Mango	128,529	169,201	198,950	154.2
Coffee/Rebusta	14,086	15,129	12,824	92.8
Coffee/Arabika	4,278	5,035	4,833	125.0
Cloves	9,686	9,030	8,336	80.0
Cashewnut	12,151	13,848	14,740	125.0
Coconut	127,549	132,558	124,288	96.8

Some of the agricultural products of the province were exported. The quantity of exports during 1994 and 1995 is shown in the following Table.

Commodity	Volume Exported (T)			Value Exported (US\$)		
	1994	1995	%	1994	1995	%
Cassava Chips	61,094	51,600	15.5	6.19m	7.37m	18.9
Markisa Syrup	144	198	37.7	0.10m	0.18m	84.8
Wheat Pollard	70,021	95,247	36.0	5.23m	8.44m	61.2
Coffee/Arabika	2,963	1,331	55.0	11.07m	4.41m	60.1
Coffee/Robusta	4,440	477	89.2	9.54m	1.45m	84.7
Cocoa	146,130	119,277	18.3	150.56m	134.16m	10.8

The province has some poultry activity. The Table given below shows the number of local chicken, broilers and eggs. About half of the eggs are distributed outside of the province.

Item	Production (Tons)		Distribution out of SulSel	
Local Chicken	1990	8,273	NA	-
	1994	9,945	NA	-
Broilers	1990	1,419	NA	-
	1994	2,192	NA	-
Eggs (all)	1990	30,049	17,307	57.5%
	1994	44,983	21,552	47.9%

The Table below shows the population of livestock except poultry. There is some activity for beef cattle activity. Dairy cattle is negligible.

Commodity (Nos)	1992
Beef-cattle	1,235,900
Buffalo	539,000
Horse	224,800
Goat	642,100
Sheep	11,600
Duck	3,846,900

Source: Statistik Indonesia Year Book 1994

6. Agro-Processing Activities

Paddy Processor: In 1994, there were 12,849 paddy processors, and 5,975 rice milling units in the province. The rice processing units are within the KUD and non-KUD sector. These are of 0.5 to 4 tons per hour capacity. At the end of 1993 the position of rice milling units in the province is shown in Table 6.1. The facilities with KUD are too small. A majority of large size rice mills are in the private sector. The following Table shows the Number of Rice Mill Unit in the Province:

Year	Sector	0.5 ton/h	1.0 ton/h	>2.0 tons/h
1985	KUD	-	22	8
	Non-KUD	5,939	238	0
1990	KUD	35	120	15
	Non-KUD	5,516	245	0
1994	KUD	42	120	16
	Non-KUD	1,450	172	0

Other Agro-Processors: There were 213 other agro-processing units in the province in 1994 as shown below.

Sugar processing factories	...	...	3
Cotton processing factories	...	...	2
Rubber processing factories	...	...	4
Palm oil processing unit	...	...	1
Coffee seed processing units	...	...	155
Cocoa Processing units	...	...	41
Other processing units	...	...	3

There is no agro-processing industry within the cooperative sector. Milk production is insignificant, and whatever is produced is consumed locally.

There is some production of Markisa fruit which is converted into syrup by several companies including by a joint venture in which the Puskud holds shares.

Slaughtering: There were 59 government-owned slaughter houses in the province including one in the private sector. The slaughter houses are traditional in character with no professional processing, handling and packaging facilities. There were 12 units of freezer trucks in the province during 1994. In addition, there are 6 cattle markets and 4 mini-ranches.

7. Business Transactions for Agricultural Products

The practices are more or less fixed. Some slight variations occur due to the type of commodity and its degree of durability and perishability. The terms are generally cash-upon-delivery of goods. However, for larger values the transactions can be partly cash and partly through bank instruments. In the case of various commodities, the customs can be summarized as follows:

Rice: The procurement is under the government programme. The procurement price is fixed by the government. The farmers sell their paddy/rice to KUD against fixed price. KUD pays the farmers generally through their account in the cooperative. The surplus paddy is sold by farmers in the open market, generally to the traders who comes to his house with cash in hand. In this case the terms are cash, and in many case, a token advance payment is also made to the farmers for the next crop.

Vegetables and Fruits: Vegetables and fruits such as onion, cucumber, chilli and banana are usually sold by farmers to middleman/collector on the terms of cash payment.

Cash Crops: Except for cloves, all transaction are on cash-and-carry basis. The price for clove procurement is fixed by the government. Payments to the farmers are made through KUD.

Poultry and Eggs: Generally the terms are cash-upon-collection from the producer. The middleman, in turn, either sells the commodity on cash terms to the retailer or on payment-after-sale basis.
