

**13TH ICA-JAPAN TRAINING COURSE
STRENGTHENING MANAGEMENT OF AGRICOOPS IN ASIA
INDIA-NEPAL-JAPAN
1998-99**

VOL. III

PROJECT PROPOSALS AND REPORTS

INTERNATIONAL COOPERATIVE ALLIANCE

**13th ICA-JAPAN INTERNATIONAL TRAINING COURSE ON
'STRENGTHENING MANAGEMENT OF AGRICULTURAL COOPERATIVES
IN ASIA**

LIST OF PROJECTS

<u>NAME OF THE PROJECT</u>	<u>PREPARED BY</u>
MILK VITA – POVERTY ALLEVIATION THROUGH DAIRYING IN RANGPUR AREA	MR MOSHARRAF HOSSAIN BANGLADESH
COTTON SEED PROECESS MILL	MR HUANG XIAO, CHINA
RAISING OSTRICH IN QINGDAO AREA	MR. XU GUOLIANG, CHINA
PADDY PROCESSING THROUGH VILLAGE LEVEL COOPERATIVE INFRASTRUCTURE	MR AMAR PAL SINGH BHULLAR, INDIA
PRODUCTION AND MARKETING OF QUALITY SEED THROUGH COOPERATIVE	MR DESPAL SINGH TOMAR INDIA
POULTRY BREEDING	MR. AZHAR B YUNUS MALAYSIA
SUGAR MILL PROJECT (GEC) MANDALAY	U ZAW MYINT, MYANMAR
STRENGTHENING AGRICULTURAL COOPERATIVES THROUGH COOPERATIVE PROCESSING AND MARKETING OF AGRICULTURAL PRODUCE	MR RAM BHAJAN SHAH NEPAL
PULSE PROCESSING PLANT	MR UMESH MAHASETH NEPAL
POULTRY BREEDERS FARM	MR TAHIR IQBAL BUTT PAKISTAN
AMALGAMATION OF FEEDMILLING COOPERATIVES IN THE PROVINCES OF BATANGAS, PHILIPPINES	MRS RUFINA S SALAS PHILIPPINES
ENVIRONMENTAL NURSERIES AND MARKETING	MS KARUNA DE SILVA SRI LANKA
MARKETING AND PROMOTION OF PASSION FRUIT POWDER	MR PHANUWAT WANRAWAY, THAILAND
PRESERVATION AND DEVELOPMENT LACQUER HANDICRAFT	MR HOANG CHUYEN CAN VIETNAM
MINI CO-OP MART DEVELOPMENT PLAN	MR PHAM KHUONG VIETNAM

Bangladesh Milk Producers' Co-operative Union Limited

Dugdha Bhaban

139-140, Tejgaon Industrial area

Dhaka-1208

Title of the Project:

Milk Vita - Poverty Alleviation through Dairying in Rangpur Area.

Prepared by :

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Bangladesh Milk Producers' Co-operative Union Limited

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Title of the Project:

Milk Vita - Poverty Alleviation through Dairying in Rangpur Area.

Overall Situation :

1. Rangpur :

- a) Topology and history : Rangpur district is located at the extreme northern part of Bangladesh. It is almost surrounded by India. It stretches to an area of 1303.3 square kilometers. Rangpur has got eight thanas (police station), 83 unions, 1214 villages and two Paurosaya (municipality). Land of Rangpur are level and located at the higher stage than the sea level. Lands are fertile and as such almost all the agricultural crops are produced in Rangpur viz:Paddy,Tobacco,Jute, Sugar Cane etc. There are some historical places at Rangpur and those are of tourist interests like Rajbari, Keramatia Mosque, Karmichael College etc.
- b) Population : The population of Rangpur is estimated to 2655498 persons out of which 1347107 are male and the rest 121839 are female. Population density is very much higher than the land availability. Tribal communities are also found in Rangpur having a population of about 2.5% of the total. Tribes are in religions of Hinduism, Christianiaty and Sawtaal.
- c) Education and institutions : About 20% people of Rangpur are educated. There are 3(three) University Colleges, 3(three) Govt.Colleges,1(one) Medical college, 1(one) Teachers Training College, 1(one) Cadet College, 1(one) Primary Training Institute, 1(one) Govt. Training Institute,35 Private Colleges, 165 Secondary schools and 1(one) Homeopathic College.

- d) Professional group : Agriculture, fisheries, and Animal husbandry have been found to be the main profession for the people of Rangpur. Sectorwise they are 70-80% agriculture, 10% livestock, 5% fisheries and rest are involved in other professions.
- e) Livestock situation : Livestock Population are 144721 out of which buffaloes – 11201, goat 621623, sheep – 11318, dairy cattle 565512, poultry 3354517, Presently it has been found that the dairy sector is being taken up by the farmers for socio-economic development . Many Dairy enterprises are growing up day by day and approximate 55 nos of small dairy farms are in view in Rangpur Town Area. Due to peoples interest indigenous breeds are gradually changed to dairy breeds by grading up. Many lactating cow's are found in this area. Average milk production is 5-6 litre per cow and highest milk production is 10-12 litter per cow. Milk quality is found to be of higher range. Due to non availability of marketing network people had to face lot of trouble to earn money against sale of milk . But recently the milk vita factory catering the need of the peoples and thereby the growers are receiving fair price and this is giving an assurance of guaranteed market. This has further encouraged the milk producing farmers for milk production increase. As such the organisation has also planned to expand the activities of milk vita in the Area. The present effort is therefore to study the role and the effect of milk vita activities in term of poverty alleviation.

2. Area of Project : Rangpur Milk Shed Area of Bangladesh Milk Producer's Co-operative Union Limited will be selected as the project site. It covers 25 nos. primary societies. About 2500 hundred co-operators are directly involved to the primary societies and including sadar thana, 4 thanas are incorporated in the project. Twelves nos of primary societies have been registered and affiliated by the organisation recently. The agricultural community is 66.17% in the project area. The cattle population is 1447215 heads of which 10,55,510 belongs to farmer members.

3. Problems faced by Farmers : Rangpur region is very much agricultural potential area. Since the lands are fertile and level. But peoples are facing problems in dairy practices. These are identified as :-

- Shortage of pasture lands for grazing.
- Lack of cattle feed processing industry.
- Lack of adequate milk marketing in the area.
- Higher price of cattle feed.
- Lower price of milk in the open market.
- Non-availabiliting of appropriate treatment, vaccination, health care etc. facilities for the cattle.
- Non availability of any special plan for dairying .
- Lack of dairy processing industry.
- Lack of appropriate knowledge and experience on rearing of dairy cattle in a rural and urban area.

4. Objective of the Project : Rangpur district is economically poor area. In Bangladesh about 20% peoples are landless and their main incomes are comming from agricultural sectors. In the present context, dairying has been considered to be one of the major activities for in the generation in the one. And as such the objective of the present project has been designed as:

- a) To study the role and effect in poverty alleviation of the marginal co-operatives farmers of the primary societies to the milk shed area by ensuring fair price of milk through assuring a guaranted milk marketing process ;
- b) To study motivational methods towards improving the socio-economic condition of the farmers/members of the primary societies through practicing dairy activities both at rural & urban areas.

5. Methodlogy of the Project : Applied Field Method will be maintained for the project.

6. Need and Justification of the Project : Bangladesh is a poor country. Most of the peoples of the Rangpur district are lived in rural area. Their income sources are limited . Maximum peoples (about 70-80%) are directly involved in agricultural business. It would be really a great advantage if the socio-economic condition of the peoples can be improved through a regular rearing of dairy cattle in the milk shed area. As because milk vita by way of creating/providing extra facilities for co-operators of the primary societies vize milk marketing, animal husbandry, treatment, vaccination, health care service, breeding, feeding, management of livestock, training on co-operatives, educations etc. even national birth control programmes of the Government are also being channelised by the infrastructure of milk vita. This would further benefit the farmers of the area. It is believed that the milk vita activities are contributing tremendously in the socio-economic development of its milk shed areas. Therefore, the present project is aimed at the study of effect in Rangpur area. If the result of the study if implemented further, it may be hoped that the process will contribute effectvely as income generating project.
7. Benefit of the farmers :
- Farmers are getting fair price of milk.
 - Guaranted milk marketing system in rural area.
 - Farmers being imparted with knowledge of Animal husbandry.
 - Facilities of prevention & a curative treatmenet, vaccination, Artificial Insemination programmes (dairying) care and feeding of livestock are in practice.
8. Conclusion : The co-operative dairy complex, milk vita is the first project of this kind of Bangladesh for organised collection processing and marketing of milk and milk products. This institute set up provides the base for intensive dairying in the Rangpur milk shed area under the co-operative fold. The milk shed area underline the importance of dairy in rural farmers producers for raising the income of poor, landless. and the marginal agricultural co-operatives farmers.

The activities of the last two years have been able to build up atleast an agricultural infra-structure through which along with dairy development activities, other special development programmes like poverty alleviation, mass education, family planning measures etc. can be planned and practised. It is belived that if the infra-structure of the project is widely expanded through out the milk shed area. The people of the area will be benefited at a great extend and the institutional efforts of milk vita towards poverty alleviation programme will further be intensified and made effective.

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Report of
the feasibility of raising Ostrich in Qingdao

NATIONALITY: CHINA

COMPANY: QINGDAO DONGFANG GROUP CO., LTD.CHINA

WRITER: XU GUOLIANG

DATE: JANUARY ,1999

Report of the feasibility of raising Ostrich in Qingdao

1. Development of Ostrich raising in China.

Ostrich is regarded as a excellent member of modern livestock husbandry in the world, the artificial raising only began from 7-8 years ago. Although there is records shows that Ostrich has been in China for a long time since ancient China, Artificial Ostrich Raising is only several years' history in China, since 1988, but we get a quick Development. Guangdong province is the first place to develop Ostrich Breeding. According to our statistics, in 1997, there are more than 300 Ostrich Breeding Companies and Totally 30,000 ostriches, and the technology level is as higher as USA and some countries in South Africa. As a more developed area in Shandong Province (the second province to put more emphasis on Ostrich Breeding), Qingdao has very good conditions to Develop this industry.

2. Economic Value of Ostrich

90% products of Ostrich can be taken as commodities.

i). Meat. Ostrich meat belongs to Red Muscle, looks like beef. It has the character of high protein, low fat and low cholesterol. Scientists regard it as the most healthy food for human kinds.

Form 1 composition of ostrich meat with other livestock meat

	Pork	Chicken	Fish	Beef	Ostrich Meat
Protein %	18-22	20.6	16	18-22	21.7
Fat %	25	3.3	1	2-14.7	1.2
Cholesterol	80-105	64-70	58	63	37.6

ii). Leather

Leather of Ostrich is soft, durable and ventilating. Now Ostrich leather is used to make Garments, shoes, bags and wallet etc. The price is very high. The countries like Japan, German, Italy, France and USA need much ostrich leather every year, for USA, need 95,000 per year.

iii). Other products

The eggs and feathers can make decorations; its bone even can be used as medicine.

3. Proposal of the project of Ostrich Raising in Qingdao.

i). Structure of Organization

Establish Joint venture according to “Law of the Peoples’ Republic of China on Joint Ventures using Chinese and Foreign Investment”.

ii). Proposed amount of Investment and structure

The total investment amount should be 1.5 million USD.

Structure of the Investment:

Infrastructure conversion:	USD110000.00
Incubators:	USD 50000.00
Means of Transportation:	USD 30000.00
Articles for office use:	USD 10000.00
Fee to Start :	USD 40000.00
Ostriches and Transportation Expenses:	USD 760000.00
Operating Expenses for 12 month:	USD 300000.00

Total amount: USD 1300000.00

iii). The purpose , scope and scale of production and business.

- a. To strengthen economic cooperation, introduce in the finest breeding ostriches, adopt advanced breeding technology and scientific management system from abroad, expand breeding scale step by step under the joint management and supply the finest breeding ostriches and live ostriches and their products to the domestic and international markets for creating benefits for both parties and making contributions to Shandong Economy.**
- b. The production and business scope of the company is to import, reproduce, breed and sell breeding ostriches and their products.**
- c. The production scale of the company is as follows:
Breed 650 chicks of 4 months old with the annual output value of the first year to USD 1,950,000.
Lay 2000 eggs and breed 400 1-year old chicks with the annual output value of USD 5,400,000.**

4. Area & Supply of Raw material, Water, Electric Power

- i). The project is proposed to locate near the highway and Qingdao vegetable base, which makes breeding and transporting ostrich in great advantage. This project need area of 30ac, include warehouse of 6000 square meter and office, hostel building of 500 square meter.**
- ii) The power requirement is 60KVA, the water needed per day is 20**

tons, all these are supplied by local and the cost should be beared by the joint venture.

- iii) The ostrich and eggs will be imported from abroad and the forage Will be purchased in local.

5. Equipment and Working Process

- i) The equipment needed in this project will be purchased in China, but the foreign party should assign a technology manager to supervise the design of the facilities and manage the project. The manager should also respond for the stuff training.
- ii). The working process
ostrich --- raising --- producing eggs --- selecting eggs --- hatching
--- raising --- process --- sale

6. Manufacturing organization and employee's salary

The joint venture will carry out the system of general manager in charge, under the leading of board of directors. The joint venture set up many managing department, in charge of the daily work of this company. The Quantity of employees is proposed to be 35. Besides the management, technology stuff recommended by the two parties of the project, others Will be choose from the stuffs of China investment party.

For the purpose of calculating cost to work out this feasibility report, the salary of the employee will be RMB700 for the time being. The real salary will depend on the decision of board of directors and will be adjusted in accordance with the development of manufacturing.

7. Environment protection & Work Safety

In process of raising in this project, there will be a small amount of waste forage dregs, excrement & foul things. We will adopt scientific method, make the depose of foul things to achieve the national stimulated standard and make them not affect the surroundings.

The joint venture will arrange proper fund for the purpose to making the environment beautiful and regulating the air condition. The joint venture will perfect the facilities of fir control and give safety training to all of the stuffs.

8. Speed of construction

Once this project is workable, the joint venture will make a little rebuilding to the existing building and also building some new facilities. For the warehouse, the proposal is to use a existing warehouse, to repair it only need two month and then it can be put into production.

For other buildings, also can be finished in three month, including the equipment fixing.

9. Benefit Calculating

i). Data calculating shows:

- a. sales income; according to the production scale, calculating on the balance of production and sales. The income of the first year is proposed to be USD 1950000.00 that is RMB1599000, from the 2nd year, the income of every year is USD 5400000 that is RMB44280000.
- b. sales cost

Depreciation charge: scrap value rate calculated by 10%.
The depreciation time are building 20 years, equipment 10 years. Traffic facilities, office appliance 5 years.

Repairing fee: based on 30% of the depreciation

Rental: field RMB7/year.m2 .

Salary & additional fee: salary of employee rmb700/person (for the time being), additional fee will be 65% of the total amount of salary.

Property insurance: calculate on 3/1000 of the total property.

Work protection fee: calculate on RMB300/person per year

Water, electric power fee: power consumption per year is 150000 degree. Water consumption per year is 10000 tons.

Labor Union outlay: calculate on 2% of stuff's total salary

Social activities fee: 5/1000 of sales income (15000000/year), other calculation 3/1000.

Establishing fee: shared by five years.

Sales amount: according to 3% of sales income.

c. Profit distribution

- a. Income tax: item product 50% for foreign sales, will be 24% tax rate. (as this project is proposed to locate in a special area, the local income tax will be free)

- b. Reserve fund: enterprise development fund, staff reward fund, welfare fund will be 15% of the profit after paying taxes.
 - c. Net profit distributions: the first party 70%, the second party 30%.
- ii) Profit calculation
- a. Net profit for 10 years is RMB237.1767 million. That is : 1st year RMB7,068,900, 2nd year RMB30,126,500.
 - b. Invest recovery time(including construction time 2 month) :16 month.

Enclosed Forms for Reference:

FORM 1. Calculation for Depreciation of Fixed Assets

Items	Asset's Cost	Salvage Value		Depreciation		ANNUAL Depreciation Amount
		%	Amount	Service Life	Depreciation Rate (%)	
Necessary Equipment	92.66	10.00	9.27	20.00	5.00	4.17
Incubation Equipment	20.50	10.00	2.05	10.00	10.00	1.85
Traffic Instrument	24.60	10.00	2.46	5.00	20.00	4.43
Office Expense	8.20	10.00	0.82	5.00	20.00	1.48
Total	145.96		14.60			11.93

FORM 2. Calculation for Expenses

Items	Total	1 Year	2 Years	3-5 Years	6-10 Years
1. Raising Cost	3326.34	401.20	407.20	1221.59	1296.35
Race Bird Share	739.64	147.93	147.93	443.78	
Depreciation Of Fixed Assets	119.30	11.93	11.93	35.79	59.65
Fixing Expense	35.80	3.58	3.58	10.74	17.90
Rent Cost	1500.00	150.00	150.00	450.00	750.00
Salary	485.00	48.51	48.51	145.53	242.55
Low Value Goods	48.00	3.00	5.00	15.00	2.50
Energy Cost	158.00	14.00	16.00	48.00	80.00
Insurance Cost	32.00	3.20	3.20	9.60	16.00
Transportation Cost	98.00	8.00	10.00	30.00	50.00
Labor Protection Expense	10.50	1.05	1.05	3.15	5.25
Other Expense	100.00	10.00	10.00	30.00	50.00
2. Advertisement Expense	444.32	40.19	48.67	146.01	209.35
Company Expense	100.00	10.00	10.00	30.00	50.00
Labor Union Expense	5.90	0.59	0.59	1.77	2.95
Board Expense	50.00	5.00	5.00	15.00	25.00
Business Entertainment	154.32	7.80	16.28	48.84	81.40
Share for Organization Expense	34.00	6.80	6.80	20.40	
Other Expense	100.00	10.00	10.00	30.00	50.00
3. Sale Cost	1243.53	47.97	132.84	398.52	664.20
4. Total	5014.09	489.36	588.71	1766.12	2169.90

FORM 3. Calculation for Cost and Expense

RMB: Ten Thousand

Items	Total	1 Year	2 Years	3-5 Years	6-10 Years
Feed, Medicine etc.	2933.00	278.00	295.00	885.00	1475.00
Raise Cost	3326.34	401.20	407.20	1221.59	1296.35
Advertisement Expense	444.22	40.19	48.67	146.01	209.35
Sale Expense	1243.53	47.97	132.84	398.52	664.20
Total	7947.09	767.36	883.71	2651.12	3644.90

FORM 4. Calculation for Profit and Sharing

RMB: Ten Thousand

Items	Total	1 Year	2 Years	3-5 Years	6-10 Years
Sum Of Sale	41601.00	1599.00	4428.00	13284.00	22290.00
Deduct: Sale Cost	7947.09	767.36	883.71	2651.12	3644.90
Sale Profit	33653.91	831.64	3544.29	10632.88	18645.10
Deduct : Income Tax	5750.77			1275.95	4474.82
Profit After Tax	27903.14	831.64	3544.29	9356.93	14170.28
Deduct :Pre Deduct Fund(15%)	4185.47	124.75	531.64	1403.54	2125.54
Net Income	23717.67	706.89	3012.65	7953.39	12044.54
A Company 70%	16602.37	494.82	2108.85	5567.37	8431.32
Convert to USD	2024.68	60.34	257.18	678.95	1028.21
B Company 30%	7115.30	212.07	903.80	2386.02	3612.42
Convert to USD	867.72	25.86	110.22	290.98	440.66

FORM5. Calculation for Foreign Exchange Balance

Ten Thousand Dollars

Items	Total	1 Year	2 Years	3-5 Years	6-10 Years
Foreign Exchange Income					
Overseas Sale	2536.50	97.50	270.00	810.00	1359.15
Investment	111.20	111.20			
Total	2647.70	208.70	270.00	810.00	1359.15
Foreign Exchange Cost					
Transportation Equipment	6.00	3.00			3.00
Office Expense	2.00	1.00			1.00
Import Race Birds	90.20	90.20			
Foreigner Cost	11.80	1.00	1.20	3.60	6.00
Sale Expense	19.00	1.00	2.00	6.00	10.00
Profit Sharing	2892.40	86.20	367.40	969.93	1468.87
Investment Return	111.20				111.20
Total	3132.60	182.40	370.60	979.53	1600.07
Retention	-484.90	26.30	-100.60	-169.53	-240.92

Note: 1、Overseas Sale 50%.

2、Profit Sharing 50%, In USD

FORM 6. Cash Flow and Interior Income Rate Statements(IRR)

Ten Thousand RMB

Items	0 Year	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	Total
inflows												
Profit After Tax		831.64	3544.29	3118.98	3118.98	3118.97	2834.05	2834.05	2834.06	2834.06	2834.06	27903.14
Depreciation		11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93	119.30
Fixed Assets Salvage Value Return				3.00		3.00					147.60	147.60
Operating Cash Return		6.56	6.56	6.56	6.56	6.56						32.80
Share Capitalization Share		147.92	147.93	147.93	147.93	147.93						739.64
Share of Birds Share		998.05	3710.71	3285.40	3285.40	3288.39	2845.98	2845.98	2845.99	2845.99	3039.99	28991.88
-total												
Outflows												
Investment and Renew for Fixed Assets	145.96						25.00					170.96
Share Capitalization Cost	32.80											32.80
Share of Birds	739.64											739.64
Operating Cash	147.60											144.60
Share Fund		41.58	177.21	155.95	155.95	155.95	141.70	141.70	141.70	141.70	141.70	1395.14
-total	1066.00	41.58	177.21	155.95	155.95	155.95	166.70	141.70	141.70	141.70	141.70	2486.14
Cash flows	-1066.00	956.47	3533.50	3129.45	3129.45	3132.44	2679.28	2704.28	2704.29	2704.29	2898.29	26505.74

Note: IRR=180%

Thirteen (13th) ICA-Japan training course for strengthening
management of Agricultural cooperative in Asia.

India. Nepal and Japan

13th January 1999 to 24th April 1999

PROJECT PROPOSAL

Title of project: Cottonseed processing mill

Country: P. R. China

Project proposal prepared by: Huang xiao

Funded by the Government of Japan

(Ministry of Agriculture, Forestry & Fisheries) and Executed
by the International Cooperative Alliance in collaboration
with its Member-Organisation in India. Nepal and Japan.

INTERNATIONAL COOPERATIVE ALLIANCE

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1. Acknowledgement

I am proud to be one of the participants of the 13th ICA Japan Training Course. I wish to associate my fellow participants of the other Asian Countries and exchange experiences and views with them during the period of training.

To increasing the income of the farmers in cotton growing area, to extend utilize of cottonseed and to provide pure cottonseed oil to the residents. I have attempted to make this project. I would like to express my sincere gratitude to Dr. Daman Prakash, project director and prof. Kumar and the staff of the ICA who assisted in many ways for a successful and progressive training programme.

My sincere thanks to the All-China Federation of supply & Marketing cooperatives who provided me this training opportunity.

Also I thank every body who helped me in all my efforts

Huang Xiao

Shandong Supply and Marketing Cooperative

Jinan P. R. China

February 1988.

2. Introduction

Shandong province is located in the east of China. It is situated between the sea and mountain ranges. Shandong is a big cotton growing province in China. Shandong Supply and Marketing Cooperative has a cotton company. At present, there are 14 cotton managing organizations at city level, 82 cotton companies at county level, 316 cotton ginning plants and oil mills.

The ginning plant buy seed cotton from farmers gin cotton and press cotton as a 100kg bales. Then they sale the baled cotton to textile mills.

Used to they return the cotton seed to farmers. Farmer crush the cotton seed and use it as fertiliser or as feeding. It was big waste of resources.

In recent years ginning plant sale the cotton seed to small oil mill. The oil mill produce crude oil and sale it. There are tow problems. One is waste oil and the second is toxin problem. (gossypol)

3. Background

Shandong province produce about 400,000 ton of cotton every year. At the same time farmers have above 640,000 ton of cottonseed.

Yield of cotton and cottonseed

cotton	cottonseed
1980年 528,000 ton	844,000 ton
1985年 887,000 ton	1,419,200 ton
1990年 918,000 ton	1,468,800 ton
1997年 338,000 ton	540,000 ton
1998年 356,000 ton	569,600 ton

The problems faced by the farmers are as following:

- 1) How to utilize the cottonseed resources?
- 2) What advance technology they should use?
- 3) How to increase the income of farmers?
- 4) How to improve the quality of the cottonseed products.

4. Project

1) Scale of the project

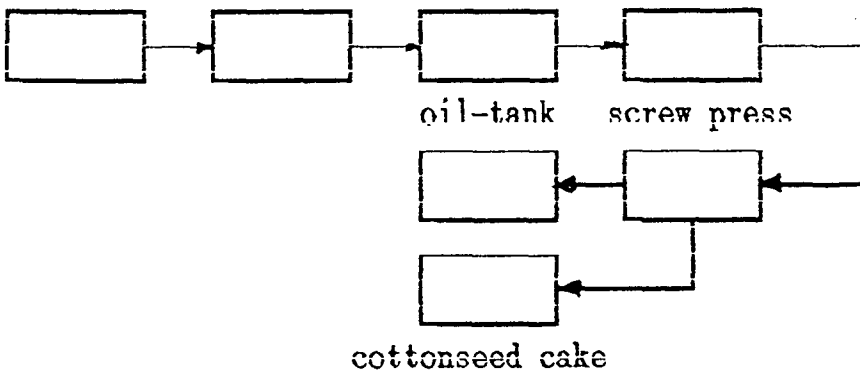
The scale of the cottonseed processing mill is different from China and other countries. Such as United States of America. Australia. In United States the output of cottonseed processing mill is over 100,000 ton of cottonseed every year.

In China the reasonable scale is 20,000-30,000 ton of cottonseed a year. This cottonseed processing mill managed by county Supply and Marketing cooperative. This county produce about 20,000 ton of cotton and 32,000 ton of cottonseed. The radial distance is less than 50km from any farmers to the mill. It will reduce the transportation costs. It is the reason. Why our scale of mill is much smaller than the mill in other countries.

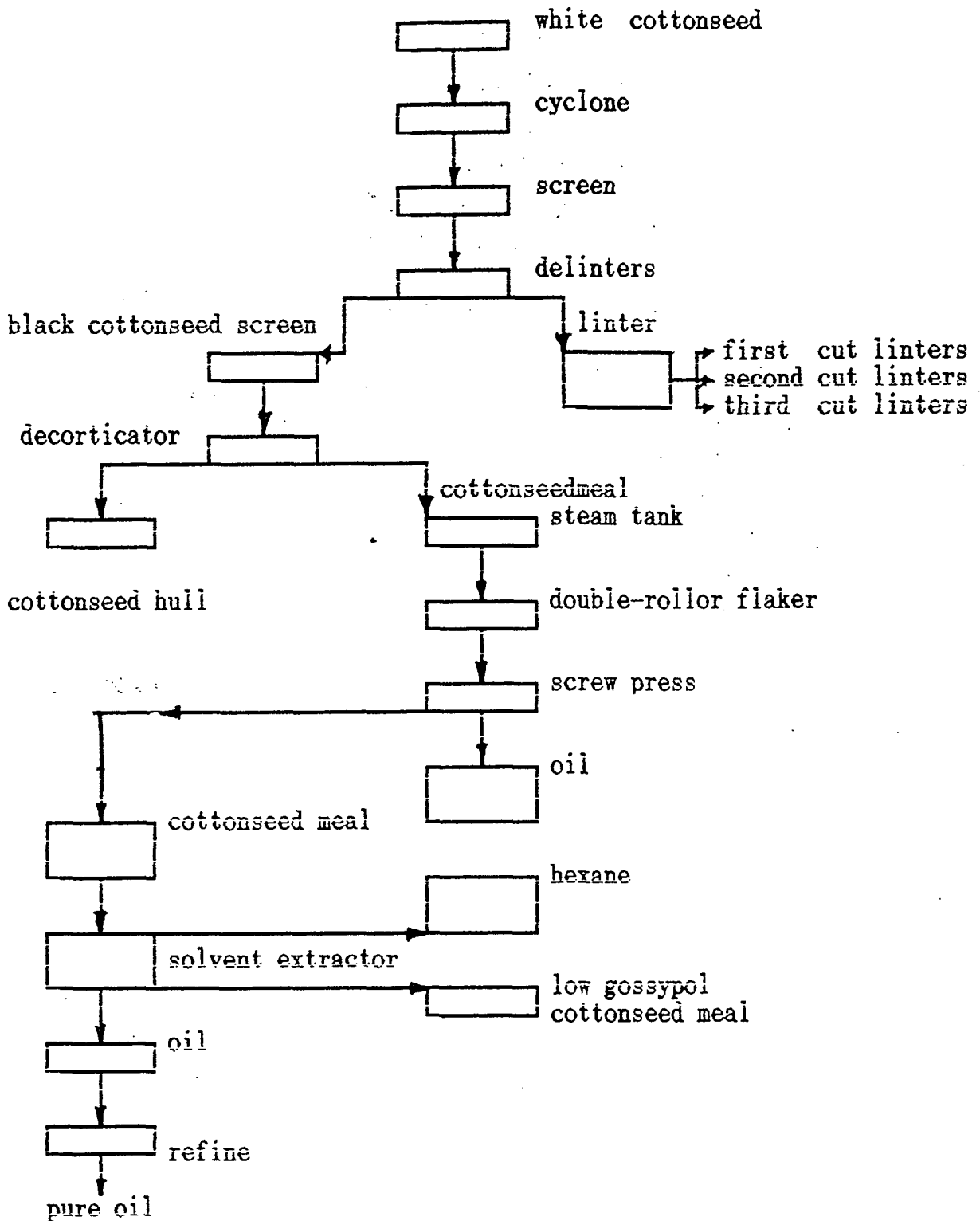
2) System of the mill

A. old system

cottonseed screen steam tank double-roller flaker



B. New system



C. Advantages of new system

- 1) Products of old system -cottonseed cake (with hull in it).
raw oil.
- 2) Products of new system -firstcut linters, secondcut linters, thirdcut linters, cottonseed hull, low gossypol cottonseed meal, pure oil.
- 3) To supply to residents high quality pure oil.
- 4) To sale low gossypol cottonseed to feeding industry.
- 5) To increase income of farmers.

D. Usage of the products

- 1) Hull-to produce mushroom.
- 2) Firstcut linters-for textile industry or high quality paper.
Secondcut linters-for chemicl factory. Thirdcut linters- for cellulose.
- 3) Low gossypol cottonseed meal-good forage.
- 4) High quality pure oil-edible oil.

5. Organization and management

1) The project will be implemented by the county cotton company. This company is a part of county supply and marketing cooperative. County supply and marketing cooperative will invest fixed capital. most of the working capital will be provided a loan by Agriculture Bank. It will be managed and run by the Board of directors of the **** county oil mill.

2) Organization and tasks of divisions.

a. The trade division purchase white cottonseed from ginning plant and sale all products to buyers.

b. The task of production division is process cottonseed and make efforts to increase the productivity and insure safety of the mill.

c. Financial Division

They make budget, borrow money from Agriculture Bank, plan to rationalize the function of work and make out the financial statements. They pay the salaries of the employees and manage the welfare facilities, and pay medical, safe and old-age insurances for employees.

d. Administration division

This division is in charge of general affairs related to the operation of the plant, they assist the General Manager for administrative affairs in order to achieve the whole target of the project.

6. Financial Analysis

Appendix 1.

The capital cost of the Fixed Assets

a. Land use fee	RMB 5, 000, 000.
b. Cost of factory building 1250m ²	RMB 2, 500, 000.
c. Cost of transformer and electric line	RMB 150, 000.
d. Cost of delinter machine	RMB 350, 000.
e. Cost of screw press and subsidiary machine	RMB 300, 000.
f. Cost of solvet extractor	RMB 400, 000.
g. Cost of refine	RMB 250, 000.
h. Two vehicles for marketing and extension activities.	RMB 300, 000.
i. Contingencies	RMB 300, 000.
Total to be provided by county supply and marketing cooperative.	RMB 9, 550, 000.
j. Working capital (loan).	RMB 4, 000, 000.
Total capital cost	RMB 13, 550, 000.

The depreciation will be charged 10% which comes to

RMB 955, 000. per year.

Appendix 2.

Manpower required and salaries at head office

Name & No. of posts	emoluments RMB per month	Total emoluments
General Manager 1	RMB 3000	RMB 3000
Deputy Manager 2	RMB 2500	RMB 5000
Staff 5	RMB 1600	RMB 8000
Driver 2	RMB 1200	RMB 2400
Sale Men 10	RMB 1500	RMB 15000
Watch Men 3	RMB 1000	RMB 3000
Total 23		RMB 36400

Manpower required and salaries at head shops

Name & No. of posts	emoluments RMB per month	Total emoluments
In charge 3	RMB 2500	RMB 7500
Staff 3	RMB 1800	RMB 5400
Workers 28	RMB 1200	RMB 33600
Total 34		RMB 46500

Annual salaries will be 994,800

$$(34400 \times 12 + 46500 \times 12) = 436800 + 558000 = 994800$$

Appendix 3.

Estimated annual operation fixed cost

a. Salaries	RMB 994,800
b. Utility bills	RMB 1,600,000
c. Communication	RMB 50,000
d. Interest of loan $4,000,000 \times 10\%$	RMB 400,000
e. Travel	RMB 300,000
f. Subsidiary material	RMB 1,200,000
g. Repair & maintenance	RMB 1,000,000
Total	RMB 5,544,800
h. Depreciation	RMB 955,000
Total cost	RMB 6,499,800

Appendix 4.

detail variable cost	RMB 34,036,000
a. cottonseed $20,000T \times 1600$.	RMB 32,000,000
b. package cost	RMB 1,036,000
c. transport cost	RMB 1,000,000

Saler Revenue (see annex 1)

a. first cut of linter	300T	RMB 960,000
b. second cut of linter	600T	RMB 1,710,000
c. third cut of linter	450T	RMB 1,237,500
d. cottonseed hull	7000T	RMB 4,900,000
e. pure oil	3700T	RMB 31,080,000
f. cottonseed meal	7000T	RMB 8,400,000
total		RMB 48,287,500

The total project cost estimate at RMB

Classification	Amount (Quantity)	Remark
1. Fixed assets and working capital	13,550,000	see appendix 1
2. Operation fixed	5,544,000	see appendix 3
3. Variable cost	34,036,000	see appendix 4
Total	53,130,800	

Finanual Analysis

capital cost	Total RMB 13,550,000
salaries cost	Total RMB 994,800
detail of fixed cost	Total RMB 5,544,800
detail of variable cost	Total RMB 34,036,000
sales reveral cost	Total RMB 48,287,500

$$\begin{aligned}
 & \text{Fixed cost} && 5,544,800 \\
 \text{B. E. P} - & \text{sale-variable cost} && 48,287,500 - 34,036,000 \\
 & && \hline
 & && 14,251,500 \\
 & && \hline
 & && = \frac{5,544,800}{14,251,500} = 38.906\%
 \end{aligned}$$

Requirement of capital

Classification	Mount	
1. Fixed Assets and working capital	13,550,000	see appendix 1
2. Fixed operation cost	5,544,800	see appendix 3
Total	19,094,800	

Profit Analysis

Details		year
Project cost	RMB	
Capital cost	RMB	9,550,000.
Working capital	RMB	4,000,000
Total cost	RMB	13,550,000
Precess capital cottonseed		20,000T
Total sales revenue	RMB	48,287,500
Detail of Fixed cost	RMB	5,544,800
Detail of variable cost	RMB	34,036,000
Total cost	RMB	39,580,000
PBDIT	RMB	8,706,700.
Depreciation	RMB	955,000
PBIT	RMB	7,751,700
Interest	RMB	400,000
PBT	RMB	7,351,700
Increment tax 13%	RMB	2,117,375
Income tax 33%	RMB	1,727,327.
PAT	RMB	3,506,998

$$\begin{aligned}
 \text{increment tax } 13\% &= (\text{sales} - \text{input}) * 13\% \\
 &= (48,287,500 - 32,000,000) * 13\% \\
 &= 16,287,500 * 13\% = 2,117,375
 \end{aligned}$$

$$\begin{aligned}
 \text{income tax } 33\% &= (\text{PBT} - \text{increment}) * 33\% \\
 &= (7,351,700 - 2,117,375) * 33\% \\
 &= 1,727,327
 \end{aligned}$$

Sensitivity Analysis

	by 10%	by 20%	by 30%	by 40%	by 50%
If processing capacity reduce					
project cost					
capital cost RMB	9,550,000.				
working capital RMB	4,000,000.				
processing capital cottonseed	18,000T.	16,000T	14,000T	12,000T	10,000T
total sales revenue RMB	43,458,750.	38,630,000	33,801,250	28,972,500	24,143,750
cottonseed RMB	28,800,000	25,000,000	22,400,000	19,200,000	16,000,000
total cost (fixed cost) (variable cost)	36,717,200 (5,544,800) (31,172,400)	33,253,600	29,790,000	26,326,400	22,868,000
PBDIT	6,741,550.	5,376,000.	4,011,250.	2,646,100	1,275,750
depreciation	955,000	955,000.	955,000	955,000.	955,000
PBIT	5,786,550.	4,421,400.	3,056,250.	1,691,100.	320,750.
interest	400,000.	400,000.	400,000	400,000	400,000.
PBT	5,386,550.	4,021,400.	2,656,250.	1,291,100.	-79,250.
Increment tax 13%	1,905,637.	1,693,900.	1,482,162.	1,270,425.	1,058,687.
income tax 33%	1,148,701.	768,075.	387,449.	6,822.	
PAT	2,332,212.	1,559,425.	786,639.	13,853.	(-) 2217187

Cash flow of the project

Year	Inflow		Outflow		Net cash flow
	sales revenue	salvage value	capital expendi.	total cost	
0			49,130,800		49,130,800
1	48,287,500			39,580,800	8,706,700
2	48,287,500			39,580,800	8,706,700
3	48,287,500			39,580,800	8,706,700
4	48,287,500			39,580,800	8,706,700
5	48,287,500			39,580,800	8,706,700
6	48,287,500			39,580,800	8,706,700
7	48,287,500			39,580,800	8,706,700
8	48,287,500			39,580,800	8,706,700
9	48,287,500			39,580,800	8,706,700
10	48,287,500			39,580,800	8,706,700
total	482,875,000		49,130,800	395,808,000	136,197,800.

Cash Flow Analysis

Year	Net cash flow P. B. D. T.	Accumulated cash flow
01	49,130,800	-49,130,800
02	8,706,700	-40,424,100
03	8,706,700	-31,717,400
04	8,706,700	-23,010,700
05	8,706,700	-14,304,000
06	8,706,700	-5,597,300
07	8,706,700	+3,109,400
08	8,706,700	+11,816,100
09	8,706,700	+20,522,800
10	8,706,700	+29,229,500

payback period 6 years and 8 months.

7. Recommendations

- 1) Establish a Cottonseed Processing Mill Committee. The members come from the county cotton company.
- 2) Cottonseed Processing Mill Committee determine to purchase the machinery.
- 3) Sales men will be reward to sell a lot of the products.
- 4) Encourage the engineers and workers to reduce the cost of the processing and increase the productivity.
- 5) Necessary the many advertise when the initiative period of the marketing.

8 Annex

Annex 1.

Price

material and product	unit price
cottonseed	1600 RMB/T
first cut of linters	3200 RMB/T
second cut of linters	2850 RMB/T
third cut of linters	2750 RMB/T
cotton seed hull	700 RMB/T
pure oil	3700 RMB/T
cottonseed meal	1200 RMB/T

Annex 2.

Calculation Basis

1. office	200m ²		
2. transformer	50m ²	2 Men	
3. place	50m ²	10 Men	
4. linter shop	300m ²	5 Men	200kw
5. screw press shop	250m ²	5 Men	200kw
6. solvent extractor shop	200m ²	3 Men	150kw
7. refine	200m ²	3 Men	100kw
8. total	1250m ²		

Thirteenth ICA-Japan Training course

for

"Strengthening Management of Agricultural Cooperatives in Asia"

INDIA - NEPAL - JAPAN

November 16, 1998 to April 24, 1999.

PROJECT PROPOSAL

Title of the Project Proposal Pilot Project on Paddy-Processing through a Village Level Cooperative Infrastructure.

Country India

Project Proposal Prepared by Amarpal Singh Bhullar

**Funded by the Government of Japan
(Ministry of Agriculture, Forestry & Fisheries)**

and

**Executed by The International Cooperative Alliance
in collaboration with its Member-Organisations in
INDIA - NEPAL - JAPAN**



FOREWORD

A.P.S. Bhullar writes with dedication of a man committed to cooperative philosophy and absorbed in his subject. And the subject is one of great significance for the farmers of Punjab and their prosperity. Much has been written on the rapid agricultural change that has become known as the "**Green Revolution**". Also the criticism of social scientists has made us aware of socio-economic tensions caused by such rapid changes. In this scenario this work (Project Proposal) acquires all the more importance.

APS works in cooperatives in Punjab. He knows those who run and those who profit from cooperatives. He has developed a deep knowledge and insight of them, a dedication to them and enthusiasm for their betterment. So we have in this project proposal, a cooperative way of increasing the prosperity of farmers through value addition of their produce. This is no dry evaluation of statistics. It is an account by a man, who took part in it, of an enterprise that is vital to the peasantry of Punjab. To it, he committed his whole heart. This is the way the project proposal should be read and not as a cold academic exercise.

P.S. SIDHU

Place : Chandigarh

Dated : 13th January, 1999



ACKNOWLEDGEMENTS

For a work of this nature in which multi disciplinary approach is involved, cooperation from many quarters is necessary. I wish to thank all the officers of Punjab State Cooperative Bank, Markfed Punjab and Mehil Gaila Cooperative Agricultural Service Society without whose efforts this project proposal would not have been possible.

I owe a special note of gratitude to Sh. Sohan Singh, AMD (B) of Punjab State Cooperative Bank Ltd. and Sh. Muneshwar Chander, Deputy Registrar Cooperative Societies, who unstintingly gave their time and expertise in finalising this proposal.

I am grateful to The International Cooperative Alliance for giving me an opportunity to work on the project and The Punjab State Cooperative Bank and the Government of Punjab who made it possible for me to attend the 13th ICA - Japan Training Course. Worthy Registrar Cooperative Societies, Punjab, Sh. J.R. Kundal, IAS is to be praised for his policy of encouraging officers to go off to the groves of academe for acquiring learning and ideas.

I am in debt to Sh. P.S. Sidhu, M.D. Punjab State Cooperative Bank for being supportive and for his invaluable guidance inspite of his busy schedules. In the final preparation and formating of this project proposal, it is Dr. Naresh Gandhi's (Faculty Topic Training Centre, Gurgaon, who happens to be my teacher) painstaking efforts which needs special mention.

I express my special thanks to Dr. Daman Prakash Programme Director, I .C.A.- a man par excellence who had always been a source of inspiration and strength for me and the dedicated team of IRMA 's faculty for providing invaluable inputs which helped me in improving my project report and sharpening my skills expected of a professional Manager

Above all I am grateful to almighty "**Wahe Guru**" who is Gracious, Merciful and Kind to Human Beings.

This project proposal has been enjoyable and enriching experience.

The project proposal holds out **HOPE**.

Chandigarh (INDIA)
January 13, 1999

A.P.S. BHULLAR



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CHAPTER – I

SUMMARY

This Pilot Project aims at providing a mechanism through a village level Co-operative infrastructure for better marketing/processing opportunity for the farmers at their door steps and enable them to enhance their farm income through value addition of their agricultural produce. The project acquires all the more importance and significance in the present scenario in view of the large - scale **distress sales** made by the farmers at a very low price in State of Punjab.

The project is designed to cover the paddy growing farming community of village Mehil Gaila (Focal Point) and its periphery villages, which generally possess small - holdings of land and are the members of Mehil Gaila Primary Coop. Agricultural Service Society Ltd., Mehil Gaila (Nawanshahr) and its adjoining co-operative society.

The setting up of a modern mini automatic rice mill by the society will help in increasing the farm income of co-operative farmer members by value addition through agro processing of their paddy produce enabling them to fetch better price. This will also benefit the consumers ensuring them palatable quality rice at a reasonable rate.

The Punjab State Coop. Bank will patronise the project and ensure the cash credit limit facility to the society for the procurement of paddy against the outright purchase made by it.

The total capital investment of project will be 13.84 lacs which will be met by the society from its own funds whereas its working capital requirements of Rs.11.45 lacs will be met through cash credit limit from the Coop. Bank. The pay back period for the investments made is 4 years.



The society, besides making outright purchase of paddy from its members will also do custom milling for its members on first come first serve basis at reasonable rate, if they so desire, which will increase their holding capacity leading to the strengthening of their bargaining capacity. To make procurement of paddy from its members effective, the society will enter into quantity contracts with its members. Further, since the project cost and financial analysis reveals that the working capital management is very crucial for the success of the project, therefore, the society will be also entering into an agreement with its members that they will repay their loan and interest due to the society in the form of their paddy produce. The society will pay a patronage dividend/quantity bonus of Rs.15 per qtl. of paddy to the co-operative farmer members against their paddy produce sold to it.

The rice and other bye-products will be sold through the society's own retail counter, other co-operative societies and Constofed.

The operating rate of Modern Rice Mill will be 70% in the first year that will be increased step by step to 100% in the 4th year for onward period.

The experts have pointed out that if the procurement of agricultural produce and its processing is managed properly and effectively through co-operatives, it helps in reducing the price spread between the producer and the final consumer thereby ensuring better return (value addition) to the primary producer without affecting the interests of the consumer at the same time. It will also act as a role model to be followed by other focal point/viable primary co-operative agricultural service societies in the paddy growing areas of the State of Punjab.



CHAPTER - II

BACKGROUND

PUNJAB - LOCATION, HUMAN ELEMENT AND ITS AGRICULTURE.

2.1 Location

Punjab state lies within latitudes 29°30' to 32° 30' north and longitude 73° 55' to 76° 50' east in the Indo-Gangetic plains of Northern India. Except for a strip of the Shivalik Hills along its eastern borders the entire area is a flat alluvial plain with height above sea level ranging between 180 and 290 metres.

2.2 Human element

The human element has an important role in agricultural development. There is a consensus among observers of the agricultural scene in India that the sturdy sikh farmer is the best farmer in the country. At the time of the first census of Punjab in 1881, Sir Denzil Ibbetson, the census commissioner wrote :

"The Sikh Jats of Punjab are proverbially the finest peasantry. Much, no doubt, is due to the sturdy independence and resolute industry which characterize the Jat of our eastern plains, whatever his religion. But much is also due to the freedom and boldness, which the Sikh has inherited from the traditions of the Khalsa. Independent and self willed, he asserts the freedom of the individual strongly".

The Sikhism is a faith, which brought about a social revolution in North India, five centuries ago. It gave a new dignity to agriculture, which was declared as best of the professions. The founder of the Sikh Religion, Guru Nanak (1469-1539) in his old age settled down at Kartarpur on the banks of Ravi River and adopted agriculture as his profession.



The Sikh farmers colonized the wastelands of West Pakistan, Bikaner and Tarai and turned them into smiling fields of wheat and rice. Infact what one examines, the distribution of tractors all over India, their heaviest concentration is in the areas colonized by the Sikh farmers.

2.3 *The Agriculture*

Punjab has an area of 50.33 lacs ha. with cropping intensity of 185% and irrigated area of 95%. Punjab State with only 1.5% of the geographical area of the country produced 21% of wheat, 9% of the rice and 15% of cotton of the total production under these crops in the country. Punjab that has earned the name of "Granary of India" is more closely identified as the seat of "Green Revolution" than any other state in the country. It has been contributing 40-50% of rice and 60-70% of wheat to central pool for the last two decades. Punjab State produces 1% of rice, 2% of wheat and 2% of cotton of the world.

2.3A *Harvesting Season*

There are two main crop seasons, namely Kharif and Rabi. Major Kharif crops are paddy, cotton, sugar cane, ground nut and maize etc. whereas major Rabi crops are wheat, gram, barley, rapeseed, mustard and sunflower.

2.3 B *Classification of Area*

Immediately after partition (1950-51) the area sown more than once was only 6.26 lacs ha. during 1950-51 which has now reached 35-47 lacs ha. and the cropping intensity has increased from 117% to 185% in 1997-98. The percentage irrigated area, which were only 53% in the year 1950-51 rose to 95% during the year 1997-98. The classification of area of Punjab is as under :-

(000 ha.)

- Geographical area

5033



- Forests	290
- Land not available for cultivation	375
- Uncultivable land excluding fallow land	33
- Fallow land	101
- Net area sown	4234
- Area sown more than once	3584
- Total cropped area (%)	7718
- Percentage area under cultivation	84
- Cropping intensity (%)	185

2.3 C Farm Mechanisation

The farm mechanisation has contributed to a large extent in the increase of cropping intensity of the state. Tractors have more or less replaced the animal power in the state. There has been progressive increase in the number of agricultural machines utilized by Punjab farmers as is revealed by the following figures :

Sr.No.	Name of the agri-impliment	No.
1.	Tractors	3,65,000
2.	Tillers	2,45,000
3.	Seed cum fertilizer drills	1,45,000
4.	Reapers	3,500
5.	Combines (T.D.)	4,800
6.	Self propelled combines	2,500
7.	Threshers	3,25,000
8.	Maize shellers	2,500
9.	Potato planters	35,000



There is a system of equitable of land distribution. The size of operational land-holdings is generally small as the following figures speak :

**CLASSIFICATION OF LAND HOLDINGS
(1990-91 AGRI-CENSUS)**

Size Class (ha)	Number (000)	Area (000 ha)
Below 1	296	164
1-2	204	328
2-4	289	842
4-10	261	1622
10 and above	67	1077
Total	1117	4033

As a result, the benefits of green revolution have reached a large mass of people. Wage rates have increased many folds. Intensive farming with new technology has generated demand for more farm labour. The gap in the labour supply is being practically filled by immigrant labour from over populated eastern U.P., Bihar, and dry areas of Rajasthan.

It is true that when a farmer prospers, the country prospers because apart from the dealers in the agricultural inputs like fertilizers, agro-machinery, pesticides and seeds etc. shopkeeper of various other categories also prosper. The biggest gainer from this new market is industry enjoying an economic boom.

Increased grain production has also given a stimulus to poultry farming. Poultry and eggs are now consumed in larger quantities by all classes of Punjabis.

The quality of life in rural areas of Punjab has improved a great deal and it is the best available in the country - a fact admitted by Dr. S.H. Wittwer, Director Michigan State University during his visit to this region in 1975.



"The greatest progress of all times in agricultural development has not been in U.S.A. It has been in the Punjab of India. Between 1965 and 1975 yields of rice and wheat the two leading crops were doubled. Punjab probably made more agricultural progress in the last ten years than any other region on the face of earth. It is a revelation to visit the area and see what is being done not only in increasing agricultural productivity but in development of technology that is at the same time labour intensive".

The agriculture in this state has been undergoing spectacular changes in the recent period. These changes are manifestation of large-scale commercialisation and diversification taking place. In the agriculture sector this broadly includes cultivation of new crops and varieties, increase in the share of area under cash crops, large spread of live stock activities, biotechnology, horticulture and agro-processing etc.

All this is a worthy tribute to the farmers of Punjab who made "**Green**" a reality. They are the real heroes of India and deserve all praise, recognition and support. If special attention is given to ensure marketing linkages for his produce and promote agro-processing, there will be increase in the prosperity of the farmers for which agricultural cooperatives are the best instruments. What is required is a strong will matched with professional efficiency.



CHAPTER - III

3.1 THE RICE PRODUCTION AND ITS COOPERATIVE COVERAGE IN PUNJAB

Rice is world's most important food crop and a staple food for one third of mankind. It provides more than 20% of the daily calorie intake. In India rice is the staple food of nearly three fourths of the population.

The concentration of rice production in India is in eastern and southern states viz Bihar, West Bengal, Assam, Orissa, Eastern Uttar Pradesh, Madhya Pradesh, Andhra Pradesh, Tamilnadu & Kerala. Although rice is not the part of their staple diet, yet Punjab & Haryana have emerged as important rice growing states. Punjab provides 1% of the rice of the world and has been contributing 40% - 50% of rice to the country's central pool for the last two decades. The state has some 5 million ha. of land area of which about 4.2 million ha. is cropped. Thus about 84% of the area of the state is under crops. Practically the state gives a look of a vast farmstead. The cropping pattern is mainly dominated by two crops - wheat (Rabi crop) & Paddy (Kharif crop) in rotation. Paddy is the major Kharif crop of Punjab and about 23.50 lac ha. area is sown under this crop. Out of this about 1.20 lacs ha. area is cultivated under world famous Basmati crop. Even the cotton growers are switching over to paddy due to repeated crops failures of cotton as is revealed by the following figures :

Crop		1995-96	1996-97	1997-98
Wheat (Rabi)	A	3223	3230	3295
	Y	3884	4235	3823
	P	12518	13679	12719
Rice (Kharif)	A	2161	2160	2279
	Y	3132	3397	3465
	P	6768	7338	7897
Cotton (Kharif)	A	750	742	727
	Y	442	441	220
	P	1950	1925	941
A - Area (000 ha)		Y - Average Yield Kg./ ha.)	P - Production (000 tones/bales)	



Thus the production of rice has increased from 2 million tones in 1965-66 to 7.89 million tones in 1997-98.

The percentage of marketable surplus is also very high for paddy since rice is not a staple diet for Punjabis. A number of varieties namely : PR-106, PR-111, PR-108 (Super fine varieties) and IR-8, PUSA-44, JAYA (Common varieties) including Basmati which is known for its exquisite taste both in the domestic and international market are sown.

3.2 Procurement of Paddy

Internal procurement in Punjab is made by Public Agencies i.e. The Food Corporation of India (FCI), Punjab State Cooperative Supply and Marketing Federation (MARKFED) and the State Govt. through the State Civil Supplies Department and Punjab Civil Supplies Corporation (PUNSUP). There are about 1086 centres for procurement operations in the state out of which cooperatives have 239 centres during 1997-98.

The agency-wise procurement of paddy is as under :

AGENCY-WISE PADDY PROCUREMENT IN PUNJAB

(Figures in MTs)

Year	Support Food Sup. Price Rs.	FCI	MARKFED	PUNSUP	PSWC	PAIC	Millers	Total	
1995-96	380/-	6,70,297	17,15,725	10,18,871	9,90,671	6,74,990	—	17,32,693	68,39,249
1996-97	395/-	6,33,406	16,88,665	10,08,242	11,43,158	6,35,097	—	27,02,842	78,21,350
1997-98	420/-	6,61,255	28,99,673	13,40,822	11,71,397	8,29,877	1,39,834	27,39,217	97,82,075

Thus the cooperative coverage in paddy procurement is very low.

3.3 Problems faced by Paddy Growers

While standards of marketing have improved, a number of mal practices still exist. The personnel and enforcement are two great problems not always sufficiently attended to much less



-
- Pricing will be according to the government price support policy and the varieties of rice.
 - To create better marketing incentive the society will pay a patronage dividend of Rs. 15.00 per qtl. of paddy to the members for selling their produce to the society.
 - The society will retain rice bran and husk.
 - At a later stage the society will install a cattle-feed plant after acquiring necessary exposure, business experience and confidence which will further add value to the produce of maize growers in the area and also ensure quality cattle-feed supply for milch animal owner members to improve the health and milk yield of the livestock.



CHAPTER - IV

NEED AND JUSTIFICATION OF THE PROJECT

To attain sustainable food security we need an ever green revolution in ecology, economic equality, employment and prosperity of the farmers. It is a known fact that marketing of agro-produce is not well organised for the benefit of the farmers either by the private sector or the state sector. This fact stands true to the Paddy growers too. This occurs very often at the time of harvesting periods and the prices too come down. During these periods the private trader monopolises leading to distress sale by the farmers and the price paid to the farmers is very low. Taking all these factors into consideration, a lucrative price for the farmer with a better and organised marketing system, business diversification and agro-processing through cooperatives provide the pathway to achieve an ever green revolution ensuring prosperity of the farmers.

Under the cooperative sector three options are available for increasing the income of the farmers through agro-processing of his paddy produce, which are as under :

4.1 OPTIONS AVAILABLE FOR AGRO-PROCESSING OF PADDY IN THE COOPERATIVE SECTOR

Sr.No.	Category	Milling Capacity	Cost of Machinery	Suitability
1.	Large Modern Rice Mill	Above 1 tonne	Above Rs. 8.00 lacs	Markfed
2.	Medium size Modern Rice Mill	1 tonne	Rs. 8.00 lacs	PAMS
3.	Mini Modern Rice Mill	Below 1 tonne	Rs. 0.60 lacs to Rs. 4.05 lacs	PACS (at Vill. level)

The first option requires heavy financial investment and manpower as well as large quantity of paddy for capacity utilization of modern rice mill and as such is a viable proposition only for Markfed. The Markfed at present has four modern rice mills located at Machhiwara (4



tonnes capacity), Bagha Purana (4 tonnes capacity), Nawan Shahr (4 tonnes capacity) and Rajpura (8 tonnes capacity).

Although Markfed has gone global and has exported basmati rice processed and packed as per international standards in Markfed's Modern Rice Mill at Nawan Shahr to the tune of Rs. 159.20 lacs during 1997-98, the overall paddy milled by the Markfed at its own units viz-a-viz. private millers is very low against the procurement made by it as is reflected by the following figures :

(000 Mts.)

PADDY MILLED BY MARKFED AT ITS OWN RICE MILLS/GOT MILLED FROM PRIVATE MILLERS.

Year	Total Procurement Markfed	Paddy Milled at its own MRM's	Got Milled from Private Millers	Total Paddy Milled
1995-96	10.19	0.59	9.60	10.19
1996-97	10.08	0.61	9.47	10.08
1997-98	13.41	0.58	12.83	13.41

The above figures reveal that there is quite a big gap between paddy procurement of Markfed and its milling at Markfed's own rice mills. The major chunk of Paddy procured by Markfed is milled by private millers. It is an area where the Primary Cooperative Marketing Societies can step in against a second option. The third option is most suited to primary agricultural cooperative service society at the village / focal point level keeping in view its area of operation which is generally confined to one village and society's financial resources. This can help in strengthening bargaining capacity of the farmer with the ultimate objective of increasing his income through value addition of his produce.



4.2 *Area of the Project*

Since value addition activities are not being undertaken by any village level primary cooperative agricultural service society (PACS) anywhere in the state of Punjab, therefore, area for setting up the Modern Mini Rice Mill is designed to cover the cooperative farming community of the MAHIL GAILA COOPERATIVE AGRI SERVICE SOCIETY LTD., NAWAN SHAHR and as such is mainly confined to the area of operation of the society and to the areas of operations of other PACS adjoining the Mehil Gaila focal point, to provide :

- a) Milling of paddy purchased by the society from its members through out right purchase.
- b) Custom milling service at a reasonable rate to the cooperative members who desire the same, on the first come first serve basis to enable them to increase their holding capacity and strengthen their bargaining capacity to fetch better price for their produce.
- c) To utilize the rice mill to optimum level the society may provide custom milling to Markfed under the principle of cooperation amongst cooperatives, if need be.

and act as a role model for other primary cooperative agricultural service societies to be followed in paddy growing areas of Punjab at the focal points level.

The Project will provide a mechanism through a village level cooperative infrastructure (PACS) for providing better marketing opportunities to the farmers at their door steps through processing of their produce to enable to increase their holding capacity and sell their produce at a competitive price.

This activity at cooperative society's level will promote the economic interests of the marginal/small farmers of the area by ensuring them a guaranteed market and a fair price thereby saving them from making distress sales of their paddy. The project will also help in encouraging involvement of farmer members in this cooperative endeavour for their own salvation. Under the circumstances, the project holds good both for tapping the potential and increasing the income of farmer members by using the modern technology.



4.3 Mahil Gaila Coop. Agri Service Society Ltd. - An Introduction

The society came into existence on 30.07.1936 as a thrift and credit cooperative society but subsequently on 21st of June, 1958 became a primary cooperative agricultural service society after adoption of model bye laws. The area of operation of the society is confined to Mahil Gaila focal point consisting of one village. At present this society has a membership of 1,712. It has a working capital of Rs. 4.31 crores besides an annual business of Rs. 28.80 crores. The society have deposits of Rs. 3.76 crores.

4.3 A Its Objectives

The primary objective of the society as per its bye laws is to promote the economic interest of its members in accordance with the cooperative principles.

4.3 B Organisational Structure

As per the bye-laws of the society the organisational structure starts from gross root level, primary members electing their managing committee and then the committee members electing the president of the society from amongst themselves. The committee is elected for a period of five years. The secretary of the society is its chief executive and under him come the rest of the 29 staff members.

4.3 C Principle Activities

The activities at present undertaken by the society falls under four main streams :

- Financial Services (Thrift and Credit)
- Production Aid Services (Input Supply)
- Consumer Services (Supply of Consumer Articles)
- Marketing Services (Food Grain Procurement)

By way of these activities the society meets members consumption needs at his door step by providing quality goods and services at a cheaper rate. Member gets agro-inputs like fertilizers, seeds, pesticides, insecticides and diesel etc. required for agricultural production including the credit facility. The society also arranges marketing of member's agri-produce. However at present the society is not engaged in any value addition activity and as such there is no linkage of credit with marketing. If the society undertakes the business of Paddy milling by setting up its own Mini Rice Mill the consumer would also be able to get his quality rice needs fulfilled at a reasonable price. Similarly the farmer member too will fetch better price for his produce. It will further help in minimising post harvest wastage and will create a lucrative



market for members produce to enhance their income. This in overall will help in developing a favourable socio-economic environment.

4.4 Government Policies

A major breakthrough in agricultural production has been achieved in the states of Punjab & Haryana which has brought about a radical change in the whole agricultural situation. Increased production naturally brought in many implications particularly regarding prices. This necessitated the government to frame separate food and price policy with the following objectives :

- To provide every grower a security price or support price which will induce him on the one hand to produce more and on the other, to ensure him a fair price for his produce.
- To build up a buffer stock of both wheat and rice by maximising the internal procurement. This was thought essential from the point of checking the possible increase in the marginal propensity to consume due to rise in production and also with a view to check the speculative tendency of the traders.
- To ensure that consumer prices do not rise unduly.
- To ensure steady price and avoid excessive price fluctuations.
- To introduce such regulatory measures as may be considered necessary to secure the above objectives.

Food Corporation of India was set up to streamline the marketing and procurement system by providing a suitable machinery for the procurement of food grains throughout the country. To help it, the Agricultural Prices Commission was set up in 1965 to advise the government regarding appropriate policy for agricultural commodities. Under the procurement programme the Union Government has recognised as back as in 1961 that cooperatives have to play a vital role in the procurement scheme and outright purchase of agricultural produce.

4.5 Benefits to the Farmers

The experts have pointed out that if procurement and processing is managed properly and effectively through cooperatives, it helps in reducing the price spread between the producer and the final consumer, thereby ensuring better return (value addition) to the primary producer without effecting the interests of the consumers at the same time.



This proposed project besides adding value to the farmers produce and increasing his bargaining capacity will also help in disciplining the private traders and Govt. procurement agencies. The cooperative marketing/processing has in itself a highly educative influence and thus deserves high priority not merely because it is desirable as such but also because it is an essential pre-requisite for large scale expansion of the healthy cooperative credit movement.



CHAPTER - V

PROJECT

Scope

Although rice is an indispensable part of the human diet in India, the existing level of its consumption is very low in Punjab, not being staple diet of Punjabis and as such has a maximum marketable surplus. The large area of the project is under paddy cultivation and that too of super fine varieties i.e. IR-8 and PR-106. Besides that there is no milling facility available in the society area. The proposed project has thus a vast potential which will not only enhance the income of the farmer members, but also add to the profits of the society besides strengthening the inter-cooperative relationship amongst the cooperatives. The society may act as a role model to be followed by other PACS at the focal point level in the paddy growing areas of Punjab. Many incentives are being offered by the State Government for setting up agro processing industry at focal points.

5.2 Objectives

- To provide a strong and sound alternative milling channel for Paddy growers which will be run and controlled by the grower members themselves.
- To make proper deployment of society funds for the betterment of both the members as well as the society.
- To generate income both for the members as well as the society.
- To diversify business activities of the society to increase its productivity making cooperative a lucrative business enterprise.
- To develop business/commercial acumen amongst the PACS to enable them to undertake bigger projects in future after gaining exposure, experience and confidence.
- To help in ensuring better post-harvest management of agricultural produce thus minimising grain losses.
- To develop a sense of belonging amongst the members of the society and increase their level of participation.



- To generate employment opportunities.
- To ensure linkage of credit with marketing for the healthy growth of cooperative credit movement.
- To supply quality rice to the consumers at a fair price.
- To utilise the available manpower/storage capacity and land etc. which has not been utilised to its fullest capacity by the society earlier.
- To make payment of patronage dividend/quantity bonus in order to create better market incentive for its members to enhance their farm income.
- To supply quality rice bran to its farmer members for their poultry and animal livestock.

To sum up the main core objective of the proposed project is to add value to the produce of its members, and strengthen their bargaining capacity through an institution owned and managed by the members themselves.

5.3 Standards / Specifications

The Paddy shall be in sound merchantable condition, sweet, dry, clean, whole some, of good food value, uniform in colour and size of grain, free from moulds, weevils, obnoxious smell, maxicane, kesari, admixture of deleterious substances and also conforming to PFA standards.

It has been classified in Grade "A" and Common Groups.

SCHEDULE OF SPECIFICATION

Sr.No.	Constituents	Maximum limits %
1.	Foreign matter	
	a) Inorganic	1%
	b) Organic	1%
2.	Damaged, discoloured sprouted and weavilled grains	3%
3.	Immature, shrunken and shrivelled grains	3%
4.	Admixture of lower classes	10%
5.	Moisture	18%



5.4 Procurement

The total area under paddy cultivation within the project area of village Mehil Gaila is 2500 acres and the society covers approximately 1000 acres of land under paddy cultivation. The average yield of paddy in the area is 24 quintals per acre and as such the total production of members at the rate of 80% capacity utilization (average) is 19,200 quintals of paddy.

The society is already carrying on the food-grains procurement business for the last 7 years and as such has an experience and sound organizational set up for the same. However, to give further edge to the procurement business and make it more effective, the society shall enter into delivery contracts with its members stating the members' rights to deliver paddy of specified variety, quantity and quality as well as members obligation to deliver the same as per schedule.

The project cost and financial analysis reveals that working capital management is very crucial for the success of the project. In order to ensure regular paddy supply to the society, the society will be entering into an agreement with its members that they will repay their loan and interest due to society, in the form of paddy.

5.5 Processing

Milling means process of converting paddy into palatable rice. The process is divided into 3 main steps. They are as follows:

- Cleaning/Drying
- De-husking or separating
- Polishing or aspirating and Grading

(The mechanism has not been discussed here in detail, as further studies have to be done on most modern machinery and technology suiting to 21st century).

5.6 Marketing

The project aims at producing 56 quintals of rice at 70% of capacity utilization per day and as such requires 84 quintals of paddy. An effective procurement as already stated above through outright purchase of paddy from its members (and if need be custom milling for MARKFED) would procure and mill the required quantity of paddy.

Besides the bi-products, and broken rice the proposed quantity of rice to be produced at 70% of capacity utilization during the first year is 10080 quintals and is valued at Rs.85.50 lakhs,



thereby generating an income of Rs.3.22 lakhs (after tax deduction but before patronage dividend). The society will sell rice and its bi-products through its well established own retail counter which is known for its quality standard and service all over the area. At present, this retail counter is selling 1200 items of consumer utility. Besides that the society will sell its rice and other bi-products through sister primary cooperative societies, primary cooperative marketing societies and the state level CONSTOFED, besides the private sector dealers, wholesalers and retailers. To increase the share in the market, the society may employ the techniques of providing commission on sales, attractive packaging and branding of its products.

Storage

Since the bulk loads of rice are to be lifted immediately for consumer service hence the storage required is only for a very short period. The society however has already a godown with a storage capacity of 500 MT.

Pricing

Pricing of raw material (paddy) and its finished products is determined by the government under the government price support policy.

5.6 Operational Rationale

The important aspect of this project is to look after the economic interests of the marginal/small farmers by setting up a mini modern rice mill in order to add value to their produce and save them from making distress sales at a very low price. At the same time to protect the consumer from exploitation by supplying a quality rice at a reasonable price. The major steps in operation are listed below:

- Procurement of paddy will be (a) through direct/out right purchase from members of the society. Besides that the society will provide custom milling to its members at reasonable rates on first come first serve basis. (b) If there is any short fall the society will provide custom milling service to Markfed to minimise its idle period.
- For effective procurement of paddy the society will enter into quantity contracts with its members besides entering into agreements with them to repay their loan and interest due to the society in the form of their paddy produce.



solved. The paddy growers are made to suffer in mandies for days together due to poor marketing and processing facilities, a few of which are listed below :

The Paddy grower is not getting fair price for his produce due to :

- The heavy arrival of paddy in the market as harvesting period has been reduced very short because of mechanised harvesting of paddy.
- Whimsical attitude of bidders in the market and FCI's paddy analysts in determining the quality of paddy.

And above all the unfavourable weather at the time of paddy harvesting adds to his sufferings. All this many a times compels the farmer to make distress sale of his produce. Even then payments are not made in time to the grower by the private traders and the government agencies.



CHAPTER - VI

ORGANISATIONAL AND MANAGEMENT FUNCTIONS

6.1 Policy Decision

Initially the project proposal has to be placed and discussed at the rice mill project committee constituted by the board of directors of the society and that committee has to submit a comprehensive report with the recommendations which is to go before the general body for approval. Thereafter it becomes an approved policy to go ahead with organisation. Then the BOD of the society is there to draw up a work plan, find out the financial resources and staffing to direct and monitor the project.

6.2 Classification of Management

Rice mill management should be monitored by a sub committee appointed by the BOD of the Mehil Gaila Coop. Agri Service Society Ltd. i.e. the Rice Mill Project Committee.

6.3 Board of Directors of the Society

BOD will function according to the bye laws of the society and the working rules laid down and approved by the general body of the society. Hence those functions are not discussed here but they will define the functions of the Rice Mill Project Committee. The Rice Mill Project Committee is :

- i) To study the rice mill project proposal in detail and monitor working.
- ii) To study the project plan and recommend on the procurement of machinery and allied equipment.



- iii) Recommendation on manpower requirements in consultations with Sh. Madho Singh, Hon. Secretary and Manager/Secretary of the society.
- iv) To coordinate with departments and institutions concerned.
- v) Procurement of paddy and recommendations on the price to be paid to the farmers.
- vi) To recommend on the price of rice.
- vii) To recommend on the payment of patronage dividend to the members.
- viii) Reporting on progress to the BOD of the society.
- ix) To coordinate with other Agri Cooperatives in the area.

6.4 Requirement of Human Resources

Particulars	Number
- Accountant cum Manager	one
- Gate Keeper	one
Labour	
- Foreman	one
- Oil Men	two
- Helper (semi)	three
- Helper (unskilled)	three.

6.5 Total investment of the Project

Required funds for the project are as follows :

Sr.No.	Source	Amount	Remarks
1.	Society's own funds	13.84	Interest free
2.	Working capital (initial) from cooperative bank	11.45	Interest @ 16% (Cash credit facility)



6.6 Financial Analysis

The project life is of 10 years.

The capital cost of the project is worked out to Rs. 25.29 lacs, detail of which is as under:

a)	Building	0.67 lacs
b)	Plant and Machinery	4.50 lacs
c)	Misc. Fixed Assets	0.10 lacs
d)	Pre-operative Expenses	0.25 lacs
e)	Working Capital Margin	8.27 lacs
f)	Working Capital	11.45 lacs
g)	Contingencies	0.05 lacs

- Depreciation will be charged @ 10% on building and @ 15% on plant & machinery which comes to Rs. 0.75 lacs for the Ist year, Rs. 0.63 lacs for IInd year and Rs. 0.54 lacs for the IIIrd year. The depreciation is calculated by WDV method.
- It is assumed that the society will procure paddy from its members at the government's support price of Rs. 470/- per qtl., and market the rice @ Rs. 838/- per qtl. (levy 75%) and @ Rs. 879/- per qtl. (free sale 25%) besides selling

Broken Rice @ Rs. 500/- per qtl.

Rice Bran @ Rs. 400/- per qtl.

Paddy Husk @ Rs. 100/- per qtl.

- The salary of the manpower required for the project will be Rs. 2.50 lacs at the beginning year.
- Income tax will be imposed @ Rs. 35% on net profit after depreciation.
- The cooperative bank will provide cash credit facility @ Rs. 16½ % per annum for working capital requirements.
- The annual fixed cost is calculated at Rs. 3.96 lacs and variable cost at Rs. 89.54 lacs assuming the capacity utilization 70%.
- The IRR is 24%.
- The net present value of fund flow is + 7.11/- lacs.
- After paying income tax @ 35% of net profit the maximum possible patronage dividend available to the farmer is @ Rs. 23.56 per qtl. of paddy. The whole investment will be cleared in 4 years (Pay-back period).



6.7 TASK DIVISIONS

Procurement-cum-processing/storage Division

The work of this division will be to :

- Make direct/outright purchase of agri produce from members.
- Mill the paddy if there is any short fall then to do custom milling for Markfed.
- Storage

Marketing Division

To make an effort to increase productivity by increasing sales targets according to a plan while expanding market share the division should take charge of sales promotion and guide the farmers on new farm technology.

Administration Division

This division is in charge of general efforts related to operations of procurement/processing operations of the rice mill. They pay the salary of the staff and manage their welfare activities. They plan to rationalise the function of work and make out financial statements.



CHAPTER - VII

Recommendations

1. Establish a Rice Mill Committee comprising of two members from BOD, a technical personnel on paddy processing, Manager of the society's Rice Mill and an accounts personnel.
2. The Rice Mill Committee to study the project proposal in detail and make their recommendations to BOD on the strengthening of the infrastructural facilities required for the purpose and on the financial viability of the whole project.
3. The BOD of the society to obtain the consent of general body of the society and to arrange for necessary financial provisions and also the approval of Registrar Cooperative Societies of Punjab.
4. ~~The BOD of the society~~ to draw up a time plan for the implementation of the proposal and ~~also to provide~~ required human resources.
5. Machinery and other equipment to be purchased by consulting the experts in the field of paddy processing.
6. The Rice Mill Committee and the BOD in the whole process should adhere to the government policies/instructions laid down in this behalf.

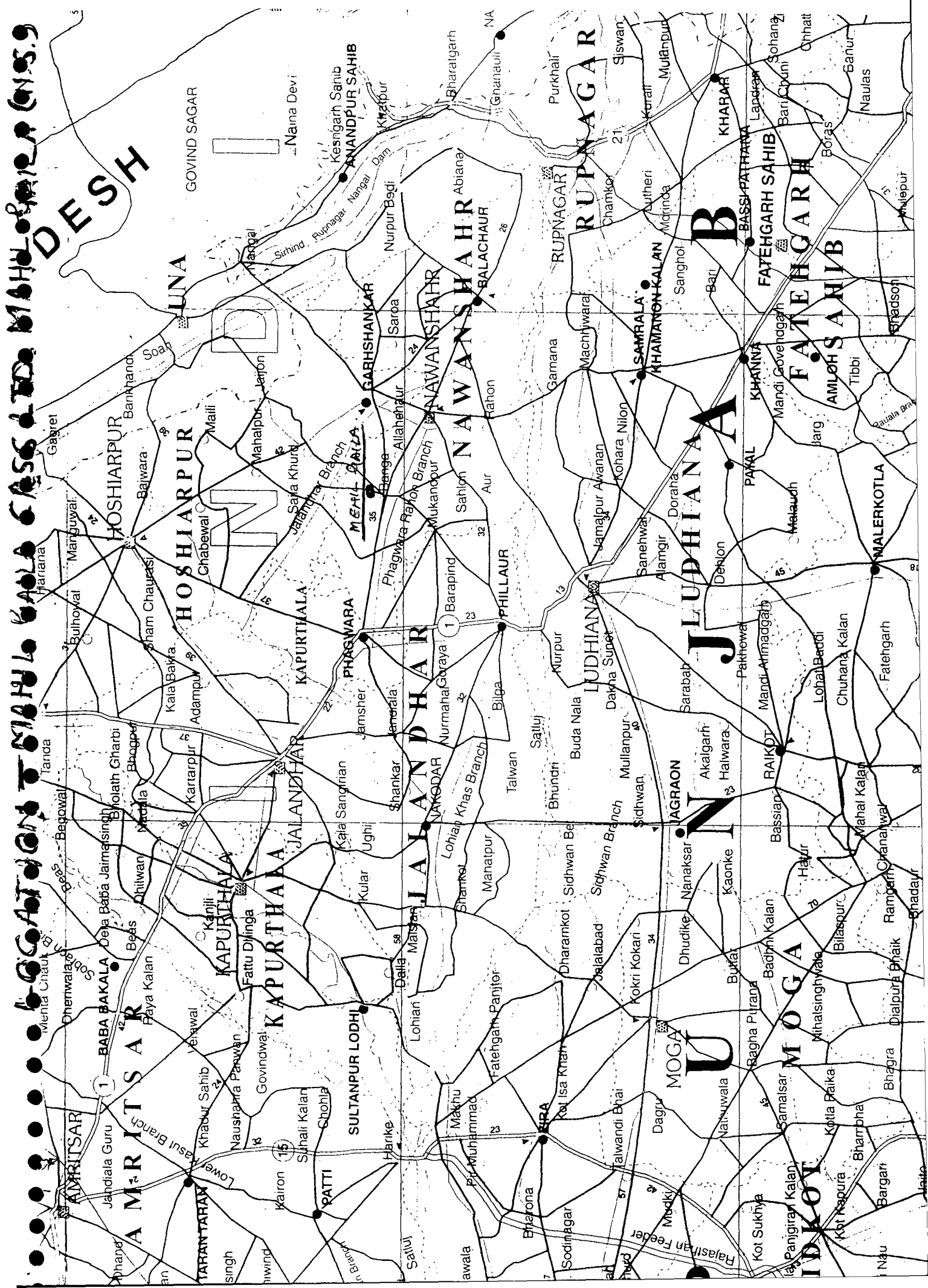
CASH FLOW STATEMENT

DETAILS	YR 0	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10
DEPRECIATION											
CIVIL WORKS											
VALUE AT YEAR BEGINNING		3.67	0.60	0.54	0.49	0.44	0.40	0.36	0.32	0.29	0.26
DEPRECIATION		0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03
VALUE AT YEAR END		3.60	0.54	0.49	0.44	0.40	0.36	0.32	0.29	0.25	0.23
PLANT AND MACHINERY											
VALUE AT YEAR BEGINNING		4.50	3.83	3.25	2.76	2.35	2.00	1.70	1.44	1.23	1.04
DEPRECIATION		0.68	0.57	0.49	0.41	0.35	0.30	0.25	0.22	0.18	0.16
VALUE AT YEAR END		3.83	3.25	2.76	2.35	2.00	1.70	1.44	1.23	1.04	0.89
TOTAL DEPRECIATION		0.74	0.63	0.54	0.46	0.40	0.34	0.29	0.25	0.21	0.18

BREAK-EVEN ANALYSIS

S. No.	DETAILS	YR 0	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10
	TOTAL SALES REVENUE		98.44	112.50	126.57	126.57	126.57	126.57	126.57	126.57	126.57	126.57
	VARIABLE COSTS:											
	RAW MATERIALS		78.96	90.24	101.52	101.52	101.52	101.52	101.52	101.52	101.52	101.52
	INCIDENTAL EXPENSES		3.95	4.51	5.08	5.08	5.08	5.08	5.08	5.08	5.08	5.08
	LABOUR & FREIGHT @ Rs. 3/- PER QTL. OF PADDY		0.50	0.58	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
	MACHINERY REPAIR @ Rs. 3/- PER QTL. OF PADDY		0.50	0.58	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
	STORES & SPARES @ Rs. 5/- PER QTL. OF PADDY		0.84	0.96	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
	BARBANA LOSS @ Rs. 3/- PER QTL. OF PADDY		0.50	0.58	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
	SUTLI @ Re. 1/- PER QTL. OF PADDY		0.17	0.19	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
	QUALITY CUT @ Rs. 5/- PER QTL. OF PADDY		0.84	0.96	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
	POWER CHARGES		1.44	1.65	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
	INTEREST ON WCL		1.83	3.36	3.95	3.95	3.95	3.96	3.96	3.96	3.97	3.97
	TOTAL VARIABLE COST		89.54	103.61	116.71	116.72	116.72	116.72	116.73	116.73	116.73	116.74
	FIXED COSTS:											
	SALARY & WAGES		2.51	2.64	2.77	2.91	3.05	3.20	3.36	3.53	3.71	3.89
	TRAVELLING EXPENSES		0.25	0.35	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
	OFFICE EXPENSES		0.25	0.35	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
	ENTERTAINMENT		0.20	0.25	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
	TOTAL DEPRECIATION		0.74	0.63	0.54	0.46	0.40	0.34	0.29	0.25	0.21	0.18
	TOTAL FIXED COST		3.95	4.22	4.51	4.57	4.65	4.74	4.85	4.98	5.12	5.28
	TOTAL COST OF PRODUCTION AND SALES		93.49	107.83	121.22	121.29	121.37	121.47	121.58	121.71	121.85	122.01
	BREAK-EVEN SALES		43.71	53.36	57.94	58.72	59.74	60.99	62.44	64.09	65.92	67.94
	BREAK-EVEN AS % OF INSTALLED CAPACITY		31.08	37.94	41.20	41.76	42.48	43.37	44.40	45.57	46.88	48.31

	DETAILS	YR 0	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10
	COST OF PRODUCTION & SALES											
	PROCUREMENT PRICE PER QTL.		470	470	470	470	470	470	470	470	470	470
	RAW MATERIALS		78.96	90.24	101.52	101.52	101.52	101.52	101.52	101.52	101.52	101.52
	INCIDENTAL EXPENSES		3.95	4.51	5.08	5.08	5.08	5.08	5.08	5.08	5.08	5.08
	LABOUR & FREIGHT @ Rs. 3/- PER QTL. OF PADDY		0.50	0.58	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
	MACHINERY REPAIR @ Rs. 3/- PER QTL. OF PADDY		0.50	0.58	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
	STORES & SPARES @ Rs. 5/- PER QTL. OF PADDY		0.84	0.96	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
	BARDANA LOSS @ Rs. 3/- PER QTL. OF PADDY		0.50	0.58	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
	SUTLI @ Re. 1/- PER QTL. OF PADDY		0.17	0.19	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
	QUALITY CUT @ Rs. 5/- PER QTL. OF PADDY		0.84	0.96	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
	POWER CHARGES		1.44	1.65	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
	SALARY & WAGES		2.51	2.64	2.77	2.91	3.05	3.20	3.36	3.53	3.71	3.89
	TRAVELLING EXPENSES		0.25	0.35	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
	OFFICE EXPENSES		0.25	0.35	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
	ENTERTAINMENT		0.20	0.25	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
	INTEREST ON WORKING CAPITAL LOAN		1.83	3.36	3.95	3.95	3.95	3.96	3.96	3.96	3.97	3.97
	TOTAL COST OF PRODUCTION AND SALES		92.75	107.19	120.68	120.82	120.97	121.13	121.29	121.46	121.64	121.83
	PROFIT BEFORE DEPN, INTEREST AND TAX (PBDIT)		5.69	5.31	5.88	5.74	5.59	5.44	5.28	5.10	4.92	4.73
	DEPRECIATION		0.74	0.63	0.54	0.46	0.40	0.34	0.29	0.25	0.21	0.18
	PROFIT BEFORE INT. AND TAX (PBIT)		4.95	4.68	5.34	5.28	5.20	5.10	4.99	4.86	4.71	4.55
	INCOME-TAX RATE (IN %)		35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
	INCOME-TAX		1.73	1.64	1.87	1.85	1.82	1.78	1.74	1.70	1.65	1.59
	PROFIT AFTER TAX (PAT)		3.22	3.04	3.47	3.43	3.38	3.31	3.24	3.16	3.06	2.96
	NET CASH FLOW		-13.84	3.67	4.01	3.89	3.77	3.65	3.53	3.40	3.27	3.14
	NET PRESENT VALUE (NPV)		7.11									
	NPV AT 15%		4.85									
	IRR		0.24									
	MAX. POSSIBLE PATRONAGE DIVIDEND (RS. PER QTL.)		23.56	19.14	18.58	18.03	17.48	16.92	16.34	15.76	15.16	14.54



GOVIND SAGAR

AMRITSAR

JALANDHAR

LUDHIANA

RUPNAGAR

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JALANDHAR

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THIRTEENTH (13TH) ICA-JAPAN TRAINING COURSE
ON
“STRENGTHENING MANAGEMENT OF
AGRICULTURAL COOPERATIVES IN ASIA”
INDIA-NEPAL-JAPAN
November 16, 1998 - April 24, 1999

PROJECT PROPOSAL

**Title of the Project : PRODUCTION AND SUPPLY OF QUALITY
SEED THROUGH COOPERATIVE**

Country : INDIA

Prepared By : DESHPAL SINGH TOMAR

Funded by the Government of Japan
(Ministry of Agriculture, Forestry & Fisheries)
and

Executed by the International Cooperative Alliance in
Collaboration with its Member-Organisations in
India, Nepal and Japan



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ABBREVIATIONS

- IFFCO - Indian Farmers Fertiliser Cooperative Limited.
- HYV - High Yielding Variety.
- NSC - National Seeds Corporation.
- SFC - State Farm Corporation.
- SSC - State Seed Corporation.
- ICAR - Indian Council of Agricultural Research.
- NSP - National Seed Project.
- FSC - Farmers Service Centre.

ACKNOWLEDGEMENT

It is my proud privilege to gratefully acknowledge and express my sense of gratitude to ICA -ROAP, Japanese Government and IFFCO for having accorded me an opportunity to participate in Thirteenth ICA-JAPAN training course on “Strengthening Management of Agricultural Cooperatives in Asia” INDIA - NEPAL - JAPAN (November 16, 1998 - April 24, 1999) and gain valuable exposure to broaden my understanding and knowledge of Cooperative Integrated Management in particular and the thrust and essence of the Movement in general.

The project “Production & Supply of Quality Seed Through Cooperative” has been prepared to provide better quality seeds to the farmers which will effect on the yield per unit as well as income per capita and strengthen member cooperatives through enhanced economic activity.

Special gratitude is expressed to Dr.Daman Prakash, Project Director ICA - ROAP who also assisted me in various ways for a successful and progressive training programme.

I undertake to acknowledge my thanks especially to Mr. U.S.Awasthi, our Managing Director and Dr. V.Kumar, our Marketing Director, who bestowed upon me this opportunity to participate in this programme.

Above all, I may mention my indebtedness to my creator Almighty “God”, who is gracious, merciful and kind to the human beings.

LUCKNOW,INDIA

JANUARY 1999

D.P.S.TOMAR

CHAPTER - 1

SUMMARY

- 1.1 Quality seed is the key to higher productivity and Green Revolution in India owes to introduction of high yielding varieties of rice and wheat. The project aims at supplementing the national effort of increased crop production by making available quality seed to farmers. This project on production and supply of quality seed through cooperative will bring diversification in Indian Farmers Fertiliser Cooperative Limited (IFFCO) business activities to certain extent but at the same time it will also contribute to the national priority of increasing the productivity of crops by supplying quality seed to farmers. The project envisages seed multiplication in the Allahabad district of Uttar Pradesh from Kharif 2000 to facilitate supply of quality certified seed. Initially seed multiplication will be taken up on rice and wheat crop as they are major crops occupying the maximum area. Project plans to start with the production of 1000 MT seed in the first year which will be subsequently increased to 3000 MT in the fifth year and will continue to produce at same level till the end of the project.
- 1.2 The project will help to increase the production and income of the farmers of the area directly by offering better procurement price and indirectly through increased production.
- 1.3 The project aims to supplement the national effort of making available quality seed to the farmers, which in turn would directly contribute to increased productivity and income.
- 1.4 Total life of the project is 10 years and the total investment will be Rs.6.65 million.
- 1.5 IFFCO will contribute RS. 3.35 million and RS. 3.30 million will be borrowed from NCDC at 16.0% annual interest.
- 1.6 Total seed processing capacity of the plant is 1.5 to 2.0 MT per hr. Initial capacity utilisation of the plant would be 32% in the first year which would gradually increase every year making 95% utilisation in the fifth year onwards.

- 1.7 Raw seed will be procured by IFFCO from farmers immediately after harvesting of rice and wheat crops. The price will be fixed at par with the State Seed Corporation Agency. An incentive of 10% as bonus may be given to the farmers.
- 1.8 The seed will be marketed through IFFCO's Farmers Service Centres and Cooperative Societies. The distribution margin has been fixed at 8-10% of the selling price.
- 1.9 The proposed project is financially viable as it's IRR 18 percent and NPV more than zero.
- 1.10 Sensitivity analysis of the project shows that the project is highly sensitive to price fluctuations of procurement of raw seed and price of seed. Even at 2% reduction in the sales revenue, the project becomes unviable.
- 1.11 Machinery of the proposed project is easily available in India and after sales service along with spare parts are also readily available. Agrosaw seed graders, model seed master produced by OSAW AGRO Industries, Ambala, India is proposed to be installed.
- 1.12 The project has direct economic benefit to the seed growers and it will also generate employment for some skilled and semiskilled workers.
- 1.13 The project is expected to be implemented within 10 months and can start processing of seed from Oct. 2000.

CHAPTER - II

INTRODUCTION

2.1 Present Scenario :-

The Population of India is almost 900 million today and by 2001 it may exceed that of China by crossing 1000 million. Since improved seed has a direct bearing on agricultural production, Green Revolution in India was mainly brought about by introduction of high yielding varieties (HYV) of wheat and rice. In the next phase of green revolution the introduction of hybrids of rice in India may usher another break through in rice yield.

2.2 Importance of seed :

Seed is the planting material used for propagation and crop production. It is different from grain and possesses certain standards of physical and genetical purity, germination and freedom from diseases and pests. Seed is a carrier of new technology and it is the basic tool for secured food supply. It is the principal means of securing high yields of crops even in less favourable production areas. Quality seed is the most important medium for rapid rehabilitation of agriculture in case of natural disaster.

2.3 Indian Seed Industry :

a) Public Sector :-

The revolutionary change in agriculture to achieve self sufficiency in food production has come through use of quality seed. Seed is rightly considered King pin in food production. Establishment of National Seeds Corporation (NSC), State Farm Corporations (SFC), State Seed Corp.(SSC) in public sector, involvement of Indian Council of Agricultural Research (ICAR) and Agricultural Universities in the development of HYVs and hybrids and making high quality breeders seed available are significant strides in the development of national seed programme. NSC was set up in 1963 for production and distribution of improved seed. National Seed Project III (NSP-III) was launched in 1990 with the following objectives:

To assist the farmers by ensuring timely and adequate availability of certified seed of suitable varieties at reasonable price.

To improve the work efficiency of national and state level public sector seed corporation so as to make them economically viable.

To provide facilities for growth of private seed industry through adequate institutional finance.

In public sector bodies, NSC & SFCs 13 SSCs are engaged in production of various crop seeds.

b) PRIVATE SECTOR : The industry has developed a lot in the private sector as in all 147 seed companies are operating mainly for production of hybrid seeds. With the new seed policy of the Govt. of India many industrial houses and multinationals are likely to enter the seed industry.

2.4 NEW SEED POLICY :-

Private Sector Seed business is quite high for hybrids and vegetable seeds as compared to public sector. There is an urgent need for hybrid seed production of Sunflower, Castor, Cotton, Sorghum & Vegetable as the demand is increasing year after year. The hybrid seed production of these crops envisages a total production of 85.9, 102.0 and 119.0 thousand tonnes during 1992-93, 94-95 and 96-97 respectively.

To supplement the efforts of ICAR and Agricultural Universities in developing new varieties and hybrids of different crops, Govt. of India is implementing the new seed policy which extends opportunities to seed companies abroad to develop collaborative programmes with Indian Seed Companies for import/export of seed. After announcement of the new policy, there has been an increase in the import of quality seeds of vegetables, Sunflower and planting material of oil palm etc.

CHAPTER - III
BACKGROUND

3.1 OVERALL SITUATION :-

India is a developing country and its economy depends on that of village economy. About 70% population is engaged in agriculture and rice wheat is the main cropping system of the area. The availability of quality seeds are problem for the farmers. The old varieties of rice seed are still used. Replacement of such seeds and introduction of new varieties of seed in farmers field are the main objective. Therefore it was planned to prepare a project in the Cooperative Sector at a specific location to meet the demand and supply of quality seed.

3.2 OBJECTIVES OF THE PROJECT :

The main objective of the seed production project is to supplement the national efforts for making available quality seed to the farmers so as to help in increasing the agricultural productivity. This objective can be achieved by promoting following activities:-

- a. By enrollment of members of cooperatives to produce and market quality seed through its own institution.
- b. By initiating seed multiplication programme of HYV initially and production of vigorous hybrids of various crops in later stage on farmers field.
- c. By procuring seed from growers/cooperative seed growers societies ensuring reasonable economic return in the form of premium price.
- d. Involving all agricultural cooperative societies in production, procurement, processing, packaging, supply and marketing of quality seed.
- e. By marketing the good quality seed through IFFCO's Farmers Service Centres (FSCs), Agricultural Cooperatives and other institutional agencies.

- f. By educating farmers on quality seed production and promoting seed growers cooperatives/seed villages.
- g. By establishing Research and Development work on new varieties/hybrids in collaboration of Public/Private Sector or multinational seed industries.

3.3 SCOPE OF THE PROJECT :

The support price of rice and wheat are around RS. 4,150/- and RS. 5,100/- per MT. Cultivation of these grains are essential for stomach. Although cost benefit ratio of rice - wheat cropping system is the lowest, yet the cultivation of these crops are prevalent. The introduction of seed production programme will benefit farmers. They will get 20 -25 percent more price over grain.

Seed produced by the farmers will be channelised through cooperatives. The margin between the selling price and procurement price is around 10 percent. Therefore, margin to the societies will provide strength to the cooperative for its development.

3.4 Govt. Policy on Seed :

Government is providing assistance to develop infrastructure for the production and supply of proper seed, seed testing laboratory etc. to encourage quality seed supply.

There is no tax on the sale and procurement of seed. However, sometimes Government declared subsidy on the supply of certified seeds to the farmers.

3.5 Agricultural situation of Allahabad district:-

The Indo Gangetic plain contributes 10% of total production of the country where the project will be launched initially. Allahabad district is located on the bank of Ganga and Yamuna. The area comes under intensive cropping system and rice-wheat is the main cropping system. Therefore production of seed of these crops has its own importance. The farmers are still cultivating old varieties due to non-availability of quality seeds. Although climate and land are quite suitable for cultivation of rice and wheat, the average production and productivity of both crops in Allahabad district is lower than state average during 1996-97 as shown below .

<u>Unit</u>	<u>Allahabad</u>		<u>Uttar Pradesh</u>	
	<u>Rice</u>	<u>Wheat</u>	<u>Rice</u>	<u>Wheat</u>
Area in Ha	162154	253439	5560000	9014000
Production in MT	320407	549261	11751000	24050000
Av. Yield in Kg/Ha	1976	2167	2113	2668

Source : Fertiliser and Allied Agricultural Statistics 1997-98.

Allahabad district has 63.4% irrigated area and Uttar Pradesh state average is 67.4% against the national average of 37.1% which is much lower . There is a promising trend in the quantity of certified/quality seed used in the country which has increased from 250,000 MT in 1980 to 700,000 MT in 1996. The requirement of certified/quality seed is estimated at 1,275,000 MT by 2000 AD Each state has a target for replacement of farmer's seed by certified seed every year. The use of certified seed of rice and wheat in 1997-98 was to the tune of 230,000 MT and 99,000 MT respectively which replaced only 11.64% of rice and 10.99% of wheat seed. These figures show importance of production and marketing of rice and wheat seeds in the project which will be a great service to the farmers as well as a profitable venture for the cooperatives.

3.6 Cooperative structure of Allahabad :-

Sadhan Sahkari Samiti Limited is a primary agricultural credit cooperative society of the district. At some places farmers service centres also act as a PACS. This unit exists in each and every panchayat. Cash - credit limit is available to them through cooperative bank. District Cooperative Bank provides credit limit for fertiliser business. Therefore, supply of seed will be an additional business to them. If the production of seed starts in the area, supply will be affected at a much faster rate.

The working societies are less in number. Seed production and marketing will bring them in business and specially sick societies which are not in operation at present will be brought back in business. It will facilitate the development of the cooperative structure.

CHAPTER - IV
PROJECT PLAN (UPTO PROCESSING)

4.1 Basic infrastructure of the project :-

Seed production requires breeder/foundation seed, good quality water fertilisers, processing and packaging facilities and marketing structure. IFFCO is having one of its office at Allahabad. Supply net work of IFFCO fertilisers is very strong. This region has two agricultural universities; one at Kanpur and another at Faizabad and an agricultural research institute at Allahabad. The research project launched by these centres will definitely support the project. The irrigation potential of this area is 63.62 % and it is increasing day by day. Therefore, the infrastructure available in this region is most suited for the development of seed business in this region.

4.2 Project implementing Agency :-

Indian Farmers Fertiliser Cooperative Ltd. is one of the premier national level cooperative society engaged in manufacturing and marketing of fertilisers throughout the country. Being a cooperative, it has certain responsibilities towards its members who are the farmers. Since it has the marketing network of cooperative societies throughout the country, it can also contribute in seed production and marketing to a great extent. Therefore, IFFCO will launch the project in Allahabad District by associating all cooperative societies of the region for production, processing, packaging, transportation and marketing of seed within and outside the region to benefit the farmers.

4.3 Project implementation plan :-

The project will be initiated from the year 2000 AD onwards. Initially, the production target will be 1000 MT of seed per annum. The ratio of rice and wheat will be 40:60 i.e. 400 MT of rice seed and 600 MT of wheat seed. Project will continue for 10 years. The production and distribution of seed for coming five years will be as shown below:

YEAR	%age	Production target of seed (MT)		
		Rice	Wheat	Total
2000 - 2001		400	600	1000
2001 - 2002	50.0	600	900	1500
2002 - 2003	33.3	800	1200	2000
2003 - 2004	25.0	1000	1500	2500
2004 - 2005	20.0	1200	1800	3000

We can establish seed growers cooperative societies in villages through which project can be implemented.

The entire seed will be grown on farmers field. All progressive farmers and cooperative members whose farm holding area is more than two hectares at one place will be selected for this purpose. The assistance of local cooperative societies will be sought to locate the farmers. In the first year about 1100 MT of raw seed will be required for the production of 1000 MT seed. It is assumed that from 6th. year onwards production will be constant.

4.4 Installation of seed processing unit :-

IFFCO's own seed processing unit with a capacity of 1.5 to 2.0 MT/hr. of raw wheat seed at 12% moisture content and 10% impurities (Agrosaw Seed Grader, Model-Seed Master) is proposed to be installed at Allahabad which will be most suitable and economical where maximum seed production is possible.

4.5 Assistance and Incentives for Seed growers :-

IFFCO will offer following facilities to the seed growers/farmers in the seed multiplication programme:

- a. Breeder/foundation seed procured from agricultural universities will be supplied to farmers on payment basis.

- b. All farmers in the scheme will be registered as seed growers by the department of agriculture.
- c. Necessary registration will be done through UP State Seed Certification Agency (UPSSCA) for inspection, certification, grading and packaging of the seed.
- d. Input cost on seed production upto procurement of Raw seed will be met by the farmers.
- e. Raw seed will be procured by IFFCO after threshing. An advance on procurement will be given to farmers which will cover about 90 percent of the support price.
- f. Undersize grains will be given back to the farmers. The balance price of final quantity of seed will be given to the farmers on completion of processing and testing.
- g. The procurement price will vary from crop to crop depending on the market price of the general crop. The price of self pollinated crop like rice & wheat seed will be fixed at par with State Seed Corporation agencies. However an incentive of 10% as a bonus may be given to the farmers.

4.6. Storage of seed :-

Gunny bags will be supplied by IFFCO in which the raw seed will be packed and transported to the seed processing plant by the farmers. At the full capacity utilisation each seed processing unit will need one storage godown of 1000 MT seed capacity to avoid unnecessary local transportation. Hence, storage and processing facilities will be provided at the same premises. Special care like fumigation, dehydration will be required to avoid the losses.

A storage godown of 30 × 20 × 8 Cubic meter dimension is proposed to be constructed which may store 1000 MT seed. The seed will be stacked on wooden crates and polythene sheets. For additional seed quantity, state warehouse godowns or society godown will be hired on monthly basis for actual quantity of seeds stored.

4.7 Processing of seed :-

Processing of seed will start in the presence of the representative of State Seed Certification Agency. The seed grading will be done by modern seed grading plants which will remove undersized seeds, stubbles from raw seed and weed seeds by indented cylinders. The lead time is about 18 weeks.

4.8 Capacity Utilization :-

The efficiency of the processing plant is 3000 - 4000 MT of seed annually. Since the time limit for grading of seed will be very short, plant will be operated for more than one shift if necessary. It will reduce the length of period of actual grading and provide sufficient time for dispatches and other activities.

It is expected that the plant will operate at 32% capacity in first year which will gradually increase to 95% capacity utilisation from fifth year onwards.

4.9 Packing and Tagging :-

Graded seed will be packed in bags of different size of 30 kg. and 40 kg. in case of rice and wheat seed respectively. The bags will be tagged, stitched and sealed. Only DWT jute CANVAS bags will be used for packing. The cost of bags and other material required for packing of certified seed is calculated on the basis of prevailing prices.

CHAPTER - V
PROJECT PLAN (After processing)

5.1 Marketing of seed :-

The available seed will be marketed through IFFCO's Farmers Service Centres (FSC) and cooperative societies. Each cooperative society and FSC will prepare a sales plan of the area before onset of the season. Supply will be made to the centres on time to the extent of 80 - 90 per cent of demand to ensure total consumption. The society margin will be around 8 to 10% of the selling price.

Seed agency of the state is fixing its price every year. Therefore, maximum selling price of the seed will be at par with the state government agencies. If any subsidy will be announced by the government for the farmers , efforts will be made to extend the same facility to farmers through society also. All efforts will be made to sell the entire quantity of seed to avoid carry over to the next season.

5.2 Human resources :-

The project will be managed by the Field force of IFFCO. Each centre will have a Field Representative to cater all needs of the centres right from the procurement of foundation seed for the farmers and to the procurement of certified seed from the farmers. All technique for production of seed will be provided by him to the farmers. Necessary consultancy service will be available to the seed growers particularly with respect to isolation, roguing, proper threshing to avoid damage to seed etc. The staff will be under the control of Area Office and State Office. Area Office will execute the seed production programme, monitor and maintain the account, liaison with local authorities viz. Dept.. of Agri. Seed Certification Agency, Agri.Universities and watch on competitors activities.

Man power for the processing unit will be as under :-

- | | | |
|----|-------------------------|-----|
| 1. | Field Representative | Two |
| 2. | Accounts Assistant | One |
| 3. | Store Keeper | One |
| 4. | Technician-cum-operator | One |
| 5. | Watchman | Two |

5.3 Management of the project :-

All resource persons employed for the specific job, their job qualification and responsibility would match with the function of the project. Graded seed will be stored on scientific basis and will be released at proper time for marketing. Its accounts will be maintained by Accounts Assistant. Selling price will be decided by a committee constituted by the state head of IFFCO. All transactions related to financial matter will be duly approved by Area Manager, IFFCO, Allahabad.

5.4 Training :-

Employees will be exposed to the techniques of seed production each year at the best seed production centre of the state such as TDC or NSC so that they would be fully acquainted with the operational aspects of seed production, processing and marketing. The Field Representative looking after the job of seed production will be basically a Post Graduate in Seed Technology, so that only quality seed may be produced. Their training will be managed at university level to upgrade their knowledge from time to time.

The target group of this project is farmers. Therefore, farmers are also required to be trained in crop production technology with special reference to the crops in which they are interested for seed production. This training will be arranged twice a year one each in kharif and rabi season. Crops may be changed depending upon the need of the area and interest of farmers. Production technology and help to the farmers shall be provided as per their need.

5.5 Sales promotion :-

All seed will be sold in the brand name of IFC. Sufficient promotional efforts will be made for the sale of seed through field programs such as block demonstration , plot demonstration, farmers meeting, crop seminar, field day etc. organised by IFFCO. As IFFCO is in the business of production and marketing of fertilisers and biofertilisers, the promotional efforts will give a good support for timely application of the IFFCO fertilisers. It will also increase the acceptability of IFFCO fertilisers by the farmers.

CHAPTER - VI

COST ANALYSIS AND RECOMMENDATION

6.1 Financial Analysis :-

The total life of the project is ten years. The project will start from Kharif 2000 i.e. in the month of April and rice will be the first crop. For ten years rice - wheat will form the cropping system.

The total financial involvement will be around RS. 6.65 million the breakup of which is given in appendix-I, out of this total RS. 3.35 million will be contributed by IFFCO and the balance of RS. 3.30 million will be borrowed as long term loan from NCDC.

6.2 Finding of Financial Analysis:-

The working capital has been calculated on the basis of staff salary, procurement cost of one crop, processing handling and packing charges and electricity charges for a period of six months only.

• The power requirement has been worked out as under :

1.	Seed grader	7.5 HP X 1	= 5.55 KW
2.	VB Elevator	1.0 HP X 3	= 2.22 KW
3.	Indented Cylinder grader	2.0 HP X 1	= 1.48 KW
4.	Seed Treater	1.0 HP X 1	= 0.74 KW

Total 9.99 or SAY 10 KW

Total Power Consumption at full capacity = KW X hr. X working days
= 10 × 8 × 250
= 20,000 units

Total cost @ Rs. 1.50/unit = Rs. 30,000/-

Cost of power per MT = Rs. 10/-

6.4 RECOMMENDATION:

The project [production and marketing of seed through cooperatives] is a service rather than a business proposition. As it is the need of the rural area, the project offers following recommendations :-

On the success of the project, similar projects may be implemented in other parts of the country.

Cooperative society may be encouraged to handle seed procurement and marketing.

The project may be taken back from IFFCO and a promising cooperative society may be assigned the project.

State Cooperative Bank/Agriculture Development Bank may come forward voluntarily to meet financial requirement of the project.

NCDC may be encouraged to develop infrastructure where it is needed for such project.

Qualified human resources may be developed to meet the requirement of the project.

6.5 SWOT ANALYSIS :-

A. Strengths:

Customers are same for fertilisers and seed.

IFFCO's fertiliser marketing channel can be used for marketing of seed also.

Goodwill of IFFCO can be used for marketing of seed.

B. Weaknesses:

Assured and constant supply of breeder/foundation seed from Government /Agri. Universities.

Recognition from Govt. for seed business to avail various subsidies on production and marketing of seed.

Unsold seed, if sold as grain at reduced price.

C. Opportunities :

Existing skilled staff can be utilised for execution of the project.

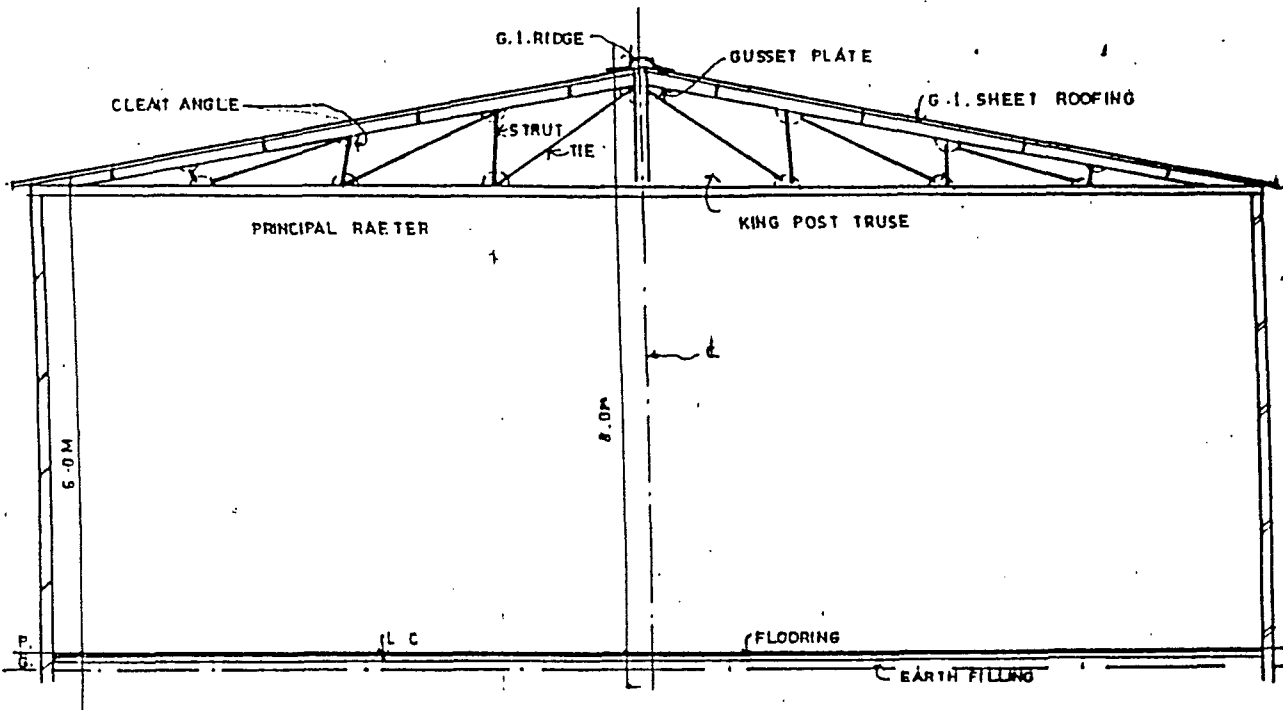
D. Threats:

Natural calamities like flood and draught may damage the entire crop.

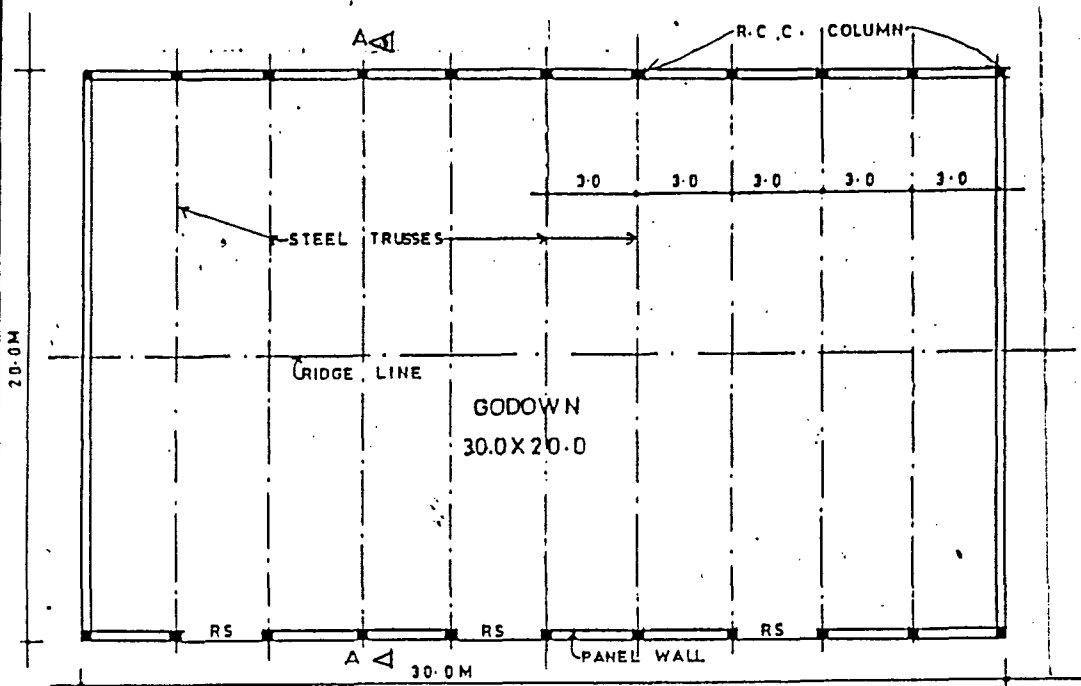
Table - 1

ESTIMATED COST OF GODOWN (COVERED AREA 600 Sq.M.)

S. NO.	PARTICULARS	ESTIMATED COST (RS. IN MILLIONS)
1	Foundation of plinth (excluding R.C.C. col. footings)	0.250
2	R.C.C. work 1:2:4 for framed structure (columns,beams,projections,col. footings excluding steel reinforcement and its bending)	0.400
3	Tor Steel including bending in reinforcement in R.C.C. footings , columns & beams etc.	0.100
4	Super Structure (Panel Walls) (1st. Class brick work in 1:6 mortor.)	0.150
5	Steel Work for roof truse (20 m. span) (Size of godown 30m.X 20 m.) including principle raeter, struts, suspendler cleat ties , gusset plate , base plate, rivits &purlins etc.	0.450
6	Galvanised corrigated iron (G.I.) sheet roofing.	0.250
7	Plastering work. (1:6)	0.090
8	Painting / Whitewash (two coats)	0.060
9	C. C. Flooring.	0.200
10	Electification Work.	0.050
TOTAL		2.000



SECTION AT A A
SCALE - 1:100



PLAN
SCALE - 1:200

SKETCH OF PROPOSED GODOWN

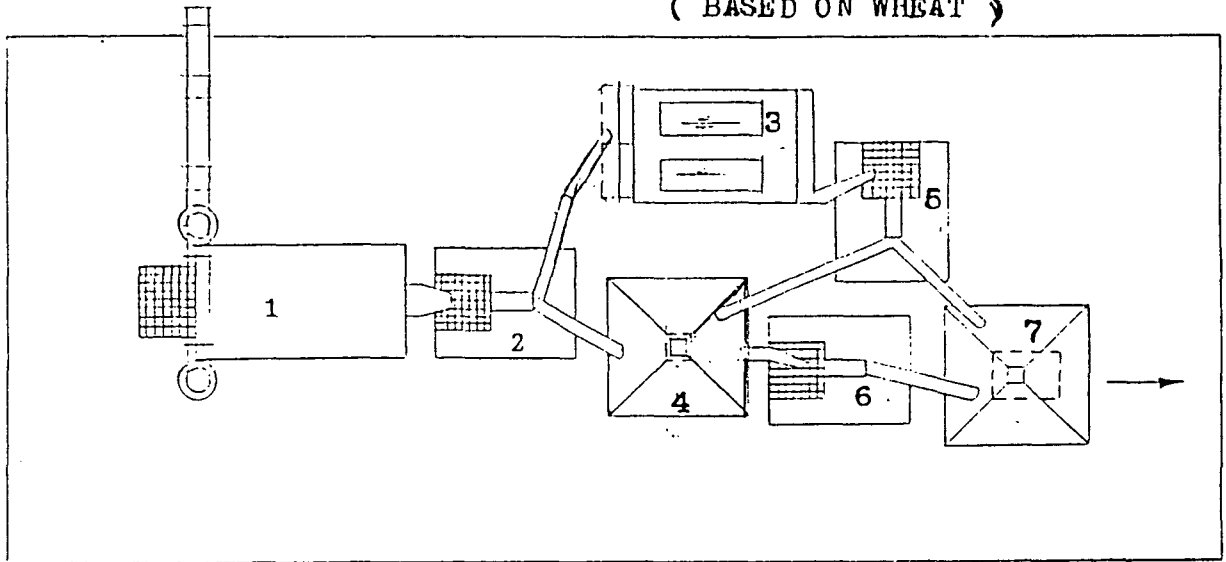
Table-2

INVESTMENT DETAILS OF PLANT AND MACHINERY

S.NO.	ITEM	UNITS	ESTIMATED COST (RS. IN MILLION)
1	Agrosaw Seed GRADER Model - Seed Master	1	0.186
	<u>Accessories</u>		
	i. Additional screen	2	0.006
	ii. Air Trunk	2	0.003
2	V.B. Elevator with 2- Way valve	1	0.065
3	Agrosaw Indented Cylinder Grader.	1	0.106
4	Seed Treater (Slurry Type)	1	0.034
5	V.B. Elevator with 2- Way valve	1	0.066
6	V.B. Elevator with 1- Way valve	1	0.06
7	Bagging Bin	1	0.032
8	Weighing Machine	1	0.02
9	Bag Closing Machine	1	0.006
10	Digital Moisture Testing Machine	1	0.016
TOTAL			0.6

SEED PROCESSING PLANT CAP.: 1.5 - 2.0 TPH

(BASED ON WHEAT)



LEGEND:

<u>S.No.</u>	<u>Name of Equipments</u>	<u>Capacity</u>
1.	Seed Grader (Model-Seed Master)	1.5 -2.0 TPH
2.	V.B.Elevator with two ways dis. valve	2 TPH,7 MDH
3.	Indented Cylinder Seed Grader IC-2	2 TPH
4.	Seed Treater ST-2.	2 TPH
5.	V.B.Elevator with two ways dis. valve	2 TPH,7 MDH
6.	V.B.Elevator with one way dis. valve	2 Ton
7.	Bagging Bin	2 Ton

Table - 3

MISCELLANEOUS AND OTHER FIXED ASSETS

SL NO	PARTICULARS	AMOUNT (Rs IN MILLION)
1	Construction of approach road and brick lining near godown and processing plant.	0.130
2	Furniture and fixture	0.020
3	Office equipment and other working amenities	0.030
4	Fire fighting equipments	0.020
	TOTAL	0.200

Table - 4

DETAILS OF VARIABLE COST

SL NO	ITEMS	QTY	RATE	AMOUNT Rs. in million
1	Cost of seed			
	Paady	400 MT	6000/MT	2.400
	Wheat	600 MT	7000/MT	4.200
2	Cost of Processing	1000 MT	600/MT	0.600
3	Packing material			
	100 kg Bags	6000 Nos	25 Each	0.150
	30.40 kg Bags	28334 Nos	16 Each	0.453
4	Electricity	20000 KWH	1.5/ KWH	0.030
5	Certification charges	1000 MT	80/MT	0.080
6	Distribution margin	1000 MT	1500/MT	1.500
	TOTAL			9.413

Table - 5

MANAGEMENT AND ADMINISTRATIVE COST

S.NO.	DESCRIPTION	NO. OF POST	EMOLUMENTS (PER MONTH)	SALARY (PER ANNUM IN MILLION)
1	Field Representative	2	5000.00	0.12
2	Accounts Assistant	1	4000.00	0.048
3	Store Keeper	1	3000.00	0.036
4	Technician-cum-oper	1	3000.00	0.036
5	Watchman	2	2000.00	0.048
TOTAL				0.288

Table - 6

DETAILS OF FIXED COST

S.NO.	PARTICULARS	AMOUNT (Rs. in million)
1	Salaries	0.288
2	Loan interest	0.528
3	Depreciation	0.174
4	Insurance premium	0.02
5	Repair and maintainar	0.015
6	Postage and Telephc	0.005
7	Advertisement and P	0.01
8	Printing and Stationer	0.02
9	Travelling Expenses	0.05
TOTAL		1.11

Table - 7

WORKING CAPITAL REQUIREMENT

S.NO.	PARTICULARS	AMOUNT (Rs. in Million)
1	Staff Salary	0.144
2	Procurement cost Rice seed @ 4500 per M.T.	1.8
3	Processing , Handling and Packing cost	0.56
4	Electricity bill	0.004
TOTAL		2.508

Table - 8

CONTINGENCY AND PRE-OPERATIVE EXPENSES

S.NO.	PARTICULARS	AMOUNT (Rs. in million)
1	Establishment Cost (including insurance and travelling)	0.078
2	Interest (for 3 months)	0.132
3	Contingency (including start up exp.)	0.04
TOTAL		0.25

Table - 9

LOAN REPAYMENT SCHEDULE

YEAR	INTEREST	PRINCIPAL PAID	LOAN BALANCE (Rs. in million)
1	0.528	0.33	2.97
2	0.475	0.33	2.64
3	0.422	0.33	2.31
4	0.37	0.33	1.98
5	0.317	0.33	1.65
6	0.264	0.33	1.32
7	0.211	0.33	0.99
8	0.158	0.33	0.66
9	0.106	0.33	0.33
10	0.053	0.33	0
TOTAL	2.904	3.3	

Table - 10

SENSITIVITY ANALYSIS

S.No.	SENSITIVITY FACTOR	I R R	N P V (@ 15%)
1	Sales revenue increase by 2%	22%	2.49
	Sales revenue Decrease by 2%	14%	-0.340
	Sales revenue increase by 1%	20%	1.78
	Sales revenue decrease by 1%	16%	0.37
2	Procurement Cost Increase By 2%	16%	0.2
	Procurement Cost Decrease By 2%	21%	1.95
	Procurement Cost Increase By 1%	17%	0.64
	Procurement Cost Decrease By 1%	20%	1.51

DETAILS OF FIXED ASSETS

S.NO.	CLASSIFICATION	ESTIMATED COST (Rs. in million)
1	Cost of land	0.3
2	Construction of godown and other civil work	2
3	Cost of processing plant and machinery	0.6
4	Miscellaneous and other fixed assets	0.2
5	Margin for working capital	3.3
6	Contingency and preoperational expenses	0.25
TOTAL		6.65

SOURCE OF FINANCE

S.NO.	FINANCIAL ARRANGEMENT	AMT. (in million)
1	From IFFCO	3.35
2	loan from NCDC	3.3
TOTAL		6.65

Financial Analysis

S. No.	Details	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
A.	Project cost											
	Civil work	2.500										
	Process plant	0.600										
	Wkg capital	3.300										
	Contingency	0.250										
	Total	6.650										
B	Capacity	3150.00										
	Capacity Utilisation(%)	32.00	48.00	79.00	63.00	79.00	95.00	95.00	95.00	95.00	95.00	95.00
	Capacity Utilisation(MT)	1000.00	1500.00	2500.00	2000.00	2500.00	3000.00	3000.00	3000.00	3000.00	3000.00	3000.00
c	Sales Revenue	10.690	16.035	21.380	26.725	32.070	32.070	32.070	32.070	32.070	32.070	32.070
D	Variable cost											
	Cost of seed	6.600	9.900	13.200	16.500	16.500	19.800	19.800	19.800	19.800	19.800	19.800
	Process cost	0.600	0.900	1.200	1.500	1.500	1.800	1.800	1.800	1.800	1.800	1.800
	Packing Material	0.603	0.905	1.207	1.508	1.508	1.810	1.810	1.810	1.810	1.810	1.810
	Electricity	0.010	0.015	0.020	0.025	0.025	0.030	0.030	0.030	0.030	0.030	0.030
	Cert. Charges	0.080	0.120	0.160	0.200	0.200	0.240	0.240	0.240	0.240	0.240	0.240
	Tpt. & Distributor Margin	1.500	2.250	3.000	3.750	3.750	4.500	4.500	4.500	4.500	4.500	4.500
	Storage Cost	0.000	0.000	0.047	0.117	0.117	0.234	0.234	0.234	0.234	0.234	0.234
	Total	9.393	14.090	18.834	23.600	23.600	28.414	28.414	28.414	28.414	28.414	28.414

**Project Proposal
Poultry Breeding**

in

Tanjong Ipoh

FO

ACKNOWLEDGEMENT

Thanks to the almighty "ALLAH" for being selected as one of the participants of the 13th ICA-JAPAN Training Course on "Strengthening Management of Agricultural Cooperatives in Asia by ICA.

I would like to express my sincere gratitude to the organiser of this course, the Farmers Organization Authority (FOA) of Malaysia, fellow staff of the FOA Negeri Sembilan, General Manager of Farmers Organization (FO) of Tanjong Ipoh and many others for their assistant and cooperation in preparing this proposal.

Also I am much indebted to Training Officer of FOA who provided me this unique opportunity.

Above all, thanks to Almighty "ALLAH" who is gracious, merciful and kind to all his creator.

Seremban, Negeri Sembilan
Malaysia.
December 1998.

AZHAR B. YUNUS

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CHAPTER I

SUMMARY

- 1.1. The project is to be place at Tanjong Ipoh FO in Kampong Ibol, Terachi, Kuala Pilah in the State of Negeri Sembilan.
- 1.2. The purpose is to create an Estate Nucleus project which will boost up the interest of the member farmers and to make Tanjong Ipoh FO as a centre for poultry production and marketing.
- 1.3. This proposal is also to help the FO to meet the bank demand for the bank loan and government grant to run this project.
- 1.4. The FOA can help in the funding of the project through the Estate Nucleus and farm management program for the fixed cost in the form of grant.
- 1.5. For the variable cost, the FO can apply for loan under the Fund For Food programme which is given by the government via the Agriculture Bank at 4% interest rate per annum.

CHAPTER II

BACKGROUND

2.1. Purpose

- i. The purpose of this paper is to fulfil the need of the course. This is only a proposal paper of the poultry breeding and marketing.
- ii. This paper includes a proposal of the project which is economically viable and financially bankable.

2.2. Overview

The State of Negeri Sembilan in Malaysia is well known for its poultry breeding. Beside for local consumption it is exported to other state in Malaysia and Singapore. Most of it are produce by big integrators like Leong Hup, Ayamas, Chareon Pokphand and Kentucky Fried Chicken. Due to the State historical and environmental situation, the industry is expanding from day to day.

Growth of the industrial sector in Malaysia, particularly around the state of Negeri Sembilan encourage the project development due to the increase of food demand.

This can be visualise by the figure below:-

Fig. 1 Poultry Production - Estimate @ yearly 4% increase.

Year	Production	
	No. Birds (Millions)	Value (RM Mil).
1996	343.2	1,716
1997	357.6	1,788
1998	372.6	1,863
1999	388.2	1,941
2000	404.4	2,002

The active growth rate is because of the increase in demand locally and oversea market. In the National Agricultural Policy, the forecast for growth in 1991 to 1995 is about 86% while from 1996 to 2000 is 6.3%. Per capita demand consumption has increase from 28.3kg in 1992 and 35kg in 1995.

Current Poultry production for the country is as follows

<u>Year</u>	<u>Production (m.t)</u>
1986	248,400
1987	277,200
1988	301,000
1989	361,000
1990	348,900
1991	391,000
1992	497,200
1993	492,200
1994	612,700

Poultry production under the FO's until 1994 is 4,4000 mt. This contribute 0.8% from the total national production. Increase in production from FO's within 1988 until 1994 is 0.5% (3,578 mt).

2.3. Project Scope

The scheme is structure to covered the needs of the farmers. It also act as an Estate Nucleus and farm management project for the FO's. With this project the FO will involve directly in the poultry breeding activities like supply of feed, day old chick, medicine, and others. Marketing will also be taken up by the FO. This will encourage farmers to carried out with this project because of the availability of raw material and marketing facilities.

2.4. Farmers Local Problem

Tanjong Ipoh FO as it is new is moving towards modernisation in Agriculture. Most of the poultry are bread in a traditional manners and not economic of scale. With the FO involvement in this project, most of the farmers problems like supply input, marketing and farm management like transportation can be solved.

2.5. Project Justification

Viability of the project depends on the size of the project which is 30,000 birds per cycle. This scheme will also help and

facilitate the individual farmer to start with poultry breeding. This will in term improve the infrastructure and logistic of the FO in carrying out this activities. This project will also help in creating employment and increase in the additional farmers income.

2.6. Impact

The project will increase the FO's busines volume. It will also push the input, agribusiness, marketing and profit of the FO's. Therefore with the big profit they can create more project and give good returns to the farmers member.

Indirectly the farmers member will benefit through the rebate, logistic facilities and employment. This can also give additional income to them.

CHAPTER III

PROJECT

3.1. Scope

Since the area of this FO is low in agriculture activities and lack of agriculture land, therefore this project can give a bigger scope to trigger the farmers project. With this, the FO can achieve the economies of scale. This can also help in the improvement of the socio-economic status of the farmers.

3.2. Project Status

The project propose is poultry breeding. Marketing is done by contract farming with Chareon Pokphand through its subsidiaries, Syarikat Pertanian Pertiwi Sdn. Bhd. Location of the project will be in Mukim Terachi, Kuala Pilah. For this purpose 5 unit poultry house will be constructed with 300 feet x 24 feet per unit. Number of birds propose is 25,000 birds/cycle. Area needed is about a portion of 6.8 hectares own by the FO.

3.3. Project Position

Located in Tanjong Ipoh FO, at the small farm unit Kampong Ibol, Mukim Terachi, Kuala Pilah, Negeri Sembilan. The nearest town is Tanjong Ipoh which is about 8.5 kilometer. It is 4 kilometer from the main trunk road (Kuala Pilah/Seremban).

3.4. Objectives

3.4.1. Main objectives

Objective of the project is to create an Estate Nucleus and Farm Management Poultry breeding which is viable, economic of scale and bankable which can give profit to the FO.

3.4.2. Sub objectives

- Create an economic project for the FO
- Increase the agribusiness volume of the FO.
- Provide employment for farmers member.
- Catalyst for the farmers to set up a project alike.

3.5. Marketing

Aggrement with Syarikat Pertanian Pertiwi Sdn. Bhd. will be develop as soon as the project get its approval. This contract is mainly base on the marketing of poultry and the terms in purchasing of inputs such as day old chick, feed madicine and professional/technical advice. This will be provided by the company.

FO will in terms provide the infrastructure, management team and supply of birds to the company.

Price of the poultry will be base on contract price while input will be base on current price.

3.6. Project Rationale

Since the project will create employment and catalyst for farmers to start they own poultry farm, FO must make sure the following steps must be taken care of as listed below.

- i) Farm road has to be constructed and compacted so that it could stand the load of the lorries which will supply feed and transporting the birds in big quantity.
- ii) The drainage system of the site must be as recommended by the veterinary department in accordance to the law.
- iii) Workers will be supplied by the FO which is either the farmers members or their family or foreigners.
- iv) Training of the staff will be initiate by the FO with the help of FOA.

- v) The maintenance of the poultry farm will be the responsibility of FO.
- vi) Labourers quarters will be provided by the FO.
- vii) Veterinary services will be arrange with the marketing agency and the veterinary department.
- viii) Manangement control will be base on the technical advice of the veterinary department.

3.7. Implementation Plan

The project life span will be 10 years including 1 year of implementation and 8 - 9 years of formal operation. The work flow will be as follows:-

<u>Process</u>	<u>Name of The Activity</u>	<u>Period</u>
1.	Grant from the Government.	4 months
2.	Survey/basic layout.	2 months.
3.	Purchase of land its development and construction etc.	4 months.
4.	Ordering and purchasing of Tools and equipment - installation.	2 months.
5.	Staffing.	1 month.
6.	Electricity supply and installation.	3 months.
7.	Water supply and installation.	2 months.

No.	Activity No.	Period – Month												
		0	1	2	3	4	5	6	7	8	9	10	11	12
1.	Activity 1	█	█	█	█	█								
2.	Activity 2			█	█	█								
3.	Activity 3					█	█	█	█	█				
4.	Activity 4								█	█	█			
5.	Activity 5										█	█		
6.	Activity 6									█	█	█		
7.	Activity 7										█	█	█	█

CHAPTER IV

ORGANIZATION AND MANAGEMENT

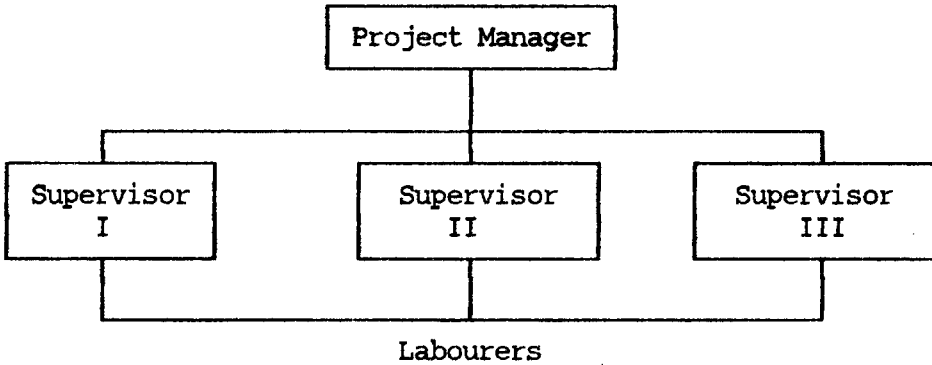
4.0. Management Policy

The project will be implemented by the Farmers Cooperative (FO) with the collaboration of Verterinar Services Department and Chareon Pokphand Company. The infrastructure cost will be requested from the government through FOA with the grant of RM 333,433.00. The operating cost will be obtain from the Agriculture Bank of Malaysia as loan. This loan is under the Fund for Food program with 4% interest rate per annum.

The poultry house will be consructed by contractors where less monitoring is required. The drinking system is automatise and the feed is supply manually. Supporting services will be obtained from other government agencies such as the veterinary services department.

4.1. Project Organization

The project will be run by a project manager from the FO. They are assisted by Supervisor which will be station on site supported by 2 labourers. Other workers are classified as contract workers and are employed according to needs as shown below.



4.2. Project Operation

4.2.1. Proposal

The FO will construct 5 unit poultry house measure 300 feet x 24 feet with the area of 36,000 square feet. Maximum poultry store is about 25,000 birds/cyle. On the average the area required is 1.44 square feet per birds.

4.2.2. Poultry house design

The poultry house will be built in 5 rows parallelly. It is built from timber and aluminium roof. It is of *raised floor type and the wall is of the chicken mesh. The roof will have a ventilation system appropriate to its structure. The pillars, floor and other structure are made from timber.

4.2.3. Apparators

The poultry house will be supplied by 417 drinking vessel and 820 feed tray. Feeding is done manually and drinking water is automatise. Water source is supply by a water tank. This tank is sufficient to supply water and is placed at 20 feet high on the tower. The water is transported (flow) through the FVC pipe to the drinking vessel. Electricity and brooder gas heater will be attached to control temperature.

4.2.4. Material

<u>Type</u>	<u>Source</u>
1. Timber	Sawmill
2. Wire, metal, alluminium etc.	Hardware shop.
3. Pipe, hose.	Hardware shop.
4. Day old chick, feed and Medicine.	Chareon Pokphand.

4.2.5. Methodology

Supply of day old chick will be in 3 stages at 1 week interval for 25,000 birds. Stocking will be 10,000 birds/house/cycle CP will program with due respect to the needs and capability of its processing plant.

4.2.6. Elaboration

<u>Input</u>	<u>Supply price</u>
1. Day old chick	RM 0.75/bird
2. Starter pellet	RM 43.00/bag @50kg.
3. Finisher I	RM 41.00/bag @50kg.
4. Finisher II	RM 39.50/bag @50kg.

4.2.7. Feeding

Starter is for the first 18 days and finisher will be given when the chicken is from 19 days old onwards.

Feed Conversion ratio (FCR)

This is the exchange rate of the feed consume to the body weight of the chicken. This is influence by the way the feed is given, timely and order. Movement of the chicken also influence this ratio. The formula is

$$\text{FCR} = \frac{\text{Weight of feed consume}}{\text{live weight of the chicken}}$$

4.3. Marketing

4.3.1. Potential

Usually, chicken can be sold when it is between 41 - 45 days old. This is about 6 weeks after the stocking. The

body weight will increase with the increase in feed consume. The optimum increase in weight is at 28 - 42 days (4 weeks) at the average of 100gm/birds/day. If CP buy at 60 days or more, the feed will be on them.

4.3.2. Market/Price

The best market now is through CP and the price as in the contract is about RM 2.50/kg (ex farm) for chicken more than 36 days old.

CHAPTER V

Financial Analysis

5.0. Generally the financial analysis is the most important part of the proposal. This is the quantitative result of the project.

5.1. Project cost

Total cost

1. Fixed cost	RM 333,433
2. Variable cost	<u>RM 570,500</u>
	RM 903,933
	=====

Total Revenue RM 658,125

Development cost/unit RM 13.34/bird.

Depreciation cost is RM 7,761/year.

5.2. Implication

Break even is in year 4.

Profit/loss : Expected to get RM 9,764.

Costing for 1st cycle.

1. Grant

i) FOA RM 30,000

ii) FO RM 33,433
RM333,433
=====

2. Bank RM109,850

Total Cost RM443,283
=====

5.3. Analysis

- i. IRR = 17%
- ii. BEP = RM 2,504,315
500,863 birds
20 cycle

CASH FLOW

Details	Total	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
A REVENUE									
i Chicken	4,571,875	-	653,125	653,125	653,125	653,125	653,125	653,125	653,125
ii Chicken Dung	35,000	-	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total Revenue	4,606,875	-	658,125	658,125	658,125	658,125	658,125	658,125	658,125
B EXPENDITURE									
1 Fixed Cost									
i Land Preparation	8,000	8,000							
ii Levelling/Filling	6,000	6,000							
iii Farm Road	9,000	9,000							
iv Chicken Hut	200,000	200,000							
v Implement	49,433	49,433							
vi Labourers House	25,000	25,000							
vii Store	15,000	15,000							
viii Electrical Wiring	8,000	8,000							
ix Water Facilities	5,000	5,000							
x Water Tank	8,000	8,000							
Sub Total	333,433	333,433							
2 Variable Cost									
i Day Old Chick	656,250	-	93,750	93,750	93,750	93,750	93,750	93,750	93,750
ii Feed	3,013,500	-	430,500	430,500	430,500	430,500	430,500	430,500	430,500
iii Medicine	175,000	-	25,000	25,000	25,000	25,000	25,000	25,000	25,000
iv Labour	131,250	-	18,750	18,750	18,750	18,750	18,750	18,750	18,750
v Electricity	17,500	-	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Sub Total	3,993,500	-	570,500	570,500	570,500	570,500	570,500	570,500	570,500
TOTAL COST	4,326,933	333,433	570,500	570,500	570,500	570,500	570,500	570,500	570,500
Net Cash Flow									
SURPLUS/(DEFICIT)		(333,433)	87,625	87,625	87,625	87,625	87,625	87,625	87,625
ACCUMULATIVE SID	279,942	(333,433)	(245,808)	(158,183)	(70,558)	17,067	104,692	192,317	279,942

FINANCIAL ANALYSIS

Details	Total	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Net Cash Flow									
SURPLUS/(DEFICIT)		(333,433)	87,625	87,625	87,625	87,625	87,625	87,625	87,625
ACCUMULATIVE SID	279,942	(333,433)	(245,808)	(158,183)	(70,558)	17,067	104,692	192,317	279,942
0.1 NPV @ 10 %	93,161								
0.2 NPV @ 20 %	(17,580)								
IRR	17%								
Break-Even Point (\$)	RM2,504,315								

1 Sales (RM) - Break-even Point Calculation

$$\frac{\text{Fixed Cost}}{1 - (\text{Variable Cost} / \text{Sales})} = \frac{333,433}{1 - (3993500 / 4,606,875)}$$

$$= \frac{333,433}{1 - (3993500 / 4606875)}$$

$$= \frac{333,433}{0.133}$$

$$= 2,504,315$$

2 Calculation on NPV with Discount Factor of 10 %

Year	Initial Cost	Flow Return	Discount Factor 10%	Present Value Cost	Present Value Return	Cummulative Present Value
0	(333,433)		1.0000	(333,433)		(333,433)
1		87,625	0.9091		79,660	(253,773)
2		87,625	0.8264		72,413	(181,360)
3		87,625	0.7513		65,833	(115,527)
4		87,625	0.6830		59,848	(55,679)
5		87,625	0.6209		54,406	(1,273)
6		87,625	0.5645		49,464	48,191
7		87,625	0.5132		44,969	93,161
Jumlah				(333,433)	426,594	

NPV @ 10%

$$426,594$$

$$\underline{(333,433)}$$

$$\underline{\underline{93,161}}$$

3 Calculation on NPV with Discount Factor of 20 %

Year	Initial Cost	Flow Return	Discount Factor 20%	Present Value Cost	Present Value Return	Cummulative Present Value
0	(333,433)		1.0000	(333,433)		(333,433)
1		87,625	0.8333		73,018	(260,415)
2		87,625	0.6944		60,847	(199,568)
3		87,625	0.5787		50,709	(148,860)
4		87,625	0.4823		42,262	(106,598)
5		87,625	0.4019		35,216	(71,382)
6		87,625	0.3349		29,346	(42,036)
7		87,625	0.2791		24,456	(17,580)
				(333,433)	315,853	

$$\begin{array}{r}
 \text{NPV @ 20\%} \\
 \qquad \qquad \qquad 315,853 \\
 \qquad \qquad \qquad \underline{(333,433)} \\
 \qquad \qquad \qquad \underline{\underline{(17,580)}}
 \end{array}$$

4 Calculation on IRR

$$\begin{aligned}
 \text{IRR} &= 0.10 + (0.20 - 0.10) \times \frac{93,161}{93,161 - (17,580)} \\
 &= \frac{0.20 \times 93,161}{110,740} \\
 &= 17\%
 \end{aligned}$$

5 SUMMARY

With IRR of 17 %, this shows that the project internal rate of return is higher than the present interest rate of approximate 11 % charge by the banking sectors. On the fourth year it will get back all it initial investment plus the variable cost and breakeven with sales RM2.5 million.

CHAPTER VI

CONCLUSION

6.1. RECOMMENDATIONS

- Casual Labourers will only be employ on contract.
- Purchase will be in term of cash payment to reduce its cost.
- Main staffing will be assimilated under the FO management eg. Project Manager.
- FO must find other market source to diversify its outlet.

ANNEXURE A

DETAIL FINANCIAL FLOW

A. REVENUE

RM

One cycle is 10 weeks

- i. 5 cycle per year
- ii. Stocking 25,000 birds/cycle
- iii. Marketing age is between 36 - 50 days.
- iv. Mortality rate 5%.
- v. Sales per cycle on the average 2.2kg/bird.
- vi. Price of Sales per birds RM 2.50/kg (live).

. . . Expected Income:

a. 25,000 birds @ 5% mortality ie 23,750 birds x RM 2.50 x 2.2kg.	130,655
b. Dung	<u>1,000</u>
	<u>131,626</u> =====

B. EXPENDITURE

1. Capital Cost

1.1. Land clearing @RM 800/ekar		8,000
1.2. Land Levelling		6,000
1.3. Farm road 30 chain @RM300		9,000
	RM	
	<u>kos/bird</u>	
1.4. Poultry house size 300' x 24' with timber and alluminium roof fpr 4.5 unit (RM40,000/ 5000 bird)	8.00	200,000
1.5. Drinking vessel		
a. (100 bird @RM 2.90)	0.03	725
b. (160 bird @RM24.50)	0.41	10,208

1.6. Feeding tray		
a. (100 bird @ RM7.50)	0.08	1,875
b. (30 bird @ RM9.00)	0.30	7,500
1.7. Heater (1000 bird @RM 280.00)	0.28	7,000
1.8. Gas and equipment (1000 bird @RM65.00)	0.07	1,625
1.9. Water tank and equipment (5,000 bird @RM1,000)	0.20	5,000
1.10. Wiring and bulb (5,000 bird @RM1,000)	0.20	5,000
1.11. Labourer Quarters (22' x 45'/ unit - 2 unit)		25,000
1.12. Stor 45' x 45'		15,000
1.13. Water piping		5,000
1.14. Main water tank for 6,000 gallon		8,000
1.15 Fogging system (300' x 24' @RM1,100)	0.22	5,500
1.16. Netting (300' x 24' @RM1,000)	0.2	5,000
1.17. Electricity pillars		<u>8,000</u>
		333,433
2. Operational cost/cycle		
2.1. Day old chick 25,000 @RM0.75		18,750
2.2. Feed		
a. Starter (450bag @RM43)		19,350
b. Finisher 1 (1050 bag @RM41)		43,050
c. Finisher 2 (600 bag @RM39.50)		23,700
2.3. Medicine @RM20/bird		5,000
2.4. Wages @RM500 x 3 x 2.5 month 1		<u>3,750</u>
		<u>113,600</u>
		=====

ANNEXURE B

FINANCIAL FLOW PER CYCLE

	RM	RM
1. REVENUE		131,625
2. EXPENDITURE		114,100
3. DEPRECIATION		
i. House/apparatus	6761	
ii. Quarters/Star	1000	<u>7,761</u>
4. Profit		9,764

* Calculation of Depreciation

Item	RM	RM	
	Present Value	Depreciation	
		Per year	Per cycle
1. House/Apparatus	270,433	33,804	6,761
2. Quarters/Stor	40,000	5,000	1,000

THIRTEEN (13TH) ICA-JAPAN REGIONAL TRAINING COURSE
ON
"STRENGTHENING MANAGEMENT OF
AGRICULTURAL COOPERATIVES IN ASIA"
INDIA-KATHMANDU-JAPAN
NOVEMBER 16, 1998 to April 24, 1999

PROJECT PROPOSAL

Title of the
Project Proposal : **GEC (Mdy) Sugar Mill Project**

Country : **MYANMAR**

Project Proposal
Prepared by : **Mr. Zaw Myint**

Funded by the Government of Japan
(Ministry of Agriculture, Forestry & Fisheries) and
Executed by the International Cooperative Alliance
in collaboration with its Member-Organisations in
India, Kathmandu and Japan



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This is the first time I had written a project proposal as an exercise for a international training course, which I hope will be presentable. Anyway, with the assistance of my friends and colleagues I was able to realise this proposal. The responsibilities for any weakness or short-comings in the proposal, is solely mine.

Moreover, I cannot refrain from recording my thanks to my friends and colleagues from Cooperative Department and GEC (Mandalay), who placed their unrivalled knowledge and experience ingrudgingly at my disposal. Last, but not least, my heartfelt thanks to our distance learning professor Mr. G.Krishnamurthi.

Abbreviations

ICA	=	International Cooperative Alliance.
ROAP	=	Regional Office for Asia and Pacific.
CDR	=	Crude Death Rate.
TFR	=	Total Fertility Rate.
CBR	=	Crude Birth Rate.
GDP	=	Gross Domestic Product.
TCD	=	Ton cane per day.
GM	=	General Meeting
GEC	=	Government Employees' Cooperatives (Mdy)
Mdy	=	Mandalay
MAS	=	Myanma Agricultural Service
MSE	=	Myanma Sugarcane Enterprise
CP	=	Construction Period
MEB	=	Myanma Economic Bank.
NPAT	=	Net profit after tax
GNP	=	Gross National Product
Ks	=	Kyats (Myanmar currency)
BOD	=	Board of Directors
CFB	=	Cooperative Farmers' Bank

GEC (Mdy) Sugar Mill Project

Chapter - 01

1. Executive Summary.

- 1.1. Project execution : GEC (Mdy), Myanmar
- 1.2. Project orientation : Market orientation
- 1.3. Project concept : It is a Sugar mill Project and an agro-processing one. It will produce sugar packed in polythene bags, designed to serve local markets.
- The demand of sugar will be on rise for a distant future. Government with its plan to produce .50 million tons of sugar by the year 2000, it is encouraging cooperatives and entrepreneurs to make investments in sugar mills. To meet the inputs needed, boosting of sugarcane production are being undertaken by MSE and by individual farmers.
- 1.4. Project background : GEC (Mdy) is a society formed by government employees' working in Mandalay division. Sugarcane is widely grown in Mandalay Division and is the main produce of that Division. The State has also named paddy, beans & pulses, cotton and sugarcane as pillar crops, and all-out-efforts have been encouraged to promote increase in production. Increase in population, coupled with rise in living standards, lucrative markets in the border areas have also pushed the demand for sugar higher and higher. And with the encouragement from the government the GEC (Mdy) adopted a resolution to construct a sugar mill in the outskirts of Mandalay city.
- 1.5. Project sales : It is estimated that the sales of sugar from the mill will be Ks 118.13 million.
- 1.6. Production : Mill will run for (250) days per year, and the production capacity will be (5) tons of sugar per day.
- 1.7. Inputs : The main raw material required for making sugar will be obtained from sugarcane juice, which will be supplied by three primary

- agricultural cooperatives close to the project area. One viss or 1.63 kg will cost Ks 53.88.
- 1.8. Location & site : The mill will be located near Mandalay at the Economic Zone (2). The site is about 3 acres and is situated on Shwe Hlan Bo street, between 46/47 street, Mandalay.
- 1.9. Project engineering : Project engineering will be implemented by Sein Ban Industrial Cooperative.
- 1.10. Supervision : Specially assigned committee headed by the Managing Director of GEC will supervise the implementation of the project.
- 1.11. Implementation : The project implementation period will be about one year, and the work will start in January 1999 and will end in Dec. 1999.
- 1.12. Financial and Economic evaluation : The total investment cost will be Ks 59 .64 million.
: Total production cost will be Ks. 107.42 million.
: The internal rate of return of the Project is 22 % .
: The recoupment period is 4 years .
: The benefit-cost ratio is 1.04 .
- 1.13. Project life : Project life will be ten years and one year for construction.

Chapter 02

2. Introduction

2.1 GEC(Mdy) was formed by the government employees of Mandalay division in accordance with the 1992 Cooperative Law. The society has a membership of 29811 individual members. The society is engaged in trading, transport, health-care and export & import business etc. The society is also engaged in marketing of farm produce by the agricultural cooperatives. In turn the GEC import farm machineries and other inputs such as fertilizer and pesticides for agricultural coops. At this time the GEC society is in sound position and financially strong even in the midst of financial crises. Total amount of shares is Ks 19 .7 million and total amount of capital is Ks 23 .28 million. The organizational structure of GEC(Mdy) is shown in annex-A.

2.2 The project is an agro-processing project having objectives to enhance agricultural coop member farmers income from sales of sugarcane, and for the development of movement as the whole. With the importance of this project, competent management will be required. The requirement coincides with the 13 th ICA/Japan Training Course, and thereby the participant was advised to take up the sugar mill project as an exercise for the training course, so as to be able to assist the Implementation Committee in

implementing the project, on completion of the training course. For this purpose the participant have been attached to the GEC(Mdy) as a Manager.

2.3 The main economic objective of the State is, the development of agriculture as the base and all-round development of other sectors of the economy. The State has taken all out efforts to boost the production of four main crops which are paddy, cotton, sugarcane, beans and pulses and also ensuring the maximum production of other cash and industrial crops. The government and the cooperatives hand in hand, are encouraging the farmers to mechanise farming, and are assisting them with farm machineries. The Ministry of Agriculture on the other hand is expanding cultivable land which now exceeds over 25 million acres or about 10 million hectares. For increase production cropping patterns have been changed and in some parts of the country two crops of paddy - monsoon and summer paddy have been cultivated.

Income distribution and poverty.

2.4 In 1997/98, according to the provisional data, the gross domestic product increased by 4.6 percent over 96/97. At constant prices per capital GDP was K 1602. The people living in the most dried part of the country, the central part, have escaped the jaws of poverty since 1996, with the introduction of a strategy of planting forests and greening of nine arid areas in the region, to prevent desertification.

Development policies and social objectives.

2.5 Since 1988, the economic system has been changed to market economy and preparation were under way, for paving the way to multiparty democracy. The development policies are, to promote all round development of all sectors, with agricultural as the base, to establish proper evolution of the market economy and to encourage foreign investments and participation. The social objectives are to uplift the health, fitness and education standards of the entire nation and to eradicate poverty and to promote wellbeing of all the people.

Cooperative development situation.

2.6 Cooperatives are well established in this country since 1905, and for all these years it have withstood the winds of change and striving for survival. During these years one cooperative law after another were enacted so as to redress the situation of the economy, which were also changing from one to another. Today, with the enactment of new Cooperative Law in 1992, the cooperatives have become more independent and autonomous. At present, the economic situation of our cooperatives are not at their best and most of them were in the state of stagnation, but some of the coops like GEC, are in better position. The often changes in the economic system of the country has complicated the cooperative work, of frequently revising the subject matter and bringing it up-to-date, without abling to move forward for development.

Chapter 03

3. Background

Key features.

3.1 After quarter of a century under the banner of socialism and centralised economy, the country adopted to multi-party democracy and oriented economy in 1988, in accordance with the peoples' wish. The government has been laying foundations for a new modern developed nation and placing emphasis on stability, community peace and tranquillity, prevalence of law and order and national reconsolidation.

3.2 Market economy has been in practise since the later part of 1988 and the country has seen many fruitful developments. But full fledged market economy is still on the trend of proper evolution, from socialist aspired to market economy. Myanmar is an agricultural country and the economy is fully based on agricultural, and long term objectives of industrial policy has been to transform a predominantly agricultural economy into an agro-based industrialised country.

3.3 The total estimated population in 1997/98 was 46.40 million with the male population 23.04 million and the female population 23.36 million. The agriculture sector was the largest in total employment amounting to 11.51 million. The age structure reflects a young population, the population below 15 years of age has been declining for the last two decades, from 41.5 per cent in 1973 to 38.6 in 1983, reaching 35.0 per cent in 1990. For 90-95 the expectation of life at birth for both sexes was established at 60.7 years. CDR at 9.81, TFR at 3.5 and CBR at 27.7. The low mortality level and the moderate but falling fertility coupled with an age structure having a high proportion of people below 15 would contribute towards an increase in the size of population.

Chapter 04

Project Rational /Context

4.1 Sugarcane cultivation in Myanmar was recorded since A.D 729 and with the passing of the years sugarcane cultivated acreage increased to about one hundred and sixty thousand by the end of 1988. After the change of economy and with the encouragement from the government, the sown acreage increased to 250,000 acres and sugarcane production to 5 million tons. There exist seven State owned mills with a total capacity of 8100 TCD crushing capacity. Further establishment of sugar mills are being undertaken along with the boosting sugarcane production to meet the target of 5000,000 tons of sugar by the year 2000.

4.2 Since the change to market economy, and with increasing population, sugar consumption has risen and for the last two years the price of sugar had risen five folds. A viss or (1.63 kg) of sugar in 1996 cost about 30 kyats and now it cost 150 kyats. The lucrative sugar markets - on the borders have also pushed the sugar demand index higher and higher, and sugar is the third hottest product in the country. But up to this day our cooperatives have no big sugar mill of our own but only two cottage sugar industries. Now

a production mill for sugar has become a rational choice for the cooperatives. On the other hand MOC has been advising the GEC to invest in a sugar mill, so as to establish a secure market for the sugarcane growers, who are also members of agricultural cooperatives, in that area.

4.3 GEC Board of Directors, with the resolution adopted by its members at the GM, unanimously agreed to construct the sugar mill. Preliminary studies were conducted in the first quarter of 1998-99 fiscal year. The studies recommended a feasible project which is economically sound, financially viable with ample commercial quantities.

4.4 . Project area is in the middle of sugarcane cultivation and the area cultivate two thirds of the whole sugar-cane cultivation of the country. The area have agricultural cooperatives with sugarcane growers and the procurement of input for the mill is quite abundant. Design of the mill is made to increase the output from the initial 5 tons capacity to maximum 15 tons capacity, at a bankable time.

Chapter 05

The Project area and Development potential

5.1 The project area is situated in Mandalay, the second city of Myanmar, which is also the most important city in the upper part of the country. The project will be located in the Economic Zone (2) of Mandalay, which is also the capital city of Mandalay division. The population of Mandalay city is about .80 million and the total population of the Division is over six million inhabitants. It has a hotter climate and average rainfall is about 40 inches per year. The area of cultivation in the whole division is about three million acres or about 1.2 million ha.

5.2 Mandalay city is linked with other parts of the country by rail, car and river transport, through our main river Ayeyarwaddy. Domestic airfield is at the outskirts of the city and an international airport is under construction about 15 miles from the city and targeted to commence operation by the end of 2000.

5.3 At present and for the last eight years our borders trading have been successful and business on both sides are flourishing, especially the trading between China and India. These two places have their centre to Mandalay and goods going to and from between these two places depart from this city. With the change of economy the city itself has emerged into a bustling place and most of foreign firms working in this country have branch offices in Mandalay. The whole area has high potential for the future developments.

5.4 The area also has a big potential in regard to sugarcane cultivation, and sown acreage is increasing yearly. New plants produce about 20 tons per acre and old plant, about 10 tons, and one ton of sugarcane cost Ks 1850. Sugarcane is grown in October and November and harvested in November or December of next year.

Cultivation of sugarcane in the Mandalay division is shown in the following table:-

Particulars	Sown acreage	Matured acreage	Yield	Produce (tons)
1. Private farmers	62361	56360	20	1127200
2. Cooperative farmers	4787	4678	16.20	77907
	-----	-----		-----
	67148	61038		1205107
	=====	=====		=====

Chapter -06

6. The Project

6.1. Objectives

The objectives of the project are as follows:-

- (1) To increase the income of farmers by assuring the price of sugarcane,
- (2) To establish a secure and profitable market for the sugarcane farmers of agricultural coops;
- (3) To enhance sugar production for domestic consumption,
- (4) To produce quality sugar for consumption at reasonable price, and
- (5) To assist in facilitating cooperative development and to create opportunity for steady income for GEC (Mdy).

6.2 Location

The project site will be located on a three acres or about 7.5 ha plot of land situated at economic zone (2) of Mandalay. The site is not far from the prominent markets and close to the Yangon-Mandalay highway. The site has an easy access to surrounding roads and is convenient for the employees and workers to commute to and fro between the factory and home. A power feeder is installed about 200 meters from the site. A tube well had been drilled and there will be enough water to rely upon. It is a flat land and there is no tendency for water clogging within the site and a proper drainage system will exist after completion of the project. Map of Mandalay and project location is shown in annex-B(1) & (2).

6.3 Capacity

The sugar mill to be implemented by the GEC (Mdy) will have a capacity of (5) tons per day at the initial stage, but with a cushion for future possible expansion up to (15) tons per day. The mill will be constructed so that the capacity be augmented by marginal investment, without resorting to major modifications.

6.4 Processing

The technology of processing planned for the project is a well-proven method, and capital intensive. For a foreseeable future it will remain as a single line of production. The technology is of local needs and commonly used. Purchase of hardware will be done locally and any foreign make can also be purchased with local currency. The provision for software adaptation and know-how will be rendered by Sein ban Industrial Cooperative, a highly experienced and competent society, that has the contract for installation of machineries. Training of personnel will be conducted with the collaboration of Cottage Industries Dept.

6.5 Quality

GEC (Mdy) sugar mill will produce ordinary sugar with white color and targeted specifications is as follows:-

Polarization	-	99.5 (min)
Moisture%	-	0.10 (max)
Ash%	-	0.10 (max)
Reducing sugar%	-	0.10 (max)
SO ₂ (ppm)	-	70 (max)
Color (IC ₄)	-	150 (max)

Quality control will be responsible to the committee formed by GEC- BOD, which is headed by a food technician.

6.6 Safety and Layout

"Safety First" will be the standard precaution during the constructions period, and throughout the processing. The buildings and other facilities will have adequate ventilation, lighting and exits. The layout will provide the smoothness of operations, and for future expansion. It will also have adequate communication facilities and will also provide for basic amenities, with clean hygienic toilets. One storage facility will be constructed in the compound. Machines layout and factory design and machineries list are shown in annex- C (1)(2) & (3).

Chapter-07

Procurement and Marketing

7.1 Procurement

7.1.1 The input to the sugar mill, will be sugarcane syrup, which will be procured from three agricultural cooperatives, situated on the northern part of the division each townships about 15 to 50 mls. from the project site. The raw material cost Ks53.88 a viss (1.63 kg) and transport cost 194 kyats a churn which contains about 85 viss. The Project will procure annually, 1.53 million viss or about 2500 tons of sugarcane syrup.

7.1.2 The inputs will be produced by three primary agricultural coops in three townships. The canes will be crushed by their own machines, made locally, and the juice will be fully cooked. The farmer members of the three societies between them have enough inputs for this sugar mill, and can even supply more in case of increase in capacity. The three societies' farmers between them produce about 62457 tons of sugarcane which is equivalent to 2.12 million viss or 3540 tons of sugarcane juice. One ton of sugarcane produce 34 viss of juice. The cultivation of sugarcane in the catchment townships area is shown in annex-D.

7.1.3. Procurement-method will be ex-goodown and GEC (Mdy) transport network will carry the materials at cost. The prevailing market price varies between 50-55 Ks with some fluctuations in Mandalay. But the sugar mill will be purchasing the inputs at ex-factory price, which will be a handsome price for the agricultural cooperatives.

7.2 Marketing

7.2.1. The product sugar, is designed to serve industry and consumer markets, but also has an option for export, so has to make some much needed hard currency. Sugar is in demand throughout the country, and Mandalay with its thriving condense milk producing cottage industries and two condense milk factories, owned by Divisional Cooperative Syndicate, the Division is "crying sugar". The two factories itself have a combine capacity to consume about 1080 tons of sugar annually.

7.2.2. The product will be marketed in wholesale, packed in polythence bags, containing 30.62 viss (50 kg) sugar, with 20 bags making one ton. One ton of sugar is priced for Ks 81000. The prevailing ordinary white sugar price for one ton, fluctuates between 84000-87000 kyats, with changes depending wholly on the lucrative border markets. But with the increase of production in the future, the GEC (Mdy) has plan to introduce retail sales with sugar packed in sachets.

7.2.3 By-product of this project, the molasses, are also money earners. 100 % of raw material is processed into 50 % sugar, 45 % molasses and 5 % wastage. Most of the machineries of the mill are locally made, and before the increase in capacity, the process will be of one cycle. By-product molasses are of high demand by distilleries. A viss of molasses can easily fetch Ks 25. The total sales amount of the project include the sale of molasses.

Chapter 08

Organisational & Implementation

8.1 Organisational

Implementation Committee for the sugarmill was formed in the early stages of identification phase. The committee is headed by the Managing Director of GEC (Mdy). The sugarmill manager who will be in charge of administration will be the Project Manager during the implementation stage, with authorisation to execute the various activities. The organizational chart is shown in annex- E.

8.2 Implementation

The implementation period of sugarmill will take about one year. Acquisition of bank loans is still in the process and will be available by the end of December' 98. Project work will commence in January'99, with the land preparation, and all other activities will continue as planned. Full operation of the mill is targeted by the 2nd week of December'99. The implementation schedule is shown in annex F. The project office will consist of two section, the administration and production section. The Project Manager will directly supervise the administration section with six staff members. The production section will be headed by a qualified technician, and will have a total of 22 staff members. The Project Manager will also directly supervise the construction works, done by the contractor.

Chapter 9 Financial Analysis

9.1 Total Investment Cost

The total investment cost of project is estimated to beKs 59.64 million. The cost is phased out as follows:-

Table: one

Particulars	(Kyats in million)
Land & site preparation	15.52
Building & civil works	13.09
Machines & equipment	14.17
Electricity supply system	5.50
Tube well(Artesian)	1.80
Transportation (1 % of machineries)	.14
Installation Charge (1 % of machineries)	.14
Contingency (1 % of machineries)	.14
Furniture, Office & firm equipment	1.50
Syrup container	3.90
Bank interest during CP	3.74

	59.64
	=====

9.2 Out of the total investment , kyats 44 million will be funded by bank loan and the remaining kyats 15.64 million will be invested by GEC(Mdy). The bank loan will be short loan and the interest per annum will be 17% from MEB. In addition to the above total investment cost, annual operating expense for years 2,3, & 4 will have to be borned by Bank loans, borrowed each year with an interest rate of 18% per annum, from MEB.

9.3 Overhead costs.

The Overhead costs of the Project is shown in the table below. Detail calculations of each component is worked out in the proceeding table-three, four, five and six.

Table: two

Nos.	Particulars	Ks. in million
1	Factory overhead	3.36
2	Administrative overhead	0.37
3	Financial overhead	9.28
4	Depreciation	3.66

9.4 Factory Overhead Cost.

The sugar mill factory overhead cost is calculated in the following table:-

Table: three

Nos.	Particulars	Amount Ks. million
1	Fuel	1.79
2	Electricity charges	0.39
3	Welfare fund	0.11
4	Medical treatment fund	0.05
5	Fire insurance	0.36
6	Repairs and maintenance	0.27
	Sundry	<u>0.23</u>
7	Telecommunication	0.05
8	Stationery	0.03
9	Travelling expenses	0.15
	Miscellaneous	<u>0.16</u>
10	Audit fees	0.01
11	Entertainment	0.10
12	General expenses	0.05

		3.36
		=====

9.5 Manpower

The Project will have a total of (31) staff members. The breakdown with salaries is shown in the following:-

Table: four

Nos.	Employees	Nos.	Salary	Annual cost K.s. in million
	Operation staff			
1	Engineer (technician)	1	15000	.180
2	Asst. technician	1	10000	.120
3	Supervisor	1	6000	.072
4	Lab. technician	1	7000	.084
5	Asst. lab. technician	1	5000	.060
6	Attendants (Centrifugal)	15	6000	1.08
7	Operator (Boiler)	2	6000	.144
8	Generator operator	2	3000	.072

				1.812
	Office staff			
1	Manager	1	7000	.084
2	Accountants	3	5000	.180
3	Security personnel	3	3000	.108

		31		.372
		=====		=====

9.6 Total Production cost.

The total production cost of the project is calculated in the following table. The costs shown is for the second year of project life and first year of production, which will decrease by each year. Detailed calculation is shown in annex-G.

Table: five

Nos.	Particulars	Ks. in Million
1	Raw material and other related charges for raw	88.06
2	Packaging material for finished goods	0.88
3	Salaries	2.18
4	Fuel	1.79
5	Electricity charges	0.39
6	Funds	0.16
7	Insurance	0.36
8	Maintenance	0.27
9	Sundry	0.23
10	Depreciation	3.66
11	Interest on bank loans	9.28
12	Miscellaneous	0.16

		107.42
		=====

9.7 Operating Cost.

Operating cost of the Project is shown in the following table.

Table:six

Nos.	Particulars	Cost Ks. in million
1	Raw material	82.50
2	Purchase commission for raw material	1.53
3	Handling charges for raw material	0.54
4	Transportation charges for raw material	3.49
5	Direct labour cost (operating staff)	1.81
6	Salaries (Office staff)	0.37
7	Fuel	1.79
8	Electricity charges	0.39
9	Packaging material for finished goods	0.88
10	Welfare fund	0.11
11	Medical treatment fund	0.05
12	Telecommunication charges	0.05
13	Maintenance	0.27
14	Insurance	0.36
15	Stationery	0.03
16	Travelling expenses	0.15
17	Audit fees	0.01
18	Entertainment	0.10
19	General expenses	0.05

		94.48
		=====

9.8. Benefit cost ratio.

Benefit cost ratio as calculated in the following formula exceeds one and therefore it is an acceptable project. Detailed calculation is shown in annex-II. Supporting calculation are also shown in annexures-H (1) & H (2).

$$\text{Benefit cost ratio} = \frac{\text{Present value of benefit}}{\text{Present value of cost}}$$

$$= \frac{611.43}{587.01}$$

$$= 1.04$$

9.9 Recoupment period.

The Recoupment period of this Project will be four years as per formula.

$$\begin{aligned}
 \text{Recoupment period} &= \frac{\text{Investment cost}}{\text{Average surplus}} \\
 &= \frac{59.64}{16.157} \\
 &= 3.69 \\
 &= 4 \text{ years.}
 \end{aligned}$$

9.10 Internal rate of return.

The internal rate of return of the project is 22% as calculated in the following formula. This percentage is considered to be of reasonable return. Detailed calculation is shown in annex-H.

$$\begin{aligned}
 \text{IRR} &= i_1 + (i_u - i_1) \left\{ \frac{\text{NPWi}_1}{\text{NPWi}_1 - \text{NPWi}_u} \right\} \\
 &= 18 + 24 - 18 \left\{ \frac{6.77}{6.77 - (-4.39)} \right\} \\
 &= 18 + 6 \left\{ \frac{6.77}{6.77 + 4.39} \right\} \\
 &= 18 + 6 \times \frac{6.77}{11.16} \\
 &= 18 + 6 \times .61 \\
 &= 18 + 3.66 \\
 &= 21.66 \\
 &= 22\%
 \end{aligned}$$

9.11 Contribution to National income.

During the project life only one year accrued a loss and all the rest ten years made reasonable net profits. Contribution to National income for the first year of production is shown below. Detailed yearly calculation is shown in annex-I.

$$\begin{aligned}
 \text{Contribution to National income} &= \text{Net profit} + \text{Depreciation} + \text{Salaries} + \text{Tax and Interest} \\
 &= 7.55 + 3.66 + 2.18 + 3.16 + 9.28 \\
 &= 25.83 \text{ (Ks. in million)}
 \end{aligned}$$

Conclusion

10.1 With the above presentations and the financial analysis, I consider this project to be worthwhile. The financial calculations applied, were used in the early 80., for projects funded by ADB and many other financial institutions. Successful implementation of this project will achieve the following immediate objectives.

- (1) To utilise the abundant supply of sugarcane syrup, produced by farmer members,
- (2) To produce quality sugar for domestic consumption at fair price and
- (3) To promote innovations for the development of cooperatives on the whole.

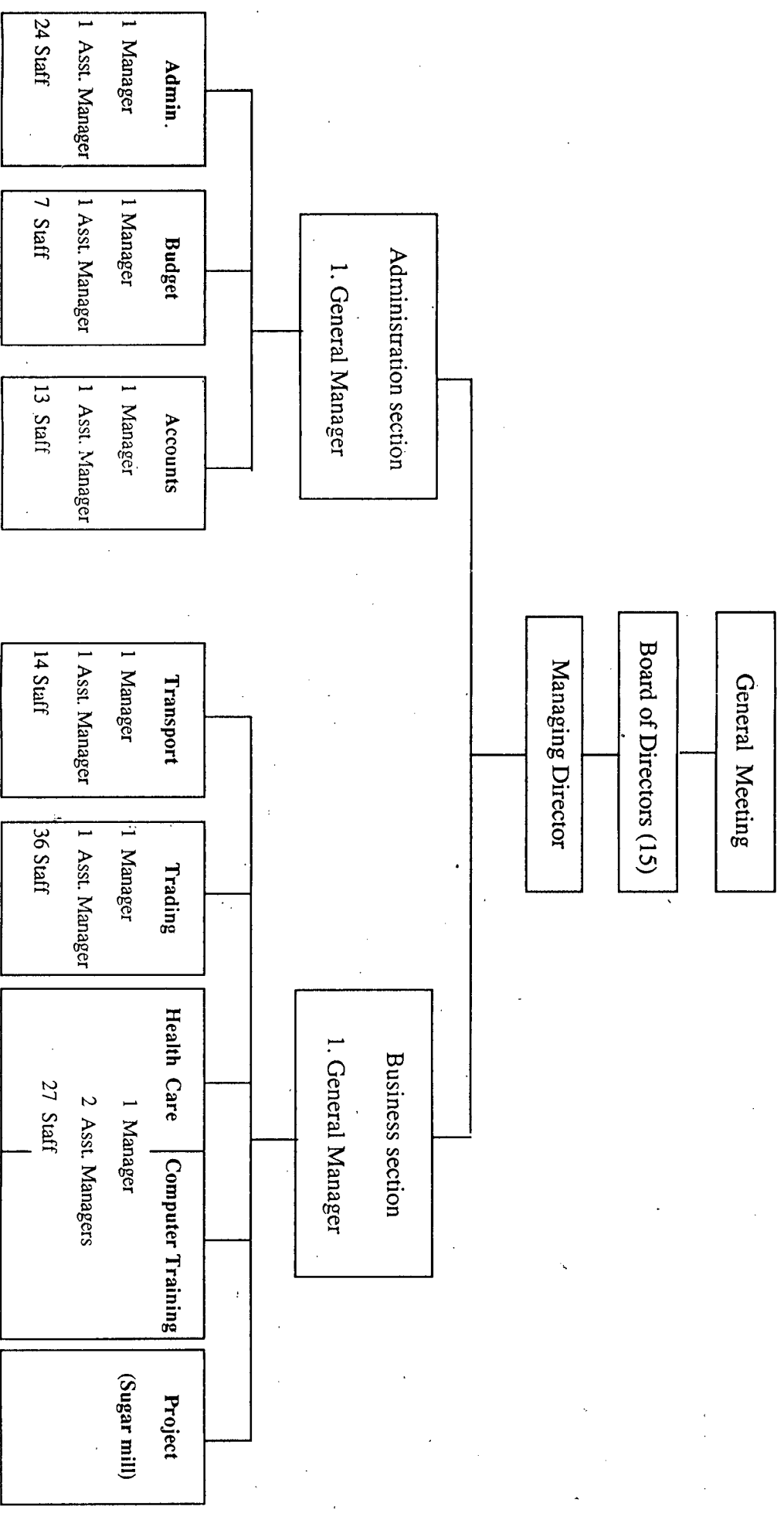
10.2 All necessary plannings have been taken care of, and with the bank loans to be sanctioned before the end of this fiscal year, we have 100% possibility of implementing the project as scheduled.

10.3 Break even analysis of the Project, diagram of sugar processing and trade mark of sugar bag packed in polythene bag are shown in annex-J, K & L.

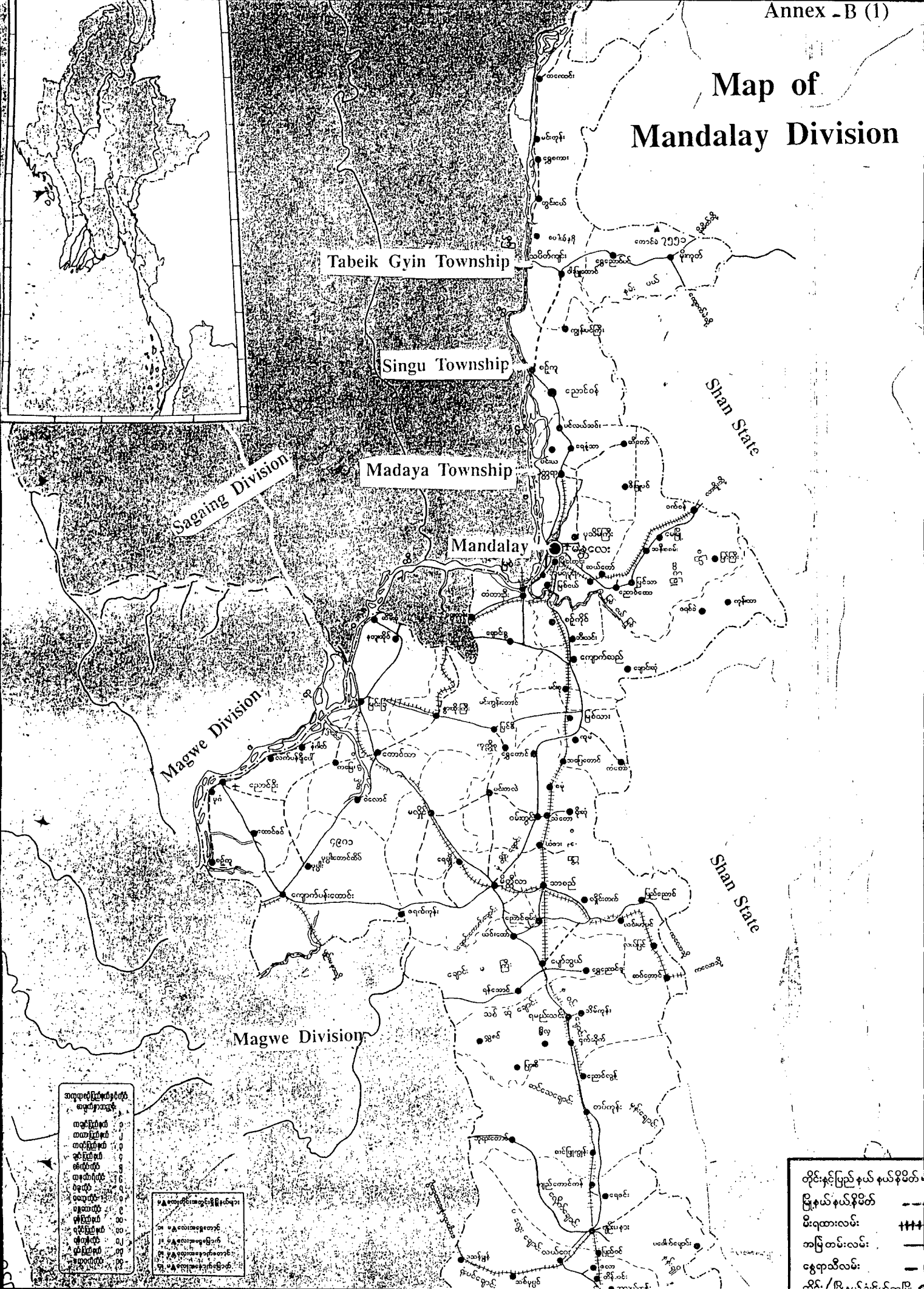
References:

- (1) Review of The Financial, Economic and Social Conditions of Myanmar. (1997-98)
- (2) Management Leadership development in Agricultural Cooperative Business, by Mr. Daman Prakash.
- (3) Prelude to "A Manual for Preparation of Agricultural and Agro-Industrial Project Proposals", by Mr. G. Krishnamurthi.

GEC (Mdy) Organization Chart



Map of Mandalay Division



Tabeik Gyin Township

Singu Township

Madaya Township

Mandalay

Sagaing Division

Magwe Division

Magwe Division

Shan State

Shan State

အထူးပြင်ဆင်မှုများ

တစ်လမ်းကပ်	၁
တစ်လမ်းကပ်	၂
တစ်လမ်းကပ်	၃
အင်္ဂလိပ်	၄
အင်္ဂလိပ်	၅
အင်္ဂလိပ်	၆
အင်္ဂလိပ်	၇
အင်္ဂလိပ်	၈
အင်္ဂလိပ်	၉
အင်္ဂလိပ်	၁၀
အင်္ဂလိပ်	၁၁
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အင်္ဂလိပ်	၁၈
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အင်္ဂလိပ်	၂၀

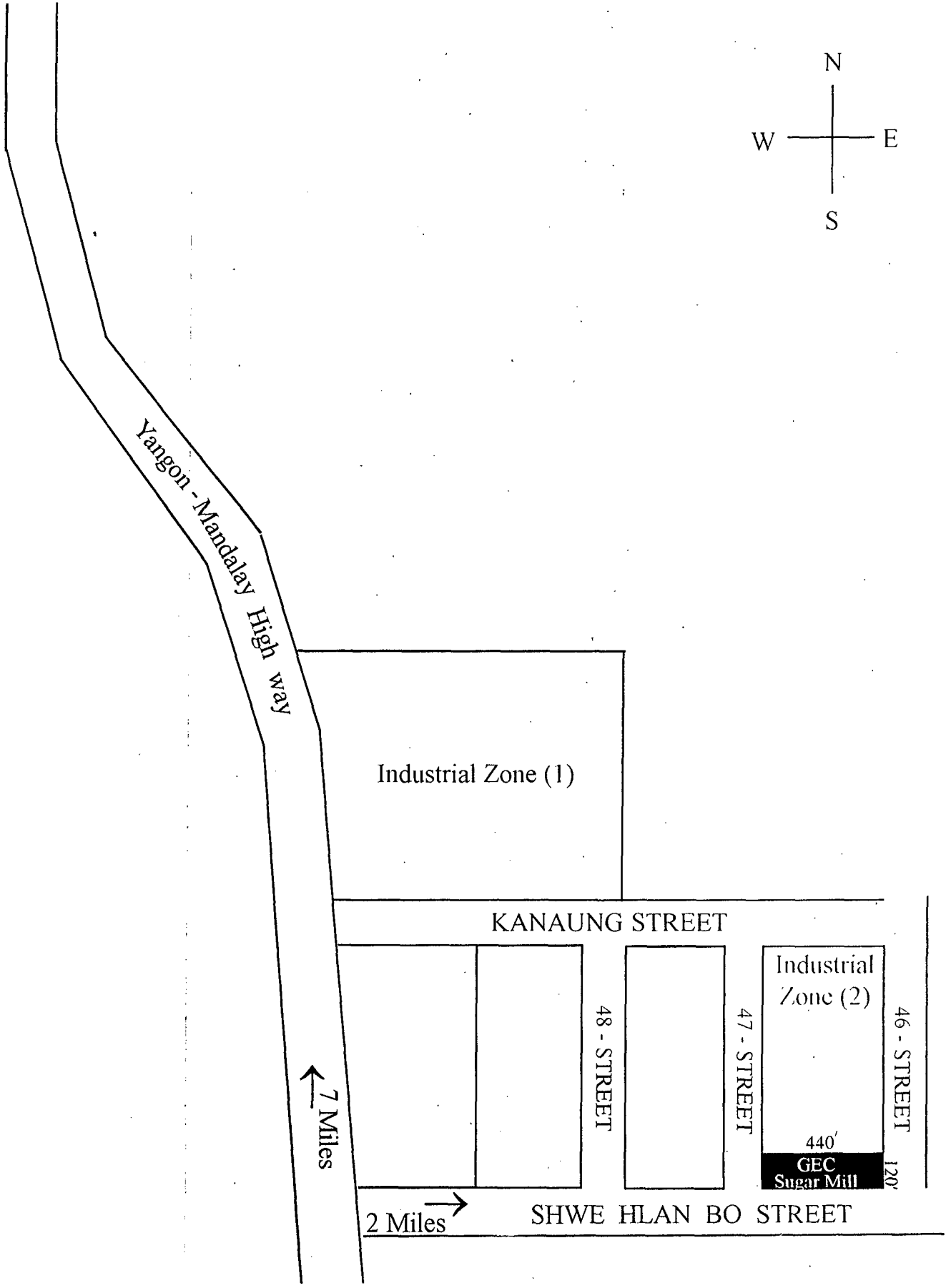
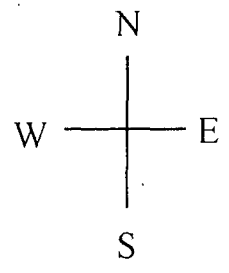
၁	အထူးပြင်ဆင်မှုများ
၂	အထူးပြင်ဆင်မှုများ
၃	အထူးပြင်ဆင်မှုများ
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၁၁	အထူးပြင်ဆင်မှုများ
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၁၄	အထူးပြင်ဆင်မှုများ
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၁၉	အထူးပြင်ဆင်မှုများ
၂၀	အထူးပြင်ဆင်မှုများ

တိုင်းနှင့်ပြည်နယ်နယ်နိမိတ်	---
ပြည်နယ်နယ်နိမိတ်	---
မီးဂုဏ်းလမ်း	+++
အပြင်တမ်းလမ်း	---
ငွေကုသီလမ်း	---
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GEC (Mdy) Sugar Mill Project

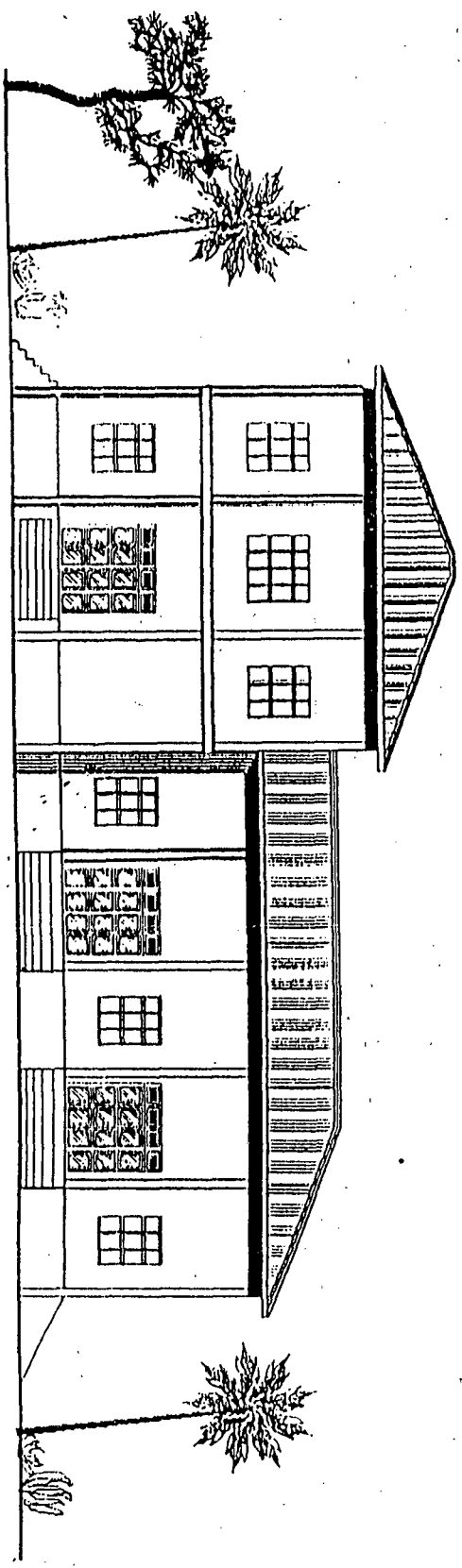
Location

Mandalay City



GEC (Mdy) Sugar Mill Project Factory front view

Annex-C (2)



FRONT ELEVATION

SCALE 1/4" = 1'-0"

Client: GEC
 Industrial Zone (2)
 Sugar Refinery Factory

YOUTH
 YEG SOUTHWEST
 CONSULTING ENGINEERS

NO. 325, 75th Road,
 BETHEDEN 2704 & 28th STREET
 Maryland, Myanmar
 TEL: 02-38237

Project: Sheet 04
 Date: 2-5-98
 Scale: 1/4" = 1'-0"

GEC (Mdy) Sugar Mill Project

List of machineries and its cost

No.	Particulars	Cost in Ks
1.	Boiler one set	3900000
2.	Diesel engine	1500000
3.	Dryer	400000
4.	High-grade vacuum pan	1260500
5.	Condenser & jet pump	1277700
6.	Crystalliser tank (3)	576250
7.	Syrup melter tank	550500
8.	Centrifugal	713000
9.	Compressor	179000
10.	Fermentation tank	175700
11.	Settling tank	400500
12.	Pipes	828000
13.	Hot water tank	
14.	Cold water tank	895870
15.	Cooling tower	
16.	Molasses tank	
17.	Lime tank	170000
18.	Sulphitator	400000
19.	Laboratory equipment	9 43500

14170520

=====
= 14 .17 million

GEC (Mdy) Sugar Mill

Cultivation of Sugarcane in three townships where raw material will be purchased.

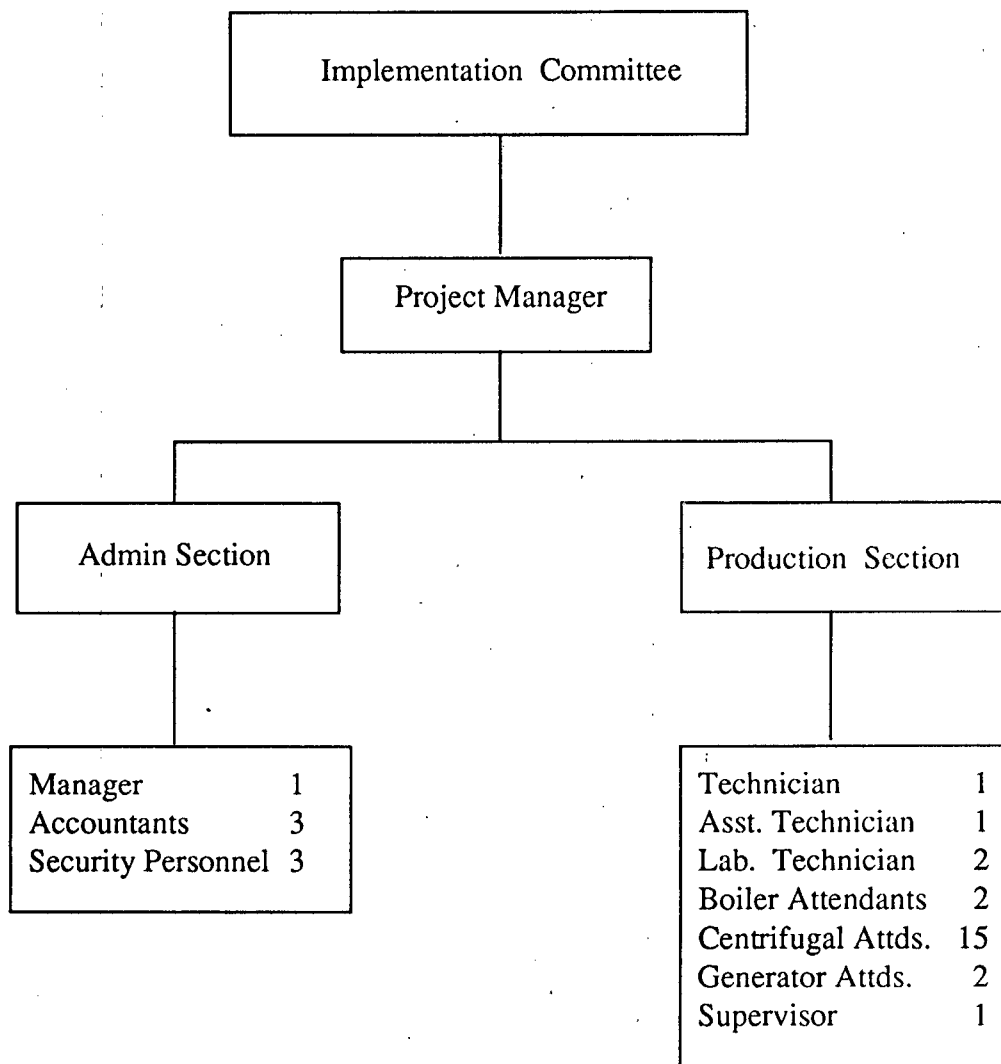
Sr. No.	Name of Townships	Sown acreage	Matured acreage	Per Yield	Total Yield (Tons)	Total Sugarcane Juice (viss)	Remark
1	Tabeik Gyin	11778	11778	18.70	220249	7488466	
2	Sin gu	7257	7257	14.92	108274	3681316	
3	Madaya	2960	2960	16.20	47952	1630368	

Cultivation of Sugarcane by Cooperatives in the catchment area.

Sr. No.	Coop. Societies in Townships	Sown acreage	Matured acreage	Per Yield (Tons)	Total Yield (Tons)	Produced Sugarcane juice	
						(viss)	(ton)
1	Tabeik Gyin	1958	1958	18.70	36615	1244910	2075
2	Sin gu	1207	1200	14.92	17904	608736	1015
3	Madaya	492	490	16.20	7938	269892	450
	Total	3657	3648		62457	2123538	3540
4	Coops. in other parts of division	1130	1030	15.00	15450	525300	875
	Total coops.	4787	4678		77907	2648838	4415

GEC (MDY) Sugar Mill Project

Organisation set-up



GEC (Mdy) Sugar Mill Project
Bank Loan Repayment Programme
Short-term loan

Years	Bank Loan	Surplus	Payment		Outstanding Balance	Remarks
			Capital	Interest		
0	44	-	-	3.74	44	Interest during CP
1		11.21	11.21	7.48	32.79	
2		12.55	12.55	5.57	20.24	
3		14.04	14.04	3.44	6.20	
4		15.71	6.20	1.05	-	
5		17.71				
6		18.07				
7		18.07				
8		18.07				
9		18.07				
10		18.07				
	44		44.00	21.08	-	

N.B. -----> Surplus = NPAT + Depreciation

GEC (Mdy) Sugar Mill Project
Income-tax Calculation

Ks in million

Year	Net Profit before tax	Income-tax upto K.500,000	Income-tax for k.500,000 and above			Total tax
			Profit for taxation	Income-tax Rate (%)	Income-tax	
1	2	3	4	5	6	7 (3+6)
0	-	-	-	-	-	-
1	10.71	0.0948	10.21	30	3.063	3.16
2	12.62	0.0948	12.12	30	3.636	3.73
3	14.75	0.0948	14.25	30	4.275	4.37
4	17.14	0.0948	16.64	30	4.992	5.09
5	19.99	0.0948	19.49	30	5.847	5.94
6	21.62	0.0948	21.12	30	6.336	6.43
7	21.62	0.0948	21.12	30	6.336	6.43
8	21.62	0.0948	21.12	30	6.336	6.43
9	21.62	0.0948	21.12	30	6.336	6.43
10	21.62	0.0948	21.12	30	6.336	6.43

GEC (Mdy) Sugar Mill Project

Calculation sheet for Internal Rate of Return

Year	Capital Cost	Annual Operating Cost	Total Cost	Benefit	Cash flow	12%			18%		24%	
						Discount rate	Cost present worth	Benefit present worth	Discount rate	Net present worth	Discount rate	Net present worth
0	59.64		59.64		(-)59.64							
1		106.92	106.92	118.13	11.21	0.893	53.26		0.847	(-)50.52	0.806	(-)48.07
2		105.58	105.58	118.13	12.55	0.797	85.22		0.718	8.05	0.65	7.29
3		104.09	104.09	118.13	14.04	0.712	75.17		0.609	7.64	0.524	6.58
4		102.42	102.42	118.13	15.71	0.636	66.20	380.26	0.516	7.24	0.423	5.94
5		100.42	100.42	118.13	17.71	0.567	58.07		0.437	6.87	0.341	5.36
6		108.53	108.53	126.60	18.07	0.507	50.91		0.37	6.55	0.275	4.87
7		108.53	108.53	126.60	18.07	0.452			0.314		0.222	
8		108.53	108.53	126.60	18.07	0.404			0.266		0.179	
9		108.53	108.53	126.60	18.07	0.361	198.18	231.17	0.226	20.94	0.144	13.64
10		108.53	108.53	126.60	18.07	0.322			0.191		0.116	
					18.07	0.287	587.01	611.43	0.162		0.094	
										(+)6.77		(-)4.39

GEC(Mdy) Sugar Mill Project
Cash flow for financial planning

Ks in million

Period	Full capacity										
	Construction	1	2	3	4	5	6	7	8	9	10
Year	0	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
A. Cash in flow	59.64	128.13	128.13	128.13	128.13	118.13	126.60	126.60	126.60	126.60	126.60
1. Bank loans											
(a) Short-term	44.00										
(b) Annual loan		10.00	10.00	10.00	10.00						
2. Contribution GEC (Mdy)	15.64										
3. Sales.		118.13	118.13	118.13	118.13	118.13	126.60	126.60	126.60	126.60	126.60
B. Cash out flow	59.64	128.13	128.13	128.13	128.13	118.13	126.60	126.60	126.60	126.60	126.60
1. Total assets	59.64										
2. Operating cost		94.48	94.48	94.48	94.48	94.48	102.10	102.10	102.10	102.10	102.10
3. Bank loans repayment											
(a) Short-term		11.21	12.55	14.04	6.20						
(b) Annual		10.00	10.00	10.00	10.00						
4. Interest											
(a) Short term		7.48	5.57	3.44	1.05						
(b) Annual		1.80	1.80	1.80	1.80						
5. Tax		3.16	3.73	4.37	5.09	5.94	6.43	6.43	6.43	6.43	6.43
C. Surplus					(+)9.51	(+)17.71	(+)18.07	(+)18.07	(+)18.07	(+)18.07	(+)18.07
D. Accumulated cash balance					9.51	27.22	45.29	63.36	81.43	99.50	117.57

GCEC(Mdy) Sugar Mill Project

Net Income Statement

Ks in million

Particulars	Construction	Full capacity											
		Year	1	2	3	4	5	6	7	8	9	10	
1 Sales	0%	118.13	118.13	118.13	118.13	118.13	126.60	126.60	126.60	126.60	126.60	126.60	126.60
2 Production Cost	0%	107.42	105.51	103.38	100.99	98.14	104.98	104.98	104.98	104.98	104.98	104.98	104.98
3 Gross profit		10.71	12.62	14.75	17.14	19.99	21.62	21.62	21.62	21.62	21.62	21.62	21.62
4 Income tax		3.16	3.73	4.37	5.09	5.94	6.43	6.43	6.43	6.43	6.43	6.43	6.43
5 Net profit (AT)		7.55	8.89	10.38	12.05	14.05	15.19	15.19	15.19	15.19	15.19	15.19	15.19
6 Accumulated profit		7.55	16.44	26.82	38.87	52.92	68.11	83.30	98.49	113.68	128.87		
Ratio													
a. Gross profit: sales													
		9.07	10.68	12.49	14.51	16.92	17.08	17.08	17.08	17.08	17.08	17.08	17.08
b. Net profit: sales													
		6.39	7.53	8.79	10.20	11.89	12.00	12.00	12.00	12.00	12.00	12.00	12.00

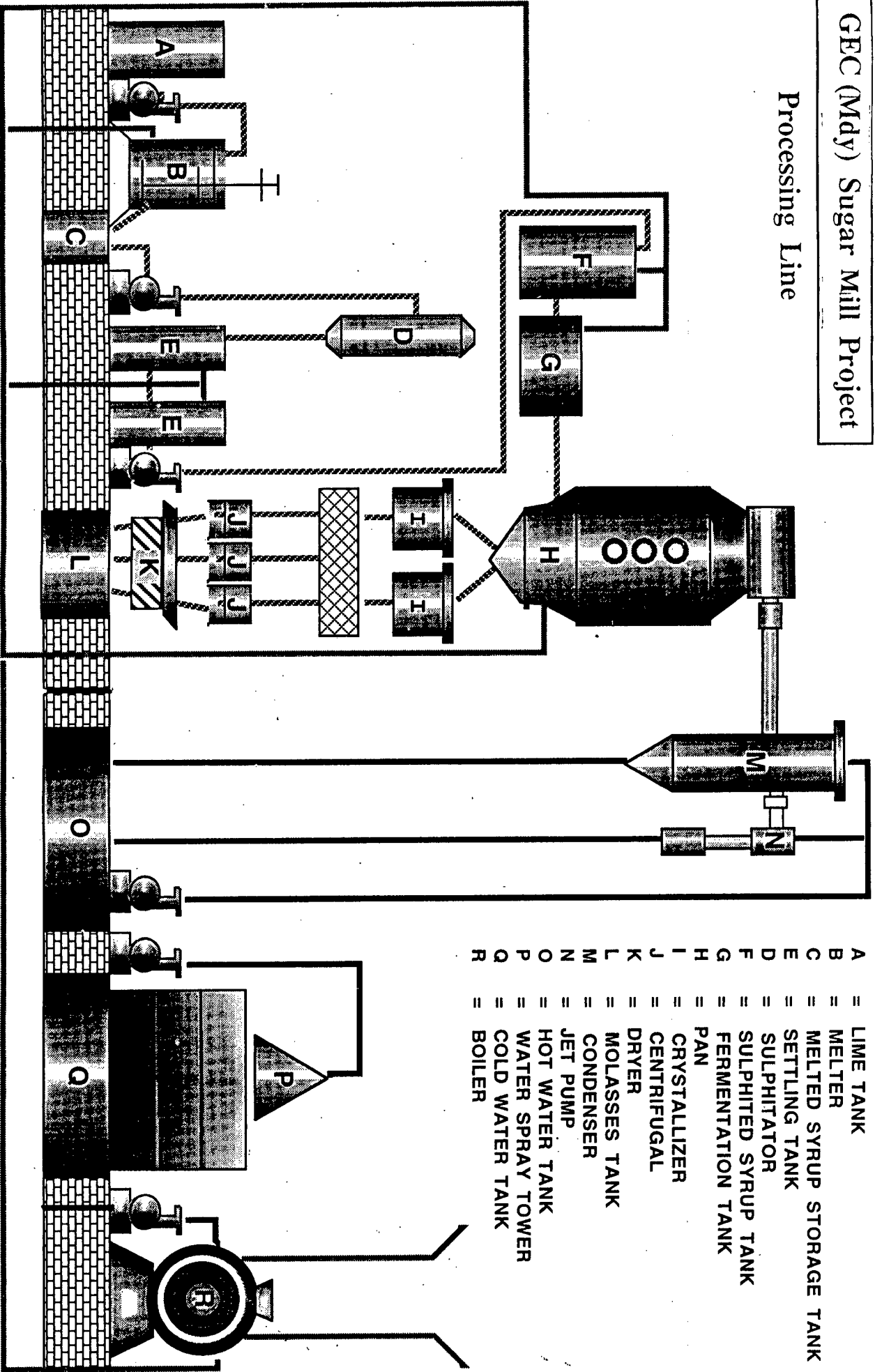
GEC(Mdy) Sugar Mill Project
Contribution to National Income

Ks in million

Operating years	Net profit	Tax	Interest	Depreciation	Salaries	Contribution to G.N.P	Remarks
0			3.74			3.74	
1	7.55	3.16	9.28	3.66	2.18	25.83	
2	8.89	3.73	7.37	3.66	2.18	25.83	
3	10.38	4.37	5.24	3.66	2.18	25.83	
4	12.05	5.09	2.85	3.66	2.18	25.83	
5	14.05	5.94		3.66	2.18	25.83	
6	15.19	6.43		2.88	2.18	26.68	
7	15.19	6.43		2.88	2.18	26.68	
8	15.19	6.43		2.88	2.18	26.68	
9	15.19	6.43		2.88	2.18	26.68	
10	15.19	6.43		2.88	2.18	26.68	

GEC (Mdy) Sugar Mill Project

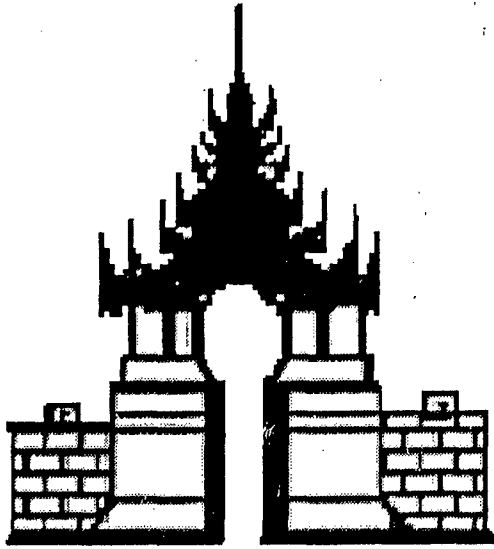
Processing Line



- A = LIME TANK
- B = MELTER
- C = MELTED SYRUP STORAGE TANK
- D = SETTLING TANK
- E = SULPHITATOR
- F = SULPHITED SYRUP TANK
- G = FERMENTATION TANK
- H = PAN
- I = CRYSTALLIZER
- J = CENTRIFUGAL
- K = DRYER
- L = MOLASSES TANK
- M = CONDENSER
- N = JET PUMP
- O = HOT WATER TANK
- P = WATER SPRAY TOWER
- Q = COLD WATER TANK
- R = BOILER

GEC (Mdy) Sugar Mill Project

Packaging trade-mark



MANDALAY

GEC

SUGAR

Net Wt. - 50 Kg

Co-operative Processing of Agricultural Produce

A project proposal prepared by
Ram Bhajan Shah
Deputy General Manager
National Co-operative Federation of Nepal.

as part of the
“13th ICA/Japan Training Course in Strengthening
Management of Agricultural Co-operatives in Asia”

India, Nepal and Japan
(November 16th 1998 to April 24th 1999)

The Thirteenth ICA-Japan Training Course in "Strengthening Management of Agricultural Cooperatives in Asia (India-Nepal-Japan, November 16th 1998 to April 24th 1999) has given me valuable exposure to broaden my understanding and knowledge of integrated cooperative management.

I would like to express my sincere gratitude to Dr. Daman Prakash, Project Director, and other members of the ICA staff, as well as Professor Krishna Murti and faculty members of IRMA for providing me with the valuable knowledge of the subject.

I am equally thank full to Hon'ble Deepak Prakash Baskota, Chairman of NCF, for giving me the opportunity to do this important course.

I also thank Mr. Shanta Raj Sharma, Managing Director of NCF, for his cooperation in preparation of this project proposal.

Similarly, I also express my gratitude to board members and managers of the concerned district co-operative unions and primary co-operative societies of Nepal for their support and valuable pieces of information.

Also, I thank my colleagues at NCF for their ideas and cooperation.

January 1999

Ram Bhajan Shah
Deputy General Manager
National Co-operative Federation of Nepal
Kathmandu

1.1 BACKGROUND

Nepal is a landlocked country situated in the lap of the Himalayas between China in the north and India in the east, west and south. It has a total land area of 147,181 sq. Km, ecologically divided into three regions: the mountain region (35%), the hilly region (42%) and the plain known as tarai (23%).

Nepal is the birthplace of Lord Buddha and the place of Mt. Everest. In the hilly region, only 10% of the area is suitable for cultivation. Agriculture and animal husbandry are the main occupation of the people of this region.

The tarai region is situated in the southern part of the country. It contains much of the fertile land and forest areas. Agriculture is the main occupation of the people living in this region. Paddy, wheat, maize, oilseeds, sugarcane, jute, tobacco and vegetables are the main crops grown in the region.

More than 87% of the people of Nepal live in rural areas and around 81% of them depend upon agriculture. Nepal is one of the least developed countries in the world with a per capita income of US \$234.

There are 5 development regions and 75 administrative districts in Nepal. These districts are divided into small units called Village Development Committees (VDCs) and municipalities. Currently there are 3913 VDCs and 58 municipalities in the country.

Some background information is given in the following table:

TABLE 1: BACKGROUND INFORMATION

1	Total area of the kingdom (sq. km)	147181
	<ul style="list-style-type: none"> • Mountain • Hill • Tarai 	<p>51817</p> <p>61345</p> <p>34019</p>
2	Land use (ha)	
	<ul style="list-style-type: none"> • Agricultural land cultivated • Agricultural land uncultivated • Forest (including shrub 689900ha.) • Pasture • Other 	<p>2968017</p> <p>986898</p> <p>6306460</p> <p>1757345</p> <p>2729622</p>
3	GDP at current prices (Rs million) (1996/97)	268009

	• Agriculture	111516
	• Non-agriculture	156493
4	GDP at constant prices	78408
	• Agriculture	32295
	• Non-agriculture	46113
5	Per capita GDP (Rs)1995/96	12127
6	Per capita GNP (Rs)1995/96	12303
7	GNP per capita real growth % (1985-95)	2.4
8	Population projected (1996/97)	21423649
	• Male	10754375
	• Female	10669274
9	Population growth rate per annum (1985-1995)	2.5
10	Unemployment rate % (1996)	4.9
11	Population density (per sq km)	145.56
12	Population in agriculture (%)	81.1
13	Crude birth rate (1996)	36.9
14	Crude death rate (1996)	11.6
15	Total fertility rate (1996)	4.98
16	Life expectancy at birth (1996)	56.5
17	Households (1991 census)	3328721
18	Irrigated area (ha) (upto 1996/97)	817343
19	Area and production of cereal crops (1996/97)	
	<u>Crops</u>	<u>Area (ha)</u>
	<u>Production (Mt)</u>	
	Paddy	1511230
	Maize	793720
	Millet	259940
	Wheat	667120
	Barley	35280
	Total	3267290
		6425630
20	Area and production of cash crops (1996/97)	
	<u>Crops</u>	<u>Area (ha)</u>
	<u>Production(Mt)</u>	
	Oilseeds	182110
		119250

Potatoes	110850	997400
Tobacco	5670	4480
Sugarcane	46360	1629300
Jute	11000	14000
Total	355990	2764430

(* Source: Ministry of Agriculture, S.I.N.A 1997)

In Nepal there are 1787 agricultural multipurpose cooperative societies in the agriculture sector. But they mainly provide their members with production support services. It is felt that an agricultural cooperative cannot generate income for its members until its activities are properly linked with marketing, including processing. So, it is felt that a project-oriented program should be launched through agricultural cooperatives.

1.2 A BRIEF HISTORY OF COOPERATIVE MOVEMENT

The Government initiated the cooperative movement in Nepal by establishing the Cooperative Department back in 1953. This was followed by the promotion of agricultural credit cooperatives in 1956. In the past, the Government took the policy of developing the co-operative movement under its direct control. This led to the organizational development and expansion. From the same period, in each successive periodic plan, the cooperative program was included without cursive strategies to make it people and demand based.

The Government promulgated a series of Cooperative Acts, Rules and by-laws, and institutional building of cooperative department, primary cooperatives and secondary unions took place under different ministries like the Ministry of Agriculture and the Ministry of Land Reform. The Department of Co-operatives had direct control over the planning, organizing, administering, managing as well as restructuring of the cooperative movement. Co-operative development programs were launched under different names at different times. They include the guided cooperative program and the integrated agricultural development program. But they were ineffective as people's participation could not be mobilized.

During the implementation period of 40 years, neither cooperative leaders were allowed to establish a national cooperative organization nor the Government took any initiative to establish it to represent the movement at national and international levels. BY and large, the cooperative movement in Nepal remained only a slogan.

An important development in the history of the cooperative movement in Nepal was the promulgation of the Cooperative Act 1992. The Act also paved the road for establishing a national cooperative organization. After that, on June 20, 1993, the National Co-operative Federation of

Nepal was voluntarily established by the then district cooperative union leaders and registered at the Department of Cooperatives.

1.3 NATIONAL COOPERATIVE FEDERATION OF NEPAL

1.3.1 INTRODUCTION

The National Cooperative Federation of Nepal Limited (NCF) is an apex body of the cooperative movement of Nepal. It was voluntarily and jointly organized by cooperatives of different levels on the basis of universally accepted cooperative principles. It was registered on June 20, 1993 under the Cooperative Act 1992.

At present, NCF membership consists of 3 Central Cooperative Unions, 52 District Cooperative Unions and 5 largest single purpose cooperative societies. It represents more than 4300 primary cooperative societies operating throughout the kingdom of Nepal with approximately 1.2 million members.

1.3.2 OBJECTIVES

2 The following are the objectives of NCF:

- (a) to promote and develop the cooperative movement in Nepal on the basis of cooperative principles according to the people's need and on their own initiative
- (b) to provide support for the socio-economic programs and business of cooperative societies and unions in order to improve the social and economic conditions of the people;
- (c) to assist cooperative societies and unions to strengthen their management capacity, and
- (d) to provide leadership to the cooperative movement.

TABLE 2 : CO-OPERATIVE SOCIETIES AND UNIONS

As of now, there are a total of 4435 co-operatives in Nepal. The following table provides the details:

1	National Cooperative Federation		1
2	Central (specialized) cooperative unions.		3
	a	Central Milk Producers Cooperative Union	1
	b	Central Consumer Cooperative Union	1
	c	Nepal Savings and Credit Cooperative Central Union	1
3	District cooperative unions		48
4	District level single purpose unions		34
5	Primary cooperative societies		4349
	a)	Agricultural multipurpose	1787
	b)	Milk producers'	1069
	c)	Savings and credit	815
	d)	Consumers'	262
	e)	Women's	186
	f)	Banking and finance	29
	g)	Transport	6
	h)	Handicraft	5
	i)	Housing	4
	j)	Health	2
	k)	Press	6
	l)	Workers'	4
	m)	Others	174
	Total		4435

(Source: Department of Co-operatives)

1.4 GOVERNMENT POLICY

The importance of the cooperative sector has been emphasized in several of the country's five-year development plans.

Since 1953, when the Department of Cooperatives was first established, various measures have been employed to promote and support cooperative enterprises. But despite these undoubtedly well-intended efforts, the actual accomplishments have been disappointing.

This can be attributed to a number of factors, such as (a) inconsistency in Government policy (b) discontinuity

caused by changes of the Ministry responsible for co-operative development, and (c) lack of physical infrastructures and efficiently managed institutions to implement government policies.

In connection with agricultural cooperatives, past Governments may also have failed to recognize that cooperatives can't be developed in isolation, and that they require an environment conducive to cooperative development.

Co-operatives were established following the so-called top down approach, with little regard to the needs and aspirations of the grass-roots. The result was the lack of dedication and interest on the part of the members.

As indicated above, government policy regarding cooperatives has previously been characterized by considerable intervention in the affairs of the movement. This has been changed with the enactment of the Co-operative Act of 1992, which reflects a new policy of minimum intervention. The role of the Government has been redefined and co-operative leaders are expected to take over a number of activities that were previously the responsibility of Governmental authorities. It is now the policy of the Government to encourage the formation of co-operative societies and unions at the local as well as national level in such a manner that co-operatives fully adopt democratic norms in their management and maintain transparency in their operation. The Act has also exempted co-operatives from certain taxes.

1.5 EXISTING SITUATION OF COOPERATIVES

Nepal is an agricultural country where 81% of the people depend upon agriculture. More than 1780 agricultural co-operatives are engaged in agricultural activities, but many of them are not functioning properly according to their objectives.

A lot of problems are being faced by the Nepalese farmers. Farmers are not able to set prices of their products.

The lack of active member involvement is one of the most serious problems of the co-operative movement. Many co-operatives have not held general meetings for the last several years. Why are not co-operative members interested and assuming an active role in co-operative business activities? Why are co-operatives just functioning as a private dealer? Part of the answer is the lack of effective member oriented programs. In addition, co-operative leaders' and staff's know-how is very poor. In general, there is the lack of skilled human resources in co-operative organizations. This has led to the problem of the lack of economic viability.

A co-operative enterprise is member-owned. It is therefore imperative for the co-operative to provide services for its members. At the same time, the co-operative should have a concern for its community.

In an effort to promote the co-operative business, the National Co-operative Federation has initiated wholesale marketing of agricultural produce. By doing so, NCF is trying to provide value-added price for co-operative members through their processing plants.

Apart from this, some efforts have been made by the NCF run Co-operative Wholesale Marketing Center (CWMC) to provide better quality goods at reasonable prices for consumers with co-operative brand and attractive packaging services. CWMC is planning to set up collection centers in areas where processing co-operatives are not active so that co-operative members' produce such as paddy, pulse, oilseeds, can be purchased easily at reasonable prices.

Some of the co-operative paddy and oilseed processing plants are defunct due to the lack of financial resources. In this respect providing some financial help can activate such processing plants.

It is expected that sound relationships among co-operative members, producers and consumers will be promoted and strengthened through CWMC. In this way, efforts are being made to create a suitable and viable Co-operative network.

2.1 PRODUCTION

Sharing 41 percent of GDP and employing more than 81 percent of population, agriculture plays a vital role in Nepal's national economy. Agriculture is the leading sector for economic development as it provides the base for the upliftment and integration of other sectors like trade and industry.

The bulk of agricultural production is derived from food grains (rice, wheat, millet and barley), accounting for nearly 85% of the total crop area. Rice is the predominant crop and as much as 57% of the arable land is used for rice growing.

The production of paddy and oilseeds is quite good in areas where co-operative processing mills are running. There is a great potential for co-operative paddy and oilseed mills.

The project will cover the area of operation of 10 co-operatives as the production in this area is sufficient. The area under paddy and oilseed cultivation and production are shown in Table 3.

TABLE 3 : AREA, PRODUCTION AND YIELD OF PADDY AND OILSEED IN DISTRICTS WHERE CO-OPERATIVE MILLS ARE OPERATING (1996/97)

District	Paddy			Oilseeds		
	Area (ha)	Production (Mt)	Yield (kg/ha)	Area (ha)	Production (Mt)	Yield (kg/ha)
Dhanusha	62100	150000	2415	2975	3080	800
Chitwan	31000	82150	2650	21500	13975	650
Nawalparasi	42500	110000	2588	6330	3166	500
Morang	92700	241940	2610	-	-	-
Mahottari	47000	105930	2254	-	-	-
Parsa	45570	125990	2765	-	-	-
Rupendehi	70200	190000	2707	-	-	-
Banke	33000	87100	2639	-	-	-
Siraha	67060	140700	2098	-	-	-

2.2 Procurement of paddy and oilseeds

The estimated paddy and oilseed production in these areas is sufficient for the project during both seasons of the year.

At present, the processing co-operatives purchase paddy and oilseeds as follows:

- i) Direct purchase from the member
- ii) Indirect purchase through other cooperatives.

Direct purchase from the members is very easy and effective. There is no problem in such purchasing. It is also estimated that ten to twenty rupees per quintal of paddy or oilseeds can be given to the co-operative member over and above the market price. It is therefore possible to attract members.

There are some co-operative societies in the proposed project area that is involved in purchasing paddy and oilseeds, but they do not process them. They store some quantity of paddy and oilseeds in godowns. During the harvesting season, these co-operatives purchase paddy and oilseeds at the prevailing price. After 3-4 months, they sell them. At that time, usually the prevailing price is higher. So some co-operatives do that business to make profit. It is assumed that a procurement system can be built on this practice.

2.3 MARKETING OF AGRICULTURAL PRODUCE

The agricultural marketing system with regard to food grain is mainly based on local domestic consumption. It is estimated that 70 percent of rice produced is utilized by the producer for food, payment of labor, rent and seeds. Of the marketable surplus some 35% is sold at the farm gate and 65% at the local market. In both instances, middlemen have the upper hand.

The National Food Corporation (NFC) is the major buyer of rice. It is not just the largest, but from the social point of view, also the most important dealer. But food grain trade is dominated by private dealers and NFC only accounts for some 30 percent of rice procured.

Due to scattered and under-developed nature of markets, co-operative societies can be effective in joint marketing of agricultural produce. Some of them are also actively involved in selling food grains, milk, seeds, and vegetables and processed products. Some of the co-operatives function as commission agents for the procurement of food grains to, and also in selling of food grains supplied by the Nepal Food Corporation (NFC) an undertaking of His Majesty's Government. Co-operatives also have 354 urban and rural godowns with a total storage capacity of about 55,000 metric tons of food grains. Therefore, the cooperative can be effectively geared towards creating infrastructure and a wide distribution network. The marketing concept in this project is related to the real life of the marginal and small co-operative members who are engaged in agriculture. From marketing point of view the following three factors are the most important.

- a) Production
- b) Marketing
- c) Processing

a) Production

Farmers do not know about the advanced cultivation of land and proper utilization of modern agro inputs, application of new technology and marketing of agricultural produce. To solve all these problems, this project has tried to provide essential training in the above-related subjects so that, co-operative members are able to increase productivity and production.

b) Marketing

Production is not the only factor. Farmers can benefit if they are able to get proper and reasonable price of their produce. Co-operatives should pay more attention to establish sound marketing infrastructure. They should pay attention to increase farmers' income through reduction of losses incurred during the harvest and post-harvest periods.

b) Processing

Processing, selling and distribution are also integral parts of marketing. Processing can add value to raw materials in terms of shape, quality, space and packaging. Additional income is also earned by selling by-products. In this respect, a co-operative brand can be introduced to consumers so that co-operatives' goodwill is utilized. At the same time, value-added price can be given to co-operative members. In this way, it is assumed that real and reasonable prices can be provided to co-operative members.

2.4 PROBLEMS FACED BY FARMERS

Even though Nepal is an agriculture-based country, it seems as though the interest of farmers has been neglected, despite the fact that in policy and paper immense work is said to have been done for their upliftment. Only a few cash crops have been introduced and most farmers have involved themselves in subsistence farming. Enough emphasis has not been laid on rural management and, for most of the farmers' their problems remain unsolved.

Some of the problems faced by farmers are as follows:

- Unavailability of fertilizers: Due to improper planning, there is always an acute shortage of fertilizers. Year after year, fertilizers have not reached in time and the crop has suffered. Privatization of this sector will perhaps ensure that fertilizers are available in time.
- Cash crunch: As most farmers are involved in subsistence farming, they lack cash. This leads them to borrow cash from traders by mortgaging their next crop at throw-away prices. It is interesting to note that though farmers sold paddy at 600 Rs per quintal, the same rice was selling at 2000 per quintal. While the consumer has suffered, the profit has not been made by farmers.

- Lack of know-how: Even when pesticides and fertilizers have reached in time, farmers have no knowledge of how to use it. The soil has perhaps never been tested. So, in the long run, the farmer may have done more harm than good. A need based training program can be conducted periodically at local and regional levels while introducing new varieties and techniques.
- Lack of cash crops: The introduction of cash crops has been slow. Whatever initiative the private sector has taken, the private sector, and not the former, has been the main beneficiary of the same.
- Organizational and marketing problems: Farmers are not organized and, therefore, tend to be exploited by traders who control the entire market. Traders from India have been able to export herbs and spices from Nepal to India and then to a third country, thereby taking the maximum benefit.
- Rural management: Excessive population growth and several other factor have led to deforestation for agriculture purposes. Ploughing of fallow land is resulting in the washing away of the top fertile soil and the lack of land consolidation, irrigation facilities, etc. have created problems, the impact of which will only be felt in the days to come.
- Training: Most of the training centers are located in urban areas and the farmer has little knowledge to obtain the maximum benefit from the available resources at his disposal. Knowledge of new varieties marketing, processing, animal husbandry, fisheries, etc. Can be instrumental in increasing farmers' income and in lifting the living standard of the rural community.
- Unavailability of quality seeds: Most farmers keep their own seeds from their own crops. This leads to lower productivity in every succeeding year. Farmers themselves are not aware of various quality seeds available and the ones best suited to their soil and climatic conditions.

3.1 PROJECT OBJECTIVES

1. The following are the primary objectives of the project:
 - a. to provide co-operative members with reasonable price of their produce; and
 - b. to develop the co-operative market mechanism and help stabilize the food grain market.
2. The specific objectives of the project are as follows:
 - a. to give value-added benefits to co-operative members;
 - b. to promote the business of member co-operatives;
 - c. to give incentives to the co-operative members in terms of patronage dividend;
 - d. to transfer production and marketing know-how to co-operative members;
 - e. to develop co-operative human resources; and
 - f. to establish a sound and suitable marketing system among co-operative members, co-operatives and NCF.

3.2 NEED AND JUSTIFICATION

The National Co-operative Federation of Nepal has taken a leading role in the development of co-operatives. Project-oriented activities can generate additional income for co-operative members.

It is possible to collect large quantity of paddy and oilseeds in the proposed project area. It is already mentioned that farmers are not getting reasonable price for their produce. The co-operative member and staff need to be trained in marketing activities.

It is proposed that some selected co-operative processing mills should be operated effectively keeping in mind an integrated approach.

The income of co-operative members is expected to be increased as a result of (a) cost saving activities (such as bulk purchase of inputs); (b) production-support activities (such as better seeds, chemicals and practices); (c) loss preventive activities (such as better packaging, storage and transport and marketing); (d) value addition and (e) direct or indirect gains due to various welfare activities.

Consumers are also likely to benefit from this project as the processed produce will be sold at reasonable prices in urban or food-deficient areas.

Further more, use of the available resources, capacity utilization of the existing paddy and oil mills, and manpower development can help increase productivity.

3.3 PROJECT AREA

The project area extends to 10 different districts, where the co-operative processing mills are in operation.

In each of the districts, one primary co-operative society or district co-operative union will be selected. There will be two district co-operative unions and eight primary co-operatives, with an average catchment area of around 5 VDCs.

3.4 DURATION

This will be a five-year project. A second phase of the project will be considered based on the evaluation results.

3.5 BUSINESS OPERATION

It is estimated that 50 percent of the rice and edible oil will be sold locally and 50 percent will be available for distribution through the CWMC. Based on this, it is estimated that 1638 Mt of rice and 216 Mt of oil will be annually purchased in the project area. Table 4 provides the details:

TABLE 4 PROJECTED VOLUME OF CWMC'S BUSINESS

Qty : Metric Tons

Rs in' 000

S. No.	Name	District	Mill	Paddy purchase			Rice sale			Oilseeds purchase			Oil sale		
				Qty	Rate	Amount	Qty	Rate	Amount	Qty	Rate	Amount	Qty	Rate	Amount
1	District Cooperative Union, Bharatpur	Chitwan	Oil	-	-	-	-	-	-	72	80	5,760	72	90	-
2	District Cooperative Union, Janakpur	Dhanusha	Oil	-	-	-	-	-	-	72	80	5,760	72	90	-
3	Paropakar Cooperative Society Ltd. Tilakpur	Nawalparasi	Oil	-	-	-	-	-	-	72	80	5,760	72	90	-
4	Cooperative Society Ltd., Pokharia	Parsa	Rice	234	18	4,212	234	20	4,680	-	-	-	-	-	-
5	Cooperative Society Ltd., Mahendranagar	Dhanusha	Rice	234	18	4,212	234	20	4,680	-	-	-	-	-	-
6	Cooperative Society Ltd., Lahan	Siraha	Rice	234	18	4,212	234	20	4,680	-	-	-	-	-	-
7	Cooperative Society Ltd., Kanchanbari	Morang	Rice	234	18	4,212	234	20	4,680	-	-	-	-	-	-
8	Cooperative Society Ltd., Kohalpur	Banke	Rice	234	18	4,212	234	20	4,680	-	-	-	-	-	-
9	Cooperative Society Ltd., Goshala	Mahottari	Rice	234	18	4,212	234	20	4,680	-	-	-	-	-	-
10	Cooperative Society Ltd., Manigram	Rupandehi	Rice	234	18	4,212	234	20	4,680	-	-	-	-	-	-
	Total			1,638		29,484	1,638		32,760	216		17,280	216		1

3.6 OUTPUTS

The outputs of the project are as follows:

- At least 10 model co-operative processing mills strengthened, a benchmark survey done and plans and programs for each of the co-operatives drawn up.
- Appropriate post-harvest technology transferred, marketing systems developed and adequate market outlets for agricultural produce identified.
- Additional agro-processing and income-generating activities identified according to the needs of the members of the concerned co-operatives.
- Members, in particular women members, board of directors and staff of the concerned co-operatives trained in marketing in a competitive environment.
- Some trainers trained in subjects relating to marketing and post harvest technology.

4.1 INSTITUTION ASPECTS

First of all, this project proposal will be presented to the Board of Directors of concerned co-operatives for consideration. It will be implemented only after it has been duly approved and an agreement to this effect is signed by CWMC and the concerned Co-operative society or union.

There will be a Business Committee appointed by the Board of Directors in each of the cooperatives.

The Board of Directors (BOD) will function according to the Bye-laws and working rules laid down and approved by the General Assembly. The BOD will pay proper attention to business promotion and institutional development of the co-operative.

The Business Committee will assist the Board of Directors in properly guiding the business of the co-operative as envisaged in this project. This committee will have the following responsibilities:

- to study the rice and oilseed mill project proposal in detail;
- to study the proposal and recommend for the procurement of machinery and essential equipment;
- to recommend for the manpower required in consultation with the General Manager and the Manager of the mill;
- to plan for the procurement of paddy and oilseeds and recommend the price to be paid to the member;
- to recommend the price of rice;
- to study and recommend appropriate incentives for members and employees;
- to arrange for physical facilities, including the means of transport; and
- to do local sales promotion.

District Co-operative Unions (DCUS) are the members of the National Co-operative Federation. DCU's responsibilities are as follows:

- to act as a link between CWMC and the related co-operatives of the project area;
- to provide educational and promotional support services for the concerned co-operatives; and
- to make arrangements for selling the produce locally.

The National Co-operative Federation is an apex organization of the co-operative movement in Nepal. The CWMC will be run by NCF, which will have the following responsibilities:

- to give proper information about pricing, technology, market trends, qualities of the products, etc.;
- to form a CWMC Business committee with proper representation of NCF, and the concerned DCUS and cooperatives;
- To provide technical and promotional support services for the concerned co-operatives in collaboration with the related DCUS;
- to extend financial assistance to the concerned co-operatives;
- to buy the surplus produce processed by the concerned co-operatives and arrange for selling the same through consumers' co-operatives in urban or food -deficient areas;
- to arrange for transferring technology and development of human resources ; and
- to monitor the results of the project

4.2 PHYSICAL FACILITIES

An important aspect of the project is to develop and look after the economic interests of small paddy and oilseed producers. A processing mill will, on an average, require 4000 kg of paddy per day. With a milling percentage of 65%, it will produce 2600 Kg of rice in a day.

Similarly, the production of 1200 kg of oil a day will require 3000 kg of oilseeds, with a milling percentage estimated at 40%.

Storage facilities are available at the paddy and oilseed processing mills and godowns will also be rented for storing paddy and oilseeds, if necessary.

The existing capacity of mills and godowns is as follows:

TABLE 5:

CAPACITY OF MILLS AND GODOWNS

S.N.	Co-operative	District	Mill	Milling capacity(Mt/hr)	Storage capacity(Mt)
1	District Co-operative Union Bharatpur	Chitwan	Oil	0.15	300.00
2	District Co-operative, Union Janakpur	Dhanusha	Oil	0.15	300.00
3	Paropakar Co-operative Society, Tilakpur	Nawalparasi	Oil	0.15	200.00
4	Cooperative Society, Pokharia	Parsa	Rice	0.50	200.00
5	Cooperative Society, Mahendranagar	Dhanusha	Rice	0.50	300.00
6	Cooperative Society, Lahan	Siraha	Rice	0.50	300.00
7	Cooperative Society, Kanchanbari	Morang	Rice	0.50	300.00
8	Cooperative Society, Kohalpur	Banke	Rice	0.50	300.00
9	Cooperative Society, Goshala	Mahottari	Rice	0.50	300.00
10	Cooperative Society, Manigram	Rupendehi	Rice	0.50	300.00
	Total				2,800.00

Acquisition or development of the basic physical facilities like land and buildings, paddy and oilseed processing units, etc will be the responsibility of the concerned co-operative.

The essential maintenance of paddy and oilseed processing units and equipment will also be the responsibility of the concerned co-operative.

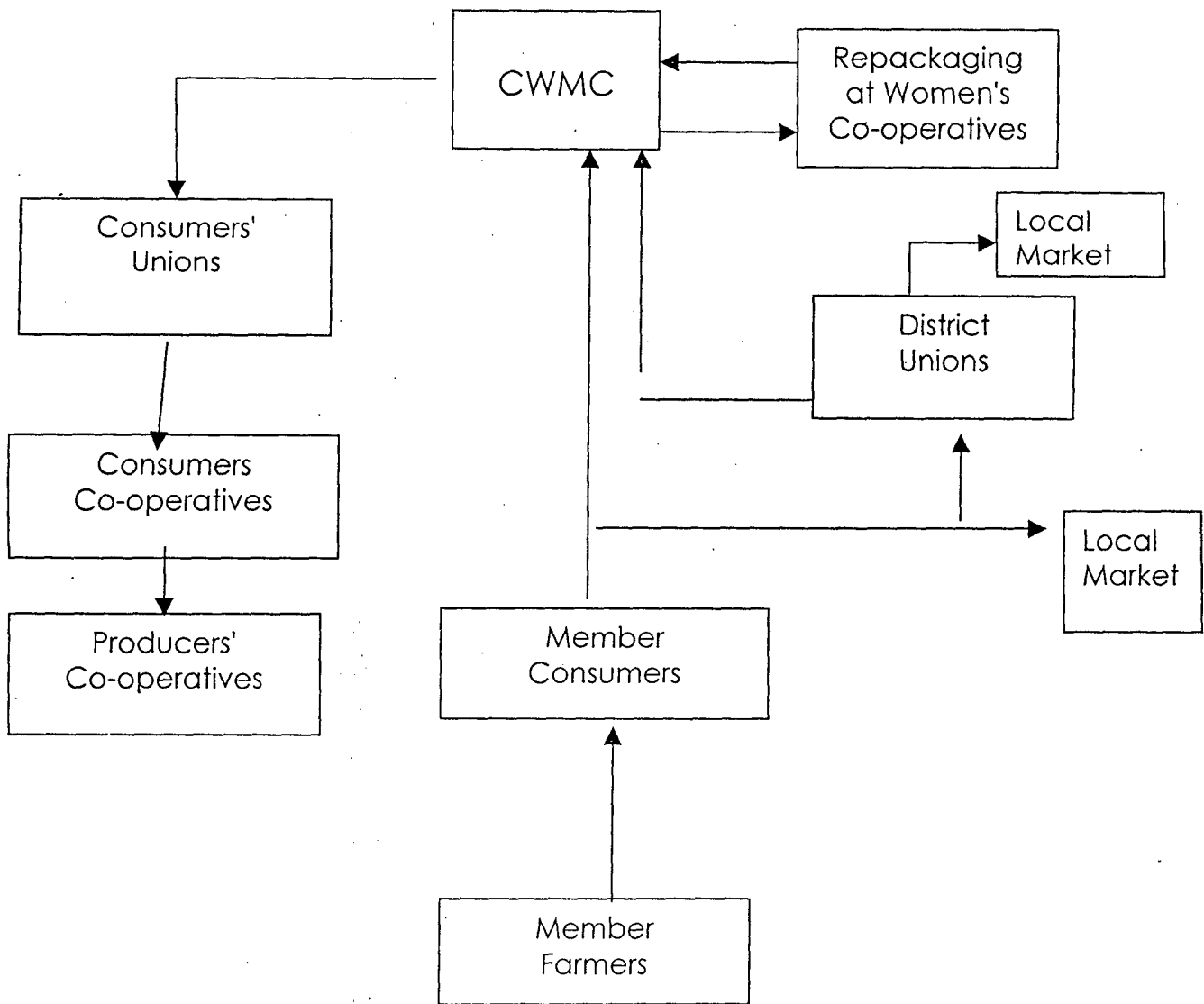
4.3 BUSINESS AND FINANCE

- ❖ In Nepal pricing of agricultural produce basically depends on the cost of production, marketing trends and also on climatic conditions. There are several factors determining the pricing of rice and edible oil. Therefore, pricing will have to be done according to the market conditions.
- ❖ The selected 7 rice processing co-operatives and 3 oilseed processing co-operatives will have to take at least one share of Rs. 10,000 to be the member of CWMC.
- ❖ The co-operatives will have to purchase paddy and oilseeds from their members, especially small and marginal farmers, at reasonable prices and on priority basis.

- ❖ CWMC will provide an advance of up to Rs 3,00,000 per processing mill so that the concerned co-operative is able to purchase and store agricultural produce. The money will be deducted from the payment of the final lot of rice or edible oil of the season supplied to CWMC.
- ❖ CWMC will purchase rice, edible oil and other finished goods processed by its member co-operatives. Purchasing and selling rates will be fixed by the CWMC Business Committee.
- ❖ CWMC will sell rice, edible oil and other commodities under the co-operative brand.
- ❖ CWMC will promote and strengthen female workers' co-operatives, and encourage them to do the grading and packaging work in Kathmandu.
- ❖ In the project area, efficient member and market information systems will be developed by the concerned co-operatives in collaboration with CWMC and DCU.
- ❖ Wholesaling and retailing will be done through the Central Consumer Co-operative union District Co-operative Unions and primary co-operative societies in urban and food-deficient areas.
- ❖ Patronage refund and incentive price will be given to the co-operative members in the project area.
- ❖ Evaluation and monitoring will be done by CWMC in cooperation with the concerned DCUs.
- ❖ The necessary fund will be mobilized in terms of share capital, loans from the Co-operative Development Fund, and advances from NCF.
- ❖ Transportation service will be contracted out to the private sector CWMC or the concerned co-operative.
- ❖ A Computer unit will be set up at the concerned co-operative society or union for processing the essential information.

The following is a glimpse of the scheme :

Figure 1: A Glimpse of the proposed marketing network.



4.4 TRAINING AND EDUCATION

The present situation of Nepal's cooperative movement is a result of 40 years efforts to strengthen the role of cooperatives in the process of the country's development. Due to a variety of reasons, including insufficiently trained and motivated cooperative staff and members, these efforts have not always yielded the desired result.

On the other hand, marketing and business-oriented projects need a well-trained and motivated team. In this context, CWMC will establish a small training and education wing to educate the co-operative members and train the concerned staff. Training and educational programs will be conducted for developing the skills of the staff increasing awareness among co-operative members about Cooperation and for developing the feeling among the leaders that co-operative organizations should promote their business according to the needs of their members.

The focus of the CWMC Training will be on appropriate post-harvest technology, marketing system, processing methods, drying, storage, application of inputs, and so on. Emphasis will be given to helping women acquire technical and business knowledge.

In this way training and education programs will be conducted according to the need of the target beneficiary. All such programs will be carried out in close cooperation with the concerned co-operatives and agencies.

The proposed training wing will consist off a small team, however. The team ill contract out the actual training and educational programs to reputed and renowned NGOs or co-operatives training institutes.

4.5 MONITORING AND EVALUATION

Throughout the life of the project, CWMC Business Committee and NCF Board of Directors will check whether the project is producing the outputs foreseen in the project document in terms of quality, quantity and timeliness. The continuous review of progress will be in accordance with established procedures of NCF. A mid-term and terminal evaluation of the project will also be done.

4.6 AGREEMENT BETWEEN MEMBER CO-OPERATIVES AND CWMC

An agreement will be made between member cooperatives and CWMC regarding the processing and marketing of paddy and oilseeds on the following terms and conditions:

1. Paddy and oilseeds shall be processed by the member co-operative and around 50% of the processed produce will be sold to CWMC.
2. The selling rate of the processed produce will be fixed by the Business Committee of CWMC, in which member co-operatives and NCF will be properly represented.
3. CWMC will have to provide an amount not excluding Rs. 300,000/- for the member co-operative as an interest-free advance.
4. CWMC will have to make payment to the member Co-operative immediately after the delivery of rice and oil.
5. CWMC will have to arrange for training and educational programs according to the needs of the members, leader and staff of the member Co-operative.
6. Grading, branding and packaging should be done by the member co-operative according to the direction of CWMC.
7. The member Co-operative will have to purchase at least one share of CWMC to be its member.
8. The member co-operative will have to distribute patronage divided to its members for promoting their participation.
9. The member co-operative will have to follow the direction of CWMC Business Committee regarding the quality, branding, etc. of the produce provided that such a direction does not infringe on their autonomy.
10. CWMC will have to make an arrangement for providing market information for the member co-operative.
11. The member Co-operative should purchase paddy and oilseeds from its member, or through its member Co-operatives, as the case may be by giving priority to small members.

4.7 RECOMMENDATIONS FOR THE NEXT PHASE

- CWMC needs to purchase the necessary land and build its own building and godowns and other facilities to carry out business on a large scale.
- CWMC should make an appropriate business perspective plan.
- Marketing and processing of agricultural produce should be emphasized and efforts should be made to develop an inter co-operative marketing network throughout the country.
- CWMC should manage a "pull fund", in which each and every processing Co-operative should contribute certain amount of profit.

All these should be considered for the next phase of the project based on the experience gained during the proposed 5 years' period .

The financial analysis of the project is based on the following assumptions:

- a. Rs. 300000/- will be given to the processing mill as an interest -free advance.
- b. The rate of interest on bank loan will be 15%;
- c. (The rate of local tax will be 1%;
- d. (50% of rice and 60% of oil will be purchased by CWMC;
- e. (Only 50% of the NCF's administrative costs is applicable to this project; and
- f. NCF will provide Rs 55,00,000/- for CWMC, in which Rs 25,00,00/- will be used by CWMC and Rs 30,00,000/- will be given to the 10 member Co-operatives as advances.

The following tables show the projected financial results of the project:

TABLE 6 : SOURCES AND USES OF CAPITAL FOR CWMC.

FIGURE IN 000 RUPEES

Uses	Amount	Sources	Amount
<u>Fixed Assets</u>	<u>500</u>	NCF	55000
- computers	100	Fund	
- furniture	200		
- motorcycle	100		
- miscellaneous	100		
<u>Current Assets</u>	<u>5000</u>	Revolving	
- cash	500		
- account receivables	500		
- stock in-trade	1000		
- advances	3000		
Total	55000	Total	55000

Appendix 1: Cost of Sales of CWMC

Rs in '000

Items	Qty	Rate	Amount
Raw materials			
Purchased rice	1,638	18.00	29,484.00
Purchased oil	216	80.00	17,280.00
Packaging and branding			
Rice bag			520.00
Oil plastic bag and canes			504.00
Transportation	1,854	0.75	1,390.50
Loading/ unloading charges	1,854		37.00
Local taxes			468.00
Total			49,683.50

Appendix 2 : Calculation of Salary of CWMC Staff.

Rs in '000

Particulars	Number	Monthly Salary Rs.	Amount	Remarks
Marketing Director	1	9,000	117	For 13 months
Manager	1	7,700	101	For 13 months
Marketing Officer	1	4,000	52	For 13 months
Accountant	1	3,000	39	For 13 months
Storekeeper	1	3,000	39	For 13 months
Marketing Assistants	2	2,500	65	For 13 months
Sales Representatives	2	2,500	65	For 13 months
Peons and watchman	3	2,200	86	For 13 months
Total	12	33,900	564	

Note : It is estimated that only 50% of the cost of management will be allocated to CWMC.

TABLE 7: PROJECTED INCOME STATEMENTS OF CWMC.

Qty. . MT
Rs in 000

Details	Yr1	Yr2	Yr3	Yr4	Yr5
Rice sales (MT)	1638	1638	1638	1638	1638
Oil sales (MT)	216	216	216	216	216
Total sales (MT)	1854	1854	1854	1854	1854
Sales revenue	52200	52200	52200	52200	52200
Rice 1638*20	32760	32760	32760	32760	32760
Oil 216*90	19440	19440	19440	19440	19440
Cost of sales	49683.5	49683.5	49683.5	49683.5	49683.5
Rice and Oil	46764	46764	46764	46764	46764
Transportation	1390.5	1390.5	1390.5	1390.5	1390.5
Packaging	1024	1024	1024	1024	1024
Unloading charges	37	37	37	37	37
Local taxes	468	468	468	468	468
Office Overheads	1320	1320	1320	1320	1320
Salary	282	282	282	282	282
Repairs and maintenance	10	10	10	10	10
Communication	60	60	60	60	60
Office and Godown rent	300	300	300	300	300
Stationary	50	50	50	50	50
Travelling	100	100	100	100	100
Meeting allowances	90	90	90	90	90
Audit fee	15	15	15	15	15
Training	300	300	300	300	300
Fuel	50	50	50	50	50
Market information	50	50	50	50	50
Contingencies	13	13	13	13	13
Profit before interest and depreciation	1196.5	1196.5	1196.5	1196.5	1196.5
Depreciation	30	30	30	30	30
Net Income	1166.5	1166.5	1166.5	1166.5	1166.5
Gross Margin	2516.5	2516.5	2516.5	2516.5	2516.5

TABLE 8 : ANNUAL VOLUME OF BUSINESS OF PROCESSING CO-OPERATIVES

(Qty in MT and Rs in '000)

S. No.	Name	District	Mill	Paddy purchase		Rice sale			Oilseed purchase			Oil sale		
				Qty	Rate	Amt.	Qty	Rate	Amount	Qty	Rate	Amt.	Qty	Rate
1	District Cooperative Union Ltd., Bharatpur	Chitwan	Oil	-	-	-	-	-	300	28	8,400	120	80	9,600
2	District Cooperative Union Ltd., Janakpur	Dhanusha	Oil	-	-	-	-	-	300	28	8,400	120	80	9,600
3	Parepakar Coop. Society Ltd., Tilakpur	Nawalparasi	Oil	-	-	-	-	-	300	28	8,400	120	80	9,600
4	Cooperative Society Ltd., Pokharia	Parsa	Rice	720	10	7,200	468	18	8,424	-	-	-	-	-
5	Cooperative Society Ltd., Mahendranagar	Dhanusha	Rice	720	10	7,200	468	18	8,424	-	-	-	-	-
6	Cooperative Society Ltd., Lahan	Siraha	Rice	720	10	7,200	468	18	8,424	-	-	-	-	-
7	Cooperative Society Ltd., Kanchanbari	Morang	Rice	720	10	7,200	468	18	8,424	-	-	-	-	-
8	Cooperative Society Ltd., Kohapur	Banke	Rice	720	10	7,200	468	18	8,424	-	-	-	-	-
9	Cooperative Society Ltd., Goshain	Mahottari	Rice	720	10	7,200	468	18	8,424	-	-	-	-	-
10	Cooperative Society Ltd., Marigrain	Rupendehi	Rice	720	10	7,200	468	18	8,424	-	-	-	-	-
	Total			5,040		50,400	3,276		58,968	900	25,200	360		28,800

Appendix 3: Cost of sales of a Paddy Processing Co-operative.

Qty- MT
Rs in '000

No.	Items	Amount	Remarks
1	Raw materials	7,200	720000kgxRs 10 for 6 months
2	Jute bags	270	bags 9000xRs 30
3	Electricity	150	U30000xRs5
4	Wages	72	
5	Transportation costs	36	
	Total	7,728	

*The mill will operate approximately for 180 days in a year

Appendix 4: Calculation of Salary of a processing Co-operative.

Rs in' 000

No	Particulars	Number	Rate	Amount	Remarks
1	Manager	1	4,000	52,000	13 Months
2	M/Operator	1	3,000	39,000	13 months
3	Accountant	1	3,000	39,000	13 Months
4	Store Keeper	1	2,500	32,500	13 Months
5	Peons/Watchmen	2	2,200	57,200	13 Months
	Total	6		219,700	

Appendix 5: Overhead Expenses of a Paddy Processing Co-operative.

Rs in 000

No	Item	Amount
1	Salaries	220
2	Allowances	30
3	Loan interest	75
4	Depreciation	37
5	Repairs and maintenance	60
6	Telephone and Communication	12
7	Godown rent	40
8	Other overheads	20
9	Audit fee	10
10	Travelling	20
11	Contingencies	20
	Total	544

TABLE 9 : SOURCES AND USES OF CAPITAL FOR A PROCESSING Co-operative

FIGURE IN 000

Uses	Amount	Sources	Amount
<u>Fixed Assets</u>	<u>300</u>	- Member's capital	100
- processing unit	100	- CWMC	300
- Godown	50	- Co-operative development fund	100
- office equipment	100	- banks	500
- Miscellaneous	50		
<u>Current Assets</u>	<u>700</u>		
- cash	50		
- account receivable	50		
- inventory	600		
Total	1000	Total	1000

TABLE 10: PROJECTED INCOME STATEMENT OF A PADDY PROCESSING CO-OPERATIVE

RS IN 000

Details	Yr1	Yr2	Yr3	Yr4	Yr5
<u>Sales</u>	<u>8885</u>	-	-	-	-
- rice 468000kg. @ Rs 18	8424				
- bran 57600 kg. @ Rs 5	288				
- broken rice 21600 kg. @ Rs 7	151				
- husk 720 qt. @ Rs 30	22				
<u>Cost of Sales</u>	<u>7728</u>				
- paddy	7200				
- other variable costs	528				
- Gross Margin	1157				
- overheads	546				
- rent income 2000qt @ Rs 30	60				
- Income before Interest	671				
- Interest	75				
<u>Net Income</u>	<u>596</u>				

LIST OF ACRONYMS

AIDB	Agriculture Development Bank
AIC	Agriculture Inputs Corporation
NCF	National Co-operative Federation of Nepal
NCDB	National Co-operative Development Board
CTC	Co-operative Training Center
CWMC	Co-operative Whole sale Marketing Complex
DCU	District Co-operative Union
NGO	Non-governmental Organization
HMG/N	His Majesty's Government of Nepal
VDC	Village Development Committee
DDC	District Development Committee
BOD	Board of Directors
NFC	Nepal Food Corporation
MOA	Ministry of Agriculture
DOC	Department of Co-operatives
COF	Co-operative Development Fund
NPC	National Planning Commission
ICA	International Co-operative Alliance
HRD	Human Development Report
SCDP	Secondary Crop Development Project

Co-operative Pulse Processing Plant

Umesh Mahaseth

Manager

*"13th ICA/Japan Training Course in Strengthening
Management of Agricultural Cooperatives in Asia"*

India, Nepal and Japan

November 16th 1998 to April 24th 1999

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December 1998

Umesh Mahaseth

Manager

DCU Banke, Nepalgunj

C/O National Co-operative Federation of Nepal Kathmandu

1.1 BACKGROUND

1.Introduction:

Nepal is a landlocked country located between two giant nations India and China. It covers some 147181 sq. kilometers, which can be divided into three ecological zones running from east to west. The Terai is the southern most Zone, which is an extension of the Gangetic plain and is fairly flat. The hills form the central zone. This zone is the largest of the three zones and consists of a wide belt foothills and valleys. The third zone includes mountains, which are part of the Himalayan chain. It contains of peaks massifs as high as 5000. It has very limited agricultural potential.

It is estimated that the Terai, the hills and the mountains account for 23 percent, 44 percent and 33 percent respectively of the total land area.

Nepal is one of the least developed countries in the world with a per capita income of only US\$ 234 and ranking of 154 on the human development index ladder (HDR, 1997). The incidence of poverty is growing as the proportion of the poor to the total population has increased form 12% in 1984/85 to 45% in 1996 (NPC, 1997).

Agriculture continuos to be the mainstay of the economy. The agriculture sector contributes about 42% to the GDP and supports 81% of the population. The country has about 48% of field crops. The main cereal crops grown in the country are rice 45%, maize 20%, wheat 18% and millet 5% with a smaller but significant area of pulse crops

Pulse crops and cash crops that are generally second priority of the farmers. These secondary crops come after the major cereals like rice, wheat and maize. Pulse corps are grown in about 12% of the total land and account for 312260-hectare area of the country. The annual production of pulse of estimated at 223000 metric ton. Pulse crops are grown in rained and marginal areas and to improve soil fertility.

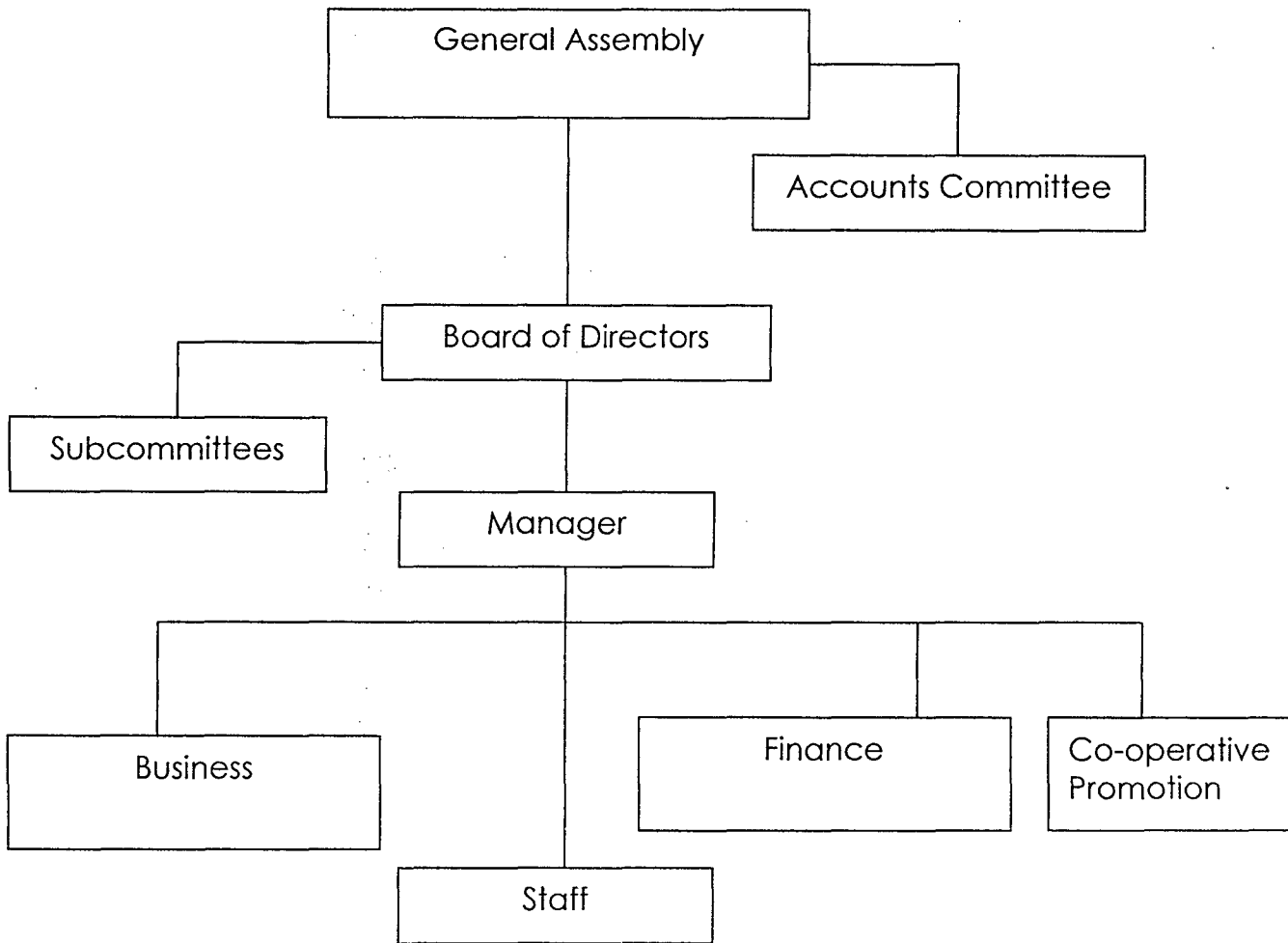
1.2 District Cooperative Union, Banke

The District Cooperative Union, Banke is situated in the Mid western Development Region of the kingdom of Nepal. It is district body of primary Co-operative societies. It has 21 member cooperative societies and 150 thousands share capital.

The main objectives of DCU, Banke are as follows:

- to uplift the socio-economic conditions of members by promoting the business of member cooperatives;
- to create Co-operative awareness among the people ; and
- to represent the Co-operative movement at the district level.
- DCU' Banke' deals in fertilizers, improved seeds, pesticides, consumer goods, construction materials, etc. and runs
- Member education activities member Co-operative societies. It also provides consultancy services for member cooperatives.

The organizational structure of DCU, Banke is as follows:



1.3 Agricultural situation of the Banke District:

The Banke district has an area of 235983 its land use pattern is as follows.

TABLE 1: A LAND USED IN BANKE.

Use	Area in hectare
Cultivated land	51392
Non cultivated Land	7584
Grassland	2629
Forest	165861
Shrub	1358
Other	7187
Paddy	33600
Maize	7850
Wheat	12500
Barley	40
Cotton	338
Lentil	6591

12550.90 has ha access to irrigation facilities of the total cultivated area.

2.1 Project Area

The project aims at establishing a pulse (lentil) processing plant in Nepalgunj. The project is being established in consideration of the growing demand of cooperative members and such processing facilities. DCU Banke has also formally requested NCF July 1997 for the necessary assistance in this regard. The proposed facility is expected to support cooperative farmer members. It is expected to contribute to improve the income of small holder of the project area. This processing plant will also ensure the availability of pulses throughout the year and provide a basis for exporting pulse to other countries.

The project therefore would not only justify its financial worthiness, but with also support the national economy.

2.2 Location

The pulse processing plant will be located in Nepalgunj. In the premises of DCU, Banke, the site has been considered feasible as this area is the gateway to India for many districts of the mid-western Development Region of Nepal.

At present, DCU, Banke has 5 *kathas*¹ of land, 500 MT godowns and office buildings in the market area of Nepalgunj.

¹ One hectare =30 Kathas

2.3 Transportation and other facilities

The area is very well connected by fair-weather roads with regular bus services to Kathmandu and most of the towns in Terai and hill districts of the region. The distance between Nepalgunj and Kathmandu is 513 km.

There are regular flights to Nepalgunj from Kathmandu.

There are communication services such as telephone, fax as well as postal services, in Nepalgunj, and Electricity is also available there.

Chapter Three

Government policy and need for the project

3.1 Policy

HMG/n policy is to increase pulse crop production in the country. HMG/n has also launched a through Secondary Crops Development Project (SCDP) in Banke. SCDP provides extension, seed multiplication and marketing services, and credit facilities for farmers.

HMG/n has also commitment to provide adequate budget for the project.

HMG/n has also subsidized agricultural tools for the benefit of farmers. At the same time, the promulgation of the Cooperative Act 1992 has provided autonomy to cooperatives. Now cooperative members can take decisions according to their interest.

3.2 PRODUCTION

The project area covers ten Village Development Committee (VDC,) of Banke district.

This area is sufficient for the growing pulse crops.

The estimated production is given in Table 2.

TABLE 2: AREA AND PRODUCTION

	Village Development Committee	Area in hector	Pulse production in MT
1.	Puraini	2500	3250
2.	Puraina		
3.	Bunkatwa		
4.	Behavi		
5.	Horiya		
6.	Piparhawa		
7.	Hirmineya		
8.	Wideypur		
9.	Gangapur		
10.	Binouna		

(Source : (Statistical Information, Banke DDC)

3.3 Problems faced by farmers

It has been a pity that the agriculture sector suffers from multiple problems most of which are not at the control of farmers. At the production stage natural disasters and various type of pests make farmers lose sleep. If they are lucky to escape from this stage; then, they face marketing problems.

Small producers neither have the capacity nor an approach to withstand the adverse market situation. They have to dispose of their product immediately after the harvest. This is the main reason why farmers cannot get fair price of their product.

Small producers can get fair price if they make Co-operative marketing efforts. This can also enable them to compete with large producers and play a significant role in influencing the market.

3.4 Need and Justification

The project, is directly linked with the farm. The project has given priority to the processing and marketing of small holders produce. The aim is to provide value added price for the real producers.

There is extremely low productivity, low investment and agricultural operation is done in a traditional way.

In the present situation the poor farmer is operating at the subsistence level. The proposal project will help commercialize his farming and increase the production of pluses.

4.1 Objectives:

The following are the main objectives of the project:

- (a) to increase production of (pulses) for meeting domestic and external demand;
- (b) to provide- value added benefits for Co-operative members; and
- (c) to increase the income and nutritional standards of cooperative members.

The specific objectives of the project are as follows:

- (a) to provide a better price for pulse-growing members of co-operatives,
- (b) to promote inter Co-operative business relationships; the quality processed pulse.
- (c) to supply quality pulses to the consumer at reasonable price.
- (d) to generate additional employment opportunities; and
- (e) to check the private sector's monopoly in this business.

4.2 Procurement of pulse

The lentil producing area covers ten VDC which, are in the outlying part of the district, at a distance of approximately 20 Km from Nepalgunj.

The DCU will purchase lentil as follows:

- From member farmers through their cooperatives;
- From member farmers through their groups ; and

- From member farmers directly in case their cooperatives or groups are defunct or are not interested in this business.

There are 16 agricultural co-operatives, which are members of DCU, Banke including 4 in the project area. These societies will collect pulses and the DCU will purchase and process them.

4.3 Steps in lentil processing

The following are the major steps in lentil processing:

1 st Step	Cleaning, soaking and drying
2 nd Step	Husking
3 rd Step	Policing
4 th Step	Grading
5 th Step	Packaging

4.4 Marketing

The processed pulse must be handled with care Marketing will be done mainly through the Co-operative net work as follows:

- Consumer co-operative societies in the district, and
- Consumer Co-operative societies or unions in other districts, and
- the National Cooperative Federation of Nepal.

4.5 Physical facilities

A processing unit with the capacity to process 2000 kg per day of lentil will be set up.

4.6 Storage

The existing godowns of the DCU will be repaired, if necessary, and will be used for storing pulses.

4.7. Pricing

There are several factors related to the pricing of pulse and therefore pricing will be done according to market condition

4.8 Implementation

The project proposal will be presented at the DCU Board of Directors. After it has been approved by the Board of Directors, the proposal will be forwarded to the general body for approval.

If the general body approved the plan the Board of Directors will form a pulse processing sub-committee.

The sub-committee will consist of the following:

- Coordinator - 1 from the DCU Board of Directors
- Member -1 from the DCU Board of Director
- Member-1 from among the Boards member of the pulse processing cooperatives
- Secretary- 1 Manager of the DCU.

The afore-said sub-committee will have the following functions

- recommend for machinery and equipment,
- fix the buying and selling prices of pulses, and
- monitor the implementation of the project

4.9 Requirement of manpower

The project will require 6 people as follows

- 1) Manager- 1
- 2) Accountant- 1
- 3) Machine Operator- 1
- 4) Assistant Machine Operator- 1
- 5) Salesman - 1
- 6) Watchman and helper - 1

4.10 Manpower Development:

For the smooth and efficient management of the pulse processing plant, the union will require competent administrative and technical personnel. There is the lack of manpower specializing in processing pulses. The available people should there for be given-an adequate practical knowledge off the subject. They should be trained at reputed institutions within and outside the country.

Likewise, they should be provided with an opportunity to visit the existing pulse processing plants located in different parts of the country and across the border so that they can get first-hand knowledge of different aspects of plant operation.

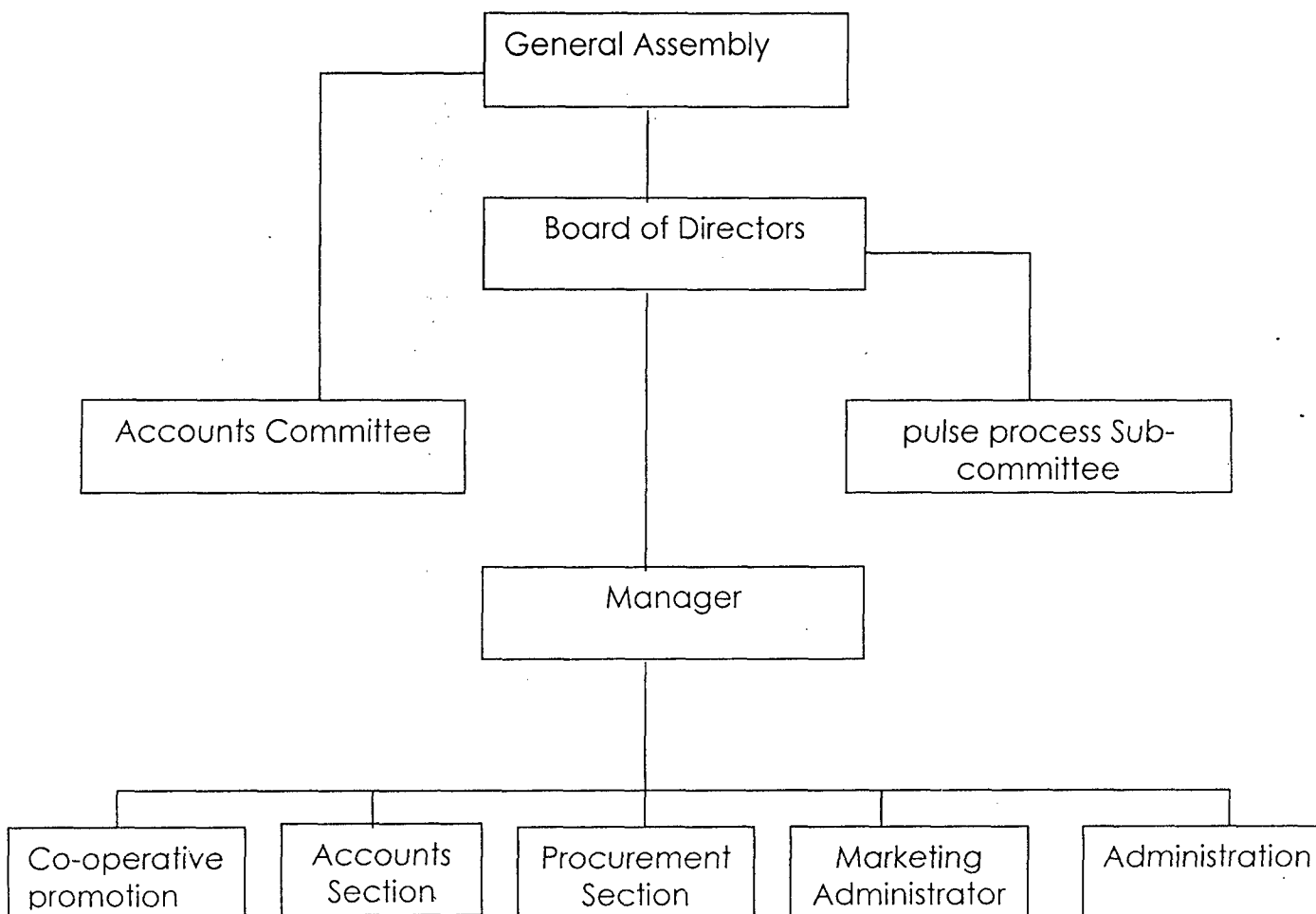
The SCDP, NCF, NCDB will be requested to provide support for the manpower development of the processing plant.

Besides, the NCF will be requested to provide supervisory services for the plant during the initial period of its operation.

4.11 Organizational Structure

The DCU's organization in light of this project is proposed as follows

Proposed organizational Structure of DCU, Banke



5.1 Machinery and equipment

The following machinery and equipment will have to be installed under the project. The tentative cost of the machinery and equipment is given in table 2.

TABLE 2 : COST OF MACHINERY AND EQUIPMENT

S.N.	Particulars	Capacity	No	Cost in Rs
1)	Production plant	1/2 MT per hr.	1	150,000
2)	Motor and accessories	15 H.P.	1	25,000
3)	Electrical ware, cable, lighting, fire-alarm, etc.	-		100,000
4)	Furniture and office equipment	-		50,000
5)	Shed for the plant	-		225,000
6)	Motorcycle	-	1	100,000
	Total	-		650,000

The above figures are preliminary estimates.

5.2 Annual Production

Table 3 provides the projected annual production and sales figures.

TABLE 3 :ANNUAL PRODUCTION AND SALES REVENUE

Rs in '000

Particulars	Purchasing of pulses			Selling of processed pulses		
	Qty	Rate	Amount	Qty	Rate	Amount
Lentil	400	24	9600	320	35	1200
Husk	-	-	-	40	2	80
Total	400	-	9600	360	-	11280

5.3 Capital requirement

The total investment in the project is estimated at Rs 1650 thousand.

Table 4 presents the sources and uses of funds.

TABLE 4 : SOURCES AND USES OF FUND

Rs in '000

Uses		Source		
Particulars	Amount	Source	Amount	Remarks
sheds	225	Co-operative Development Fund	500	8% interest
Motor accessories	25	NCF	300	Interest free
furniture office equipment	50	Share Capital	200	-
Electric works	100	Bank loan	650	15% Interest
Vehicles	100			
Processing plant	150			
Working capital	1000			
Total	1650	Total	1650	

5.4 Projected income

The income from the milling operation is projected as follows:

TABLE 5: PROJECTED INCOME STATEMENT

Rs in 000

Year	1	2	3	4	5	6	7	8	9	10
Sales Revenue	11280	11280	11280	11280	11280	11280	11280	11280	11280	11280
Operation Cost	10481.5	10481.5	10481.5	10481.5	10481.5	10481.5	10481.5	10481.5	10481.5	10481.5
operating income	841	841	841	841	841	841	841	841	841	841
Income before interest and tax	798.5	798.5	798.5	798.5	798.5	798.5	798.5	798.5	798.5	798.5
Interest on loan	137.5	120	103	96	68	51	37	27	18	
Income before tax	661	678.5	695.5	712.5	730.5	747.5	761.5	771.5	780.5	798.5
Vat	-	-	-	-	-	-	-	-	-	-
Net Income	661	678.5	695.5	712.5	730.5	747.5	761.5	771.5	780.5	798.5

Annex-IV

Calculation of salaries and allowances

Rs in'000.

S.N.	Particulars	Number	Rate	Amount	Remarks
1	Manager	1	5000	65	
2	Accountant	1	3000	39	
3	Marketing Administrative Assistant	1	3000	39	
4	Machine Operator	1	3000	39	
5	Assistant Operator	1	3000	39	
6	Watch men	2	2000	52	
7	Allowances			27	
	Total			300	

Angels

Details of Annual Depreciation charge

Rs in '000

S.N.	Particulars	Unit	Rate	Amount	Remarks
1	Plant Building	1	2%	4.5	
2	Machinery Plant	1	10%	15	
3	Motor	1	10%	2.5	
4	Vehicle	1	15%	2.5	
5	Furniture and equipment		11%	5.5	
				42.5	

Estimated Annual Fixed Cost.

Rs in '000

S. N.	Particulars	Amount	Remarks
1	Salary	300	
2	Depreciation	42.5	Annex-1
3	Interest	137.5	
4	Repair and maintenance	65	
5	Stationary	20	
6	Travelling	20	
7	Meeting allowances	20	
8	Communication	24	
9	Audit fee	10	
10	Advertisement	40	
11	Contingencies	20	
	Total	699	

Estimated annual Variable Cost

Rs in '000.

No.	Particular	Qty(Mt)	Rate	Amount	Remarks
1	Raw materials	400	24	9600	
2	Labor @ Rs 10 per quintal	400		40	
3	Jute bags			160	
4	Transportation, loading and unloading			20	
5	Electricity and Lubricants			100	
	Total			9920	

Calculation of salaries and allowances

Rs in'000.

S.N.	Particulars	Number	Rate	Amount	Remarks
1	Manager	1	5000	65	
2	Accountant	1	3000	39	
3	Marketing Administrative Assistant	1	3000	39	
4	Machine Operator	1	3000	39	
5	Assistant Operator	1	3000	39	
6	Watch men	2	2000	52	
7	Allowances			27	
	Total			300	

Loan Repayment Schedule

Rs in '000.

Year	Interest	Principal Reimburse	Loan Left	Remarks
1	137500	115000	1035000	Calculated @15 % on and 8 % on 500.
2	120250	115000	920000	
3	103000	115000	805000	
4	85750	115000	690000	
5	68500	115000	575000	
6	51250	115000	460000	
7	36800	115000	345000	
8	27600	115000	230000	
9	18400	115000	115000	
10	-	115000	-	

Calculation of Annual purchases and sales

Rs in '000

Particulars	Unit	Rate	Quantity	Amount
Sales Pulses	MT	35	320	11200
Husk	MT	2	40	80
Total sales			360	11280
Purchases Lentil	MT	24	400	9600
Total purchases			400	9600

Socio economic Information Banke District

Population	285604
House holds	49083
Road density	4.80

LIST OF ACRONYMS

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INDIA-NEPAL-JAPAN
NOVEMBER 16, 1998 TO APRIL 24, 1999.

DRAFT PROJECT PROPOSAL

Title of the
Draft Project Proposal : Setting up a Poultry Breeders Farm by
Live stock and Dairy Development
Cooperative Society, Tehsil & Village
Ferozwala District Sheikhpura.

Country : Pakistan.

Draft Project Proposal
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TAHIR IQBAL BUTT.
LAHORE, PAKISTAN.
December, 1998.

PROJECT INFORMATION SHEET.

1. Name of the sponsor cooperative : Livestock and Dairy Development Society
Society : Livestock and Dairy Development Coop. Society, Tehsil and Village Ferozwala District Sheikhpura.
2. Project location : Tehsil and Village Ferozwala District Sheikhpura.
3. Project objective and description : **Objective:**
To ensure more regulated incomes for members.

Description:
To produce hatchable eggs and culled birds.
4. Investment period : 1999.
5. Total cost of the project : Rs.15.950 million.
Including a permanent working capital of Rs.2.635 million.

CHAPTER – I:

S U M M A R Y

- 1.1 The production of poultry is a good substitute of beef and mutton. Its importance can be judged from the fact that almost every family in rural areas and every fifth family in urban areas are associated with it.
- 1.2 Government is providing every possible incentive to develop it at an accelerated pace.
- 1.3 The national consumer market for poultry meat appears to be quite big and there is a sufficient demand from the Poultry farmers producing broilers and layers.
- 1.4 This draft project proposal has been carried out to produce 1.9 million hatchable eggs and 14,000 culled birds (weighing 3.5 Kg per bird on average) based on triple shifts per day and 365 days per annum.
- 1.5 The draft project has been designed to cover the demand of poultry farmers of Lahore Division and its surroundings.
- 1.6 The total capital investment for this project will be 15.950 million out of which request for financing facility of Rs.2.300 million and Rs.5.200 million will be made to PPCBL and Federal Bank for Cooperatives respectively.

CHAPTER – II:

INTRODUCTION.

- 2.1 The consumption of poultry meet has greatly increased over the year. It is highly appreciated because of its comparatively low cost and the easy way in which it can be incorporated in traditional Pakistani cooking.
- 2.2 Poultry farming is also appreciated by producers because of the short gestation periods of projects and quick return on investment.
- 2.3 Breeding and hatching are, as supporting services within poultry farming, directly related to the production of eggs and chicken meat. Although breeding and hatching are two separate activities, they can easily be integrated.
- 2.4 According to a report on production of meet during 1997-98, the production of poultry meet will reach upto 324,000 tonnes as compared to 287,000 tonnes of the last year.
- 2.5 This draft project proposal concerns the establishment of a Poultry Breeders Farm at Tehsil and Village Ferozwala, District Sheikhpura.

CHAPTER – III:

PROJECT

3.1 Scope of the Society.

- 3.1.1 The society is under the process of registration. The society held his General Body Meeting in the month of December, 1998 and had resolved to apply to the Registrar, Cooperatives, Punjab for its registration and fixation of Maximum Credit Limit.
- 3.1.2 The society is located in Tehsil Ferozwala which is about 2 Km away from the Grand Trunk Road and the scheme is designed to cover the farmer community of the said Tehsil.
- 3.1.3 The society will be incorporated with an initial authorized and paid up capital of Rs.9.000 million and 8.450 million respectively.
- 3.1.4 The Managing Committee will control the affairs of the society.
- 3.1.5 The members of the society are landlords and can easily manage to contribute Rs.8.450 million towards equity.

3.2 Market Prospects.

3.2.1 In Pakistan, the supply of eggs and poultry meat is based on 2 distinct sources :

1. Small scale Village levels production.
2. Large scale commercial poultry farming.

Desi birds are hardy and exists as a scattered population which live on scavenging. They lay 55 to 60 eggs per year. It is estimated that 80 percent of the families in the villages of Pakistan keep on an average 12 adult birds each and hatch chick under brood hen. Government has been paying special attention to increase production of poultry products at village level in order to improve the diet of rural population and provide them an additional source of income by selling poultry products.

The production of rural poultry products during the last two year is given in the following table:

TABLE – 1

PRODUCTION OF RURAL POULTRY

	Units	1996-97	1997-98
Day Old Chick	Million No's	125	130
Cocks & Cock-ribs	do	50	52
Layers	do	50	52
Meat	000 Tons	100	104
Eggs	Million No's	3315	3432

(Source: Ministry of Food, Agricultural & Livestock)

The following table shows Production of Poultry and Poultry Products during the last two year:

TABLE – 2

PRODUCTION OF COMMERCIAL POULTRY

	Units	1996-97	1997-98
Production of Day Old Chick	Million No's	320	366
Production of Layers	do	13.5	13.5
Production of Broilers	do	264	300
Production of Breeding Stock	do	4.5	5.0
Production of Poultry Meet	000 Tons	287	324
Production of Eggs	Million No's	2750	2852

(Source: Ministry of Food, Agricultural & Livestock)

3.2.2 Pakistan is deficient in the production of animal protein foods to feed its present human population. According to the Protein Committee of Pakistan, per capita daily consumption of protein should be 68.5 grams out of which 37.4 grams should be of animal origin if the standard of national health is to be brought to optimum level. At present, per capita consumption of proteins of animal origin is 16.6 grams per day only as against requirements of 37.40 grams.

3.2.3 Government of Pakistan in its efforts to narrow down the animal protein supply gap in the country is granting high priority to the development of poultry (both rural and commercial). It has been planned to meet 1/3rd of the total shortage of animal protein foods through increasing production of eggs and poultry meat in the country.

3.3 **Government Policies.**

3.3.1 Pakistan is deficient in animal protein and poultry is an effective and economical source of producing animal proteins within the shortest possible time and can, therefore, play a vital role in narrowing down the animal protein supply gap, government is pursuing a policy which has served as a great impetus to the poultry development in Pakistan.

3.3.2 Agricultural Universities of Faisalabad and Tandojam have facilities for 350 students to undergo graduate course and 160 students to undergo postgraduate course. The faculty of Agriculture and Animal Husbandry, Peshawar has been upgraded to University status and soon a separate faculty of Animal Husbandry/Veterinary is expected to start functioning. These research facilities institutes also provide research facilities to students on various aspects of livestock production and health.

3.4 **Demand and Supply Gap.**

Hatchery plays an important role in the development of poultry products by providing the main input i.e., Day Old Chicks. Therefore, a lot of attention has been paid to this sector and the number of hatcheries has increased and the capacity to produce day old chicks has also increased. There is a wide gap between demand and supply of poultry products.

3.5 **Project Implementation Plan.**

The project life will be 5 years. The progress of work will flow as under:

Sr. #	Name of the Activity.	Period.
1.	Loan Approval	2 Months.
2.	Legal Documentation	2 Months.
3.	Building & Civil Works	7 Months.
4.	Ordering and Purchasing Equipment's	4 Months.
5.	Erection & Installation	2 Months.
6.	Commercial Operations	1 Months.

3.6 **FACILITIES FOR THE PROJECT**

3.6.1 **LAND.**

The society own a piece of land measuring 25 kanals at Village Ferozwala District Sheikhpura. The total value of land including development is estimated at Rs.2.000 million.

3.6.2 **BUILDING**

The building and civil works of the project consists of Farm Sheds, Egg and Feed Stores, Office block, boundary wall and allied civil works. The total covered area of the building will be 46,900 Sq. ft. and is estimated to cost Rs.7.700 million.

3.6.3 **EQUIPMENT**

No machinery is required as such, however, equipment like automatic drinkers, feeders, laying nests, brooders, generators etc., would be required. The total cost of such equipment's is estimated at Rs.2.300 million.

3.6.4 RAW MATERIAL

Major raw material required for the project will be day old parent flock which would be procured from the renowned parent flock hatchery situated in Lahore Division.

3.6.5 UTILITIES

a) Power.

The project will require a connected load of 50 KVA. Which will be supplied by WAPDA.

b) Water.

Water requirement of the project will be met by a tubewell to be installed at the project site.

CHAPTER – IV:

ORGANIZATION & MANAGEMENT

4.1 Management of Policy.

The Project will be implemented by the Livestock and Dairy Development Cooperative Society, Village Ferozwala District Sheikhpura with a total cost of Rs.15.950 million. Request for the grant of required financing of Rs.7.500 million will be forwarded to FBC/PPCBL for approval. The project will be managed and run by the Managing Committee to be elected in the meeting of the General Body of the society.

4.2 Organization and tasks of Divisions.

a). Procurement/Production Division.

The job of the procurement/production division will be to procure day old parent flocks from the renowned parent flocks hatcheries situated in Lahore Division.

b). Administration Division.

This division will be incharge of general affairs relating to the operation of the project. They will be responsible for payment of salaries to the employees and to extend welfare facilities also. They will plan to rationalize the function of work and make out financial statements. Another task will be to assist the other division for administrative affairs in order to achieve the whole target of the project.

c). Marketing & Extension Division.

The job of this division will be very important. They should plan to achieve the sales target while expanding market share. They will

take charge of sales promotion such as contact with the poultry farmers of the Lahore Division in order to maintain and increase the market share. Another important job of this division will be to encourage the local poultry farmers to raise poultry production and will also guide them to adopt new technology for the purpose.

CHAPTER – V:

FINANCIAL ANALYSIS

5.1 FINANCIAL POSITION.

The projected balance sheet is annexed and the same is summarized hereunder:

(Rs. in 000)

AS ON 30TH	Dec, 2000	Dec, 2001	Dec, 2002	Dec, 2003	Dec, 2004
Current Assets.	5,668	7,520	9,331	11,096	12,804
Less Current Liabilities.	1,560	1,563	1,563	1,561	1,560
Net Working Capital.	4,108	5,957	7,769	9,535	11,244
Add Intangibles.	288	216	144	72	0
Net Fixed Assets.	12,454	11,715	10,976	10,237	9,498
Net Assets.	16,850	17,887	18,889	19,844	20,743
Financing through:					
Federal Bank for Coop.	4,160	3,120	2,080	1,040	0
PCBL.	1,840	1,380	920	460	0
Total Debt.	6,000	4,500	3,000	1,500	0
Equity:					
Capital	8,450	8,450	8,450	8,450	8,450
Retained Earnings.	2,400	4,937	7,439	9,894	12,293
Total Equity.	10,850	13,387	15,889	18,344	20,743
Total Financing.	16,850	17,887	18,889	19,844	20,743
CURRENT RATIO	3.63	4.81	5.97	7.11	8.21
%AGE OF DEBT/EQUITY	36%	25%	16%	8%	0%

5.2 OPERATING RESULTS OF THE PROPOSED PROJECT.

The detailed estimated operating results and financial position is given at Annex-IV to X A summary of the same is given below:

(Rs. in 000)

AS ON 30TH	Dec, 2000	Dec, 2001	Dec, 2002	Dec, 2003	Dec, 2004
Capacity Utilization.	100%	100%	100%	100%	100%
Sales Revenue.	12,256	12,380	12,380	12,380	12,380
Gross Profit.	4,176	4,167	4,110	4,047	3,979
Operating Profit.	3,694	3,637	3,527	3,407	3,276
Net Profit.	2,400	2,538	2,501	2,455	2,399

PROFITABILITY RATIOS					
Gross Profit/Sales.	34.1%	33.7%	33.2%	32.7%	32.1%
Operating Profit/Sales.	30.1%	29.4%	28.5%	27.5%	26.5%
Net Profit/Sales.	19.6%	20.5%	20.2%	19.8%	19.4%

The project is expected to earn reasonable profits throughout the projected period. The gross profit/sales and operating profit/sales show a steady profitability inspite of conservative approach towards the future projections under which the sales revenues have been kept constant whereas the labour cost and other operating expenses have been escalated throughout the projected period.

5.3 **CASH FLOW.**

The project is expected to generate enough cash to meet its operational as well as financial obligations.

5.4 **BREAK EVEN ANALYSIS.**

At 100% capacity and in the fourth operating year the cash and commercial break-even points have been worked out at 33.60% and 51% respectively. (Details at Annex's).

5.5 **INTERNAL FINANCIAL RATE OF RETURN (IFRR).**

The internal financial rate of return for the projected operations comes out to be 23.288% as explained in Annex.

5.6 **SENSITIVITY ANALYSIS.**

The proposed project has also been tested for its sensitivity to changes in various variables. The results are summarized below:

1.	5% increase in Capital Outlay	IFRR	21.847%
2.	5% increase in Operating Profit	IFRR	22.016%
3.	5% increase in Raw Material	IFRR	20.984%
4.	5% decrease in Sales Revenue	IFRR	18.662%

5.7 **SOCIO ECONOMIC JUSTIFICATION.**

The project would help in accelerating the development of the area. It would provide employment to 31 personnel, thus, contributing towards the uplift of the local population.

ASSUMPTIONS UNDERLYING THE COST OF PROJECT.

<u>1. LAND.</u>				
The society members have acquired a piece of land measuring 25 Kanal located at G.T. Road, Sheikhpura. Cost of land including development is:-			Rs.2,000,000/-	Rs.2,000,000/-
<u>2. Building & Civil Works.</u>	<u>Rate per Sq. feet.</u>	<u>Area in Sq. feet.</u>	<u>Cost. (Rs.)</u>	
i). Rearing & Laying sheds	150	45,000	6,750,000	
ii). Doctor's Residence	250	600	150,000	
iii). Office Block	250	200	50,000	
iv). Feed Store	200	150	30,000	
v). Egg room	200	150	30,000	
vi). Servant Quarters	200	600	120,000	
vii). Generator room	225	100	22,500	
viii). Laboratory	225	100	22,500	
ix). Water Tank & T. Well	-	-	230,000	
x). Internal roads	-	-	100,000	
xi). Boundary Wall (1500 R.Ft.)	130	1,500	<u>195,000</u>	
TOTAL COST OF BUILDING & CIVIL WORKS.				Rs.7,700,000/-
<u>3. MACHINERY & EQUIPEMENTS</u>			Rs.2,200,000	Rs.2,200,000/-
<u>4. TRANSPORTATION, OCTROI & OTHERS.</u>				
Transportation, Octroi and other charges have been assumed @1% of the cost of machinery:			Rs.22,000	Rs.22,000/-
<u>5. ERECTION & INSTALLATION</u>				
Erection and installation charges have been assumed @1% of the cost of machinery			Rs.22,000	Rs.22,000
<u>6. VEHICLES.</u>	<u>NO.</u>	<u>Unit Price.</u>	<u>Total Price.</u>	
Toyota Van.	1	400,000	<u>400,000</u>	Rs.400,000/-

<u>7. FURNITURE & FIXTURE.</u>		<u>Qty.</u>	<u>Price.</u>	<u>Total Price.</u>	
i).	Office Furniture	-	-	30,000	
ii)	Office Chairs	6	650	3,900	
iii)	Office Tables	4	1,000	4,000	
iv)	Visitors chairs	6	350	2,100	
v)	Airconditioner	1	18,000	18,000	
vi)	Misc.	-	-	<u>12,000</u>	Rs.70,000/-
<u>8. MARKUP/INTEREST DURING CONSTRUCTION.</u>				<u>278,529</u>	Rs.278,529/-
<u>9. PRELIMINARY EXPENSES.</u>					
i).	Project appraisal fee.			37,500	
ii).	Legal Documentation fee.			18,750	
iii).	Society Registration fee etc.,			35,000	
iv).	Others.			<u>10,000</u>	Rs.101,250/-
<u>10. CONTINGENCIES.</u>					
Contingencies are taken @5% of the fixed cost excluding Land.				<u>520,700</u>	Rs.520,700/-
TOTAL FIXED COST.					13,314,479/-
<u>11. NET INITIAL WORKING CAPITAL.</u>		<u>No. of days/ %age</u>	<u>Amount.</u>		
i).	Raw Materials	180	3,374,795		
ii).	Labour	180	255,452		
iii).	Finished goods	1%	81,620		
iv).	Stores & Spares	180	110,466		
v).	Utilities	180	162,247		
vi).	Salaries & Wages	180	213,041		
vii).	Cash in hand	-	44,000		
TOTAL WORKING CAPITAL :			3,941,620		
Bank borrowings @ 40% of inventory :-			<u>1,306,752</u>		
NET INITIAL WORKING CAPITAL :			<u>2,634,868</u>		<u>Rs.2,634,868</u>
TOTAL COST OF THE PROJECT :					Rs.15,950,000/-

FUNDS DRAWDOWN SCHEDULE.

(Rs. in 000)

Sr. #	Activity	Society	FBC/PCBL	Total.
1	Land & land development.	2,000		2,000
2	Building & Civil works.	4,700	3,000	7,700
3	Machinery & Equipement.	0	2,200	2,200
4	Transportation, Octroi etc.	22		22
5	Installation & Others.	22		22
6	Furniture & Fixture.	70		70
7	Vehicles.	400		400
8	Markup/Interest during const.	279		279
9	Preliminary Expenses.	101		101
10	Contingencies.	521		521
11	Working Capital.	335	2,300	2,635
	TOTAL	8,450	7,500	15,950

Annex-1-B.

IMPLEMENTATION SCHEDULE

Sr. #	Activity	Start	End
1	Loan Approval	April, 1999	May, 1999
2	Legal Documentation	May, 1999	June, 1999
3	Land Acquisition	Already Acquired	
4	Building & Civil Works	June, 1999	Dec, 1999
5	Order of equipement	July, 1999	
6	Arrival of equipement	Sept, 1999	Oct, 1999
7	Erection & Installation	Nov, 1999	Dec, 1999
8	Commercial operations		January, 2000

LIST OF MACHINERY

Sr. No.	Description.
1.	Automatic Drinker
2.	Round Feeder (20 Grams) Full Size/12 Birds.
3.	Through Feeder for Chicks
4.	Laying nests for Breeders
5.	Egg Trays (Plastic)
6.	Brooders with automatic temperature control
7.	Spray Pumps
8.	Wheel Barrow
9.	Plastic Egg Transportation Cases
10.	Generator
11.	Transformer & Electrification
12.	Coolers
13.	Other

ASSUMPTIONS UNDERLYING INCOME FORECAST.

1. INTRODUCTION:

1.1 The project at 100% efficiency, based on 365 working days and on triple shifts operations of eight hours per day will have the following production capacity:

PRODUCT	QTY (000, Nos.)	No. of Operating Days per annum	No. of Shifts
Hatchable Eggs	1,900	365	3
Culled Birds	14	365	3

1.2 It is assumed that the plant would operate at the following efficiency levels during the projected periods of operations:

YEAR	% CAPACITY UTILIZATION
2000	100%
2001	100%
2002	100%
2003	100%
2004	100%

1.3 Based on the above, following is the year-wise detail of production:

YEAR	(Tons)				
	2000	2001	2002	2003	2004
Efficiency	100%	100%	100%	100%	100%
Hatchable Eggs	1,900	1,900	1,900	1,900	1,900
Culled Birds	14	14	14	14	14

1.4 Assumed Finished Goods Inventory Level will be **1%**.

1.5 Goods Available for Sale

YEAR	2000	2001	2002	2003	2004
Hatchable Eggs	1,881	1,900	1,900	1,900	1,900
Culled Birds	14	14	14	14	14

(Tons)

2. SALE REVENUE.

2.1 Ex-factory prices of the products are given below:

PRODUCT	PRICE (Rs./000,Nos.)
Hatchable Eggs	6,000
Culled Birds	70,000

2.2 Based on the above price, the following would be the Sales Revenues for the projected period:

YEAR	2000	2001	2002	2003	2004
Hatchable Eggs	11,286	11,400	11,400	11,400	11,400
Culled Birds	970	980	980	980	980
	12,256	12,380	12,380	12,380	12,380

(Rs. In 000)

3. RAW MATERIALS

The following raw materials would be required to produce the products:

No.	Description	Qty Req. (Nos./Ton)	Rate/Ton/No. (Rs.)
3.1	Day Old (Parent Flock)	13,500	110
3.2	Feed	750	6,000
3.3	Vaccine & Medicines	15,000	10
3.4	Rice Husk	50	2,000

RAW MATERIAL REQUIRED AT 100% EFFICIENCY:

Raw material required at 100% efficiency level is worked out as under: -

YEAR	2000	2001	2002	2003	2004
Efficiency	100%	100%	100%	100%	100%
Day Old (Parent Flock)	13,500	13,500	13,500	13,500	13,500
Feed	750	750	750	750	750
Vaccine & Medicines	15,000	15,000	15,000	15,000	15,000
Rice Husk	50	50	50	50	50

TOTAL COST OF RAW MATERIAL:

YEAR	2000	2001	2002	2003	2004
Efficiency	100%	100%	100%	100%	100%
Day Old (Parent Flock)	1,485	1,485	1,485	1,485	1,485
Feed	4,500	4,500	4,500	4,500	4,500
Vaccine & Medicines	150	150	150	150	150
Rice Husk	100	100	100	100	100
TOTAL :	6,235	6,235	6,235	6,235	6,235

4. LABOUR.

Permanent direct labour cost for the project is calculated hereunder: -

Designation	No.	Basic Pay per month (Rs.)	Annual Payroll (Rs.)
Farm Manager	1	4,000	48,000
Farm Superintendent	2	2,500	60,000
Vaccinators	1	1,500	18,000
Electrician	1	1,500	18,000
Farm Attendants	15	1,000	180,000
TOTAL:	20	10,500	324,000

The basic salaries are assumed to increase @ 10% per annum and fringe benefits are calculated @ 60% of current year basic salaries. Based on this, total labour cost for the projected period is worked out as under :-

(Rs. in 000)

YEAR	2000	2001	2002	2003	2004
Basic Salary	324	356	392	431	474
Fringe Benefits	194	214	235	259	284
TOTAL:	518	570	627	690	758

5. UTILITIES.

5.1 POWER.

	LOAD	RATE
Total connected load (KW)	50 KW	Rs. 151
Maximum Demand (KW)	40 KW	Rs.0.68

(Rs. in 000)

Fixed Charges	$50 \times 12 \times 151 / 1000$	91
Variable Charges	$40 \times 8 \times 3 \times 365 \times 0.68 / 1000$	238

Based on the above, total electricity cost is calculated as under :-

(Rs. in 000)

YEAR	2000	2001	2002	2003	2004
Fixed Charges	91	91	91	91	91
Variable Charges	238	238	238	238	238
TOTAL:	329	329	329	329	329

5.2 WATER.

A lumpsum charge of Rs.20,000/- per annum has been assumed for the entire projected period.

6. MANUFACTURING OVERHEADS:

6.1 Repairs & Maintenance

Cost of repair and maintenance are assumed @ 1% of the cost of fixed assets excluding land and preliminary expenses has been worked out as under:

(Rs. in 000)

YEAR	2000	2001	2002	2003	2004
Repair & Maintenance	112	112	112	112	112

6.2 Insurance, Stores & Spares

Cost of Insurance, Stores and Spares are assumed @ 2% of the cost of fixed cost excluding land and preliminary expenses has been worked out as under:

(Rs. in 000)

YEAR	2000	2001	2002	2003	2004
Insurance, Stores & Spares	224	224	224	224	224

6.3 Lubricants

The cost of lubricants is estimated at Rs.5,000/- per annum.

7. OPERATING EXPENSES.

7.1 General Expenses.

These expenses are assumed at Rs.50,000/- per annum on a lumpsum basis for the first year of operation and escalated at the rate of 10% per annum as under :-

(Rs. in 000)

YEAR	2000	2001	2002	2003	2004
General Expenses	50	55	61	67	74

7.2 Administrative Expenses

Administrative Expenses are calculated as under:-

Designation	No.	Basic Pay per month (Rs.)	Annual Payroll (Rs.)
Manager	1	6,000	72,000
Admn./Account Officer	1	3,000	36,000
Store & Sales Staff	2	2,000	48,000
Clerk/Typist	2	2,000	48,000
Peon	1	1,000	12,000
Driver	1	1,500	18,000
Watchman	3	1,000	36,000
TOTAL:	11	16,500	270,000

The basic salaries are assumed to increase @ 10% per annum and fringe benefits are calculated @ 60% of current year basic salaries. Based on this, total Administrative cost for the projected period is worked out as under :-

(Rs. in 000)					
YEAR	2000	2001	2002	2003	2004
Basic Salary	270	297	326	358	393
Fringe Benefits	162	178	196	215	236
TOTAL:	432	475	522	573	629

8. **TAXES.**

The project would be exempted from taxes for the entire repayment period of the facilities given by the FBC/PPCBL.

9. **SALES TAX.**

No sales tax would be levied on net sales.

10. **DEPRECIATION:**

Depreciation has calculated on straight line basis.

11. **DEPRECIATION SCHEDULE:**

(Rs. in 000)		
Building & Civil Works	7,700	
Contingencies	385	8,085
Machinery & Equipment	2,200	
Spares, Installation & Others	44	
Contingencies	112	2,356
Furniture & Fixture	70	
Contingencies	4	74
Vehicles	400	
Contingencies	20	420

11.2 CALCULATION OF DEPRECIATION:

	Initial Cost	Depreciation	
		Rate	Total
Building & Civil Works	8,085	5%	404
Machinery Equipment & Spares	2,356	10%	236
Furniture & Fixture	74	20%	15
Vehicles	420	20%	84
TOTAL :	10,935		739

12. CALCULATION OF AMMORTIZATION OF PRELIMINARY EXPENSES.

12.1	Preliminary Expenses:	Rs.101,250
	Add Mark-up during Construction:	<u>Rs.258,175</u>
	Total to be amortized:	<u>Rs.359,425</u>
	Number of years:	5
	Amortization per annum:	<u>Rs.71,885</u>
	In thousand	<u>Rs.72</u>

CALCULATION OF MARK-UP.**(Rs. in 000)****Disbursement Schedule:**1. **PPCBL Loan (from own sources)**Rs. 2300 on 15th of December, 1999.2. **FBC Loan (under Medium Term Scheme)**Rs. 2,500 on 30th June, 1999.Rs. 2,700 on 15th October, 1999.Rs. 5,2003. **Mark-up Rates (%) :**

	<u>With Rebate</u>	<u>Without Rebate</u>
PPCBL Loan (from own sources)	19%	22%
FBC Loan (under Medium Term Scheme)	14%	19%

4. **Grace Period:**364 days which will ends on 31st December, 1999.5. **Mark-up during Construction period:**

<u>PPCBL Loan</u>		<u>FBC Loan</u>	
19%	22%	14%	19%
20	24	177	241
-	-	81	110
Total	20	Total	24
		258	351

6. **Repayment Schedule:**

Total Instalments	10
No. of Instalments/year	2

CALCULATION OF MARK-UP FOR GRACE PERIOD.

1. **PPCBL Loan (from own sources)**

(Rs. in 000)

Disbursement		Mark-up Rate		
Start of Grace Period	Amount Disbursed	Period (Days)	With Rebate 19%	Without Rebate 22%
01 Jan, 2000	2,300	364	436	505

2. **FBC Loan (under Medium Term Scheme)**

(Rs. in 000)

Disbursement		Mark-up Rate		
Start of Grace Period	Amount Disbursed	Period (Days)	With Rebate 14%	Without Rebate 19%
01 Jan, 2000	5,200	364	726	985

3. **Repayment Schedule (PPCBL LOAN).**

Repayment Date	Principal	Return	Total	Rebate Allowed	Payable with Rebate
30.06.2001	230	161	391	25	366
31.12.2001	230	161	391	25	366
30.06.2002	230	161	391	25	366
31.12.2002	230	161	391	25	366
30.06.2003	230	161	391	25	366
31.12.2003	230	161	391	25	366
30.06.2004	230	161	391	25	366
31.12.2004	230	161	391	25	366
30.06.2005	230	161	391	25	366
31.12.2005	230	161	391	25	366
TOTAL:	2,300	1,610	3,910	250	3,660

Repayment Schedule (FBC LOAN).

Repayment Date	Principal	Principal Repayment	Mark-up	Total Instalment
30.06.2001	4,600	520	364	884
31.12.2001	4,160	520	328	848
30.06.2002	3,640	520	291	811
31.12.2002	3,120	520	255	775
30.06.2003	2,600	520	218	738
31.12.2003	2,080	520	182	702
30.06.2004	1,560	520	146	666
31.12.2004	1,040	520	109	629
30.06.2005	520	520	73	593
31.12.2005	0	520	36	556

Annex - IV

Financial Analysis						
(Rs. in 000)						
Details	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
PROJECT COST:						
Capital Cost	13.315					
Working capital Margin	2.635					
Total Cost:-	15.950					
FARM CAPACITY.						
Hatchable Eggs	1,900,000					
Culled Birds	14,000					
Capacity Utilization.		100%	100%	100%	100%	100%
Sales Revenue (Net)		12,256	12,380	12,380	12,380	12,380
Cost of Sales						
Raw Material		6,235	6,235	6,235	6,235	6,235
Labour		518	570	627	690	758
Depreciation		739	739	739	739	739
Utilities		329	329	329	329	329
Manufacturing Overhead		341	341	341	341	341
Total cost of goods Mfg.		8,162	8,214	8,271	8,334	8,402
Add opening inventory		0	82	82	83	83
Less Closing inventory		82	82	83	83	84
Cost of Goods Sold		8,080	8,214	8,270	8,334	8,401
Gross Profit		4,176	4,166	4,110	4,046	3,979
Operating Expenses						
Salaries & Wages.		432	475	522	573	629
Selling, General & Admin. Exp.		50	55	61	67	74
Total Operating Expenses.		482	530	583	640	703
OPERATING INCOME		3,694	3,636	3,527	3,406	3,276
Financial Expenses						
Mark-up on FBC Finance		726	692	619	546	473
Mark-up on PPCB Finance		436	272	272	272	272
Amortization of Preliminary Exp.		72	72	72	72	72
Total Financial Expenses.		1234	1036	963	890	817
PBT & WORKERS FUNDS		2,460	2,600	2,564	2,516	2,459
Workers Welfare Fund		60	63	63	61	60
PRE-TAX PROFIT		2,400	2,537	2,501	2,455	2,399
TAX PROVISION		0	0	0	0	0
NET PROFIT.		2,400	2,537	2,501	2,455	2,399
RATIOS						
Gross Profit/Sales		34.10%	33.70%	33.20%	32.70%	32.10%
Operating Profit/Sales		30.10%	29.40%	28.50%	27.50%	26.50%
Net Profit/Sales		19.60%	20.50%	20.20%	19.80%	19.40%

Annex - V

ESTIMATED BALANCE SHEET.						
(Rs. in 000)						
As of 30th	Const.	Year 1	Year 2	Year 3	Year 4	Year 5
ASSETS.						
Current Assets						
Cash & Bank Balance	2,287	1,735	2,586	2,897	3,162	3,369
Inventories						
Raw Material	0	3,741	3,741	3,741	3,741	3,741
Finished Goods	0	82	82	83	83	84
Stores & Spares	110	110	110	110	110	110
Investments	0	0	1,000	2,500	4,000	5,500
TOTAL CURRENT ASSETS	2,397	5,668	7,519	9,331	11,096	12,804
Non Current Assets	359	288	216	144	72	0
Fixed Assets						
Fixed Assets at Cost	13,193	13,193	13,193	13,193	13,193	13,193
Less Accumulated Depreciation	0	739	1,478	2,217	2,956	3,695
Net Fixed Assets	13,193	12,454	11,715	10,976	10,237	9,498
TOTAL ASSETS.	15,950	18,410	19,450	20,452	21,405	22,303
LIABILITIES AND EQUITY						
Current Liabilities						
Workers Fund Payable	0	60	63	63	61	60
Current Maturities	0	1,500	1,500	1,500	1,500	1,500
TOTAL CURRENT LIABILITIES	0	1560	1563	1563	1561	1560
Long Term Liabilities						
FBC Finance	5,200	4,160	3,120	2,080	1,040	0
PPCB Finance	2,300	1,840	1,380	920	460	0
LONG TERM LIABILITIES	7,500	6,000	4,500	3,000	1,500	0
EQUITY						
Paid Up Capital	8,450	8,450	8,450	8,450	8,450	8,450
Retained Earnings	0	2,400	4,937	7,439	9,894	12,293
TOTAL EQUITY.	8,450	10,850	13,387	15,889	18,344	20,743
TOTAL LIABILITIES & EQUITY	15,950	18,410	19,450	20,452	21,405	22,303
CURRENT RATIO		3.63	4.81	5.97	7.11	8.21
DEBT/EQUITY RATIO	47%	36%	25%	16%	8%	0%

ESTIMATED CASH FLOW STATEMENT.						
	(Rs. in 000)					
As of 30th	Const.	Year 1	Year 2	Year 3	Year 4	Year 5
SOURCES OF FUNDS						
Operating Profit	-	3,694	3,637	3,527	3,407	3,276
Add back Depreciation	-	739	739	739	739	739
Total Funds from Operations	-	4,433	4,376	4,266	4,146	4,015
ADD:						
PPCB Finance	2,300	-	-	-	-	-
FBC Finance	5,200	-	-	-	-	-
Paid Up Capital	8,450	-	-	-	-	-
TOTAL SOURCES OF FUNDS	15,950	4,433	4,376	4,266	4,146	4,015
APPLICATION OF FUNDS						
Investment in Fixed Assets	12,935	-	-	-	-	-
Mark-up during construction	258	-	-	-	-	-
Pre-production Expenses	359	-	-	-	-	-
Repayment- FBC Finance	-	-	1,040	1,040	1,040	1,040
Repayment- PPCB Finance	-	-	460	460	460	460
Mark-up	-	1,162	964	891	818	745
Workers Fund	-	-	60	63	63	61
Short Term Investment	-	-	1,000	1,500	1,500	1,500
Increase in Current Assets(Ex. Cash)	110	3,823	1	1	1	1
TOTAL APPLICATION OF FUNDS	13,662	4,985	3,525	3,955	3,882	3,807
Cash Surplus/(Deficit)	2,288	(552)	851	311	264	208
Cash Opening Balance	-	2,287	1,735	2,586	2,897	3,162
Cash Closing Balance	2,288	1,735	2,586	2,897	3,161	3,370

CASH BREAKEVEN ANALYSIS
(4th YEAR)

(Rs. in 000)

ITEMS	COST	
	FIXED	VARIABLE
Raw Material	0	6,235
Factory Wages	414	276
Mfg. Overhead	171	170
Operating Expenses	320	320
Utilities	91	238
Financial Expenes (Ex. Amort)	272	0
Principal Repayment	460	0
TOTAL:	1728	7239

PLANT EFFICIENCY: 100%

Sales Revenue: 12,380

Cash Break even = $\frac{\text{Fixed Cost}}{\text{Sales-Variable Cost}}$

= 33.60%

COMMERCIAL BREAKEVEN ANALYSIS
(4th YEAR)

(Rs. in 000)

ITEMS	COST	
	FIXED	VARIABLE
Raw Material	0	6,235
Factory Wages	414	276
Utilities	91	238
Depreciation	739	0
Operating Expenses	320	320
Financial Expenses	890	0
Manufacturing Overhead	<u>171</u>	<u>170</u>
TOTAL:	2625	7239

PLANT EFFICIENCY: 100%

Sales Revenue: 12,380

Commercial Break even = $\frac{\text{Fixed Cost}}{\text{Sales-Variable Cost}}$

= 51.04%

Annex - IX

INTERNAL FINANCIAL RATE OF RETURN (IFRR)

Rs. in 000

YEAR	CASH OUTLAY	OPERATING PROFIT	DEPRECIATION	WORKERS FUND	TAXES	CASH INFLOW	DISCOUNTED AT	
							23%	25%
0	(15,950)					(15,950)	(15,950)	(15,950)
1		3,694	739	60	0	4,373	3,555	3,498
2		3,637	739	63	0	4,313	2,851	2,760
3		3,527	739	63	0	4,203	2,259	2,152
4		3,407	739	61	0	4,085	1,785	1,673
5		3,276	739	60	0	3,955	1,405	1,296
6	(470)	3,276	739	60	0	3,485	1,006	914
7		3,276	739	60	0	3,955	929	829
8		3,276	739	60	0	3,955	755	664
9		3,276	739	60	1079	2,876	446	386
10	5,850	3,276	739	60	1079	8,726	1,101	937
							142	(841)

IFRR

23.29%

SENSITIVITY ANALYSIS

If Capital Outlay is increased by 5%.

INTERNAL FINANCIAL RATE OF RETURN (IFRR)

Rs. In 000

YEAR	CASH OUTLAY	OPERATING PROFIT	DEPRECIATION	WORKERS FUND	TAXES	CASH INFLOW	DISCOUNTED AT	
							20%	22%
0	(16,748)					(16,748)	(16,748)	(16,748)
1		3,694	739	60	0	4,373	3,644	3,584
2		3,637	739	63	0	4,313	2,995	2,898
3		3,527	739	63	0	4,203	2,432	2,315
4		3,407	739	61	0	4,085	1,970	1,844
5		3,276	739	60	0	3,955	1,589	1,463
6	(494)	3,276	739	60	0	3,461	1,159	1,050
7		3,276	739	60	0	3,955	1,104	983
8		3,276	739	60	0	3,955	920	806
9		3,276	739	60	1079	2,876	557	480
10	6,143	3,276	739	60	1079	9,019	1,457	1,235
							1,079	(90)

IFRR 21.85%

SENSITIVITY ANALYSIS

If Operating Profit is decreased by 5%.

INTERNAL FINANCIAL RATE OF RETURN (IFRR)**Rs. in 000**

YEAR	CASH OUTLAY	OPERATING PROFIT	DEPRECIATION	WORKERS FUND	TAXES	CASH INFLOW	DISCOUNTED AT	
							21%	23%
0	(15,950)					(15,950)	(15,950)	(15,950)
1		3,509	739	60	0	4,188	3,461	3,405
2		3,455	739	63	0	4,131	2,822	2,731
3		3,351	739	63	0	4,027	2,273	2,164
4		3,237	739	61	0	3,915	1,826	1,710
5		3,112	739	60	0	3,791	1,462	1,347
6	(470)	3,112	739	60	0	3,321	1,058	959
7		3,112	739	60	0	3,791	998	890
8		3,112	739	60	0	3,791	825	724
9		3,112	739	60	1079	2,712	488	421
10	5,850	3,112	739	60	1079	8,562	<u>1,273</u>	<u>1,080</u>
							<u>536</u>	<u>(519)</u>

IFRR

22.02%

SENSITIVITY ANALYSIS

If Capital Outlay is increased by 5% and Operating Profit decreased By 5%.

INTERNAL FINANCIAL RATE OF RETURN (IFRR)

Rs. in 000

YEAR	CASH OUTLAY	OPERATING PROFIT	DEPRECIATION	WORKERS FUND	TAXES	CASH INFLOW	DISCOUNTED AT	
							20%	22%
0	(16,748)					(16,748)	(16,748)	(16,748)
1		3,509	739	60	0	4,188	3,490	3,433
2		3,455	739	63	0	4,131	2,869	2,776
3		3,351	739	63	0	4,027	2,330	2,218
4		3,237	739	61	0	3,915	1,888	1,767
5		3,112	739	60	0	3,791	1,524	1,403
6	(494)	3,112	739	60	0	3,297	1,104	1,000
7		3,112	739	60	0	3,791	1,058	942
8		3,112	739	60	0	3,791	882	772
9		3,112	739	60	1079	2,712	526	453
10	6,143	3,112	739	60	1079	8,855	1,430	1,212
							353	(772)

IFRR

20.63%

SENSITIVITY ANALYSIS

If Cost of Raw Material is Increased by 5%.

INTERNAL FINANCIAL RATE OF RETURN (IFRR)

Rs. in 000

YEAR	CASH OUTLAY	OPERATING PROFIT	DEPRECIATION	WORKERS FUND	TAXES	CASH INFLOW	DISCOUNTED AT	
							20%	22%
0	(15,950)					(15,950)	(15,950)	(15,950)
1		3,382	739	60	0	4,061	3,384	3,329
2		3,325	739	63	0	4,001	2,779	2,688
3		3,215	739	63	0	3,891	2,252	2,143
4		3,095	739	61	0	3,773	1,820	1,703
5		2,964	739	60	0	3,643	1,464	1,348
6	(470)	2,964	739	60	0	3,173	1,063	962
7		2,964	739	60	0	3,643	1,017	906
8		2,964	739	60	0	3,643	847	742
9		2,964	739	60	1,079	2,564	497	428
10	5,850	2,964	739	60	1,079	8,414	1,359	1,152
							532	(549)

IFRR 20.98%

SENSITIVITY ANALYSIS

If Sales Revenues are decreased by 5%.

INTERNAL FINANCIAL RATE OF RETURN (IFRR)

Rs. in 000

YEAR	CASH OUTLAY	OPERATING PROFIT	DEPRECIATION	WORKERS FUND	TAXES	CASH INFLOW	DISCOUNTED AT	
							18%	20%
0	(15,950)					(15,950)	(15,950)	(15,950)
1		3,081	739	60	0	3,760	3,187	3,134
2		3,018	739	63	0	3,694	2,653	2,565
3		2,908	739	63	0	3,584	2,181	2,074
4		2,788	739	61	0	3,466	1,788	1,671
5		2,657	739	60	0	3,336	1,458	1,341
6	(470)	2,657	739	60	0	2,866	1,062	960
7		2,657	739	60	0	3,336	1,047	931
8		2,657	739	60	0	3,336	888	776
9		2,657	739	60	1,079	2,257	509	437
10	5,850	2,657	739	60	1,079	8,107	1,549	1,309
							372	(752)

IFRR

18.66%

13TH ICA/JAPAN TRAINING COURSE
ON
STRENGTHENING MANAGEMENT OF
AGRICULTURAL COOPERATIVES IN ASIA

NOVEMBER 16, 1998-APRIL 24, 1999

- A PROJECT PROPOSAL

AMALGAMATION OF COOPERATIVE
FEEDMILLERS IN THE PROVINCE
OF BATANGAS, PHILIPPINES

PREPARED BY
RUFINA S. SALAS

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Limcoma Multipurpose Cooperative for its pledged support.

My family specially, to whom belongs the time I spent attending this course and preparing this project proposal.

My God above all, to whom I owe everything that I am and everything I hope to be.

Lipa City, Philippines
January 1999
Rufina S. Salas

AMALGAMATION OF COOPERATIVE FEEDMILLERS IN BATANGAS PROVINCE

CHAPTER I

SUMMARY

This project envisions the amalgamation of feed milling cooperatives in the province of Batangas, Luzon Island, Philippines. It aims to form alliances and collaboration among these cooperatives in the form of linkages, facility sharing, pooling of resources, joint ventures and finally consolidations and mergers.

This project covers only the five cooperatives producing poultry and animal feeds for their members, which are all located in Batangas province.

Direct benefits to these five cooperatives are in cost savings, efficiency in fund utilization, specialisation on integrated activities, strong advocacy position.

Direct benefits to the members of these cooperatives are additional patronage refunds, assured market for their produce and less input costs.

Benefit to the community would be better environmental pollution control through combined and coordinated strategies of the five cooperatives.

This project is to be pursued within one year after completion of this training course. However actual consolidations and mergers cannot be given a definite time frame until the results of these initial alliances are known.

This project includes representations to the sectoral representatives of cooperatives in the Philippine Congress for inclusion of amalgamation in the cooperative law in the event that government intervention would be found necessary.

The budget for this project is estimated at one hundred thousand (100,000.00) or two thousand five hundred US dollars (\$2,500.00).

The fund shall be sourced from the Cooperative Education and Training Fund payable to the Cooperative Union of the Philippines by the biggest among the five feed milling cooperative, the Limcoma Multi-Purpose Cooperative.

CHAPTER II

INTRODUCTION

The Philippines like most Asian countries is an agricultural country. The enhancement of agricultural production geared towards attaining food sufficiency has always been one of the priority objectives of its government.

With its vast agricultural land and the almost unlimited seas surrounding its 7,000 islands, the Philippines considers agriculture as the base of its economic development. Agricultural industries that service farming activities are therefore encouraged to fast track agricultural modernization. The Filipino farmer, through the help of government and non-government organizations, is being pushed forward to improve his process, increase his output to elevate himself to the level of his counterpart in the industrial sector. Recognizing the need for farmer groups and farmer organizations, the formation of cooperatives was encouraged. The Philippine constitution in 1986 included a provision stating that the government shall promote the welfare of cooperatives. Also, a cooperative law was passed in 1990. With these encouragement and help, cooperatives grew in number to about 40,000, however, of these, only 30% are still alive. These handful that succeeded in staying afloat, some even succeeding beyond general expectations are mostly credit and multipurpose agribusiness cooperatives. Those that are in the manufacture of poultry and animal feeds also became successful in membership growth and viability. As in almost all successful cooperatives, integration of activities came as the logical course to pursue, therefore these cooperative feedmillers individually are into the same forward and backward integration ventures. This project is focused on these 5 feedmilling cooperatives only.

CHAPTER III

BACKGROUND OF THE PROJECT

The five cooperative feedmillers covered by this project are all located in the province of Batangas and within fifty kilometer distance from each other. The province of Batangas is considered the center of poultry and livestock production in the southern Tagalog region of Luzon Island. The province supplies about 50% of the consumption of meat, chicken and eggs in Manila and the national capital region. Production of eggs in the province is about three million per day and swine population is about one million heads at any one time. Poultry and swine farming is 85% in the hands of backyard farmers and 15% in large and medium scale raisers. Broiler production is largely on contract growing schemes with corporations.

The feed processing industry was pioneered in the province by a handful of poultry and swine raisers forming a cooperative in 1970. This cooperative is now the biggest agribusiness cooperative in this line, serving its 4,000 members by producing about 175 tons of feeds daily. With the growth of the poultry and livestock industry in the last thirty years, feed production likewise became popular. At present there are 36 commercial feedmillers in the province, five of these are cooperatives. A few large scale raisers produce their own feed requirements in their farms.

The five cooperative feed millers, considered among successful cooperatives have a combined output of 250,000 tons of feeds per year, serving 10,000 members and having a combined market share of 50% in the province and neighbouring provinces. These cooperatives in an effort to provide integrated services to their members and to ensure a

sustained if not an increasing market have entered in the following ventures:

Backward integration:

Swine breeding for piglet supply

Artificial insemination service

Forward integration:

Marketing of members produce such as fattened hogs and eggs

Meat processing

Contract growing

Banking

Each of the cooperatives individually produces about 16 types of feed rations for broilers, chicken layers and swine in their feed milling activity.

With these varied pursuits, management of these cooperatives has been spread thin and in almost all cases, the operations in the integrated activities are subsidised by the profits in feed milling.

CHAPTER IV

RATIOALE OF THE PROJECT

This project of amalgamation preceded by linkages, alliances, facility sharing and joint ventures is considered by the proponent as the solution to the following problems presently being faced by the five cooperative feedmillers to wit:

1. The high cost of raw materials arising from individual instead of collective procurement
2. The inability to take advantage of the benefits of direct importation as a group
3. Failure to modernize facilities and technology for lack of required capital investments
4. Inability to access information on production and marketing activities of farmer members
5. Lack of specialization on any of the forward and backward integration activities
6. Failure to maximize plant capacities
7. Competition instead of complementation and cooperation among themselves

If these five cooperatives would come together and realize these problems, they could come into certain arrangements that could effectively offer solutions. Among themselves for instance, they need a monthly input of 10,000 metric tones of corn grains. If a centralized procurement scheme is agreed upon, this quantity would bring in bulk discounts and better terms from suppliers. For imported raw materials such as soybean meal from the United States a three month supply can be imported to cover the lead time of arrival and the economic quantity. While importation may not be on a regular basis the cooperatives should be able to import as a group to control the margin of private importers and be knowledgeable in the import market.

Pooling of resources for a joint capital investment in facilities would be possible.

Specialization in integration activities can be attained by allowing only one of the cooperatives to pursue one activity depending on its capability and experience. Swine breeding and artificial insemination service can be undertaken by one, marketing of produce by another, meat processing, contract growing assigned to the most appropriate. The banking activity should be for one cooperative only and each one of the four partnering as investor members or depositors all availing of its services.

In the case of plant capacities, an agreement can be reached whereby the 16 types of rations will be divided among themselves depending upon capacities. This would result in production cost savings due to continued processing instead of batch production. Eventually with uniform formulation for each type of ration the cooperatives could come up with one brand per type with superior quality at less cost.

Information technology for market and production of member farmers can be given more emphasis if one of the cooperatives is tasked with its development and provided with resources from all.

Problems	Objectives	Strategies
Quality deviations on feed inputs	Uniform/best quality feeds	<ul style="list-style-type: none"> Uniform formulations for the same type of feeds Centralized raw material procurement Specialization in production
High costs of feed inputs (Potential cost savings Table I)	Lower feed cost for higher profit margin for farmers	<ul style="list-style-type: none"> Bulk buying of raw materials Centralized procurement Specialization in production
Inferior breed of piglets for farm input (Effect on farmers profit - Table II)	Availability of good breed of piglets	<ul style="list-style-type: none"> Establishment of a common breeding farm by pooling of resources
<ul style="list-style-type: none"> Undeveloped small scale meat processing operations Undeveloped market for frozen processed meat 	<ul style="list-style-type: none"> Viable, modern technology meat processing plant Creating and sustaining a market for processed meat 	<ul style="list-style-type: none"> Joint venture agreement for establishment of meat processing plant Joint investment in market research Centralized marketing
Individual marketing of fattened hogs resulting in a buyers' market through traders	Direct access to fattened hogs market for better price	<ul style="list-style-type: none"> Centralized marketing system
<ul style="list-style-type: none"> Lack of effective savings mobilization of members Lack of access to credit for farm improvement and expansion 	<ul style="list-style-type: none"> Savings mobilization system Availability of credit facilities for capital investment and working capital requirements 	<ul style="list-style-type: none"> Establishment of a cooperative bank through joint venture or pooling of interest arrangements

There is reason for the proponent of this project to believe that amalgamation of the five cooperative feedmillers could eventually materialize. In the past three years, a linkage between these cooperatives and some clusters of cooperative corn producers in Luzon has been successfully established. The project was undertaken by the Land Bank of the Philippines to address its mounting losses from uncollectible loans granted to the corn farmers' primaries. With Land Bank's financial and organizational support in setting up joint meetings, an organization was created, the Luzon chamber of agri-based cooperatives. Officers were elected coming from both the feedmillers and the clusters of corn producer primaries. Regular meetings were rotated among the Land Bank provincial branches where the clusters are located. In these meetings, pledges of delivery were made, prices and payment schemes agreed upon. In the first year of implementation, commitment compliance was at a very low 10%, on the second year it rose to 60%. However, on the third year, compliance was 105% of committed quantity. This linkage is on going and Land Bank is improving its collection rate dramatically.

Likewise in the past, the proponent successfully syndicated two or three direct importations of raw materials by combining the quantity required by the feedmillers arranging for financing and other importation details as the groups authorized representative. In these transactions, the cooperative feedmillers saved on procurement costs.

Based on these experiences, the proponent concludes that the five feedmillers are not averse to work together and collaborate if they are convinced of the benefits.

CHAPTER V

THE PROJECT IMPLEMENTATION APPROACH

This project is to be implemented according to the following ladderized approach:

First : Data gathering: At least two staff shall be commissioned to gather pertinent data from the five cooperatives and from the feedmilling industry in the province. These data would support the existence of present problem and projections for the future.

Second: Exposing the realities of the problem to key officers of the cooperatives and advocating solutions. The first officers to be approached are the Presidents or Chairmen of the Boards. To avoid resistance on offered solutions, amalgamation will not be introduced at this stage. Instead the advantages of collaborative activities would be emphasized. Joint buying or group importation can be tried to concretize the benefits.

Third: After obtaining cooperation or at least neutralizing the resistance of officers, the project will be presented to the Boards of Directors. Basically, the same approach will be made. In these meetings, each Board of Directors shall be persuaded to form a committee to evaluate the merits and demerits of the activities. During this time, it is expected that joint procurement should continue and forward or backward linkages introduced. Laboratory facilities for quality assessment of raw materials of one cooperative can be availed of by others for a fee.

Fourth: The committees thus formed by the Board of Directors shall meet, with the project in agenda. In these meetings, it is expected that

other areas for collaboration can be explored. The ideas should emanate from the respective committees to be recommended by them to their own Board members. Among others, the ideas of toll milling for pelleting mash feeds, supply of piglets from breeding farm of one, common or agreed pricing of members' produce, exchange of market information or new technologies on feed production or common advocacy on raw material importation for government action should materialize.

Fifth: The committees of the individual cooperatives shall form a council. In council meetings, collaborative activities that have been undertaken can be evaluated for their successes or failures. Further in these meetings, it is envisioned that formal, permanent agreements will be forged on areas successfully tried to be mutually beneficial. Other ventures closer to amalgamation can evolve such as:

1. Toll processing contracts for pelleting or toll milling for selected feed rations
2. Joint financing of common storage facilities for raw materials
3. Joint venture on meat processing
4. Joint ownership in a cooperative bank
5. Centralized marketing for members produce
6. Mutual financing for a common effort on research and development and on market and production information for members
7. Common quality standards for raw materials and finished feeds.

These agreements shall be sponsored by council committee members to their respective boards for implementation as they evolve.

CHAPTER VI

ACTION PLAN

1999-2000

The time table and action plans for this project are based on the assumption that as the proponent meets with the Presidents, Board of Directors, Committees and council, positive outcomes and actions as mentioned in the chapter on details shall be realized. Otherwise, each succeeding step has to be temporarily shelved until the preceding one produce positive results. In this event, the time table shall stretch to a longer period. As envisioned the project shall follow this action plan:

Activity	Persons/Groups involved	Time frame
1. Gathering of data	Staff Proponent	May 1999
2. Meeting with Presidents (10)	Secretary Proponent	June } July } 1999 August }
3. Meeting with Board of Directors (10)	Secretary Proponent	August } September } October } 1999 November } December }
4. Meetings with committees (10)	Secretary Proponent Committee Members	January } February } 2000 March }
5. Meetings with council	Secretary Proponent Council Members	April } May } 2000
6. Submission/defence of council proposals to the Boards	Council members Board of Directors	June } July } August } 2000 September }
7. Merger drafts preparation	Secretary Proponent	October } November } 2000
8. Final merger agreement papers	Secretary Proponent	December } 2000
9. Presentation/approach of merger by general assemblies	Board and cooperative members	March } April } 2000
10. Linkages, collaboration, facility sharing toll processing, joint financing, joint ventures, division of integrated activities are year round and continuing.		

CHAPTER VII

BUDGET AND FUNDING SOURCE

The budget estimate for this project is detailed as follows:

	In Phil. Peso
Data gathering for one month 2 staff at minimum wage of 5,000 or each per month	10,000.00
Preparation of minutes for all meetings and report generation 1 Secretary – on per day basis for 40 days @ 200.	8,000.00
Transportation costs for proponent and secretary 33 meetings @ 500/meeting	16,500.00
Supplies expenses Printing expenses – for merger agreements presentation to members 5 cooperatives @ 10,000 each	50,000.00
Contingency provision	5,500.00
Total	100,000.00

Assumption:

1. Meetings with Presidents, Boards of Directors and committees are to be held in the respective cooperative offices and hosted by each.
2. Council meetings are to be rotated among the cooperatives for their hosting
3. Limcoma Multipurpose cooperative, the biggest of the five shall extend free use of its computer facilities for staff and secretary. Likewise basic office facilities.

Funding Source and Manner of Release:

The funds for this project shall be taken from Limcoma Multipurpose Cooperative to be charged against its liability for CETF accruing to the Cooperative Union of the Philippines.

The fund shall be released on a "need" basis and according to the time table.

Annex - I

Cost savings on Direct Importation of Soybean meal from the United States – once every 4 months:

Combined soybean meal requirements of 5 Cooperative feedmillers in 4 months	14,000 tons
Required minimum quantity per import	25,000 tons
Excess quantity to be sold to other non-cooperative Feedmillers	9,000 tons
Importation costs on 25,000 tons	
Procurement price CIF manila 8,000/ton	200,000,000
Integrated handling on FOW terms 1000/ton	25,000,000
Interest on short term loan 18%	40,500,000
Warehousing costs for excess volume	750,000
Total cost	266,250,000
Cost per ton	10,650
Actual purchase price per ton from trader/ Importers	12,000
Cost savings per ton	1,350
Total cost savings on 16,000 usage	21,600,000
Add: Profits on sale of 9,000 tons	12,150,000
Total savings	33,750,000

Annex II

Comparative Income Statement per Growing of 120 days 20 Heads fatteners

	High breed Piglets	Ordinary Piglets
Sales revenue		
Average weight 95 kilos x 62/kilo	119,800	
Average weight 85 kilos x 60/kilo		102,000
Less: Costs and expenses		
Cost of piglets 1800 x 20 1500 x 20	36,000	30,000
Cost of feeds 9 bags of 50 K x 500	45,000	45,000
Utilities	1,000	1,000
Veterinary drugs	1,000	1,000
Immunization		1,000
Wages & subsistence of farm hand	6,000	6,000
Depreciation of pen	1,000	1,000
Total costs and expenses	90,000	35,000
Net income per growing	29,800	17,000
Growing per year 2.5 times		
Annual income	69,500	42,500

13th ICA-JAPAN REGIONAL TRAINING COURSE
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NOV. 16th 1998 to April 24 1999

***ENVIRONMENTAL NURSERIES AND
AGRI PRODUCTS AND MARKETING
PROJECTS***

Presented by:

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Lecturer

National Co-operative Council of Sri Lanka

C O N T E N T S

ACKNOWLEDGE

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ACKNOWLEDGMENT

It gives the great pleasure to participate in this 13th Training programme to Co - operative agricultural management in Asia for the aim of Streamlining and bringing it on a sound footing.

First, I wish to Place my esteemed honour and gratitude to international Co - oprative Alliance for giving me this great opportunity.

Also I wish give my kind regard to Mr. Lionel Samarasingha Hon. president of Sri Lanka co - operative Council for allowing me this opportunity to participate in the programme.

I am very much indebted to the Chairman of Galle District Co - operative Board who helped me this project.

I admire Mr. Daman Prakash project Director ICA (ROAP) for his dedicated service in enlightening me by supplying required guidelines and information.

Also my appreciation goes to professor Krishnamoorthy in Supplying me with data and facts in preparing this report, to Assistant Secretary MS. Jayanthi Nawarathne, General Secretary Mr. A.M. Madduma Banda, Director (Education a Training) Mr. A.B. Bulathgama and to the executive officers and all staff of National Co - operative Council in for their fullest Co - operation and derotion in helping to prepare me this projects report.

I am verymuch thanks also to Lecturer Mr. Bandula Priyantha for helping me this project proposal.

Lastly I thanks, them all from the bottom of my heart.

CHAPTER - 1

SUMMARY

1. Sri Lanka has a healthy climate suited for agriculture and for this reason along it is truly an agricultural Country.

Yet it is Sad to note that there natural gifts are deteriorating the causes of Which can be listed as follows:

- ❖ Deforestation
- ❖ Excessive use of agro Chemicals and their wrong use thing
- ❖ Resulting the soil erosion dry water resources, global pollution.

By now Sri Lanka is facing this universal Problems of physical destruction

These problems today stand as a major threat to the agro - based economy of the Country so less and less faith is shown by a majority of farmers and there is general trend of their turning to some other trade.

So Considering these grave threats to the economy. Our project which is mentioned above is very important and crucial at this juncture. So I hope to launch this programme through galle District Co - Op Board. This Project is Proposed to carry out under the guidance of national Co-Operative Council of Sri Lanka.

In this district except Galle which is Considered as an Urban area all other areas come within rural agricultural area. At present their agro products are marketed by Co - operatives and government institution, Yet It is inadequate to cope up with their demand so the main aim of this Project is enhance, the income of the farmers which give them new impetus for their products.

1.2 Main Objectives

- ❖ Prevent air Pollution
- ❖ Soil animals and Plants Conservation Projects
- ❖ Increase the agri Products.
- ❖ And there by improve the general health of the population by providing them with fresh and nutritional agro - products.
- ❖ To improve their income Capacity.
- ❖ To supply the easy method for marketing facilities.

1.3 The target group of the above project is Comprised of the entire^{D.} farming Community in galle district Southern Province.

1.4 We hope to invest a total of Rs. 100, 000/-

1.5 This fund is to be collected through District Board, People's Bank and the Co - Operative Development fund.

1.6 This is expected to Commence in the year 2000 and Complete by 2005 as a pioneer Project to be implemented by District Co - op Board.

CHAPTER 2

BACK GROUND

2.1 Over all Situation

Sri Lanka is a Tropical Island in the Indian Ocean lies, 23 miles South east of India. It is 425 Kilometres Long and 225 Kilometres wide.

The Island had tropical Climate, and Sri Lanka is a thickly populated Island of about 18.3 million and the annual population increase is 1.16

We have an agricultural economy yet in recent years this pattern is changing to trade based economy Tea Rubber and Coconut product are our main exports, paddy ingrown an large scale, and we are able to gather a good foreign exchange in traditional product like pepper cardamoms, cloves cinnamon and nutmegs.

The main food of Sri Lanka is rice and vegetables.

The majority of the farmers in Sri Lanka are small farmers. There fore the contribution of the small farmers to the National Economy is considerably high 80% of our population lives in the Rural area and their main living hood is agriculture.

Co-operative movement of Sri Lanka has had over eighty years of uninterrupted co-operative growth and development from the small beginnings of credit co-operative with unlimited liability today.

Co-operative service a multiplicity of economic activities, through a wide variety of co-operative both at the primary and other levels today there are over twelve e thousand primary co-operatives covering activities like credits (Limited and unlimited) Tea, Rubber, Coconut and Milk productions and sales fishery small Industry and Handicrafts woman youth co-operatives textiles (mostly handloom co-operavive livedstock school and Hospital co-operatives and also a wide net work through 300 odd Multi purpose co-operatives. The membership of the primary co-opetratives now exceeds for million which in effect means that a very high percentage of the families in the Country have some connection with the co-operatives.

2.2 Area of Project

Out of the nine provinces in the island this project is to be implemented in Galle District in Southern province Galle is the provincial Capital of this province which is of historical important Centre.

There is a busy port and sunny beaches where crowded with a Chain of international Hotels, about 107 KIMS South of Colombo. It is bordering the Indian Ocean.

World famous beaches at Hikkaduwa and unawatuna attract thousands of tourists both local and foreign Coral reefs one of finest in the world lies along these beaches.

The total population of the District is numbered a bout one million and it is comprised of Males 484128 Femal 508288 roughly.

The main source of in come is derived from paddy cultivation, Tea Cultivation, fishing Industry and Tourism. To this non - traditional Crops like cloves, Cinnamon and pepper are to be added. In recent years a large income is obtained by especially Villager through there Small tea estates.

Number of Co - operative Societis in Gall, District

Society	Number of Societies	Number of Members
Multipurpose	18	153349
Thrift and credit	494	74100
Agricultural	10	2000
Industries	39	1950
Fisheries	61	3050
School	64	9000

2. 3 Problems facing the farmers

- * Production Capacity is at a very low level due environmental pollution.
- * Difficulty in getting a fair price for their product
- * Lack of Marketing
- * Hang on to their traditional methods but less response to the modern methods and uses of new technology
- * Problems in getting Capital investment.
- * Lack of knowledge in financial management.
- * A new trend especially by younger generation to leave out the agricultural and seeks new jobs.
- * High cost of Raw Materials.
- * No proper Co - ordination resulting the farmers being subjected to other forces.

2. 4 Need and Justification of the Project

The main objective of the Project is to ease their problems. Today we experience a low productivity. So several steps like nursery programmes are proposed to introduce in order to minimise the environmental Problems and also to encourage the farmers.

The other Problem as pointed earliar is the difficulty they experience in marketing their products. To erase off these difficulties the Proposed marketing centres the Proposed marketing Centres will be of immense helpful.

CHAPTER III

Project

3.1 Scope of the organization

This pilot project is to be located at Pettigalawatta Estate which is situated at close to Galle - Matara main road. This land is centred round the regional centre of National Co - Operative council and District Co - operative Board.

The distance to the centre is only 1/2 Kilometers south of Galle. There are a number of Government offices so the transport facilities are very good. Vide above reasons the location is ideally suited to the purpose.

It is hoped to name the project as the marketing centre of agriproducts plus nursery organic farming.

The project is not mainly of production nature yet various types of plants such as herbal, exotic plants are obtained from the farmers, then they are well nurtured and maintained till they are marketed, In addition we hope to purchase the agri products including dairy products and market them.

We intend to start a healthy nutritional herbal drinks centre too.

3.2 Targeted Objectives

- * Introduction of the importance of the healthy environment to increase the products.
- * To encourage the producer through providing better facilities for their marketing.
- * To provide a better opportunity for the public to get healthy and nutritional fresh food.
- * To enable the farmer to get a better income.

Through these it is hoped to give a better prospect for the people for a happy and decent living.

3.3 Operations Rationale.

The following activities are used for the implementation of the project.

- * To make aware about the importance, of the project of District Co - Operative Board, District women Committee members and selected farmers representing the entire district.
- * As the project is located within city limits, required legal matters are formulated.
- * Enlighthⁿ the farmers about the importance of the Co - Operative movement.

3.4 Methodolgy

To establish centres of collecting agri Product of the farmers, and to achieve this end hope to get the fullest assistance of the multipurpose societies.

In project it is proposed to grow herbal Plants at national value and to Produce drinks (herbal) for this purpose it is hoped to get the Co - Operation of District Co - Operative women's Committe.

To make Composed fertilizers and to provide them at reasonable rates to farmers.

CHAPTER IV

Organization Policy and Management

4.1 Management Policy

Under galle District Co - op Board the policy is implemented with the assistance^{of} National Co - op Council and Co - operative Development Department.

First this falls within the ambit of District, Yet at the end of first year it is proposed to register as a separate Co - operative Society with the Participation of active farmers.

After registration the responsibility of managing the society assign to farmer members.

4.2 Functions of the organization

This organization is of 3 units.

1. Environmental nursery unit
2. Purchasing and Marketing unit
3. Administrative unit.

Environmental nursery unit

Maintaining the nursery till they are sold. Production^{of} Composed fertilizer.

Purchasing and marketing unit

Purchasing of Agri Products from the farmers, transporting them and marketing and it is their responsibility to keep the products in good Condition till they are marketed.

Administrative Unit

There consist four employees in this unit and they should carry out duties under the supervision of District Co - op Board. Four employees are a manager, driver and two labourers. The driver and the two labourers are working under the manager. The manager should^{be} responsible for Direct Board.

CHAPTER V

FINANCIAL ANALYSIS

5.1 Supplement of the required Capital

Particulars	Amount (Cost)	Annex
1. Fixed Capital		
1.1 For Buildings	Rs. 600,000/=	
1.2 Fence	Rs. 15,000/=	
1.3 Vehicle	Rs. 125,000/=	
1.4 Marketing Stall	Rs. 50,000/=	
1.5 Operational Expenses	Rs. 65,000/=	
2. Working Capital (Per Month)		
2.1 Purchasing of Agri Products	Rs. 100,000/=	
2.2 General Expenses	Rs. 45,000/=	
Required Total Capital	Rs. 1,000,000/=	

- * For the Pilot nursery and buildings a sum of Rs. 690,000/= are spent out of total capital amount. (See annex A).

- * For Purchasing a vehicle for the purpose of transporting the products to Marketing centre. (See annex A)

- * Required working capital is estimated to Rs. 145,000/= out of this amount Rs. 100,000/= is required for purchasing of the products - this is monthly expenses. (See annex B)

- * The amount assigned general expenses is Rs. 45,000/= and this sum is used for the workers, maintenance and fuel electricity water and taxes etc.(See annex B)

- * Rs. 25,000/= is to be used for the implements of the project out of operational expenses and the rest of Rs. 40,000/= is spent for stationary and training of farmers.(See annex C)

5.2 Source of Finance

Sources	Year 1 Amount
Peoples Bank Co-operative Development Fund	Rs. 755,000/=
District Co-operative Board	Rs. 145,000/=
Total Requirment	Rs. 1000,000/=

Total capital requirement is obtained by above sources, and working capital requirement is by District co-op Board. It is 145,000/= Rupees. (per month).

CHAPTER VI

6.1 Profit Analysis

Particulars	1st year Rs.	2nd year Rs.	3rd year Rs.	4th year Rs.	5th Year Rs.
<u>INCOME</u>					
Marketing of Plants	1200,000	1300,000	1350,000	1375,000	1375,000
Marketing of agri products	1200,000	1300,000	1350,000	1375,000	1375,000
Extra Income	100,000	100,000	100,000	10,000	100,000
Total	250,000	270,000	280,000	285,000	285,000
<u>Expenses</u>					
Purchasing of Plants	920,400	101,1600	110,1800	113,3000	115,1200
purchasing of Agri Products	850,000	950,000	975,000	975,000	980,000
Salaries and Wages	240,000	250,000	250,000	250,000	275,000
Electricity and Water Supply	26,500	24,000	24,000	24,000	24,000
Maintenances and fuel expenses	87,500	95,000	98,000	99,000	99,000
Administrative expenses	20,000	20,000	20,000	20,000	20,000
Depreciation	20,000	20,000	20,000	20,000	20,000
Loan Interest	90,600	72,400	54,200	36,000	17,800
Income Tax	40,000	42,000	42,000	43,000	43,000
Other	5,000	5,000	5,000	5,000	5,000
Total Expenses	2300,000	2490,000	2590,000	2635,000	2635,000
Profit / Loss	200,000	210,000	210,000	215,000	215,000

6.2 Vehicle depreciation

* Cost	-	Rs. 125,000.00
Last Value (end 5th year)	-	Rs. 25,000.00
		Rs. 100,000.00
period	-	5 years
per year	-	Rs. 20,000.00

* Loan Interest

Loan	-	Rs. 755,000.00
Loan period	-	5 years
Estimated Interest Rate	-	12%
Per Annual	-	Rs. 90,600.00

* ² _^Income Tax

Tax Rate for Profit 20% percent.

Per Year	-	1
Annual Tax	-	Rs. 40,000.00

CHAPTER VII

Benefits

Under this project both economics and social benefits are gained and on the completion of the project within 5 years, not only farmers but the general public at large are benefitted.

- * Environmental Conservation
- * Increase in agri products due to the protection physical environment.
- * Economic progress in farmer families.
- * Increasing of producing Capacity
- * Generating the sources of income of farmers.
- * An access for the general public to get healthy and nutrient food.
- * To ease the problems among farmer families.
- * When the agricultural is on sound footing due to above benefits it certainly due to above benefits it certainly help to generate new avenues of employment.
- * To bring about a sound and healthy growth.

CHAPTER VIII

RECOMMENDATION

Selected region for the implementation of the project main livelihood of majority of farmers is agriculture. Yet due to various problems there is a trend among them to seek some other avenues for their living. Younger generation show less response.

Taken all in all when this project is implemented most of these burning question can be avoided, and it will Certainly help to give a new impetus to agriculture.

Although District Co - op Board and N.C.C. take strenuous efforts to solve these problems, Yet they couldn't do so due to financial problems. However with all these draw backs they are still fully engaged in helping them.

To implement this project assistan^{ce} ensured from Co - op Development Dept. of southern province and the Co - operative Ministry.

DETAILS OF FIXED COSTS

	Description	Size and Quantity Rs.	Total
1.	To Construct a building	20' x 30'	600,000/=
2.	To Construct Marketing Stall	10' x 15'	50,000/=
3.	To Construct Security Fence		15,000/=
4.	For Vehicle	C Fan GN 12 Tractor	125,000/=

DETAILS OF WORKING CAPITAL

Annex B

1.	Purchasing of Agr: Products - Rs. 100,000/=		
	(For first month)		
2.	General Expenses (Permonth)		
2.1	Salaries and wages	-	Rs. 20,000/=
2.2	Elcetricity and water supply	-	Rs. 4,700/=
	(For first month)		
2.3	Maintenance and fuel expenses	-	Rs. 7,300/=
2.4	Depreciation	-	Rs. 1,665/=
2.5	Loan Interest	-	Rs. 7,550/=
2.6	Incom Tax	-	Rs. 3,335/=
2.7	Other	-	Rs. 450/=
	Total Cost		Rs. 145,000/=

DETAILS OF OPERATIONAL COST

Annex C

1.	Equipment and tools	-	Rs. 25,000/=
2.	For Stationary and training of farmers	-	Rs. 40,000/=
	Total Cost	-	<u>Rs. 65,000/=</u>

13th ICA/JAPAN Training Course
for
Strengthening Management of Agricultural Cooperative in Asia
India, Nepal and Japan
16th November 1998 - 24 April 1999

Project Proposal

Title of Project : Export Promotion of Passion Fruit Powder
Country : Thailand
Project prepared by : Mr. Phanuwat Wanraway

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I would like to take this opportunity to express my deep thanks and sincere gratitude to International Cooperative Alliance, Regional Office for Asia and the Pacific, especially Dr. Daman Prakash, Director of the training course for selecting me to participate in this training course which is seem very important during the global economic crisis. The scene of huge industrializes have been erased. Many people were unemployed and returned back to their domiciles in rural areas of the country. The sufficient economy and self-reliance cooperative-based may be one of the best and appropriate solution for those people in the rural satellite remote villages to combat with poverty and also to secure for their sufficient food consumption in the families.

Also I am very much indebted to Manager of Tungchang Agricultural Cooperative Ltd., Nan province who assisted me to collect data source, background of passion fruit cultivation during I was traveled to Nan province on 4 - 6 December 1998.

Chapter 1

Summary

The Export Promotion of Passion Fruit Powder Project is setting up to make value-added and promote marketable agricultural product of Tungchang Agricultural Cooperative Ltd., Nan Province, 912 Km. from Bangkok to the North of Thailand with the main purpose of increasing the income of women farmer group in Tungchang Agricultural Cooperative Ltd. It is a type of agroindustrial project for production of raw material and inputs market require for agricultural product. The scheme of the project is designed to cover the farming community of women farmer group who productive agro-processing of passion fruit cultivation. The Cooperative also collects fresh passion fruit and sold out to private manufacturer in Chiangmai.

As this project size and level of investment is classified in full-scale production or commercial project, the purpose is designated the basis of expansion and new process development project.

The fresh passion fruit is supported marketing by the Cooperative Promotion Department (CPD). The women farmer group will gathering together passion fruit of member and sell it through the cooperative.

To expand passion fruit cultivation in Tungchang District area, the CPD has promoted members of Tungchang Agricultural Cooperative Ltd. in particularly for how to select planting area, prepare soil for propagation bag as well as suggestion on trellis construction by using concrete post instead of using wood post in order to reduce the cost of post preparation and reducing forest destroying.

Tungchang Agricultural Cooperative Ltd. is one of 3,313 primarily agricultural cooperative societies of the Cooperative League of Thailand. At present, there are 2,514 members. And there are 540 women farmer group in the cooperative are gathering to process passion fruit into powder. The passion fruit powder will also benefit the consumer of the area.

As Cooperative Promotion Department-CPD, government agency promote expansion passion fruit cultivation in Tungchang District area, the product of cooperative have been consumed in the respective area, the Cooperative League of Thailand has set up the plan to strengthening cooperative trading between both cooperatives in the country and international cooperative such in Singapore and Vietnam. The beneficiary of the project will be reaped by the farmer group of Tungchang agricultural cooperative.

Chapter II

Background

Overall Situation

Tungchang Agricultural Cooperative Ltd. is a primarily an agricultural cooperative in Nan province, located in the North region, 912 Km. from Bangkok and just 32 Km. broadering to PR Lao. There are, at present, 2,514 members with 540 women farmer group of the cooperative. The main career of the member are maize cultivation, green vegetable as well as passion fruit cultivation which is an important part of it. Currently, passion fruit cultivation and its products; powder, and wine suplement and stabilize farm incomes.

The population of Tungchang District is 15,716 persons. The farmers cultivate maize, vegetable, passion fruit, and etc. within the total arable land used for passion fruit cultivation is 500 Rai (1 Rai/0.16/hectare/0.395 acre). Total land area of Tungchang Distict is 13,500 sq. km.

The government, CPD promotes farmers of Tungchang District to expanding cultivation of passion fruit through the cooperative. The Cooperative Promotion District Official of CPD, Mr. Prachote Luengluo is now in active to implementing the policy. The first budgetary of 2,000,000 baht. (1 baht/1.354 Rs,) has approved for CPD-Cooperative District Office of Tungchang District for financial support to farmers-passion fruit cultivation. The year plan of expanding passion fruit cultivation was started since December 1998 until 2001 to increase from 500 Rai to 1,500 Rai. The yield of cultivating passion fruit per Rai is 3,000-5,000 kg. One planted plant can be yielded within 4-5 year. Total product of passion fruit in 2001 will be 7,500,000 kg.

Tungchang Agricultural Cooperative Ltd. will collect fresh passion fruit from farmers-members of cooperative and sell to Thai Nutrijuice Manufacturer in Chiangmai province. At present, cooperative has to collect fresh passion fruit for Thai Nutrijuice Manufacturer 30,000 kg./month with price of 12 baht/kg. and the left approximately 20,000 kg. women farmer group of the cooperative will process into powder and wine.

Women Farmer Group of Tungchang Agricultural Cooperative Ltd. was official established on 18 November 1998 with its principal purpose to collect fresh passion fruit from famers who are member of Tungchang cooperative. The repective farmers are 540 families. The women farmer group will produce passion fruit powder, packing, marketing as well as take up effort to export to respective country by granting support from CLT and CPD as well as the agricultural cooperative federation of Thailand Ltd. - ACFT.

The Cooperative League of Thailand has organized cooperative study visit to Vietnam, Hanoi and signed MOU with International Cooperation Promotion Center-ICPC by Mr. Vu Luu, General Managing on 25 September 1998 with the objective to exchange agricultural cooperative trading as well as human resource. And during 27-30 December 1998, CLT and its representative of cooperative societies have organized cooperative study visit to Jurong Shipyard Multi-Purpose Society Ltd., Singapore. It was the most possibility to export Thai agricultural cooperative products to Singapore through the Agricultural Cooperative Federation of Thailand Ltd.-ACFT such as orange, rich and passion fruit powder.

Chapter III

Scope of the Cooperative League of Thailand

The CLT is the apex body of the national and non-governmental organization of cooperatives movement in Thailand, presenting of all 6 types of cooperatives, namely, Agriculture, Land Settlement, Fishery, Thrift and Credit, Consumer and Services Cooperatives. At present, the number of membership is over 5,502 cooperative societies with its member approximately 6,650,890 million households. The number of agricultural cooperative in whole country is 3,313 cooperative with its membership of 3,880,685 million household. The agricultural cooperatives sector constitute the major part of the movement and play a vital role in enhancing the socio-economic life of the people, especially those in the rural areas.

The CLT and ACFT will jointly assist the primarily agricultural cooperative to expanding their marketing of the products both in between cooperatives in the kingdom and international.

Objective

As the government policy is to increasing and expanding passion fruit cultivation in Tungchang District through Tungchang agricultural cooperative Ltd. in the year of 1998-2001, CLT with close collaboration with ACFT are planning to strengthening exporting of Thai agricultural cooperative products to Vietnam and Singapore. Thus CLT and ACFT will implementing development and promote export activities to achieve the following objectives.

- To increasing the income of farmer-member of agricultural cooperative
- To strengthen agro-processing of women farmer group, passion fruit, in Tungchang agricultural cooperative Ltd.
- To protect the inbalance price of fresh passion fruit selling to private sector.
- CLT and ACFT can indicate helping cooperative societies, then the cooperative members will pay fully subscription to CLT annually in time.

Operational Rationale

The important aspect of this project is to develop and assist the economic interests and increasing income of Tungchang community, farmers-member of Tungchang agricultural cooperative Ltd. by expanding passion fruit cultivation. Since the fresh passion fruit, powder and wine is not available in many parts of Thailand, therefore, Tungchang District, Tungchang agricultural cooperative Ltd., and women farmer group in Tungchang cooperative will be established in the center of passion fruit cultivation and marketable to all area of country and export to other respective country.

Project Implementation plan

The project life will be 5 years including 7 month of implementation of cultivation and 4.5 years of formal operation. The progress of activities on cultivation of passion fruit will flow as follows :-

Activites		Period
1. Grant fund from Government		September 1999
2. Suvey the land/area to expand/purchase/hire land and selecting of planting area planting preparation		October-December
3. Cultivation of passion fruit	First Period	January-April
	Second Period	September-December
4. Collecting fresh passion fruit		Collecting after planting 7 months
5. Processing fresh passion fruit into power and packing made to order of exporting running by CLT and ACFT		2 months

The project will be implemented by the Cooperative League of Thailand and the Agricultural Cooperative Ferderation of Thailand Ltd. with collaboration of the Cooperative Promotion Tungchang District Office with granted financial support from the Government with amount of 2,000,000 baht. and some contribution from CLT and ACFT. These whole activities will be led running by ACFT.

THIRTEENTH ICA / JAPAN TRAINING COURSE
OF STRENGTHENING MANAGEMENT
OF AGRICULTURAL COOPERATION IN ASIA
INDIA - NEPAL - JAPAN
1998 - 1999



PROPOSAL OF DEVELOPMENT PROJECT

***PRESERVATION AND DEVELOPMENT OF
TRADITIONAL HANDICRAFT LACQUER***

November 16th, 1998 - April 24th, 1999.

Prepare by: eco.eng.Hoang Chuyen Can.
Senior Expert
Personal Organization and Development Report
Vietnam Cooperative Alliance
77 Nguyen Thai Hoc, Hanoi, Vietnam.

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1. Introduction of “ Lacquer’s “ village.
2. Objectives and targets .
3. Background of the Cooperative.

Chapter II Infrastructures.

1. Location of project.
2. Material bases of production.

Chapter III Policy of development.

1. The policy of development of the Government.
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3. Barriers of the growth of lacquer’s production.
4. The necessary and proves of project.

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3. Supply of materials.
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2. The delegation of management.
3. Requires of HDR.
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- 5., General investment of the project.

Chapter VI The motions of the project.

- 1.
- 2.

CHAPTER I THE INTRODUCTION.

1. Lacquer is one of the very long-time traditional handicraft in Vietnam. Previous time, lacquer's products had been used for religious purpose. It's only side-work of farmers.

In Vietnam are two villages involved to lacquer-production. The one of them is village Duyen thai (Thuong tin- Hatay), the another is Cat dang(Y yen-Namdingh).

They have different method of lacquer-production.

2. The project has two main objectives:

- Preservation of this handicraft for future generation.
- To vary the structure of the income of farmers.

3. Background of lacquer-production.

The lacquer, first time was like paint-profession. Seventy years ago, the famous painter Dinh Van Thanh used lacquer-method in an express of art-decoration purpose. He had implemented to the technology the finished maner- to grind lacquer-picture in the water.

CHAPTER II INFRASTRUCTURE.

1. The project's location is seventeen kilometres far from Hanoi village Duyen thai belong to district Thuong tin, province Hatay.

Hatay is province which has many different handicrafts.

Village Duyen thai is very well connected by the road with trade centers.

2. Cooperative has 2000 square metres of the land. In this land are some small house using for the production, office, warehouse of mat material and final products, etc. The Cooperative has no machines.

At the same time, ninety percent of lacquer's work is made by hand.

The arrangement of the technology-production is at bad condition.

(viz. Annex I).

CHAPTER III THE DEVELOPMENT POLICY.

1. The Government had approved long-time plan of development strategy of rural, agriculture and farmers. In the future, the investment share of agriculture is going to raise about 25% in compare with 18% in 1998.

2. The obstacles for realization :

- A few capital,

- Low level education of the rural population,
 - Limited area for construction of fabrique,
 - Unstable market.
3. Within the project we have to solve following problems;
- mechanization of lacquer's work
 - to get rid of pollution environment
 - to create new rational arrangement of process-production.
4. The necessary and proves of the project:
- Rehabilitation and preservation of traditional handicraft.
 - To raise an income for farmers.
 - To take part in Government program of industrialization and modernization of the country.
 - To solve the problem "short of work" for farmers.
(Urbanization led lack of cultivation land).

CHAPTER IV THE PROJECT.

1. The objectives of project are following:
- The education-training for youth generations.
 - To raise an income for farmers.
2. The structure of product.
- 40% is for religious purpose,
 - 60% is for decoration purpose include art-decoration and furniture.
3. Supply of the materials:
- Lacquer
 - Wood
 - Cloth
 - Bamboo semi-product
 - Another secondary
4. Marketing.
- To organize the section for designing new article.
 - To improve package-process.
 - To order lacquer's products to the world
 - To make video-cassette (or CD) for introduction.

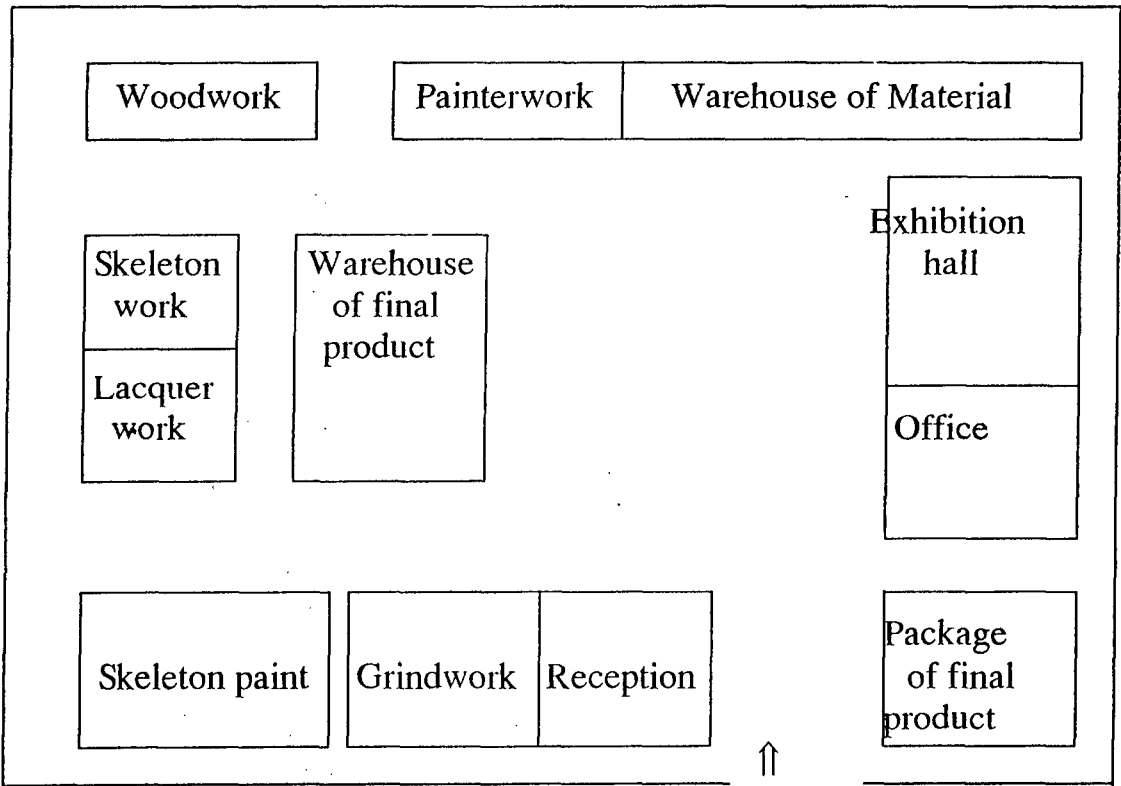
CHAPTER V THE ORGANIZATION OF PROJECT.

1. Project management :

- The investor
 - The project's office
 - The executive office
2. The former arrangement of production (viz. Annex II)
 3. The new arrangement of the project (viz. Annex III)
 4. The delegation of management of Coop.
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 - The Center's level,
 - The household's level.
 5. HDR
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 - Officials
 - Designers
 - Workers.
 6. Economic analyse of the investment process of organization the training course of 40 workers/year, and to raise turn-over of Coop from 1.5 bill VND to 5.0 bill VND in 2003.

CHAPTER VI THE MOTION OF PROJECT.

Annex 1.



13th ICA/JAPAN TRAINING COURSE

STRENGTHENING MANAGEMENT OF AGRICULTURAL CO-OPERATIVES IN
ASIA

DRAFT PROJECT

MINI CO-OPMART DEVELOPMENT PLAN
IN HOCHIMINH CITY – VIET NAM

Prepared by :

PHAM KHUONG

Assistant to General Director of Saigon Union of Trading Co-operatives
Co-operative Consulting Center Director of HoChiMinh City Co-operative
Alliance

I. Introduction

1. It is necessary to establish the chain of mini coop mart in inhabitant area.
2. Mini coop mart business will accompany with Coop mart business to consolidate the Saigon co-op retailing.
3. This chain will serve the regional inhabitants good quality products at reasonable price and wide range.
4. It needs a mutual business to link the activities of local society and Saigon Co-op.
5. The activity will provide a chance to increase cooperative members.

II. Mini Coop Mart SWOT analysis.

1. Advantages

- Having experience of 3 Coop Marts
- Support from Saigon Co-op & through Saigon Co-op
- Support from KF
- There is no competitors or weak competitors

2. Opportunities

- To develop in a good condition of competition.
- Will growth of with CoopMart thanks to use the CO-OPMART Trade Mark.
- Consumer potential
- Support from local government at moment

3. Difficulties

- Hard competition of wet market and small private shops.
- Lack of investment capital from local cooperatives
- Lack of human resources for operation of new stores

4. Threats

- New type of retailing may get risk if there is no good market survey

III. Main concepts for the project

1. Vision 2005: "Market leader on small mini mart business and to be the confident seller of inhabitants"
2. Mini Marts are sister chain of Coop Marts' one.
3. Becoming the main business of local cooperatives for increasing of members
4. Assortment will be suitable to the demand of local area
5. Target group is medium class people and under
6. Central purchasing of Saigon Co-op will provide at least 60% of goods for Mini Marts

7. Separated solution for implementation of inside-city stores and suburb stores.

IV *Objectives of project* :

- 1.To build 9 -11 stores from 1998 to 2000
- 2.To build 7 - 9 stores from 2001 to 2003

V. *Key issues for chain operation*

1.Assortment

- Total sku may be around 1,500
- Daily products
- Kitchen utensils & plastic
- Canned food
- Drinking
- Fresh food and vegetable(step by step development)
- Goods provided by central level
- Goods for holidays
- Special goods for local demand

Besides, it should build a child place at suburb-mini mart to attract more consumers

2.Pricing

- Goods will be bought by shop management team may be equal or cheaper than which the competitors' are.
- Prices will be equal in same sku at any stores belong to the chain available to provided goods made by Central Level.
- Margins of goods will be set up based on pricing strategy

3.Location

- Generally ,Mini Mart will be located at crowded area, easy to come to buy
- Average dimension may around 130 m2 - 500 m2
- Cu Chi District for the suburb and Cau Kinh Cooperative for inside of the city are selected to set up the pilot projects

4.Definition and standardization

- Mini Marts are defined as sister-chain of Coop Marts
- Establishment of store standard on assortment, ordering, space management etc... based on the size of each store
- Having the unified management of stores belong to the chain

5.Equipment

- Counters & check out machines are equipped as Coop Marts
- No aircon or limited aircon
- Using goods mini truck and balance suitable to business volume

-

6. Computer system

- It will be equipped to link up Saigon Coop system but be limited on information supply.
- IT staff will be trained by Saigon Coop

7. Marketing

- Central level is in charge all marketing activities except anyone which will be assigned.
- Outside Signs will reflect what content of chain-store inside is and express separated services that consumers may get in store.
- Others such as uniform, promotion campaigns are followed central level

8. Human resources

- Local cooperatives get preferential to recruit employees and Saigon Coop will train and get them to practice at Coop Marts
- Saigon Coop may move her staff to support.
- Staff's income will follow up the standard and result of store operation
- Organization-structure and personnel policy are unified in same chain and same size of store.

9. Routine

- Stock control, layout, exposure, scheduling, statistics, reports, bonus scheme, finance, saving, etc... are followed shop manual issued by Saigon Coop.

10. Ordering

- Mutual purchasing goods through out Central Purchase must be set up sales prices for whole chain
- Goods of shelf purchase must be informed to Central Level and be processed by central coordinator.
- Goods should be delivered directly to store if it is possible.

11. Investment

- There are many types of cooperation to invest in Mini Mart business : Saigon Coop owned or Franchising or BOT.
- The feasibility and investment contract will make clearly on investment capital, responsibility, benefice of each party and management as well.

12. Operation control to get unify the chain

- Saigon Coop bears responsibility to control the operation of her retailing chain.
- Saigon Coop will prepare franchise agreement to assure this

- Management will be transferred through training, practicing of staff to update during cooperated period.

13. Cooperative member increasing

- Increasing of member and service of member are objectives and motivation of local cooperatives.
- Members invest to build Minimart to get good products and good services and profit from stores.

IV. Project group

- Project ownership
- Project steering group
- Protect team

V. Support from Oversea

- Consulting on standardization of the chain of Minimart
- Consulting on shop manual
- Franchising
- IT system
- General regulation on chain management

PART II : PILOT PROJECT /CAU KINH STORE

I.Introduction:

The site of existing shop named Cau Kinh in Binh Thanh District is available for the first m.Coop Mart based on following conditions :

- Located at crowded inhabitant area
- The road in front of this shop is always occupied by a lot of passengers who may be clients of the store.
- It needs a mini supermarket to serve people who are living in this area so far become officers of many companies and joint-ventures and they have no time to go long distance shop.
- The local co-operative achieves standard to be partner of Saigon Co-op in mutual business.

II. Market survey

1.1 It is comprised 3 wards 26/27/28 with total population estimates 76,000 people. Every day 15,000 passengers go across the store will be potential consumers. Report of market survey made by Marketing Department shown the estimated target hereafter:

• Area population	Employees	Average income	A.expenditure	Estimated .target
76,000 people	32,500	US\$ 848,52	US\$ 205,68	28,12 million/years
• Passengers	Visit	Buyer	buying	Est.target/year
15,000/day	3%	1.5%	US\$ 3.93/1time	27.85 million
Total				# 56 million

1.2 Assortment:

221. Based on existing assortment such as :

- Food 34.15%
- Sweets, beverages 1.51%
- Household ware 16.31%
- Others 44.24%

222. Assortment will be made in this store is :

- Food 39%
 - Out of which : Rice 5%
 - Canned food 5%
 - Fresh food & vegetable 10%
 - Sweets and other candy 4%
 - Beverages, wine 15%
- Daily used products 16%
- Cosmetics and personal care 5%

- To build a small supermarket with outside decoration suitable for whole chain design which reflects exactly which each store will serve inside in same size store everywhere used same logo.
- Should use cheap local construction materials with good quality to reduce construction cost
- Equipped air condition in and comfortable counters, computers, selfs in standard...
- Locate glass doors in front side
- Use logo color to paint advertising neon sign

42. Area of renovation

• Selling place	140 sqm
• Storage	40
• Office	40
<i>Total</i>	<i>220 sqm</i>

43. Construction cost US\$ 44,285

V. Finance analysis

	Total investment capital	Saigon Co-op	Local Co-op
<u>51. Total invest. capital</u>	74,428	59,285	15,143
511. Fixed Assets	44,286	29,143	15,143
512. Working capital	30,142	30,142	0

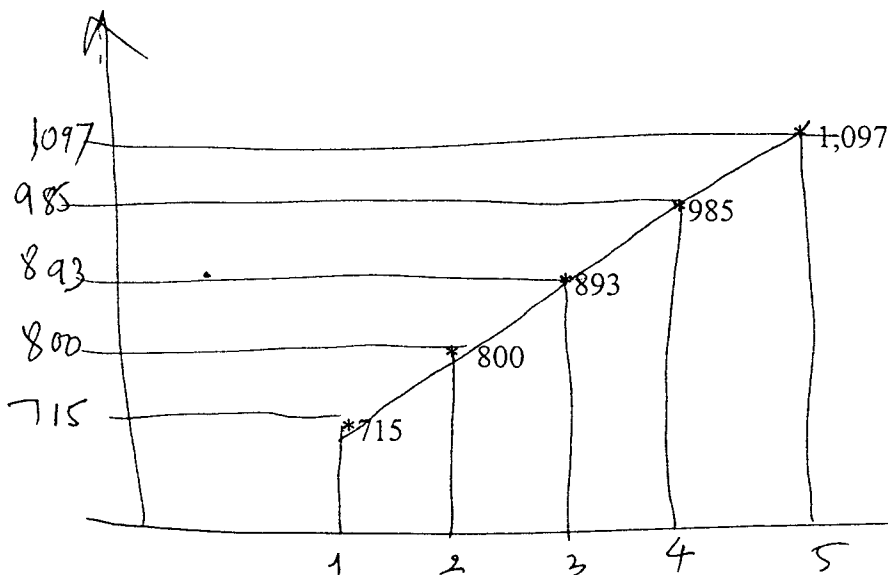
52. Capital cost

521. Investment Capital	US\$ 74,428
522. Rate 12%	8,931

53. Net sales

No	Category	Margin	Year 1	Year 2	Year 3	Year 4	Year 5
1	Food & vegetable	16%	257	287	322	340	377
2	Daily used products	16%	180	198	218	240	264
3	Cosmetic/personal care	15%	101	111	122	134	148
4	Beverages/wine	14%	101	111	122	134	138
5	Others	14%	76	93	109	137	170
	TOTAL		715	800	893	985	1097

YEARLY SELLING DIAGRAM



54. Cost to trade

No	Items	%	Year 1	Year 2	Year 3	Year 4	Year 5
I	Cost of goods sold		608	676	751	840	933
1	Food /vegetable		216	238	261	287	316
2	Daily used products		151	166	183	201	221
3	Cosmetic/personal care		87	96	105	116	127
4	Beverages/wine		88	97	106	117	129
5	Others		66	79	96	119	140
II	Operation cost		80	84	93	100	113
1	Depreciation	5 years	9	9	9	9	9
2	Insurance/maintenance	5%	4	4	4	4	4
3	Salary		25	28	31	34	36
4	Social welfare	15% of S	4	4	5	5	6
5	Loss	1% CGS	6	7	8	8	10
6	Power	1% NS	7	8	9	10	11
7	Packaging	1% NS	7	8	9	10	11
8	Marketing	>2%NS	18	16	18	20	26
III	Total		688	760	844	940	1,046

CGS : Cost of goods sold

NS : Net sales

55. Financial analysis

551. Results

US\$ 1,000

No		Year 1	Year 2	Year 3	Year 4	Year 5
I	Business results					
1	Net sales	715	800	893	985	1,097
3	Cost to trade	688	760	844	940	1,046
4	Value addition tax	11	12	12	15	16
5	Gross profit	16	28	37	30	35
6	Income tax (32%)	5	9	12	10	11
7	Net profit	11	19	25	20	24
II	Capital return					
1	Depreciation	9	9	9	9	9
2	Opportunity	8	8	8	8	8
3	Net profit	11	19	25	20	24
	TOTAL	28	36	42	37	41

552. Net Present Value & IRR

Year	Investment	Net return	R = 12%	R' = 22%	NPV _r	NPV _{r'}	Inflation
0	74,428						
1		28,	0.893	0.826	25,004	23,128	10%
2		36,	0.797	0.672	28,692	24,192	
3		42,	0.712	0.551	29,904	23,142	
4		37,	0.636	0.451	23,532	16,687	
5		41,	0.567	0.370	23,247	15,170	
	TOTAL	184,			130,379	102,319	
					55,950	27,891	

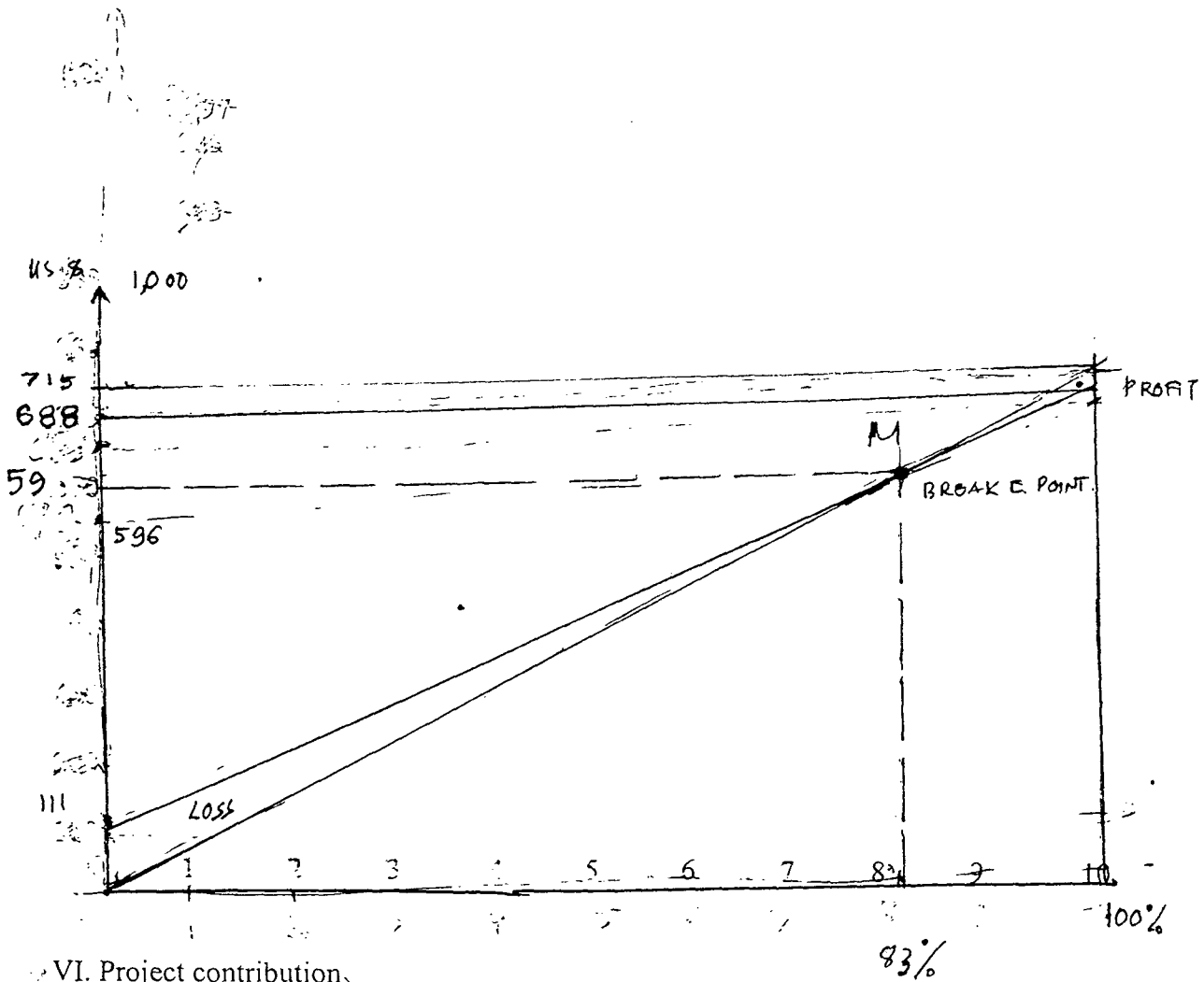
IRR = 32%

553. Break event point(BEP)

Unit US\$ 1,000

Items	Year 1	Year 2	Year 3	Year 4	Year 5
I. Net sales	715	800	893	985	1,097
II. Cost	688	760	844	940	1,046
2.1 Fixed cost	111	113	124	133	152
*Depreciation	9	9	9	9	9
*Insurance/maintenance	4	4	4	4	4
*Operation	80	84	93	100	113
*Marketing	18	16	18	20	26
2.2 Variable cost(2-2.1)	577	657	720	807	894
III. Turnover at BEP	596	607	681	769	900
IV. % Net sales at BEP	83%	76%	76%	78%	82%
V. Turnover / currency BEP	587	594	670	718	890
VI. % Net sales/currency BEP	82%	74%	75%	73%	81%

BREAK EVENT POINT DIAGRAM (Year 1)



61. Benefice to society

- To serve consumers who are in its located area with good quality products at reasonable price especially ecological vegetable.
- To provide consumers a fine opportunity to be member of consumer co-operatives
- To contribute more tax
- To create 22 jobs and place for future employees to practice selling
- To contribute to partners profit

6.2 A sound experience for chain management

- Assortment building

- Central controlling
- Central buying/marketing/pricing/IT network etc

6.3 Creating market for agriculture co-ops to produce ecological vegetable and local manufactures to produce local high quality products'

13th ICA/JAPAN TRAINING COURSE
OF STRENGTHENING MANAGEMENT
OF AGRICULTURAL COOPERATION IN ASIA
India-Nepal-Japan
1998-1999

**Preservation and Development
of Traditional Craft Lacquer**

November 16th 1998 – April 24th 1999

Prepared by

Hoang Chuyen Can

Personal organization and Development Department

Vietnam Cooperative Alliance

Acknowledgement

Craft is the symbol of cultural life for every country in the world. The preservation and development of the craft there are always important responsibility of the present generation.

But more important is know how to use this tradition for the prosperity of our farmers. Just is an aim of my project.

Finally I would like to use this opportunity to express my grateful thanks to my sponsor organization- Vietnam Cooperative Alliance who gives me chance to participate this 13th Training course, and to Mr. Vu Hy Thieu vice director of the Institute of cooperative economy who helped me preparing this project.

Forever, there are my thanks from the bottom of my heart to Mr.Dr Daman Prakash, to Mr. professor Krishnamurthi, Mr. Professor K.V. Raju and all of the staff of IRMA for helping during my presence in Anand India.

Content

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- a. Duyen Thai, a lacquer's village.
- b. Background-My Thai Cooperative.

Chapter 2: Existing conditions.

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- a. The needs
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- d. Implementation schedule.

Chapter 5: Financial analysis.

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Chapter 6: The requires of the project.

Annex 1 Input – Output Chart.

Annex-2 Lacquer Production Chart.

Annex 3 Financial counting.

Chapter 1

Present status of Lacquer's handicraft.

A. Duyen Thai- village: A lacquer's village existed already long time. And lacquer is one of ancient traditional handicraft in my country. It said that the ancestor of lacquer handicraft was born and lived there. Previous time, lacquer products had been used for religious purposes. It is only sideline of our farmers. Now Duyen Thai has 7126 population (statistical data of 1997), 60% population is at manpower age. Average growth of population is 1% per year. Every year need employ 120 people. It has 380 hectares of the land, but only 250 hectares is fertile. According to the Chairman of People's Committee the average income of the farmers is only one hundred thousand dong (Vietnamese currency) monthly. It means only 100 \$ per year. The lacquer production increased just several years ago. By raising of lacquer production the village has to face a situation of pollution of the environment. Because to the order of rising productivity the farmer already began to use chemical lacquer instead to organic lacquer.

B. Backgroud-Mythai cooperative society: First cooperative society was established in 1960, named Binhminh for lacquer production. At this time Binh minh-cooperative society had 600 members. This cooperative society was dismissed in 1989. Till 1993, the Mythai cooperative society was established with only 55 members. About 90% lacquer products of My Thai cooperative society is exported to England, France, Germany, Sweden and Canada. Talking with the Chairman of People's Committee of village Duyen Thai I knew that he wanted My Thai to expand the production for more farmers but answer was a lack of capital?

Chapter 2

Current conditions

A. **Project location**: The project location is in the south of Hanoi and 17 kilometers far from our capital. The village Duyen Thai belongs to the district Thuong tin of the province Ha Taiyo. The Duyen Thai is well connected to other trade centers because it located beside highway No.1. There was developed communication facilities as telephones (70 units). The village has its primary school with 2000 pupils. There is built medical station.

B. **Resource available**: The My Thai cooperative society has used 2000 squares meters of the land which was rented by People' Committee of village. There several small houses were using for storage of material, production workshops, warehouse of final products etc. Mainly hands make the lacquer production. The arrangement of the production is in bad condition. The very important advantage is that products of My Thai was well known in the international market.

C. **The development policy of the Government**: The Government had just approved long time strategy of development rural area beginning 1999. The share of budget 1999 will raise about 25% in compare with 18% in 1998. The government has decided to invest to the agricultural sector in 1999 5,000 bill. Dong. It raises about 70% in compare with practical investment of 1997. International Monterey Fund (IMF) promises to increase the investment share for the agricultural sector from 27% to 38% of total sum. The Bank of agriculture and rural development (BARD) will increase a capital for breed livestock and poultry about 15% in compare with 1998.

D. The consumption market of lacquer products has growing tendency as well as in domestic and in international one . By the rising of living standard of the people the demand of lacquer products raises, because the

observe ancestor cult is very important habit of spiritual life of our people.

Table 1 (mil. \$)

Year	1995	1996	1997	1998
Export's value	18,5	3,3	5,7	9,7

Chapter 3

The needs and the scope of the project.

A. The needs of the project: It is necessary to help the villlage Duyen Thai rehabilitation and preservation of traditional lacquer handicraft. At same time, with increasing production we have to solve the problem of the pollution of the environment. By increasing of the income of the farmers we can successfully fulfill our program of development of rural area.

B. The scope of the project: We have to invest to production field by building new material bases for cooperative society by providing new machinery, to enable the cooperative society in realization their training issues for young apprentice, to give more opportunity for younger generation to choose their job in future.

Chapter 4

The project organization.

A. **The objectives of the project:** We have two main objectives for the project. There are following:

- i. first is preservation of lacquer handicraft and
- ii. the second is development of lacquer production.

B. So that we can successfully realize our objectives we have step by step solve four issues. They are following:

- i. First is erection of new buildings for staff, for exhibition and new houses for workshops and
- ii. Second is a purchasing new machinery for manufacturing and
- iii. Third is organization of training courses for our youth and
- iv. Final is helping My Thai cooperative society to gain financial source by bank loan or some subsidize of government or some donor or patron.

C. **The management of the project:**

- i. The investor is Province's Cooperative Alliance Hatay.
- ii. The project's office is The Promoting and Development Center for Craft (belonging to VCA).
- iii. The executive organization is My Thai Cooperative society.

D. **The operational rationale:**

- i. Supplying of the material is realized by the cooperative.
- ii. Marketing and designing is realized by the cooperative.
- iii. The farmer realizes producing.
- iv. Supervision and packaging is realized by the cooperative.
- v. Educating and training is realized by the cooperative.

E. The implementation schedule:

Realization phase	Duration
Preparation of project	From Jan 3. to Apr. 1999
Approval of project	May.1999
Erection of building	From Jun. To Sep.1999
Installation of machinery	From Oct. to Dec.1999

Chapter 5

Financial analysis.

- A. Fixed asset. Viz. Annex 1.
- B. Calculation of ARR.
- C. Calculation of IRR.
- D. Solution of the project:
 - i. By giving for the new generation facility of attending training course in lacquer production they will have possibility to follow their parent in preservation and development of traditional craft of their village.
 - ii. Reorganization of the production the cooperative would concentrate in marketing, in development of new designs, in providing services of input and output for the farmers.
 - iii. By supplying some machinery and equipment we can help the communal authority to solve problem pollution of environment.

Chapter 6

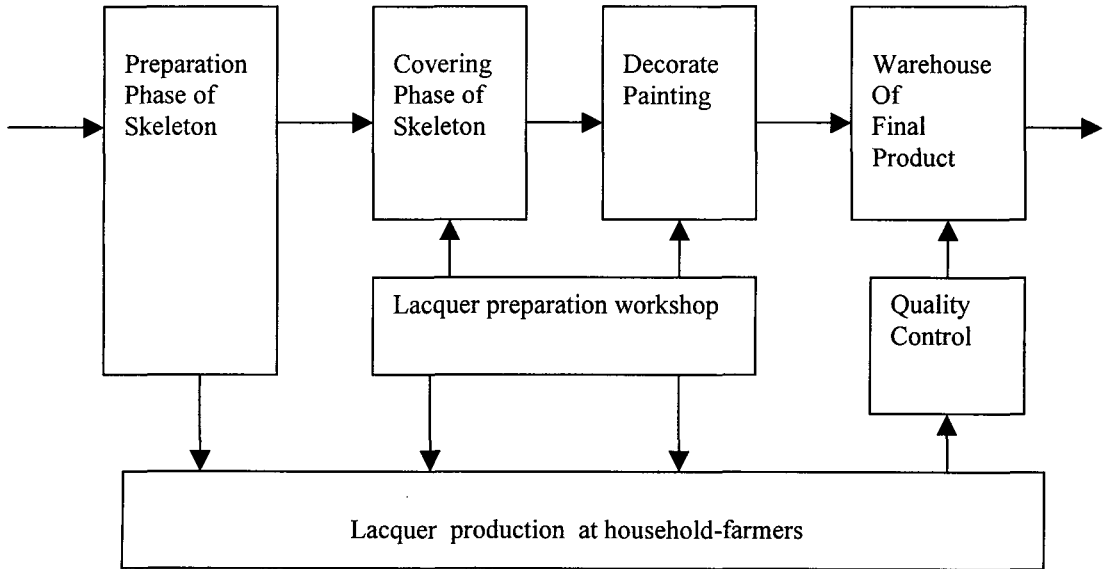
The motion of project.

Because as mentioned above the My Thai cooperative society is in situation of lack of capital. For successful realization of project the Promoting and Development Center for Craft would like to require the Government the following points:

- i. The first is an investment capital for the erection of training center and apprentice cost and
- ii. To enable the cooperative to gain the bank loan without the mortgage.

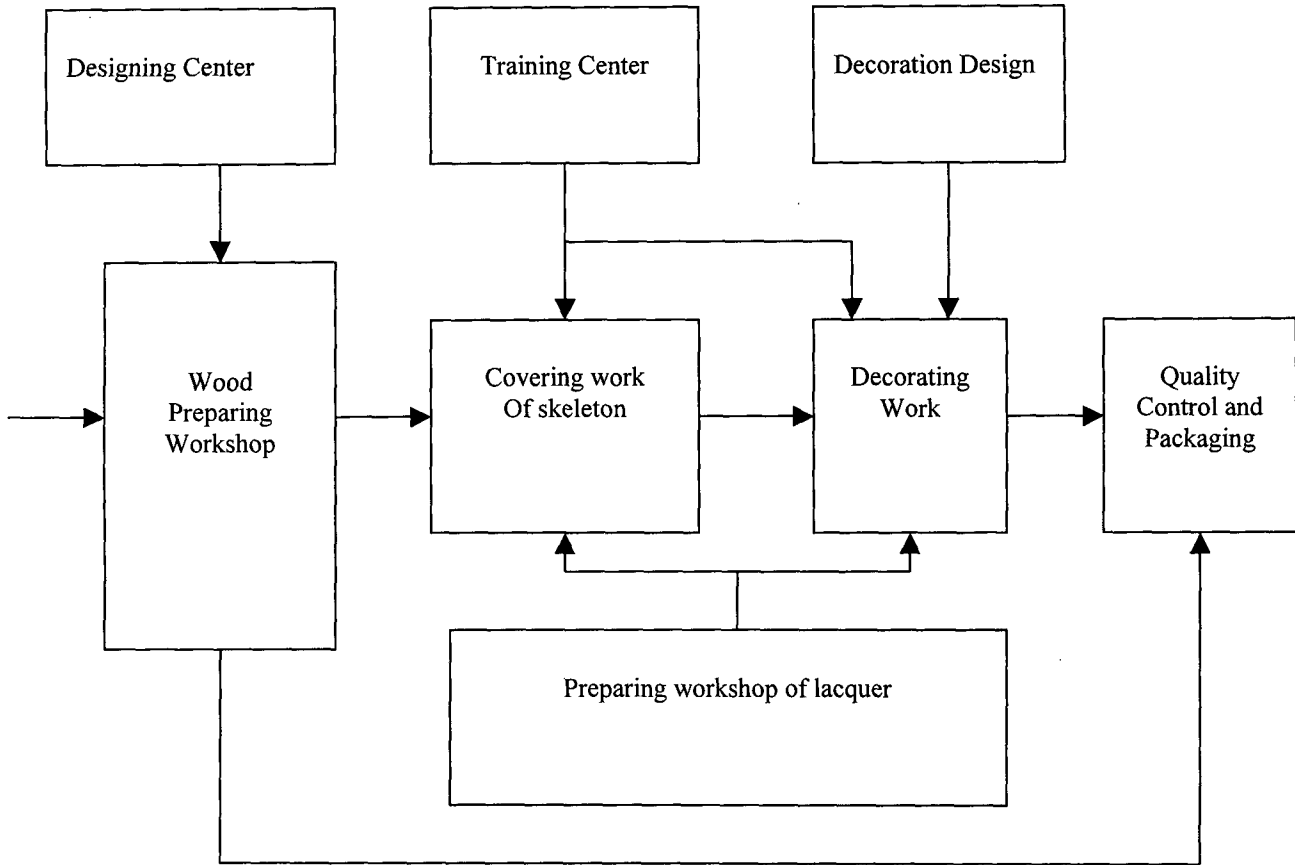
Annex - I

Input-output Chart



Annex- II

Lacquer Production Chart



Annex 3 **The cost of Fixed asset.**

			(mil.VND)
i.	Building for office and expedition	160 square meter	180,000,000
ii.	Building for wood workshop	160 square meter	180,000,000
iii.	Building for lacquer workshop	280 square meter	400,000,000
iv.	Machinery and equipment		450,000,000
		Sub-total	1,200,000,000
	Museum of Traditional craft	100 square meter	110,000,000
	Training center	100 square meter	110,000,000
	Equipment for Training center		30,000,000
	Total cost for training course		120,000,000
		Sub-total	370,000,000

This sub-total investment will be provided by Ministry of Education and By Ministry of Cultural.

Calculation of ARR

mil. VND

	1	2	3	4	5
A.Sales	2000	2600	3500	4000	5000
B.Les cost					
I.Raw material	1200	1560	2100	2400	3000
ii. Wages	600	780	1050	1200	1500
iii. Interest	57.6	46	34.5	23	11.5
iv. Depreciarion	45	40.5	35.4	31.01	27.71
Total cost	1902.6	2426.3	3219.9	3654.9	4539.2
C. Profit before tax	97.4	173.7	280.1	345.1	460.8
D.Tax@45%	43.8	78.1	126	155.3	207.3
F. Profit after tax	53.6	95.6	154.1	189.8	253.5

Average Capital Employed 660

Average Profit after Tax. 149.32

ARR 23%

The project is acceptable

The parameter ARR is calculated with following condition:

cost of raw material is 60% of sale

the wages is 30% of sale

interest rate of long-term bank loan is 9.6% per annum

depreciation of machinery and equipment is 10%

average profit before tax is 10%

Annexure - I

Calculation of Interest on Long-term loan

Year (mil.VND)

	1	2	3	4	5
A. Opening balance	600	480	360	240	120
B. Repayment	120	120	120	120	120
C. Closing balance	480	360	240	120	0
D. Interest (9.6%)	57.6	46	34.5	23	11.5

Annexure - II

Calculation of Operating Cash Flow

Year (mil.VND)

	1	2	3	4	5
A. Sales	2000	2600	3500	4000	5000
B. Operating cost	1,800	2,340	3,150	3,600	4,500
C. Profit before DIT	200	260	350	400	500
D. Less Depreciation	45	40.5	36.4	32.8	29.5
E. (C-D)	155	219.5	313.6	367.2	470.5
F. Less Interest	57.6	46	34.5	23	11.5
G. Profit before tax	94.4	173.5	279.1	344.2	459
H. Less Tax 45%	42.4	78	125.5	154.8	206.5
I. Profit after Tax	52	95.5	153.6	189.4	252.5
J. Operating Cash Flow	154.6	183	224.5	245.2	293.5

Cash Flow of Project**Year**

(mil.VND)

	0	1	2	3	4	5
A.Plant&Equipment	-1200					
B.Long Term Invest.	600					
C.Operating C.F.		154.6	182	224.5	245.2	293.5
D.Net Salvage Value						120
E.Recovery of WCI						600
Net Cash Flow		154.6	182	224.5	245.2	1013.5

Calculation of IRR

(mil.VND)

Year	Cash Flow	PVI@11%	NPV	PVI@12%	NPV
0	-1200		-1200		
1	156.6	0.901	139.3	0.893	138
2	182	0.812	147.8	0.797	145.1
3	224.5	0.731	164.1	0.712	159.8
4	245.2	0.659	161.6	0.636	155.9
5	1013.5	0.593	601	0.567	574.6
			NPV= 13.8		NPV=(26.6)

$$\text{IRR} = 11\% + (1213.8 - 1200) / (1213.8 - 1173.4) * 1\% = 11.34\%$$











