

TOTAL QUALITY MANAGEMENT PRACTICES IN AGRICULTURAL COOPERATIVES IN ASIA

DAMAN PRAKASH
GC SHROTRIYA



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International Farmers' Fertiliser Cooperative Limited

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Compiled and edited by

**Daman Prakash
GC Shrotriya**

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Agricultural Cooperatives in Asia**
by Daman Prakash & GC Shrotriya

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THE present publication "Total quality Management Practices in Agricultural Cooperatives in Asia" is based on the technical papers presented at the 14th ICA-Japan International Training Course on 'Strengthening Management of Agricultural Cooperatives in Asia', a part of which was held at the IFFCO's FMDI [Fertiliser Marketing Development Institute], Gurgaon, during January 02-16 2000. The Course was attended by 15 senior level managers of agricultural cooperatives from nine countries i.e., China, India, Indonesia, Malaysia, Myanmar, the Philippines, Sri Lanka, Thailand and Vietnam. The main theme of the Training Course was "Value-addition through Agro-Processing" with the aim of increasing the income of basic farmer-members, and the sub-theme of the FMDI component was "Total Quality Management Practices in Agricultural Cooperatives in Asia". India happens to provide some good examples of agro-processing, especially in dairy, sugar, oilseeds and cotton processing sectors. Also, organisations like the IFFCO have contributed significantly in food security efforts through production, distribution and proper application of fertiliser through its extensive farm extension and education programmes. It was, therefore, considered appropriate that some of the technical papers presented at the FMDI module be 'processed' properly, edited and published for the information and use of field officers, extension workers, cooperative managers and cooperative scholars.

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Foreword

It is with great pleasure and with a sense of satisfaction that we are able to place this valuable publication in the hands of our field workers, managers of agricultural cooperatives, and cooperative research scholars with the hope that they would get an insight into the achievements of agricultural cooperatives, their problems and their valuable contributions in addressing the food security and quality management issues in the Asian Region. Institutions like the Indian Farmers' Fertiliser Cooperative Limited [IFFCO] and the International Cooperative Alliance [ICA] have a lot to offer in the form of experiences, expertise, networking and literature designed for the managers and field workers to enable them to lead their cooperatives effectively and efficiently in the wake of open market economy pressures.

Management of cooperative institutions, especially those dealing with basic farmers and food, has a special role to play in the present day world of international trade and competition. It is important that these institutions are managed well so that they are able to survive, sustain and develop further. Business organisations [including agricultural cooperatives] are able to maintain their standing and credibility in the market and among their users only if they are able to deliver quality products and services. Maintaining quality and efficient management go together. Cooperatives have to be conscious of this fact and in this process the responsibilities of managers are even greater.

We are sure that the present publication containing highly technical papers which are well-edited, processed and summarised would be a valuable addition to the cooperative literature. Our friends and colleagues, Dr Daman Prakash, Director of the Agricultural Cooperatives Management Training Project from the ICA Regional Office, and Dr GC Shrotriya, Chief Manager [Agri-Services] from the Marketing Division of the IFFCO have done an excellent job in not only running the 14th ICA-Japan International Training Course on "Strengthening Management of Agricultural Cooperatives in Asia" but also on consolidating and presenting the technical papers in this form which were used during the TQM component of the Course held at IFFCO's FMDI during January 02-16 2000.

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Total Quality Management Practices in Agricultural Cooperatives in Asia – An Overview

Daman Prakash
GC Shrotriya

Poised between the 20th and the 21st centuries, we must look not only at the positive developments achieved by industrial civilisation – with its ideology of economic growth at all costs – but also at its negative results, such as the destruction of the earth's environment and destabilisation of mankind. Economic development unprecedented in the history of mankind and the population increase are beginning to collide with the earth's tolerable limit. In this regard, it is worthwhile to consider things from the perspective of an endeavour fundamental to human existence – agriculture.

At present, global production of foodgrains is at the level of 1.9 billion tons. If the rate of food consumption continues to expand at its present pace, the global demand for foodgrains is expected to reach 2.9 billion tons by the year 2025. Even if the lower end of the forecast for production is realised, it can be seen that foodgrains supplies will fall at least 400 million tons short of the balance. The reason for this lies in increasing demand for foodgrains because of increased and varied demands for food caused by population increase and economic growth, especially for feed stemming from greater consumption by livestock.

According to the United Nation's Food and Agriculture Organisation [FAO], the world's land area for foodgrain harvesting rose only slightly over the 35 years up to 1995. During the same period, the world's population increased 1.8 times. Despite this, it was possible to avoid a food supply crisis because the yield per unit of land doubled due to various reasons including improved farm technology, other inputs and application of better management methods and techniques.

About 90% of this dramatic increase was due to the introduction of chemical fertilisers and pesticides, along with the improvement of crops and the expansion of irrigation. In other words, agricultural fields assumed the form of factories. But the wide-ranging use of chemicals has impaired soil conditions, and excessive irrigation using underground sources of water has lowered subterranean water levels. As a result, over a period of time the improvement in harvesting has subsided.

In the past, it was possible to achieve an increase of up to nine tons of foodgrains production by dispensing one ton of fertiliser. From around 1984, however, it became difficult to expect anything beyond an increase of two tons from one ton of fertiliser. The abusive utilisation of soil and a massive consumption of water driven by business logic that ignores the natural cycle have led to the present-day consequences. In addition, the farmers in the developing economies have not been too active to adopt better post-harvest techniques, mainly due to financial reasons, and there have not been many efforts to control soil erosion and degradation of ecological balance. This is especially apparent in the United States, Europe and South-East Asia.

Considering all this, is it possible to further expand the current amount of cultivated land, which is just less than 1.4 billion hectares worldwide? According to the FAO, roughly half of the 1.8 billion hectares of land with the potential for agricultural development [excluding the PRC] exists in forested areas, and nearly 70% of it has problems related to soil and topographic conditions. On the other hand, every year five million hectares of cultivated land worldwide become desertified. This area is equivalent to the entire amount of cultivated land in Japan. Moreover, one forecast predicts that three billion people will be adversely affected by water shortage in 2025.

Major investors in agriculture and agribusiness interests are placing their hopes on biotechnology-related efforts such as genetic farming, and it may actually be possible to raise production levels once more. But here again the potential effects of the production increase on the earth's landmass and water would be immense. In addition, food safety concerns make it more difficult for us to feel optimistic that such an approach will provide an adequate solution.

On one hand, efforts have begun to stabilise population growth. On the other hand, humankind has yet to devise an answer to the food supply problem. This means that, at some point, it is imperative to do away with the ideology that sees no limit to expansion of the food supply.

Need to Reduce Excessive Consumption of Food: To begin with, the developed nations must end excessive consumption of food. At present, the world contains at least 840 million malnourished people. In 1997, of the total world foodgrain production of 1.9 billion tons, 700 million tons were used as feeds. Annual per capita consumption of meat in developed countries is 76 kg [and 118 kg in the United States], but in the developing countries only 24 kg [and a mere five kg in India]. By reducing the consumption of meat in Europe and the United States, where the consumption of animal fat is so excessive as to pose health problems, it would be possible to alleviate much of the suffering of those who are starving. The next point to consider is the reduction of food wastage. Research carried out in 1997 discovered that 27% of all edible foodstuffs available in the United States end up being thrown away. Utilising a mere 5% of this amount would make it possible to feed four million people and save \$50 million in disposal costs. Japan faces the same situation.

Environmental Considerations: Furthermore, it will be imperative in the future to shift to an agricultural model that attaches more importance to maintaining a healthy ecosystem to sustain food production. This can be achieved with agricultural methods that lessen the burden placed on the environment by replenishing the soil, reducing the use of chemicals and pesticides, application of bio-fertiliser and carrying out organic recycling. The key points to stress are eliminating excessive consumption of food and food wastage and establishing a production system that is friendlier to the environment. The same method can be applied to fields outside the agricultural sector as well.

It is very misleading to lay total faith in the authenticity of GDP figures which indicate only the abundance of material possessions and monetary amounts. In order to make these things a reality, it is essential for each of us to become more aware of the problems at hand and to make changes in our own lifestyles. In other words, it is necessary to distance ourselves from focusing simply upon GDP figures. Agriculture has something to teach us in this regard – namely, the concept of its multi-functionality. This refers to various functions, apart from the mere supply of agricultural products arising from agricultural operations performed by rural communities. Such functions include preserving the soundness of national land, dealing properly with water sources, protecting the environment and scenic landscapes, and properly transmitting the cultural heritage of rural communities. By their nature, these external economic results are unrepresented in GDP figures. From the very beginning, GDP figures were never an adequate way to represent the true wealth and soundness of the environ-

ment or human lifestyles. GDP figures increase, for example, even when the cost rises for dealing with ever-increasing environmental destruction. By no means is it possible to consider this a path to happiness.

Quality Products vis-à-vis Quality Services: In this context, the role of the institutions involved in agriculture, especially in the developing countries, becomes more apparent and involving. These institutions, usually the agricultural cooperatives or the farmers' groups or associations, have to provide the needed services to the farmers and help sustain their interest in the profession of farming. This situation calls upon these institutions to manage their affairs in such a way that the farmers produce quality products and they receive quality services, and inputs. People operating these institutions have, thus, to be good management leaders.

Agriculture Towards Economic Renaissance

As many as 80 million people are being added to our planet every year. As the population on our planet reaches 6 billion by 2000, the population of India will reach 1 billion. Today, as population continues to grow, three out of every five infants are born underweight and malnourished, and a third of the nation's people live below the poverty line. As the country struggles to feed its people, vital resources and infrastructure such as water for irrigation etc. are dwindling. Therefore, sustainable agriculture is the prime need of India.

Agriculture alone contributed 49.3% of GDP in 1960-61 which declined to 28.8% in 1991-92 and further to 25.2% in 1997-98. The per worker income of Rs 529 in agriculture in 1960-61 increased to Rs. 19,406 in 1997-98 whereas in non-agriculture sector, the per worker income has increased from Rs. 1,239 in 1960-61 to Rs. 82,848 in 1997-98. Thus the ratio between the per worker income in non-agriculture vis-a-vis agriculture has increased from about 2.03 in 1960-61 to 4.3 in 1997-98 which is a matter of serious social and political concern.

State of Agriculture in India

-Technological Interventions and Its Potentials

Agriculture is gradually becoming capital-intensive and science-based. New innovations like precision agriculture, transgenic cultivars, micro-irrigation system, selective agro-chemicals, green house farming, tissue culture and many other techniques have made agriculture a very sophisticated profession. These new technologies are in a position to fully exploit the yield potentials of various crops. Some of the technologies are adopted in Indian situation and have shown promising results.

Sustainability in agriculture is a "Moving Target". No single method of farming in any region remains sustainable without continued intervention and change. Agriculture is based on dynamic biological, physical and chemical systems and farmers live in a constantly changing economic, social and political environment. The reality is that sustainable farming systems can differ from field to field and from one period of time to another.

Bio-technological intervention could provide more environmentally-sustainable practices in agriculture. Tissue culture technique is a method for rapid vegetative propagation of large number of elite plants in the shortest time span. It is like xeroxing, i.e., production of any number of plants from a single plant. This technique has wide applications in agricultural crops, horticulture, floriculture, medicinal plants, forestry and plantation crops etc.

Growing of plants under environmentally controlled conditions is green house technology. The

technology began in India in 1983. Large industrial houses like ITC, SPIC, Harrison Malayam, Indo-American Hybrids, Tata Oriental Flora Tech have already started using green houses for either hybrid seed production or export-oriented floriculture and horticulture. Green house crop production is the most intensive method of crop production in agriculture. It is highly productive, conserves water and land and protects the environment besides generating high economic returns. Production of off-season vegetables and flowers are possible through this technology.

As the profession of agriculture becomes more and more complex and technology-oriented using the modern tools and techniques, it will be necessary for an agricultural worker to be a skilled worker rather than a mere worker for providing physical help in the work. The education system has to imbibe these knowledge transformations and also provide for extension education for the current workers to adopt, adapt and understand the technologies of farming.

Marketing of Agricultural Produce at Grassroots Level: In India, after Independence, a series of reforms have been introduced to achieve the goals of the agricultural marketing system. Some of these reforms include setting up of regulated agricultural markets, cooperative marketing societies and introducing state trading for which the Food Corporation of India [FCI] was set up. However, there are still a lot of deficiencies in pre-harvest or immediate post-harvest sales at low prices, little grading at the village level, tie in sales and high marketing margins. These can perhaps be attributed to inadequate infrastructure of transport, grading, storage facilities, marketing credit, marketing intelligence etc. A holistic approach is needed to develop market infrastructure. A market does not function in isolation, rather it influences nearby markets and, in turn, influenced by them. Therefore, efforts should be made to develop a complete market circuit for a commodity or a group of commodities.

The Indian farmer, as a producer, also does not get the benefit of "value-addition" to his produce. Post-harvest technology and agro-processing industry has to be farmers' own enterprise through collective or cooperative venture. Such steps will be a real boost for the economic renaissance.

Horticulture includes cultivation of fruits, vegetables and also plantation crops. The climatic features of the country are very congenial for the cultivation of wide variety [both tropical and temperate] of horticultural crops on commercial scale. In fact, we are the second largest producers of fruits and vegetables in the world [37.13 million ton of fruits and 55 million tons of vegetables]. In both the cases the productivity, however, is low as the processing of these items are limited to less than 2%, resulting in high wastage and low incentives to the producer. This industry has the tremendous job opportunities.

Floriculture is cultivation of flowers, flowering plants and ornamental foliage plants. It could be for traditional home consumption or for export purposes and also for industrial uses. India has the advantage of abundant sensitive, varying type of soils and climatic conditions and cheap labour vis-a-vis most European countries. The world trade in flower is estimated at about US\$25 billion and increasing @ 11% per annum.

Poultry: India stands 6th in egg production with 28.5 billion eggs per annum and 25th in broiler production with 400 million broilers per annum. Annual growth rate of production of eggs is 10% and that of broiler is 20%. The world market of processed chicken is about US\$ 5 billion, which is very attractive for India. Our exports during 1994-95 were about \$ 7.5 million. The countries importing poultry from India are Oman, Saudi Arabia, Maldives, Bahrain, Hong Kong, etc.

India possesses largest cattle population and now rank *first in the world in milk production* [71.0 million tons - 1997-98]. Major produce of milk and milk products are consumed in domestic market.

Exports are not significant. The per capita availability of milk of 66 kg per year is much below the Indian Council of Medical Research [ICMR] recommendations. There are restrictions on the export of certain dairy products like raw milk and baby milk, but exports of butter, powder milk, ghee etc. are permitted for which there is tremendous scope in global market. Therefore, there is a lot to be done in this area too.

The importance of *fishery sector* in India is now well known and it has a place of pride in the national economy. It helps the human kind by supplementing protein rich, low cholesterol food, generating employment opportunities and gainfully utilising the unproductive or marginally unproductive land. In the year 1997-98, our foreign exchange earning from this sector was to the tune of Rs. 4.31 billion. Technological developments in fish farming i.e., composite fish culture, semi intensive and intensive fish farming, induced breeding technique to produce fish seed have opened avenues to increase the productivity manifold.

Role of Fertilisers in Agricultural Production

Fertiliser use has been one of the main factors in ushering Green Revolution in India and making it self-sufficient to meet its present requirement. Fertilisers as source of plant nutrients have direct bearing on crop growth and productivity. Foodgrain production and fertiliser consumption has increased manifold in the past 50 years. The plant nutrients need will continue to grow to meet the foodgrain requirement of the growing population. India has become almost self-sufficient in the production of nitrogenous fertilisers. Fertiliser contributes to increased crop production in several ways. First, by replenishing nutrients, it helps maintain and enhance soil fertility and thereby sustains crop production. Secondly, fertiliser enables adoption of high-yielding varieties [HYV], which can increase crop yields several fold.

The role of fertilisers in increasing foodgrains production is evident during the last 35 years. About 25% increase in agriculture production has come through area changes and 75% through yield increase. The two major foodgrain crops, wheat and rice, consume the lion's share of fertilisers used in India. Special attention was paid through a package of practices to the increased production of oilseeds, and pulses which has paid high dividends. Substantial outgo of foreign exchange towards import of edible oils has been reduced. Fertiliser use in India increased from 66,000 tons of major plant nutrients in 1951-52 to 16.67 million tons in 1998-99. The country is looking ahead for self-sufficiency in fertiliser production, particularly that of nitrogenous and phosphatic. What started as a small fertiliser industry, with a capacity of 89,000 tons of N and 28,000 tons of P₂O₅ in 1951-52, has now become a giant with a total capacity of 10.94 million tons of N and 3.20 million tons of P₂O₅ in 1998-99.

Domestic production of nitrogenous fertilisers increased from 29,000 tons in 1951-52 to 10.48 million tons in 1998-99. The increased production in nitrogenous fertilisers has come by building new capacity over the years and also from obtaining higher operational efficiency. Production of phosphatic fertilisers also increased from 10,000 tons in 1951-52 to 3.17 million tons in 1998-99. All-India capacity utilization of N and P₂O₅ has gradually improved over the years and is now being maintained at around 100% level of N and P₂O₅ fertilisers. The new capacities which have been set up recently and are under implementation during the Ninth Plan period are expected to yield an additional capacity of 3.36 million tons of N [7.1 million tons of urea] and 1.45 million tons of P₂O₅.

As fertiliser is related to food production, dependence on import in a free market environment becomes a sensitive issue. Our past experiences have shown that being a bulk buyer, whenever India has entered the international market for the imports, price of fertiliser in international market has

increased significantly. Therefore, the country must have its indigenous capacity for fertiliser production. Import should be restricted to meet the gap between demand and domestic supply and not on the basis of make or buy option. Import duty may be levied to discourage dumping as and when required.

Future performance and growth of the fertiliser industry at the national level will depend on a conducive trade policy, designed to protect the interests of both fertiliser producers and farmers.

Future Challenges

Production of more food from a diminishing resource base, requiring new agricultural technologies and management systems providing increased productivity per unit of land, water, energy, labour and investment. Part of this will involve focussing research on neglected crops such as minor millets, grain legumes and tubers, which can perform in times of environmental stress and in neglected areas such as arid and semi-arid, coastal and mountain areas.

This country has tremendous potential for agriculture development and its contribution to national economy. A system approach for the capital building and investment-oriented agriculture will revolutionize Indian economy and provide a sound base for many other related industries like sugar, textile, processed food etc. A blend of traditional wisdom based on centuries of experience with modern knowledge and technologies will be the key to economic renaissance. A changed farmer, who can gain from the information base now available, will be the carrier of this mechanism. Indian farmer has shown adaptability to change and he will again rise to our expectations to transform India into an agri-based economic power.

In the future, the emphasis should be on "growth with management" rather than "growth" *per se*. This new strategy of growth with management will involve challenges in several areas: fertiliser use efficiency, energy consumption efficiency, policy and organisational reforms, environmental protection, and human and institutional capacity building. A successful resolution will require a high degree of political commitment and pragmatic solutions leading to conducive and stable policies, appropriate organisational arrangements, and adequate institutional and physical infrastructure.

Role of Agricultural Cooperatives in the Indian Economy

Agricultural cooperatives play a very important role touching almost every aspect of the human life. When the agricultural cooperatives deal with credit functions, they are concerned with the household income and its expenditure by the farmers. When the agricultural cooperatives deal with the supply of agricultural inputs, their main concern remains the nutrition for the population through foodgrain production. When the agricultural cooperatives deal with the plant protection, their concern remains for the health of the plant, health of the consumer i.e., the population. In many sectors the cooperatives have made significant contribution. In the case of sugar production and handloom it is particularly remarkable as the contribution is touching almost 60% of the total.

Challenges to Cooperatives in Liberalised Economy: The Cooperative Identity: The image of a "true cooperative" depends on the extent it faithfully translates the Cooperative Principles into practice. The International Cooperative Alliance [ICA] at its Manchester Congress in September 1995 adopted a Statement on Cooperative Identity [JSCI] according to which the cooperative is defined as: "An autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise."

Cooperatives are based on the values of self-help, democracy, equality, equity, solidarity, honesty,

openness, social responsibility and caring for others. These cooperative values are inherent in the seven Cooperative Principles around which all cooperatives function. Therefore, in the emerging scenario where the fears loom large for dilution in social values, culture, erosion of local resources, less advantage to weaker sections, the cooperatives with their true identity seem to be the only answer at present to rebuild the society for a better quality of life.

Structural Reforms: Structural reforms or reorganization has become the most significant aspect of market-oriented economy. There is a need to take up comprehensive structural reforms in the cooperative sector particularly, the creation of strong primaries, the backbone of cooperative system, and self-reliant and competitive federal structure which will be responsive to the opportunities of the emerging market economy. Federations are for primaries and it is their responsibility and accountability to strengthen their basic structure. At the institutional level, reforms in cooperative legislation are to be expedited to provide opportunities to cooperatives at par with the private sector. Over-control and over-regulation by government should be discouraged so that the cooperative system restores cooperative identity and enabled to stand on its own to gain benefits from the new policy of liberalisation. The role of the Registrar of Cooperative Societies is to be redefined as a promoter of cooperative system rather than the administrator and controller of cooperatives.

The new formula is that *managers lead and the members govern*. This formula requires a cooperative value-led management development programme based on a new understanding of management as leading a community of stakeholders on behalf of the cooperative membership. Quality standards at the service of the customers provide one objective manifestation of the realisation of cooperative identity.

The Indian Farmers' Fertiliser Cooperative Limited [IFFCO]: A Case Study in Cooperative Development: The IFFCO - a cooperative sector giant and a premier organisation is relentlessly engaged in strengthening the cooperative systems and services to the rural community in particular. Though IFFCO is engaged in manufacturing and promotion of fertilisers throughout the country, the extension and educational programmes organised by the Society centered on scientific agriculture and with emphasis on promoting balanced use of fertiliser. Such efforts have benefited the farmers and the cooperatives immensely. IFFCO's strong foundation is grounded on the principles and philosophy of Cooperation translated into practice. IFFCO's growth is largely because of its continued firm, consistent and genuine commitment to these universally-accepted principles. A multi-faceted and multi-pronged approach, envisioning, professionalism, corporate planning and commitment to achieve customer satisfaction are some of the guiding principles.

The IFFCO established four manufacturing units viz., Kalol and Kandla in Gujarat and Phulpur and Aonla in UP with a total production capacity of 2.6 million tons of urea and complex fertiliser. As on 1st April, 1999, the urea capacity of IFFCO stood at 3.2 million tons. The year 1999 has been a year of great achievements for IFFCO. The Society had also completed 32 years in the service of the farmers. In order to make the country self-reliant in foodgrain production, the Society contributed its share by attaining highest-ever capacity utilisation. During the period April-March 1998-99, IFFCO achieved an overall capacity utilization of 115% in the case of Nitrogen, and 162% in case of P205. IFFCO has sold 4.62 million tons of fertilisers material during April-March 1998-99 and has earned a pre-tax profit of Rs. 3.458 million during this period.

The Phulpur plant bagged the FAI Award for the year 1997-98 on Environmental Protection. The Kandla Unit won FAI Award 1997-98 and 1998-99 for Best Overall Performance of an operating fertiliser plant for P205. The Society has achieved a sales turnover of Rs. 38,240 million.

Special Features of IFFCO's Strength: Born as a multi-unit Cooperative Society on 3rd November 1967, IFFCO blossomed into the largest manufacturer and distributor of fertilisers in India. With an authorised capital of Rs. 10,000 million, its membership extends to over 35,000 cooperative societies through which its products – NPK, DAP and Urea – are channelised in 22 states and two union territories in the country. The Society came into being with a modest equity capital of Rs. 0.6 million in 1967-68 that grew to Rs. 3,838.7 million in 1998-99. It realised its dreams of acquiring an impregnable status of global fertiliser major by expanding its production facilities at Aonla, Kalol, Phulpur and Kandla in quick succession. During 1998-99, IFFCO sold the highest 3.34 million tons of urea while the total sales of Urea, NPK and DAP also stood at an all time high of 4.62 million tons. The Marketing Division was awarded ISO-9002 Certificate in June 1998 for marketing fertilisers, strengthening cooperatives and providing services to farmers and rural community.

The organisation is basically an industrial house. The distinctive feature is that this organisation is run as a cooperative enterprise and which is owned by the farmers. In its operations the basic strengths are the highest technological and professional methods and techniques employed and an active collaboration with its constituents established i.e., the cooperative members. Some of the important developments fostered by the IFFCO have been the following:

IFFDC Project: The Indian Farm Forestry Development Cooperative Limited [IFFDC] has been promoted by IFFCO and registered as a multi-state cooperative society. At present, the IFFDC is maintaining a pilot forestry project of IFFCO started in 1986-87 and also the IFFDC project sponsored by IFFCO and India-Canada Environment Facility [ICEF] for a period of 5 years since April 1995. As in March 1998, 16,000 ha of land has been afforested through the formation of 120 primary farm forestry cooperatives.

Special Projects: To facilitate transfer of technology, certain special projects have been launched in the areas of dry land agriculture, tribal/backward area development, land reclamation, bio-fertilisers, bio-pesticides, plastics in agriculture, farm implements, micro-irrigation system, Integrated Plant Nutrient Management System [IPNS], wasteland development, watershed management. The FAO-collaborated project on IPNS resulted in an IPNS manual based on IFFCO-IPNS experience for extension workers and others. Pilot work on Integrated Pest Management [IPM] was also introduced at selected locations.

Transfer of Technology: IFFCO has engaged more than 600 graduates and post graduates in agriculture to propagate balanced fertilisation and help disseminate the latest agriculture technology to the farming community. Right from the beginning IFFCO has been straining every nerve to inform and educate farmers through dedicated field team at the grassroots level. Its need-based educational and promotional programmes like crop demonstrations, field days, farmers' meetings, seed multiplication, village adoption, crop seminars, special campaigns are proving to be effective in transfer of technology.

Corporate Planning: In order to meet emerging challenges and retain its status as the largest producer and distributor of chemical fertilisers in the country, a comprehensive medium-term plan entitled "Vision 2000" was prepared which envisages expansion of the existing units, setting up of grassroots urea production units inside and outside India. It is also contemplating to launch Vision 2005 which will focus on strengthening the cooperative system and agricultural information system.

Total Quality Management [TQM]: The IFFCO from its very beginning, has been emphasising

on quality in every aspect of organisation which has become its thrust area. New quality systems are being implemented and the coveted ISO-9002 Certification has been received by its Kalol Plant for quality assurance in production, installation and services. The Marketing Division has acquired ISO-9002 Certificate from BVQI in June 1998 on the scope of "Marketing Fertilisers, Strengthening Cooperatives and Providing Services to the Farmers and Rural Community". IFFCO's other production units are also contemplating award of ISO- 9002 and ISO-14000.

Collaboration with the ICA and its Regional Office for Asia-Pacific

The IFFCO was admitted to membership of the International Cooperative Alliance [ICA] in the year 1979. Since then the relationship between ICA and IFFCO has grown stronger. Its participation in ICA Congresses, technical seminars, workshops and training programmes has always been acknowledged and recognised positively. IFFCO officials have contributed in crystallising several basic issues for the development of cooperatives particularly in the Asia and Pacific Region.

The IFFCO had participated in a project study on "Cooperative and Environment for Sustainable Development" conducted jointly with ICA ROAP in 1992. A senior officer of the Marketing Division had served as a Consultant-cum-Coordinator for the 13th and 14th ICA-Japan International Training Courses on "*Strengthening Management of Agricultural Cooperatives in Asia-Pacific*" parts of which were held at FMDI, Gurgaon, in January-February 1999 and January 2000 respectively. The IFFCO Managing Director had participated and initiated topical discussions at the International Cooperative Agricultural Organisation of the ICA. The Marketing Director had actively led the ICA Regional Committee on Agriculture for Asia and the Pacific as its Vice-Chairperson, and since 1998, has been its Chairperson.

Management of Food Security and Contribution of Agricultural Cooperatives

Food clothing and shelter are the fundamental of human rights. Without food nothing happens - no economic and social development, no political development etc. History shows that under nutrition whether caused by war, drought, poverty or natural disaster has always caused widespread sufferings to humanity. Freedom from hunger, therefore, remains a long cherished goal for the humanity.

Food security means access by all people at all time to safe and nutritious food to maintain a healthy and active life. It is a life free from the scourge of malnutrition and starvation. The food security, therefore, entails long-term as well as short-term strategies for making adequate quantities of nutritious food available to the entire populace of the country. The long-term strategy deals with devising prospective plans to raise agricultural productivity and ensuring national food supplies, while the short-term strategy deals with meeting the immediate food and nutritional needs.

There could be three levels at which food security could be ensured. These are, household level, national level and global level. The root cause for non-availability of adequate quantities of nutritious food is the poverty. In India alone nearly 320 million people live below poverty line. Nearly 50% of the children below 5 years of age are malnourished. Since mothers are malnourished, one-thirds of the newborn are of low weight. Poverty has been identified as the root cause for household food insecurity and therefore, actions that are related to attaining food security would necessarily have to be linked to the issues of poverty alleviation. The vulnerable groups include marginal farmers landless or

temporary labourers, small-scale fishermen, forest labourers, urban poor etc. Within these groups again the most affected lots are the children and the women. The overall food security at the national level entails three basic issues viz., availability, stability and accessibility.

In essence, the issues of food security can be broken down to production of foodgrains, price policy, public procurement of foodgrains, buffer-stocks, public distribution and international trade on one side, and population policy and planning and overall socio-economic development policy especially those related to income and employment generation, education, health, safe drinking water, housing and sanitation, on the other.

With this backdrop, the question that will continue to engage our attention is how to ensure that all people get access to good quality, safe and nutritious food or in the words of Noble Laureate Amartya Sen 'the issue of food entitlement'. The answer is as complicated as the enormity of the problem having several economic, political, social and environmental dimensions.

Contribution of Agricultural Cooperatives: Agricultural cooperatives have been playing a significant role in ensuring food security in various ways such as: a] Providing Agricultural Inputs including Credit; b] Marketing of Farm Produce; c] Agro-Processing; d] Storage; e] Production of Fertiliser.

It may be important to realise that in most poor, food insecure areas and countries, the two greatest potential resources available to address the problems of hunger and malnutrition are the local people and the agricultural productivity of land and water. To make sustainable improvements, investments will be needed in both of these resources. Investing in people will need to come in the form of education, clean water and sanitation, health and social services and when needed, direct food and nutrition support. Such investments are essential if the corresponding investments in agriculture and its productive sub-sector are to pay off. A hungry and malnourished population can neither work, nor learn nor prosper.

Total Quality Management [TQM] in Cooperatives

Cooperative management clearly needs high ethical standards but it also needs an analysis of the needs and values of society as they affect the cooperative customers and members. It is not enough to recognise the human-centred basis of cooperatives and the need for ethical values to inform management practice. The membership must not be viewed in the abstract simply as owners but rather as owners integrated into the wider society in the context of the marketplace.

Total Quality Management-TQM: TQM has evolved and developed into its present form from quality control and quality assurance. Quality is primarily a customer issue. It arises because customers require products and services which not only meet the performance requirements but also provide satisfaction in terms of safety, durability and pride of ownership. In an organisation, the achievement of quality standards is not restricted to the shop-floor or production department. It extends to all parts of the business from market analysis, conceptual design to marketing and distribution network. TQM, therefore, has to be driven through the entire range of business activities and requires continuous close relationships with customers, suppliers and employees. TQM, to be effective, requires leadership, a supportive organisational culture and human resource management strategies. World Class Cooperative Quality [WCCQ] develops TQM with the ingredient of added social value and protects TQM processes with cooperative values and purposes.

Quality is not the result of gimmicks, tricks or fads; it comes from developing a culture of openness, trust, fairness, integrity and hard work. Quality can only be achieved by creating a quality culture and

not by technical application alone. Quality cannot be improved by high investment in technology alone. Quality comes from people and is the result of attitudes and values. Organisational climate and culture decide the quality of products and services. TQM provides an opportunity to people to rethink about their value systems and beliefs.

Why TQM Now? Quality, therefore, has become a corporate strategy of doing business. It is no longer an option, it is a positive requirement. Among many other benefits, TQM results in: Committed customers; Increased productivity; Reduced costs; Better profits; Improved institutional image; Employee motivation; Team spirit and increased participation; Improvements in attitudes and value system; Dedicated management; and Positive organisational culture.

An Integrated TQM Model: It takes ten components to be implemented in an integrated way to achieve total quality. They are called components as all of them are necessarily required to become a total quality cooperative: 1] Quality Policy and its Communication; 2] Team Work and Participation; 3] Problem Solving Tools and Techniques; 4] Standardization; 5] Design and Implementation of Quality System; 6] Quality Costs and Measurements; 7] Process Control; 8] Customer-Supplier Integration; 9] Education and Training; and 10] Quality Audit and Review.

TQM is an approach to improve the effectiveness and flexibility of an organisation, as a whole. It will not succeed if line managers, HRD people and employees fail to work together. TQM is not only the Management of Quality but also the quality of Management. It is fitting to quote here Dr. Deming and Peter Drucker: 'You can begin anything you want, as long as you start now' -W. Edwards Deming; 'What we need to learn from the Japanese is not what to do, but to do it' . -Peter Drucker. The management practices can be translated in the variety of ways such as, establishing a culture which treats problems as opportunities for improvement rather than blaming people.

The classic definition of quality has perhaps been provided by Dr. Edwards Deming: "Good quality does not necessarily mean high quality. It means a predictable degree of uniformity and dependability at low cost with a quality suited to the market." Quality in the context of organisation and their customer relationships is both about the definition of objectives and the establishment of the operating methodologies for their achievement. The ultimate goal of quality management is to secure a competitive advantage in the marketplace. It seeks to do this both in terms of cost of production and delivery and in the closeness of the matching achieved between the service or product provided and the customers "ideal" specifications.

The Japanese Union of Scientists and Engineers and particularly their Quality Control Research Group [commenced in the late 1940s] picked up the ideas implanted by American production engineers lecturing in the 1950s like W.C. Deming and later by the total approach advocated by A.V. Feigenbaum which led to the Japanese innovation [linking the technical and social dimensions of work] of Quality Circles originally conceived as study groups for foreman and eventually to Total Quality Management [TQM]. TQM has been defined as: "1] Involvement of all functions; 2] Involvement of all employees; 3] Continuous improvement as a goal; and the 4] Emphasis on the customers' definition of quality." To these elements Graham James adds that TQM is "...a process of habitual improvement with control embedded in and driven by the organisational culture.... The foundation of this theory is the generation of participation, involvement, pride in work and the removal of fear from organisations."

The further refinements leading to the development of TQM built on the idea of quality as customer-led and with it the recognition that standards of quality were themselves contingent on the definition of the market niche being addressed. In these developments we need to recognise the influence of

ideas rooted in the third school of management thought referred to as Structural Analysis.

The word 'Total Quality Management' was initially coined in 1985 by the Naval Air Command to describe its Japanese style of management approach to quality improvement. Japan's transformation from 'copier' to 'leader' is the result of the serious efforts of Dr. W. Edward Deming and Dr. Juran towards TQM and Quality. The approach of TQM is to increase the effectiveness and flexibility of an organisation as a whole. Basically, it aims at involving every person in each department of an organisation so that errors can be eliminated and goals achieved, while at the same time attaining the highest standards of quality. It aims at developing a right-at-first-time organisational culture.

TQM is a management philosophy that builds customer-driven learning or an organisation dedicated to total customer satisfaction with continuous improvement in the effectiveness of the organisation and its processes. To follow this philosophy, the management must develop a system to attain high quality standards. All members of the organisation have a mindset that is focused on satisfying customer needs and expectations. Such a mindset leads to better system functioning and goal achievement.

The loss of values in our society due to the onslaught of technology is cause for serious concern. Total quality achievement is akin to total war. The European Economic Community has appeared on the quality scene with a bang, splashing ISO-9000 across the continents. Also, in the wake of liberalisation, products from the international market are flooding the Indian market resulting in cut-throat competition. It has created a do-or-die situation for Indian manufacturers, where survival is possible only if they meet the highest quality standards. Indian industry is now striving hard to acquire ISO-9000 accreditation to survive in the international market.

Product and service quality are becoming national concepts to participate effectively in global economy. Total Quality Management [TQM] is concerned with the integration of all efforts in the organisation towards quality and customer care. TQM represents a customer-oriented and quality focused management philosophy and is often regarded as successful largely due to the commitment and vision of the people at the top and strong leadership. In TQM process, leadership, to a great extent, is inbuilt. The satisfaction of the ultimate user of the products of the IFFCO, the farmer, needs a total satisfaction, and it is, therefore, the ultimate goal of the IFFCO to provide quality products and quality services to the end-user. The acquisition of ISO-9002 Certification is due to the implementation of TQM concepts in the organisation in all fields – the products, the services, board-member relationship, organisation-employee relationship etc.

TQM is concerned with the integration of all the efforts of an organisation towards quality improvement, quality development and quality maintenance for meeting complete customer satisfaction. It develops a culture where each employee can directly participate in areas and decisions concerning his work. HRD is an ongoing and continuous function. It continues to focus on improving the human processes in the IFFCO.

TQM in IFFCO

Setting up of the HRD Section: With a view to enhancing employees' capabilities and for attaining both organisational and personal goals, the HRD Section was set up in the year 1988. The aim was designing appropriate action strategies for strengthening the human resource systems and organisational processes.

HRD Philosophy: The basic philosophy of IFFCO's approach to HRD is based on the following

objectives: a] Creating an ambiance of excellence in every sphere of organisational activities; b] Generating a feeling of confidence, dignity and self-esteem for spurring people to greater endeavors; c] Conferring recognition and rewards, both tangible and non-tangible commensurate with accomplishment of tasks; d] Evolving an organisational milieu, where there is free flow of ideas and openness and authenticity in interpersonal relations; and e] Enabling the employee to realise his potential to the maximum extent possible, through sharpening of skills and harnessing of expertise.

Thus, TQM in IFFCO is concerned with the integration of all the efforts of an organisation towards quality improvement, quality development and quality maintenance for meeting complete customer satisfaction. It develops a culture where each employee can directly participate in areas and decisions concerning his work. It, therefore, builds positive attitudes in employees towards quality, and respect for others leading to meaningful work and enhanced quality of life. TQM is an approach to improve the effectiveness and flexibility of an organisation, as a whole. TQM will not succeed if line managers, HRD people and employees fail to work together. Likewise, as HRD is an ongoing and continuous function, it continues to focus on improving the human processes in IFFCO. It has reaped a rich harvest by harnessing the power of TQM which is the single most important management methodology available to achieve and maintain world class performance and competitiveness.

The ISO-9002 Certification and the IFFCO

The IFFCO is committed to quality right from the date of its inception and has been maintaining it all along its journey of success. IFFCO's products carry no other names than IFFCO itself, which are established as quality products, thus IFFCO has acquired synonymy for Quality. In consonance with its innovative and challenging spirits, the IFFCO Marketing Division envisioned to acquire international quality certificate through recognised ISO-9002 Certification exclusively for Marketing. In 1996, ISO-9001 Certification was acquired by the IFFCO Kalol Plant. In the Marketing Conference at Lucknow, a topic on Total Quality Management was delivered by the Director, Total Quality Associates [TQA], New Delhi, and it was resolved to go for ISO-9002 in Marketing Division. This was obtained in June 1998. In future, ISO Certification will become more and more stringent and hard to achieve and maintain especially after new version of ISO-9000:2000 is introduced.

ISO in India: More than 4,000 companies in India have secured certification which include Central and State Governments, public and private organisations covering manufacturing, service organisations, defence establishments, research organisations, importers-exporters, software companies, as well as hospitals, hotels, engineering colleges and schools etc. To name a few: Apollo Hospital, Hyderabad; Regional Engineering College, Jaipur; BSES [formerly known as BEST], Mumbai; and a branch of PWD in Maharashtra. Out of 4000+ Certificate-holders, only 800-900 establishments of Central and State Governments have opted for ISO Certification; otherwise the majority comes from private sector. Apart from the Quality Management System [QMS], there is another International Standard ISO:14000 which deals with Environment Management System [EMS] in the production units.

Implementation of ISO-9002: Industries are given ISO-9001, 9002 or 9003 Certification if they comply with the certification audits. This generates confidence among customers that the industry does follow quality management systems as laid down by the ISO [International Organisation of Standardisation]. ISO-9000 is a series of standards: 9001 for quality assurance in design, development, production, installation and servicing; 9002 for production, installation and servicing; and 9003 for final product inspection and testing. ISO-14000 deals in environmental management systems.

The mechanism of implementation comprises of components like responsibility of top management

evincing interest in creating atmosphere of acceptance and ownership by one and all; and also ensuring continuity in implementation and continuous improvements. The need is felt to have quality focus right from suppliers upto customers. The concept of Quality Assurance is to produce and deliver *quality by plan and not by chance*.

The *ISO-9000 standards* have several benefits like: Internationally recognised standard; Improved confidence for customer and employees; Customer satisfaction and competitive advantage; Focus on prevention and platform for improvement; Improved communication and evidence of management control; Greater consistency and uniformity of action and so the quality; Formal definition of Quality Policy, Objectives, Responsibilities and Authorities; Less rejects, rework, duplicate work and scrap [less cost]; and, a corporate image for quality.

Surveillance Audit: In order to determine the effectiveness of the Quality System, quality audits are carried out. The Certification Body conduct Routine Surveillance at six-monthly intervals in order to monitor continuing conformance with 'THE STANDARD' of ISO-9000.

Management of Agro-Input Distribution in Cooperatives

The Cooperative Movement in India started way back in 1905. Till 1939, cooperatives in India were involved only in distribution of credit to the members. Its activities got diversified to the distribution of consumer articles and also some agricultural inputs in the rural areas over a period of time. Subsequently, based on the suggestions made by different committees and commissions, the cooperatives were given a significant role in distribution of fertilisers. Currently, cooperatives are playing a significant role both in production and marketing of fertilisers.

Cooperatives in India are very actively and intimately involved in several agriculture related activities. The most important activities are the disbursement of production credit and distribution of fertilisers and other inputs viz., seeds, pesticides and agricultural implements. Cooperatives are also involved in procurement of farm produce, processing and marketing of oilseeds, cotton, sugar, milk and milk products, distribution of essential commodities, clothes, kerosene oil and other merchandise etc.

Role of Cooperatives in Agricultural Credit Disbursement: Cooperatives play a very important role in the disbursement of agricultural credit. Credit is needed both by the distribution channel as well as by the farmers. The distribution channel needs it to finance the fertiliser business and farmers need it for meeting various needs for agricultural production including purchasing fertilisers. The credit needed by the farmers for purchase of fertilisers and other inputs is called 'short-term' credit or 'production credit' whereas credit needed by the distribution channel is called 'distribution credit'. Cooperatives also play a very important role in disbursement of 'medium-term' and 'long-term' credit needed by the farmers for purchasing agricultural equipments viz., tractors, installation of tubewells and land development works etc.

In India, 78% of the farmers belong to the category of small and marginal farmers. They depend heavily on credit for their agricultural operations. These farmers will not be able to adopt the modern agricultural practices unless they are supported by a system which ensures adequate and timely availability of credit on reasonable terms and conditions.

Fertiliser Distribution Channels: Fertilisers are produced/imported at about 200 locations in the country and distributed to the farmers scattered through the length and breadth of the country in about 600,000 villages through a network comprising of private and institutional channels. Some quantities are also made available through manufacturers' own outlets. Private trade accounts for about 60% of the total fertilisers distributed in the country followed by institutional agencies at 35%

and remaining 5% through the manufacturers' own outlets. Among the institutional agencies, cooperatives are the main agencies which alone account for nearly 31% of the total fertiliser business. The total number of fertiliser salepoints in the country is 272,000; out of which about 70,000 [26%] are institutional agencies' salepoints [mainly cooperatives] and the remaining 202,000 ([4%] are controlled by the private trade.

Agricultural cooperatives in India are the backbone of the cooperative system and involved in variety of functions and serving the rural masses by providing credit, fertilisers, seeds, agro-chemicals, agricultural implements etc. Their role has been commendable and helped in making essential inputs availability to the rural masses. These need to be further strengthened

Management of Warehousing System in India

Fertilisers alone constitute major chunk of input needed for agricultural production. More than 521.62 million tons of agricultural produce is available annually, most part of which need to be stored before it is consumed in different parts of the country. A properly planned storage infrastructure for agricultural input and output is, therefore, necessary.

In brief, proper storage leads to: a) minimize losses in transit and storage; b) ensure availability of fertilizers to farmers at required stage and at reasonable price; c) avoid distress sale by the farmers; d) reduce margins of middle man; and e) ensure availability of agriculture produce to the consumers at reasonable price. The demand for storage space will keep on increasing in the time to come as requirement for various inputs and need for storage of the outputs will keep on increasing.

Warehousing for Chemical Fertilisers: The fertiliser materials are of different nature like granular, in powder form, varying hygroscopicity etc. and, therefore, need to be scientifically stored. Briefly, some of the special requirements necessitating fertiliser warehousing are: a) Bulk of fertiliser consumption takes place in 3 or 4 short spells; b) Supply points are limited to a few hundred manufacturing units or ports, whereas, farmers' consumers are spread all over the country; c) Fertilisers need to be made available to farmers at their door steps at the appropriate time. This is possible only with a wide spread network of field warehouses from where the retailers can draw their requirements; d) Railways are over-burdened and are not able to meet wagon requirements of fertiliser industry. This, coupled with low priority for fertiliser movement, makes it unavoidable to position fertilisers well before the commencement of the season nearer to the consuming centres and to meet the peak demand. Placing fertilisers nearer to the consuming points will result in better sales and low producers inventory level.

Warehousing of Fertiliser by IFFCO: IFFCO started warehouse operations during 1975-76 when the first two fertiliser plants came into production. The space hired by IFFCO in 1977-78 was to the extent of 0.7 million tons. Space was hired from CWC and SWC. IFFCO started utilising godown facility of the cooperatives from 1987-88 with 33% reservation. The space with the cooperatives has since increased to about 45%. Some of the States like Gujarat and UP would have 60-80% space reserved with the cooperatives.

Management of Agricultural Services Provided by IFFCO

IFFCO was conceived on the principle that cooperatives from different States would contribute to the share holding of IFFCO and also act as its marketers. Cooperatives, were not equipped to undertake the responsibility of promoting IFFCO's grades which were new to the Indian farmers. Thus, in order

to popularise its products and to create a ready market for them before its plants went into production. IFFCO took upon itself the responsibility of undertaking systematic promotional and educational programmes, through a well-conceived approach.

Seeding Programme: A seeding programme during the three-year construction period had the advantage of: 1] Acquainting farmers with the benefits of using fertilisers distributed by IFFCO; 2] Giving IFFCO's promotion staff experience in analysing field conditions and problems and making specific recommendations; 3] Building up data on local agronomic and cooperative conditions; 4] Stimulating better promotion and administration of fertiliser distribution by IFFCO and its member-cooperatives; and 5] Giving the marketing staff experience in distribution of fertiliser, realisation of sale proceeds and various accounting procedures.

Farmers' Education Programmes: Location specific crop production technologies for increasing productivity of crops and fertiliser use efficiency are evolved continuously at the agricultural research stations. It is important that these technologies are quickly disseminated on the farmers' fields. Organising extension and promotional programmes with a coordinated approach, alongwith other experts and the extension workers is very important for advising the farmers on the adoption of agricultural technology. Some of the main farmers' extension education programmes deployed by IFFCO consists of crop on farmer's field. Various types of demonstrations include Two-Plots Demonstrations; Block Demonstrations; Critical Input Package Demonstrations.

Field Programmes: In these programmes agricultural universities, State Department of Agriculture, voluntary organisations, cooperative institutes and other developmental agencies are also involved to help the farmers to solve their problems. These are: Farmers' Meetings, Field Days, Crop Seminars, Agricultural and Social Campaigns, Training Programmes and Visits, and Advisory Committee Meetings.

Soil Testing: Keeping in view the importance of soil and water testing, IFFCO has pressed into service two mobile soil testing vans for soil analysis on farmers' fields. IFFCO has also set up two static soil testing laboratories at CORDET, Kalol in Gujarat and Phulpur in Uttar Pradesh each having an analysing capacity of 25,000 soil samples annually. Both the CORDET soil testing labs till 1997-98 starting from the year 1980-81 have analysed 542,000 samples. IFFCO field staff in 8,031 soil sampling campaigns had collected over 800,000 samples and got these analysed in CORDET and other labs.

Village Adoption Programme: A village is selected by IFFCO on the following lines: It should have potential for agricultural development and located in backward areas; It should have farming families between 100-200 for effective monitoring; It should not have been adopted by any other agency; The farming families should be ready to extend cooperation in implementing the developmental activities; and, It should be nearer to the Headquarters of IFFCO's Field Officer for a closer supervision. While organising the field programmes, emphasis is laid on improving efficient use of inputs, particularly, fertilisers. Seed-cum-fertiliser drill, plant protection equipments like sprayers, dusters etc. are made available for community use in the village. Wherever required, soil augers, sickles and other necessary equipments are also supplied to the farming families. Social aspects like human and animal health care, village sanitation, promoting animal husbandry as a subsidiary activity, installation of bio-gas, solar cookers, family welfare programmes, social forestry etc. are also kept in view while planning the developmental activities. Youth Club and Mahila Mandal are also involved in the programmes. Schemes like supply of books to children, construction of smokeless *chulhas*, distribution of storage bins, training on fruit and food preservation are imparted in villages. In a particular year about 500 villages are adopted by IFFCO, at least one village by a Field Officer. Till now about 2,650 villages have been covered under this programme.

Promotional and Publicity Activities: Mass media approach is followed in fertiliser promotion. The media adopted are: Radio, Television and Press, Fairs and Exhibitions, Technical Literature, Hoarding and Roadside Sign Boards, Crop Films.

IFFCO has undertaken various special projects under specific situation like dry land, problematic soils, tribal and backward areas etc. The special projects are initiated with an objective to help the farmers to grow a good crop with technological interventions and subsequently adopt the new technology. The projects are operational on the following theme: 1] Dry Land Farming/Area Development; 2] Land Reclamation; 3] Tribal Area Development; 4] Lab-to-Land Programme; 5] High-Tech Projects; and 6] Integrated Plant Nutrient System.

High-Tech Projects: Five such special projects, one in each IFFCO Zone were launched during 1995-96 for a period of three years. These projects, also referred as zonal projects are as under: North Zone -Bio-Pesticides; East Zone -Bio-Fertiliser; West Zone -Micro-Irrigation System; South Zone -Agricultural Implements; North-Central Zone -Plastics in Agriculture.

Project on Promotion of Bio-Pesticides: Though the per hectare use of chemical pesticides in India is much less as compared to many developed countries, yet the problem caused by their unregulated use is quite severe, particularly in some commercial crops. Indiscriminate use of chemical pesticides may also lead to environmental problem and food poisoning, therefore, the emphasis is being shifted to the concept of Integrated Pest Management [IPM]. IPM envisages a judicious mix of all techniques - cultural, mechanical, biological and chemical for keeping the pest population below economic injury level [EIL]. Training programmes for the project staff and farmers on IPM technology in general and bio-pesticides technology in particular have been organised to understand and adopt the technology.

Project on Bio-Fertilisers: The project is being implemented in district Midnapur, Murshidabad, Birbhum, Burdwan and Hoogly of West Bengal. Various bio-fertilisers like Rhizobium, Azotobacter, and PSB were applied to specified crops in large areas.

Project on Micro-Irrigation System: A project on increasing water use efficiency [WUE] through Micro-Irrigation System [MIS] was initiated since 1995-96 for a period of 3 years. The project has been launched in collaboration with the State Department of Agriculture; Cooperative Sugar Factory, Thane; and the College of Agriculture, Pune. The operational area of the project is limited to Haveli block in district Pune in the State of Maharashtra. The primary objective of the project is to propagate the concept of micro-irrigation system to increase WUE and thereby increasing irrigation/cropping intensity and productivity of sugarcane, horticultural and vegetable crops.

Project on Using Plastics in Agriculture: Plasticulture has shown potential in enhancing over all agricultural efficiency, particularly water-use efficiency thereby increasing productivity, minimising post-harvest losses and better utilisation of resources. Use of plastics in irrigation and water management has proved successful in increasing water-use efficiency to a great extent. The project on use of plastics in agriculture has been undertaken in UP and Bihar.

Project on Integrated Plant Nutrition System [IPNS]: The IFFCO has initiated ON-FARM studies on IPNS with the following objectives: a) to integrate various sources of plant nutrients; b) to promote nutrient application based on soil test; and c) to incorporate pulses, oilseeds, green manure, vegetable crop as a 2nd and or 3rd crop in the cropping sequence to maintain soil fertility and generate additional income to the farmer.

Research and Development Programmes

IFFCO Professorial Chairs: The agricultural universities and research institution has played a commendable role in developing location specific crop production technology and its dissemination at the farmers level. IFFCO instituted 14 Professorial Chairs in various universities and one at Vaikunth Mehta National Institute of Cooperative Management. [VAMNICOM], Pune. for collaborative work and also to seek their guidance in the field programmes on various aspects of crop production. These Chairs are instituted in the disciplines of Agronomy, Soil Science, Extension, Cooperation, Agro-Economics and Fertiliser Technology. These Chairs are facilitated by resource persons drawn from national institutes to review and formulate action plans.

Soil-Test-Based Trials on Farmers' Fields: Soil testing is one of the important tools to know the nutrient requirement for a crop/crop sequence. This helps to economise on cost of fertiliser and also in increasing fertiliser use efficiency. Keeping in view the importance of soil test, IFFCO has pressed into service two mobile soil testing vans for soil analysis on farmers' fields. The IFFCO has also set up two static soil testing laboratories at CORDET, Kalol and Phulpur each having an analysing capacity of 25,000 soil samples annually. IFFCO's field staff, through soil test campaigns, sends soil samples to these laboratories for analysis. Soil testing facilities available at state government laboratories and agricultural universities are also used for analysis.

IFFCO is better known for its promotional and educational programmes. A variety of need-based programmes have been introduced from time to time to make IFFCO a household name in the rural areas. With the intensively ramified network of cooperative outlets it has become essential to put IFFCO promotional and educational programmes uniformly all over in the marketing territory. In addition to farmers' education and fertiliser promotion activities a number of other programmes have been undertaken by IFFCO for the betterment of quality of life of rural community and building cooperative culture. IFFCO presently would like to continue these programmes. However, the emphasis in the future programme will be focused on balanced fertilisation, fertiliser use efficiency, promotion of bio-fertiliser, IPNS, natural resource management and environment-friendly sustainable agriculture. The programmes will have linkages with the promotion of sales of IFFCO fertilisers particularly in areas with low fertiliser consumption which need further efforts of market development.

As a future strategy of extension education, IFFCO wishes to develop some of the cooperative societies as *Agro-Info Centres* using internet communication technology. Geographical Information System [GIS] using satellite pictures on natural resource of the area including information on crop vigour etc. shall be available on IFFCONET to enable extension workers to advise farmers on optimisation of natural resources and taking care of crop and soil health on ongoing basis. The system will also have information on improved technology and input availability.

Governance in Agricultural Cooperatives in Asia

Governance is a broad term and cannot be defined in an exact frame and parameters. The parameters for governance will differ from organisation to organisation and institution to institution depending upon their needs and the character of the organisation. The "governance" for any government in a country will depend upon the nature of the legislation, the form of the government and the state of the people governed by it. Similarly, for a private organisation, the "governance" will depend upon the type of the business, masses catered, interest of the stakeholders and the fulfilment of the objects for which it has been established. Likewise, the "governance" for cooperative bodies will largely depend upon the form of the cooperatives, purpose for which it has been formed, the existing law for the

cooperatives and the business carried out and the objects, and the people involved with the organisation. The broad basic factors, which influence the "governance" in a cooperative organisation, are discussed in this paper.

The ICA Centennial Congress held in 1995, adopted the definition of a cooperative as: "*A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.*"

The autonomy of any economic enterprise will mainly depend on the level of its being self-reliant and financially viable. Since it is inherent in the functioning of cooperatives to follow the values of self-help, self-responsibility, democracy, equality, equity and solidarity, the principles of governance in cooperatives will, therefore, chiefly revolve around its autonomy and taking the enterprise to self-reliance by enthusing the members for their increased active participation in managing the affairs of the society for achieving the identified common objects through healthy professional management practices.

The Governance: In cooperatives, the "governance" implies democratic control through member participation and transparency in management systems to which the trust and mutuality are the foundations. In setting-up the good governance for effective functioning, some fundamental guiding objects like shared goals, relations built on trust, operational interdependence, relative equality in size and continued active dialogue with the members are of prime importance. Broadly, for cooperatives, the governance can be termed as a meaningful harmonious rhythmic relationship between the cooperative organisation and its members and constituents for achieving the common objectives through inter-dependence, observing cooperative values to the extent possible. However, no hard and fast rule, guidelines, or for that matter, a definition of governance could be given.

Therefore, the system of governance in cooperatives is relatively a complex system compared to private enterprises, because ensuring retention of control by members, to a great extent, depends on the awareness, understanding and knowledge of the elected representative about the cooperative philosophy, responsibility and their own role in the management. In order to insulate itself from the outside interference such as political and government, the prevailing legislation made for the cooperatives will also play a great role. Therefore, the good governance in a cooperative society will largely depend upon the following factors: Awareness to Elected Representatives; Cooperative Law; Role of Government; Federal Structure; Professional Management; Value-based Management; and Social Audit.

Cooperatives will always continue to be relevant to any country and its economy. In a developing country like India cooperatives are the only form of organisations which would return profits to the producers. "In the context of a fast dwindling of state role and increasing role of the market, cooperatives are the best form of enterprise for civil society to exert its influence and extract the optimum out of a quickly changing social and economic order."

Awareness to Elected Representatives: Essential expected role of the elected leadership in setting up a good governance, therefore, would be to take care of the members' needs, transparency and right of information to members, develop consensus in decision-making [democratic decision where the dissent is not to be overlooked] and above all, to ward off the interference by the non-stakeholders like government and politicians. In order that the cooperatives remain member-driven, the autonomy of the Board is important.

Cooperative Law: There is an urgent need to amend the existing cooperative law in such a fashion that the initiative rests with the members and the members' interest is protected and promoted. The government initiatives have reached to such a level that a general impression of cooperatives is that they are "created by statute, they are controlled by statute and so, there can be no objection to statutory interference with their composition on the ground of contravening of the individual right of freedom of association". In present cooperative forms since the interest of the members has taken a back seat and the cooperatives, by and large, have become government-directed and government-controlled bodies, in such a scenario, the governance in cooperatives becomes meaningless.

Cooperative system is most effective and most appropriate in democratic set up to bring socio-economic changes even in liberalised approach. Excessive political and bureaucratic interference [and obstinacy] is the key problems for the Cooperative Movement today. Root of most problems that confront cooperatives directly relate to the legal and regulatory environment, over regulation and virtually unlimited powers of the bureaucracy over cooperative enterprises, unaccompanied by accountability, has politicians and bureaucrats easy entry into cooperatives, allowing them to interfere in the day-to-day affairs for purposes both benign and malign.

The greatest challenge is to free the cooperatives from bureaucratic control and political opportunism. Cooperatives suffer often on account of excessive state government interference leading to slow pace of changes in cooperatives including achievement of adequate governance compared to other rural financial institutions. There is a need to give a boost to cooperative spirit to achieve a transparent cooperative policy. This would enhance the opportunity for cooperatives to function as 'business enterprise' with social mission.

Professional Management: Whereas it is the collective responsibility of the Board of Directors to further and protect the interests of the members and carry out the business of the cooperative society according to expressed needs by the members, the role of "professionals" in setting up good governance cannot be ignored. Taking advantage of the lack of awareness about cooperatives and the business, often the expert professionals dominate the cooperative governance and often indulge in such activities, which are neither the social nor the cultural needs of the members. It is, therefore, imperative that the professionals who are associated actively in the jobs of the cooperatives should be necessarily inducted into understanding cooperative philosophy, cooperative way of functioning and, above all, respecting the democratically expressed needs of the members.

Value-based Management: The "Value-based Professional Management" which has been introduced by the Leicester University, is currently being intensely debated. The concept of value-based management emanates out of the thinking that there should be only one unified board in a cooperative society to build a collective competency by bringing in professional managers as a united team on the Board to achieve the objects of the cooperative society. The team of professional managers on the board, such as functional directors, allows them to comprehend the thinking of the elected leaders in its totality and thus are able to serve their members without compromising their professional management capabilities. The concept of the value-based management is adjudged to be better to any other corporate competitor because cooperatives are owned by members who are also the users of the services generated by it and not merely customers alone. The underlying current of this concept is that the professional managers must lead first and management of implementation afterwards. This concept will have ample scope to allow policy formation to be driven by both member-lead philosophy and business results.

Governance in the Management of Cooperatives

Governance is not government as such. Governance is one of the characteristic of any institution that is concerned with governance, or management of governance. Governance is the reflection of the quality of management. Each nation's path to good governance is different, depending on culture, geography, political and administrative traditions, economic conditions, and many others.

Governance is a simple concept at heart: *good governance is good government*. The concept relates to the quality of the relationship between government and the citizens [cooperative and its members] for whom it exists to "serve" and "protect". To put it more precisely and simply, governance means *the way those with power use that power*. The concept, therefore, has political and economic dimensions. Issues of political governance include the mechanism by which the public's political preferences are ascertained and leaders chosen. These are the fundamental governance concerns.

Four Pillars of Governance: The instrumental nature of governance implies that the four governance pillars are universally applicable regardless of the economic orientation, strategic priorities, or policy choice of the government in question. As mentioned in the 1998 Annual Report of the Asian Development Bank these four pillars are: Accountability; Transparency; Predictability; and Participation.

Accountability is the capacity to call officials to account for their actions; *Transparency* entails low-cost access to relevant information; *Predictability* results primarily from laws and regulations that are clear, known in advance and uniformly and effectively enforced; *Participation* is needed to obtain reliable information and to serve as a reality check and watchdog for government action. Governance intervention should encourage the formation of social capital i.e., the stock of trust and information exchange at the base of civil society.

Governance and the Principles of Cooperation: Governance emanates from the guiding principles [which have been established by the International Cooperative Alliance in the form of Principles of Cooperation and which are universally-accepted for the last 105 years] and the legal framework [which has been provided by the State through the cooperative legislation and Cooperative policies]. We are always and already conscious of the rights and duties of members of cooperatives and member-cooperatives. We should also take note of the rights and duties of the State vis-à-vis the Cooperative Movement.

Creating parallel and the so-called "autonomous cooperative laws" are no solution – cooperatives having government financial stake are governed by one law and the cooperatives where there are no government stakes are governed by another law. These are mere academic exercises in futility and only for the elite.

In having a more member-driven cooperative law, the national federations have to play an important role. The role of the national apex unions and federations which are supposed to represent the Movement as its spokesman at various national and international fora becomes more pronounced. These institutions, through their ethical governance, set an example of a "Role Model" for others to follow and thwart the anxious designs of the government to make inroads into the management of their affairs directly or indirectly – to satisfy the wishes of politicians and the bureaucrats. The situation gets worse when the national leadership, in order to satisfy their self-interests e.g., overshooting the mandate of term of their office etc., succumb to external directives and hidden high ambitions. Consequently, the leadership is tempted to temper with the sanctity and ethical values of the charter and manipulate the well-established norms, precedents and practices. The governance thus is eclipsed with methods which run contrary to the spirit of the Principles and Values of Cooperation.

Good governance emerges through honest application of prevailing laws and respecting the spirit behind these prevailing laws. Circumventing the cooperative laws for self-interest does not qualify to be called as good governance in cooperatives. People look for a "role model", people look for good governance, people generally respect and abide by the "rule of law" in which they lay their faith and trust.

Indicators of Good Governance: The Principle of Accountability and Answerability: It has often been found that the honorary office-bearers of cooperatives tend to prove to be more expensive to the organisation than the paid board members – they often make use of the facilities of the organisation without any compensation being paid to the organisation – perhaps as a matter of right! Honorary Chairman/Presidents tend to become full-time working officials thereby disregarding and eroding the status and authority of the chief executive officer and other managers. While taking critical decisions [especially the economic decisions] chief executives are hardly consulted by the committee members – they tend to distribute the benefits [rather, kick-backs] among themselves! In order to have a proper control on the management of assets and resources of cooperatives and to attract right type of objective leaders it is much better that the posts of chairmen and other board members are compensated through monthly/yearly wages and their retirement ages fixed. Such leaders will then know how much they can get from their cooperatives rather than their enjoying the perks and resources on an open-ended scale.

Cooperatives and the International Platform: Cooperative institutions are people's organisations which are formed by the members [voluntarily], owned by them [by purchasing shares and on payment of prescribed admission fee and by agreeing to abide by the bylaws, rules and policies of the cooperative], and run by them [democratically and in accordance with the universally-accepted Principles of Cooperation and through the management organs – elected or employed], to satisfy their social and economic needs [through active participation and mutual help].

There was an urgent need for guidance to many governments on policy regarding cooperatives and the Cooperative Movement in view of the importance of the Movement and to imbibe the elements of good governance within the cooperative institutions. The International Cooperative Movement itself had comprehensively reviewed its values and principles and the nature of its proper relationship with other sections of the society, including government, and adopted a new Statement on the Cooperative Identity [ISCI] at the Centennial Congress of the ICA held in Manchester in 1995.

Governance, and for that matter, good governance, is not the game of singles. In this case, the governments and the Cooperative Movement have to join forces to bring about positive changes in favour of the ultimate basic members. Cooperatives have enormous strength to work as pressure groups.

Good Governance Calls for Harmony, Not Conflict: Cooperatives are not and need not to be completely under the shadow of the government. They are recognised by the State and hence a legal identity has been accorded to them through the instruments and functionaries of the government. Both of them are concerned with the well-being of the people. They are not the rivals to each other. They are the equal partners in the process of social and economic development. The point of conflict arises when the people's organisations are controlled, manipulated and managed by the government leaving the owners high and dry, and, when their rights and initiatives are encroached upon. There is a need for instituting the feelings of harmony rather than perpetuating conflicts.

Such conflicts can easily be avoided if there were codes of ethics agreed upon by the various sectors of the Cooperative Movement. A code of conduct/ethics is an effective means of reducing areas of

friction, misunderstanding, toning down the hard feelings and promoting a healthy climate to give the leaders and others a chance to institute a good governance through the instrument of harmony.

It is worthwhile quoting a few recommendations that were made by the Corporate Governance Working Group of the Cooperative Union Ltd. [UK] in April 1994:

“The President/Chairman should stand back sufficiently from the day-to-day running of the business to ensure that the Board is in full control of the society’s affairs and alert to its obligations to its members:

“The positions of Chief Executive and Secretary should not be occupied by the same person, except, possibly in the case of the smallest societies:

“All directors should have access to the Secretary and the removal of a person from this office should be a matter for the whole Board:

“Each cooperative society should develop and introduce its own Code of Business Ethics.”

A number of Cooperative Movements in developed countries have strongly stressed on the following points for the cooperatives and cooperative leaders to follow:

- Better transparency and accountability is established by holding statutory meetings regularly, in time, in a democratic fashion and relevant documents e.g., agenda notes, audit reports and working reports being supplied to the members sufficiently in advance;
- Honorary office-bearers tend to prove to be more expensive to the institution. They should be paid and they should be assigned specific tasks to ensure their genuine participation in the affairs of the cooperative on the principle of accountability;
- The entire Board is collectively responsible for the business performance of the cooperatives [including losses];
- Board members and the chief executive should have their job descriptions written down for a better participation, decision-making and follow-up;
- There should be a constant flow of information through consultations and documentation between the Board and the chief executive of the organisation, and all decisions taken in the Board should be in the knowledge of the chief executive to ensure a proper implementation; etc. etc.

The “Role Model”: It is for the national unions and federations to get together in the name of their constituents and the Cooperative Movement, as a whole, and unitedly prevail upon the government to review and revise the existing cooperative legislation and related policies to make them more member-friendly and cooperative-friendly. It is equally essential for the federations and top leaders to present “role models” for their constituents to follow. Only then good governance has better chances to prevail and develop further to strengthen the elements of a civil society.

Management of Cooperative Legislation and Legal Framework in Asia-Pacific Region

It has been found that in the Asia-Pacific Region even today a vast majority of co-operative leadership continues to look towards government for guidance and financial support more than towards their members. Such an attitude has made the governments more conscious of their right not only to govern the cooperative institutions [using the cooperative law and government financial inputs as

pretexts] but also control their destinies. If this attitude is not changed, both by the Governments and cooperative leaders, cooperatives will not be able to stand long. In the present scenario of Open Market system and stiff competition from multinationals and other private enterprises, cooperatives will have to compete and justify their existence by showing efficiency, better services and competence. This will also need extensive, major and urgent changes in the existing cooperative legislative structure. With their hands and feet tied under the existing laws and with a variety of over-riding powers of the government, in many cases, cooperatives will not be able to compete and stand with the market forces. Therefore, there is a need to examine the various existing cooperative laws in the countries in today's context and changes brought so that the cooperatives are able to stand and play an effective role to serve their members and needs of the society at large in matters such as environment protection, food security, gender integration etc.

Early Cooperatives Laws: The first attempt for the systematic self-regulation of the cooperatives could be found in the model rules or by-laws adopted by the third Cooperative Congress of UK in 1832. These model rules were further expanded and recast in the "Laws and Objects of the Rochdale Society of Equitable Pioneers" in 1844 which ensured *discipline, commitment, honesty and transparency* in the working by the members and office-bearers and proved the basis of success of the cooperatives in UK and Europe, and, in course of time, became the basis of the Cooperative Principles. The first separate law for cooperatives in Europe was in UK in 1952 called "The Provident and Industrial Societies Act" and, in Austria, Law on Cooperative Credit Societies' in the same year. The UK Law was enacted due to various constraints in the Friendly Societies Act under which cooperatives were registered in the UK before this Act. The cooperatives, their leaders and Christian socialists were actively involved in the framing of this law. The next country to have cooperative law was Germany.

The cooperative laws in colonial Asian countries were drafted by the foreign bureaucrats and cooperatives or cooperators were not involved as in the case of UK, Germany, and other European countries. Thus in the framing of cooperative laws the main consideration had been, "what is good considered by the state and not by the members or the people". The cooperatives were made to look towards the Department and not to their members for guidance and working. The post of Registrar was borrowed from the United Kingdom.

The situation changed considerably in the second half of the present century when most countries got freedom and national governments took over. Practically in all countries cooperatives were considered as an instrument of bringing socio-economic development and particularly agricultural production and rural development. Governments provided liberal financial assistance and support to the cooperatives. In the process while quantitatively cooperative grew manifold it suffered in quality. In many countries cooperatives lost their basic character and became more of state agencies. In many countries cooperative laws were modified to vest more and more arbitrary powers into the cooperative department. The situation further worsened by using these powers for the benefit of politician and bureaucrats. As a reaction to this, the Royal Commission on the Cooperative Movement of Ceylon has this to say: "*It is notorious and scandalous that cooperative societies and the Cooperative Movement generally in Ceylon have been outrageously misused by certain politicians to serve their own ends. In some places their machinations have gone far to undermine two levels of organisation..... In many societies the politicians are in almost absolute control of the Movement with the result that non-political initiative and leadership have been pushed into the background and silenced. In such a situation neither cooperators nor government can play their respective roles properly and the whole system suffers.*"

Developments in UK and Europe: The Asian Cooperative Movement was greatly influenced by cooperative development in Europe. While there were considerable similarities in socio-economic situations between Asia and Europe during the 18th and 19th century; to a certain extent agricultural and rural economy in many parts of Asia was better than many countries of Europe. The Cooperative Movement in Europe was an attempt to fight poverty and exploitation, by the working classes, artisans etc. supported by many social thinkers and reformers particularly due to the deteriorating socio-economic conditions of workers as a result of industrial revolution. These cooperatives were registered under the normal laws of the country, or even where specific laws were enacted, they were to provide them legal status and facilitate their working and allowed full freedom to frame their own rules of governance. Thus the Law has never interfered in the self-regulation of cooperatives.

Model Cooperative Rules in 1832: These model rules were greatly influenced by Robert Owen's vision of "Community on Land" when Rule 1 states "Let it be universally understood that the grand ultimate object of all cooperative societies whether engaged in trading, manufacturing or agricultural pursuits is community on land".

Rochdale Rules 1844: These model rules were based more on ideals than practical experience. These rules were modified and expanded based on the experience of the past and analysis of causes of the failures of co-operatives, in the laws and objects of the Rochdale Society of Equitable Pioneers in 1844.

Cooperative Laws in Asia: Japan was the first country in Asia to have a cooperative law in 1900 [Sagyō Kumiai Law] based on German cooperative law.

The Challenges: The present cooperative laws in Asia are the products of the period when cooperatives were extensively supported by the government and used for their planned development programs. Since the introduction of market economy and globalisation of trade, state support to cooperatives is constantly declining. However, no perceptible change is taking place in the cooperative laws and government-cooperative relationship. The government continues to exercise their control on the working of cooperatives including interference in the day-to-day affairs in many countries.

The cooperative leadership also continues to look towards government for guidance and financial support more than towards their members. If this attitude is not changed, both by the governments and cooperative leaders, cooperatives will not be able to stand long. *Cooperatives will have to compete and justify their existence by showing efficiency, better services and competence.* This will also need extensive, major and urgent changes in the existing cooperative legislative structure. With their hands and feet tied under the existing laws, in many cases, cooperatives will not be able to compete and stand with the market forces. Therefore, there is a need to examine the various existing cooperative laws in the countries in today's context and changes brought so that the cooperatives are able to stand and play an effective role to serve their members and needs of the society at large in matters such as environment protection, food security, gender integration etc.

Management of Women Cooperatives and Women-in-Cooperative Development

The 21st century has two grand visions for women, the economic vision and the social vision. Within this overall vision, cooperatives share a responsibility to develop a rising gender vision for the women of India. Men can contribute to this vision by improving their attitude and behaviour towards women so those women can perform a leadership role. The awareness of a vision itself has an uplifting impact on one's growth and performance. Success depends on the woman's own introspection and

awareness of her core competencies in her conceptual knowledge of cooperatives, behavioural skills in communication, motivation, team spirit and leadership and her skill in applying knowledge, doing things and achieving results. Formation of policies, which are gender sensitive, is the need of the hour. What is needed is world-wide awareness on equal rights for women in property and removal of gender bias in family laws. Rural women are actively involved in the process of food production, processing and marketing. They often lack the legal status which prohibits them to have access to credit, education and technology. Cooperative institutions can help accelerate the process of development and participation of women in their organisational and business activities.

The Focus: Though women are still far from enjoying rights and opportunities granted to them under the Constitution of India, fortunately today the focus has changed from men to women and their issues have come on the national agenda. It has forced the society to redefine the role and status of women in relation to the growth and development of mankind and to ensure that she gets equal opportunities with due weightage to her domestic responsibilities. The economic empowerment of women aims at bringing the women in the mainstream of national development.

Women Cooperatives in India: The Women's Cooperative Movement in India began in the early Seventies. The areas of activities may be classified into two broad categories: i) Production or workers' cooperatives; and ii) Service cooperatives. The women production cooperatives include dairy, fishery, industrial, and handloom societies. In this category the women members work together in groups - as part or whole-time basis - and earn income. These societies are self-managed with direct participation, mutual help and self-reliance. Service societies include women's consumer cooperatives, thrift and credit cooperatives and urban cooperative banks. The size of membership in these societies is large as compared to the production societies.

Dairy Cooperatives and Women Empowerment: The cooperative dairy industry is the largest in Asia. Though there are around 20% women members of dairy cooperatives, more than 95% women are engaged in dairy production. The NDDDB evolved Leadership Development Programmes for women so that they participate in the Annual General Body Meeting and become managing committee members. This helps in increasing their assets and they develop saving habit. Women always spend money on family health, education of the children and on consumer goods enhancing the economic status of the family.

Some of the *constraints* faced by women are:

Legislative: The Cooperative Societies' Acts are apparently gender-neutral but they are implicitly gender-blind. There are no women-specific provisions in the statutes, which can be clearly stated to be framed for the benefit of women; *Social:* The main reasons for socio-economic inequalities can be attributed to the structural obstacles arising from the fundamental conflict between the feudal culture and the cooperative culture. While the feudal culture is based on hierarchy and unequal relations among people, the very basis of the cooperative culture is equality amongst the members. The four key institutions i.e. the family, community, market and State, not only govern human existence but form the very basis of social construction for both men and women within them; *Financial and Professional:* Financial and professional assistance to women's cooperatives is also negligible; *Administrative:* There is no national cooperative policy on women involvement defining the role of cooperative institutions in the socio-economic development of women especially the women belonging to the weaker sections. There are no specific programmes either relating to cooperative credit, marketing or training assistance for bringing self-employed women or women

in unorganised sector into the Cooperative Movement; *Educational*: The facilities of cooperative education are limited. In view of women's traditional role and lower rate of literacy, education prior to registration of a society and continuous programmes after the registration are necessary.

Cooperative Education and Training for Women: Women cooperatives cannot function properly in the absence of facilities for cooperative education and training due to low literacy in rural areas. Besides there are other factors viz., lack of awareness, social taboos, purdah system, etc.

Gender Issues in Cooperatives: Gender integration in the overall process of development is yet another strategy for women development. Like other global Cooperative Movements, mixed membership is also prevalent in the Indian Cooperative Movement. In the absence of any macro level official data relating to women membership in mixed gender cooperatives, the actual participation could not be ascertained. Areas of concern for gender integration in cooperatives are: i] Recognising the role of women for development of cooperatives; ii] Efforts should be made to increase women membership so as to enhance women participation in cooperative development; iii] Identification of practical and strategic needs of women and organisation of women cooperatives on the basis of the need identification; iv] Creation of on-going mechanism within the cooperatives to facilitate implementation of the programmes for women development; v] Sensitisation of members, elected management and the employees of the cooperatives about the significance of gender integration through gender awareness programmes; vi] To create a system in cooperatives enabling women to have equal access to financial, credit, educational resources; vii] Creation of necessary legislative framework which would ensure women's involvement and participation in cooperatives; and viii] Establishment of linkages with sister cooperative organisations, government, development agencies and NGOs to materialise the objectives of the gender integration.

Development of Women Leadership in Cooperatives: In the cooperative sector, women need to be empowered in membership, employment management, administration and decision-making because women are the prime consumers and the prime producers of the cooperative services. And this is the main reason why women members refrain from seeking elections to the board of cooperatives. Some of the other reasons are: lack of time; fear of proving incompetent; lack of money incentives as leaders' duties are mainly honorary; family matters.

The Change: Cooperative organisation must adjust to change and that is where leadership and participation come in. Changing processes require openness, transparency and willing participation if they are to produce any impact. Critical scales can be achieved only if most of the workforce is involved and feels responsible for creating and implementing the change.

"Research carried out in 1997 discovered that 27% of all edible foodstuffs available in the United States end up being thrown away. Utilising a mere 5% of this amount would make it possible to feed four million people and save \$50 million in disposal costs. Japan faces the same situation."

Agriculture Towards Economic Renaissance

U.S. Awasthi

Sustainable agriculture is the prime need of India. The Indian farmers are mostly practicing subsistence farming leaving very little as marketable surplus. Agriculture is gradually becoming capital-intensive and science-based. New innovations like precision agriculture, transgenic cultivars, micro-irrigation system, selective agro-chemicals, green house farming, tissue culture and many other techniques have made agriculture a very complex and sophisticated profession. Some of the technologies are adopted in Indian situation and have shown promising results. The productivity of agriculture in India is still very low.

Fertilisers as source of plant nutrients have direct bearing on crop growth and productivity. Foodgrain production and fertiliser consumption has increased manifold in the past 50 years. The plant nutrients need will continue to grow to meet the foodgrain requirement of the growing population. India has become almost self-sufficient in the production of nitrogenous fertilisers. Fertiliser use in India has increased from 66,000 tons of major plant nutrients in 1951-52 to 16.67 million tons in 1998-99. Future performance and growth of the fertiliser industry at the national level will depend on a conducive trade policy, designed to protect the interests of both fertiliser producers and the farmers.

In the future, the emphasis should be on "growth with management" rather than "growth" per se. This new strategy will involve challenges in several areas: fertiliser use efficiency, energy consumption efficiency, policy and organisational reforms, environmental protection, and human and institutional capacity building. Mr US Awasthi is the Managing Director of the Indian Farmers' Fertiliser Cooperative Limited.

Introduction to Indian Agriculture

Late Eighteenth Century Malthusian theory that growth of the world's population would outstrip its food supplies is yet to be proven. Increased efficiencies in agricultural productivity in plant and animal breeding, in mechanisation, and other management techniques have been important factors in maintaining the balance between food supply and demand. However, adequate supplies of essential crop nutrients are, and will continue to be, the critical link between production of food to meet today's needs and long-term agricultural sustainability.

According to UN estimates as many as 80 million people are being added to our planet every year, while resources needed to feed them - land and water - are diminishing. At the moment, the world produces enough food for its people but often it is not available to those most in need, leaving some 800 million people hungry. To produce enough food to feed everyone in the year 2020, we must nearly double the world's food supply. As the population on our planet reaches 6 billion by 2000, the population of India will reach 1 billion. India's population was 846 million in 1991, nearly twice as large

as 20 years earlier, and three times the size of the population at the time of independence. The population growth rate has slowed down, from 2.1% per annum in the 1980's to 1.9% in the 1990's. It is expected that the population growth rate will further decline in the next century, yet the population of India will grow from 1 billion in 2000 to 1.3 billion by 2020. The scientific agricultural innovations of the Green Revolution saved the day. With new varieties of seeds and fertiliser usage, India was able to feed its people. Today, as population continues to grow, three out of every five infants are born underweight and malnourished, and a third of the nation's people live below the poverty line. As the country struggles to feed its people, vital resources and infrastructure such as water for irrigation etc. are dwindling. Therefore, sustainable agriculture is the prime need of India.

India is basically an agrarian society where almost two-third population is dependent on agriculture. However, the focus of attention on agriculture in the past 50 years has remained limited to national food security. As a consequence, the country has increased the foodgrain production almost fourfold since Independence [in 1947] and has become self-sufficient in foodgrain production today. Food security in India has been closely linked to the availability of foodgrain. The challenge of food security is not yet over as the population of the country is also growing fast and to cope up, the foodgrain production must touch 300 million tons by the year 2020. Therefore, the focus of agriculture will still remain on total food security which is dependent on cereal production and then for value-addition through commercialisation in agriculture.

India needs a new strategy to complement the economic reforms. A strategy designed to take full advantage of the country's agro-climatic advantages, huge tracts of cultivable land, and a large internal market to stimulate a rapid development of the rural economy. What is needed now is a national agriculture prosperity movement to realise the goal of Indian economic accomplishment. If pursued with confidence and determination, India can achieve widespread prosperity within a decade. The international community has noted with some amazement, India's impressive gains over the last 5 years in recovering from the severe economic problems brought on by high rates of inflation, high budget deficits and falling foreign exchange reserves.

India has enormous unexploited natural resources and untapped human potential. The country is also blessed with varied agro-climatic conditions with vast diversity of products. Contrary to the potential available, agriculture remained a way of life for our rural population. The Indian farmers are mostly practicing subsistence farming i.e., producing for their own family consumption only and leaving very little as marketable surplus. No doubt, the agriculture sector in India has demonstrated an admirable performance over the past four decades, but still there is abundant scope to harvest and stand in premier position in global market. After signing the GATT in December 1993, agriculture sector is destined to make a substantial contribution to nation's export efforts. This calls for a change in outlook and approach towards agriculture from subsistence farming to commercial farming. Government of India is also considering granting status of Industry to agriculture sector. Boosting farm exports is also a priority area under the New Agriculture Policy. Considerable emphasis is also placed on food processing sector.

Now the emphasis is not only on Green Revolution [cereals, pulses, oilseeds] but also on White Revolution [milk & milk products], Blue Revolution [fisheries] and Bio-Revolution [bio-tech activities and projects]. Our scientists, planners and administrators are also concerned about sustainable agriculture development i.e., the development of agriculture ensuring eco-friendly environment. Let us, therefore, examine the opportunities and activities that can be explained to achieve our overall growth and development of agriculture sector with emphasis on agro-exports, agro-processing with sustainable developments.

Contribution to GDP

Agriculture contributed more than 50% in the total Gross Domestic Production [GDP] at the time of Independence. This has declined to 25% now indicating that there has been very poor emphasis comparatively on commercialization of agriculture. Agriculture has remained as a way of life of the rural population of India for mere subsistence. Two-thirds of the population produces foodgrain for themselves and for the remaining one-third of non-farming community. In country like USA, only 2% population depends on agriculture who produce for themselves as well as for the rest of 98% and for exports. This indicates an investment opportunity for enlarging the farm produce which can be consumed without creating a situation for non-disposable surplus. When we consider the productivity in agriculture and non-agriculture sector, we find that productivity per person in agriculture has declined and it is manifold less than that of industrial sector.

Disparities between Agriculture and Non-Agriculture Workers

Agriculture alone contributed 49.3% of GDP in 1960-61 which declined to 28.8% in 1991-92 and further to 25.2% in 1997-98. The per worker income of Rs 529 in agriculture in 1960-61 increased to Rs. 19,406 in 1997-98 whereas in non-agriculture sector, the per worker income has increased from Rs. 1,239 in 1960-61 to Rs. 82,848 in 1997-98. Thus the ratio between the per worker income in non-agriculture vis-a-vis agriculture has increased from about 2.03 in 1960-61 to 4.3 in 1997-98 which is a matter of serious social and political concern.

Nonviable Operational Holdings

Average size of operational holdings for all-India has decreased from 2.83 hectares in 1960-61 to 1.55 ha in 1990-91. The emphasis of Indian agriculture is on small and marginal farmer, as a result the number of small and marginal holdings [less than 2 hectares] has increased. The number of marginal holdings alone [less than 1 hectare] has increased from 39.0% during 1961-62 to 59.4% in 1991, where as the share of large holdings of above 20 hectares decreased from 4.54% to 1.55% in the same period. Small and fragmented holdings also become a factor of poor investment in agriculture. The capital building in agriculture, because of this factor, has remained almost negligible. Even some assets created have remained underutilised. We must look for a minimum size of holding which will be viable and any further fragmentation of holdings below this level should be discouraged. However, considering the social dimension of rural India and split of families will contribute to further fragmentation of the holdings. Therefore, the approach to be worked out is to provide necessary inputs, implements and techniques to small farmers for a more productive farming leading to vertical expansion of agriculture.

High-Tech Agriculture

Agriculture is gradually becoming capital-intensive and science-based. New innovations like precision agriculture, transgenic cultivars, micro-irrigation system, selective agro-chemicals, green house farming, tissue culture and many other techniques have made agriculture a very sophisticated profession. These new technologies are in a position to fully exploit the yield potentials of various crops. Some of the technologies are adopted in Indian situation and have shown promising results. An example of drip irrigation alone in the state of Maharashtra and Karnataka is adequate to show the potential of new technology in enhancing yields, commercializing agriculture and even withstanding competition in international market.

Sustainability must include increasing production to meet the expanding food, fibre and fuel needs of a continually increasing population, while maintaining or enhancing the resource base. In order to meet the increasing demand of food for our growing population as also to increase our agro-exports, farmers and entrepreneurs will have to adopt accordingly high-tech system. This will require massive agricultural extension services from the State, Zilla Parishad, Panchayat, NGO's, fertiliser producers etc.

Sustainable Development in Agriculture

The Technical Advisory Committee of Consultative Group for International Agricultural Research [CGIAR] defined sustainable agriculture as "the successful management of resources for agriculture to satisfy the changing human needs, while maintaining or enhancing the quality of environment and conserving natural resources."

Sustainability in agriculture is a "Moving Target". No single method of farming in any region remains sustainable without continued intervention and change. Agriculture is based on dynamic biological, physical and chemical systems and farmers live in a constantly changing economic, social and political environment. The reality is that sustainable farming systems can differ from field to field and from one period of time to another. What is sustainable in one place, at one time, may not be sustainable for ever, which is why continued investments must be made in agriculture research and in updating farmers' knowledge and skills. To remain sustainable, agriculture must continually be supported with new knowledge, new practices and new technology.

Sustainable farming systems should be: 1] Economically viable; 2] Technically feasible; 3] Environmentally sound; 4] Socially acceptable; and 5] Politically supportable. Sustainable development defined as development that meets the needs of the present without comprising the ability of future generations to meet their own needs, in the context of agriculture, equal strategies that augment existing land and water resources through investment, technologies to increase the productivity of these resources, and pricing policies as well as management practices that economise on the use of such inputs.

Public investment in irrigation declined in real terms throughout the eighties on account of the erosion of investible resource, as the state governments could not recover, by way of user charges even one sixth of the cost of operation and maintenance of such works. These subsidies are leading to the over exploitation of existing water resources, resulting in water logging and salinity on the one hand, and depletion of ground water on the other. Extensive and improper use of pesticides on account of subsidies and inadequate extension services are also causing degradation of environment. The high subsidies on irrigation water and nitrogenous fertilisers led to their intensive use and wastage and thus decline in productivity of inputs used.

For putting agriculture on the path of sustainable development, effective statement are needed, in the first place, for increasing public and private investment in infrastructure e.g., irrigation, rural electrification, rural roads, warehousing and agro-processing. Besides the use of environment-friendly biotechnology's as a predominant source of agricultural growth is a necessity. Such a strategy alone can reduce pressure on natural resources and can minimise the pollution from the excessive use of chemicals. There need to be a thorough restructuring of institutions for the management of infrastructure like irrigation, rural electricity, research and extension and rural credit. Basically, these reforms need to be directed towards depoliticising and de-bureaucratising the management by involving the farmers through cooperative societies so that a link can be established between the efficiency of the

services delivered and charges to be collected for the services rendered.

Bio-Technology: Bio-technology is yet another area in food security which offers major inputs for healthier and nutritional food. Bio-technological intervention could provide more environmentally-sustainable practices in agriculture. With the advent of gene transfer technology and its use in the crops, we hope to achieve high productivity, better quality including nutrition and storage properties; ensuring adaptation of plants to specific environment conditions, increase plant tolerance to stress conditions and pest and disease resistance, etc. The genetically modified foods will have to be developed with adequate regulatory processes including public understanding. One should try and ensure proper labelling of the genetically modified food, giving consumer the choice. It is scientifically well-established that environmentally benign way of ensuring food security is through bioengineering of crops. One can even now develop designer crops. With the application of genetic engineering more fertiliser responsive varieties are to be evolved. Similarly, use of bio-technology in terms of identification, production and use of suitable strains of bio-fertilisers, bio-stimulants can supplement nutrients availability as well as increase nutrient use efficiency.

Tissue Culture: Productive agriculture requires quality planting material, which has been experienced as one of the hindering factors in commercial agriculture. Tissue culture technique, therefore, is a method for rapid vegetative propagation of large number of elite plants in the shortest time span. It is like zeroxing, i.e., production of any number of plants from a single plant. Such plants can be produced round the year independent of season. The plants so produced are free from seed borne diseases, uniform in growth, stronger than mother plant, early maturing and better quality producer.

This technique has wide applications in agricultural crops, horticulture, floriculture, medicinal plants, forestry and plantation crops etc. However, it is mostly employed in the plants which are vegetatively propagated and the traditional methods are costly and time-consuming. Tissue culture technique, in fact, has opened a new era of green revolution in horticulture crops. There are about 25 tissue culture units in India under private sector, most of them are 100% export-oriented units [EOU], with a capacity of 150 million plants per year. Since the general supply gap of the plants is so huge that the Department of Bio-Technology of the Government of India [DBT-GOI] has established about 100 units during the VIII Plan period. As the technology is established and the activity is relatively more profitable, corporate bodies are now venturing into this on commercial scale.

Green House Technology: Growing of plants under environmentally controlled conditions is green house technology. The green house technology which began in India in 1983 today encompasses about 100 ha. Corporate sectors have been evincing keen interest in this technology. Large industrial houses like ITC, SPIC, Harrison Malayam, Indo-American Hybrids, Tata Oriental Flora Tech have already started using green houses for either hybrid seed production or export-oriented floriculture and horticulture. Green house crop production is the most intensive method of crop production in agriculture. It is highly productive, conserves water and land and protects the environment. Production of off season vegetables and flowers are possible through this technology. The technology, therefore, offers immense, potential in our country. The cost of construction of green houses are cheaper in our country as compared to any European countries. The Indian Agricultural Research Institute [IARI] has developed low-cost green house structures supported with solar heating system which is very successful even in extreme cold areas like Laddakh as also in water-deficit areas of Rajasthan, Gujarat and Maharashtra. The technology is, therefore, expected to be utilised on large-scale for production of indoor flowers and vegetables, both for domestic consumption and exports.

Resource Base Opportunities for Crop Diversification

Availability of resources such as land, water, labour, and sunlight are critical for crop diversification schemes. Fortunately, India is endowed with fertile soils and ecological diversity. It also enjoys strong sunshine during most of the year. Irrigation potential is substantial and labour is also abundant and relatively cheap. Land, however, is a constraint on diversification, at least in the short run. It is scarce, and practically no extra land is available for cropping. Therefore, any new cropping programme would have to be accommodated within the existing area.

Genetic engineering and biotechnology have opened new vistas in the recent years to increase the production to the potential levels and achieve the foodgrains estimates of 370 million tons by 2020 AD. Incidentally, China with 150 million ha of agriculture land has been producing 400 million tons of food while our present production of 203 million tons only comes from 146 million hectares agriculture land.

Field Crops: India has land area of 329 million hectares of which the land available for crop production is 142.22 million hectares. Approximately 124 million hectares [87%] are being covered under food crops. The Green Revolution has increased foodgrain production over the preceding years at an average of 2.5% per annum which has made India self-sufficient in food with occasional exports. However, our average yield continues to be low as could be seen from the following Table-I:

Table-I Comparative Average Yields of Various Crops

Crops	India [kg/ha]	Foreign country [kg/ha]
<u>Food Crops</u>		
- Rice	2,915	8,567 – Egypt
- Wheat	2,654	8,313 – Netherlands
- Jowar	884	6,374 – Italy
- Maize	1,594	10,000 – New Zealand
- Barley	1,481	6,499 – France
- Cereals	2,232	7,497 – Belgium
<u>Non-Food Crops</u>		
Groundnut	988	4,600 – Israel
Soyabeans	955	3,750 – Italy
Tobacco	1,413	3,048 – Chile
Potato	16,877	43,681 – Netherlands
Sugarcane	69,737	115,284 – Peru

The productivity of our crops is very low as compared to world averages. Though this is due to the climatic advantage that temperate countries enjoy but within the tropical belt too, we are far behind the Netherlands, Egypt, France, Japan etc. The potential for raising agricultural productivity is enormous. India ranks at the bottom of the list of countries in the world in terms of productivity per ha on almost all major crops. In the groundnut segment, yields in India are 1/5th of Israel, average produc-

tivity in pulses is 1/10th the level of France. All this shows that Indian agriculture suffers from low productivity of its soil and water resources. Within the country, too large productivity gaps glare as between the higher productivity and lower productivity areas such as Punjab and Haryana in wheat production. This anomaly is seen even within the irrigated areas also. Such gaps give us the potential opportunity to step up yield level relatively with ease. In rice alone, about 32% of the irrigated area is of low productivity.

Commercialization of agriculture would make it possible to increase productivity to the maximum extent possible. The productivity of agriculture in India is very low. In spite of the improvement, so far, our productivity is less than the world average and also less than the countries similarly placed. For instance, China produced 6,331 kg/ha of rice, whereas we produced 2,915 kg/ha. Even in wheat, China produced 4,087 kg/ha compared to our production of 2,656 kg/ha [Table-II]. This gap can be made up if management is scientific and technology is updated.

Table-II: Land Use, Irrigation, Fertiliser Consumption and Crop Productivity in India 1996-97

Particulars	India	China
Total Area [million ha]	328.8	959.7
Land Area [million ha]	297.32	932.64
Arable Land [million ha]	162.5	124.2
Land under Permanent Crops [m ha]	7.2	10.91
Irrigated Area [million ha]	57	49.88
Irrigated area as % to arable land	33.6	36.9
Population [million]	851.8	1243.7
Fertiliser consumption [m tons]	14.31	35.98
Fertiliser consumption kg/h]	84.3	266.4
Crop Productivity [kg/ha]		
Paddy	2,915	6,331
Wheat	2,654	4,087
Maize	1,594	4,481
Cereals	2,232	4,844
Pulses	587	1,478
Potato	16,877	13,003
Soyabean	955	1,611
Sugarcane	69,737	75,982

The productivity of agriculture in India is very low. In case of foodgrains, it is nearly 1/3 to 1/2 of the productivity in developed countries. For optimization of the natural resources, a comparison with China will be quite inspiring. India has more or less same arable land and irrigated area compared to

China but the productivity in China is almost double for most of the crops. This shows the efficiency of resource utilisation there.

India will need a more diversified cropping pattern, including an increase in the contribution of non food crops output ratio to attain higher agricultural growth rates in future. Besides enhancing growth, diversification also contributes to nutrition, poverty alleviation, employment generation, and sustainable natural resources management.

Information Worker: As the profession of agriculture becomes more complex and more technology-oriented using the modern tools and techniques, it will be necessary for an agricultural worker to be a skilled worker rather than a mere worker for providing physical help in the work. The education system has to imbibe these knowledge transformations and also provide for extension education for the current workers to adopt and understand the technologies of farming. There is no programme or structured system of training for agriculture workers on scientific farming and agricultural operations. The vocational training courses in rural areas have to gear up to take up such challenges.

Marketing of Agricultural Produce at Grassroots Level

In India, after Independence, a series of reforms have been introduced to achieve the goals of the agricultural marketing system. Some of these reforms include setting up of regulated agricultural markets, cooperative marketing societies and introducing state trading for which the Food Corporation of India [FCI] was set up. However, there are still a lot of deficiencies in pre-harvest or immediate post-harvest sales at low prices, little grading at the village level, tie in sales and high marketing margins. These can perhaps be attributed to inadequate infrastructure of transport, grading, storage facilities, marketing credit, marketing intelligence etc. Deficiency perhaps also lay in putting greater emphasis on centralised wholesale markets rather in primary markets and village level functionaries. In the centralised wholesale markets, the capital intensity for these facilities is high and the chance of their percolating to small markets, small farmers and village petty traders are less whose services are equally important as of wholesale buyers. It is obvious that since the issue of food security is a complex one and has interrelationship with so many economic factors, agricultural marketing needs to be an integral part of the broader developmental policy.

In the country, the agricultural markets are regulated through a state level legislation. While the jurisdiction of the agricultural markets extends to every village, the facilities are almost entirely concentrated in the market yards, which are located in bigger towns. Therefore, rural markets play a complementary role only. These rural markets are multipurpose in the sense that they provide facilities for marketing of all kinds of goods including foodgrains. Although, the regulated agricultural markets can also perform the functions mentioned above, and there could be a possibility of duplication, but they are too distant for many villages. By proper coordination the duplication can be avoided and wherever it is essential in the interest of the farmers it should be tolerated.

A holistic approach is needed to develop market infrastructure. A market does not function in isolation, rather it influences nearby markets and, in turn, influenced by them. Therefore, efforts should be made to develop a complete market circuit for a commodity or a group of commodities. With the increased production through improved farming systems and modern technologies, a comprehensive strategy towards developing a modern agriculture marketing system has also to be evolved keeping in view the large number of small farmers. Only then can agriculture in India, boast of having come of age.

Post-Harvest Technology and Agro-Processing

Substantial quantities of farm produce are lost for want of proper storage and processing. The producer suffers economically because of these losses. The Indian farmer, as a producer, also does not get the benefit of value-addition to his produce. Post-harvest technology and agro-processing industry has to be farmers' own enterprise through collective or cooperative venture. Such steps will be a real boost for the economic renaissance. This will also encourage farmers for diversifying the crops which can bring more profit to him like floriculture, horticulture, livestock, etc. Availability of adequate infrastructure such as electricity, roads, information technology, irrigation, education, regulated markets etc. will be the need of the day for Indian farmers.

Horticulture: Horticulture includes cultivation of fruits, vegetables and also plantation crops. The climatic features of the country are very congenial for the cultivation of wide variety [both tropical and temperate] of horticultural crops on commercial scale. In fact, we are the second largest producer of fruits and vegetables in the world [37.13 million ton of fruits and 55 million tons of vegetables]. In both the cases the productivity, however, is low as the processing of these items are limited to less than 2%, resulting to high wastage and low incentives to the producer. Our per capita consumption of fruits [45 grams] and vegetables [112 grams] is much below the recommended levels 120 grams and 300 grams respectively. There is also a considerable scope for export of both fruits and fresh vegetables. Our share, however, in world trade of these items is negligible. This sector needs adequate priority in the national agriculture development policy. This industry has the tremendous job opportunities.

Floriculture: Floriculture industry is expected to come up in a big way in our country in future. Floriculture is cultivation of flowers, flowering plants and ornamental foliage plants. It could be for traditional home consumption or for export purposes and also for industrial uses. India has the advantage of abundant sensitive, varying type of soils and climatic conditions and cheap labour vis-a-vis most European countries. All these provide ample scope and potential for development of this activity in our country. The world trade in flower is estimated at about US\$25 billion and increasing @ 11% per annum. Though India has been identified in the world market as potential exporter for cut-flowers because of the present climatic and resources advantages, but its share in the world market is very low [2%]. An expert group has identified areas in Bangalore, Thiruvanthapuram, Pune, Nasik, Hyderabad, Western U.P., some places in Himachal Pradesh and North-East for intensive floriculture development. A few units have already entered into this area on commercial scale.

Poultry Farming: Poultry industry in India is poised for rapid growth. India stands 6th in egg production with 28.5 billion eggs per annum and 25th in broiler production with 400 million broilers per annum. Annual growth rate of production of eggs is 10% and that of broiler is 20%. The world market of processed chicken is about US\$ 5 billion, which is very attractive for India. Our exports during 1994-95 were about \$ 7.5 million. The countries importing poultry from India are Oman, Saudi Arabia, Maldives, Bahrain, Hong Kong, etc. Poultry activities are not limited to a small scale only. Few corporate giants have also entered into this industry with foreign collaboration. Three egg powder making units [100% EOU] are coming up. Our products are going to be cheaper in the global market once the subsidies which are very high in European countries are withdrawn/reduced and increased in our country in view of the GATT. All these indicate tremendous potential and prospects for development of this activity in our country in the near future.

Dairy and Meat Products: India possesses largest cattle population and now rank first in the world in milk production [71.0 million tons - 1997-98]. Major produce of milk and milk products are consumed in domestic market. Exports are not significant. The per capita availability of milk of 66 kg. per year is

much below the ICMR recommendations. There are restrictions on the export of certain dairy products like raw milk and baby milk, but exports of butter, powder milk and ghee etc. are permitted for which there is tremendous scope in global market. Therefore, there is a lot to be done in this area too.

With the growing urbanisation and increasing quality consciousness, the market for scientifically produced meat products is expected to grow rapidly. There is also growing demand for ready-to-eat and semi-processed meat products on account of changing life style of people. There is scope for export of these items to neighbouring countries especially in the Middle-East. The current production of meat and poultry products [excluding eggs] in India is estimated at over 200 million tons per annum. A large portion of this is not slaughtered mechanically in hygienic conditions which need to be attended for export. The sector too needs boost not only to meet our own increasing demand but also to increase our exports.

Fisheries Development: The importance of fishery sector in India is now well-known and it has a place of pride in the national economy. It helps the human kind by supplementing protein rich, low cholesterol food, generating employment opportunities and gainfully utilising the unproductive or marginally unproductive land. The activity is remunerative to the farmers and also to the nation by generating export earnings. In the year 1997-98, our foreign exchange earning from this sector was to the tune of Rs. 43,130 million. In global market, there is huge demand for sea food. Asian region contributes about 85% of seafood supply but our share is hardly 2%. Our production [5.1 million ton] as also the productivity is very low. Technological developments in fish farming i.e., composite fish culture, semi intensive and intensive fish farming, induced breeding technique to produce fish seed have opened avenues to increase the productivity manifold.

Role of Fertilisers in Agriculture Production

Fertiliser use has been one of the main factors in bringing Green Revolution in India and making it self-sufficient to meet its present requirement.

Fertilisers as source of plant nutrients have direct bearing on crop growth and productivity. Foodgrain production and fertiliser consumption has increased manifold in the past 50 years. The plant nutrients need will continue to grow to meet the foodgrain requirement of the growing population. India has become almost self-sufficient in the production of nitrogenous fertilisers. For phosphatic fertilisers though we have domestic capacity but we largely depend on imports for raw materials and for potash we are entirely dependent on imports. Besides these three major plant nutrients [N, P & K] which dominate the fertiliser scene, need for fertiliser sources for secondary and micro-nutrients is also emerging. Achieving higher agriculture production, therefore, will largely depend upon our capacity to produce and manage fertiliser business.

Fertiliser contributes to increased crop production in several ways. First, by replenishing nutrients, it helps maintain and enhance soil fertility and thereby sustains crop production. Secondly, fertiliser enables adoption of high-yielding varieties [HYV], which can increase crop yields several fold. Fertiliser use can increase both crop yields and biomass [living matter above and below the ground]; additional biomass can be used to augment the supply of organic matter [living and dead matter in the soil]; which improves moisture retention and nutrient use efficiency and thereby contributes to increased crop yields. Well-managed fertiliser use can create a "win-win" situation by increasing food production and reducing soil degradation in nutrient-poor, fragile soils.

The role of fertilisers in increasing foodgrains production is evident during the last 35 years. About 25% increase in agriculture production has come through area changes and 75% through yield in-

crease. It is estimated that irrigation has contributed about 18% and over 56% in yield increase could be attributed to fertiliser usage. In India any further increase in yield will come through increased and more efficient use of seed, water, fertilisers. The two major foodgrain crops, wheat and rice, consume the lion's share of fertilisers used in India. Special attention was paid through a package of practices to the increased production of oilseeds, and pulses which has paid high dividends. Substantial outgo of foreign exchange towards import of edible oils has been reduced. The thrust must continue towards successful management of resources of agriculture.

Fertiliser use in India increased from 66,000 tons of major plant nutrients in 1951-52 to 16.67 million tons in 1998-99. Foodgrain production in the country also increased to 203 million tons in 1998-99 from 52 million tons in 1951-52 [Table-III]. Fertiliser consumption in terms of plant nutrients per unit of grossed cropped area in India is still very low, average being 88.61 kg/ha. Productivity of foodgrain crops in the country is also quite low, around 1.63 ton/ha, which can certainly be doubled by enhancing per unit fertiliser use. The country will need to produce at least 300 million tons of foodgrains by the year 2020 which will necessitate the use of 30.35 million tons of NPK nutrients from various sources. About 90% of country's present demand of nitrogenous and phosphatic fertilisers is fulfilled by the domestic production. The country is looking ahead for self-sufficiency in fertiliser production, particularly that of nitrogenous and phosphatic.

Table-III: All-India Fertiliser Consumption of Plant Nutrients and Foodgrain Production

Year	Fertiliser Consumption			Foodgrains Production		
	Mil Tons	Growth Rate %	Kg/Ha	Mil Tons	Growth Rate %	Kg/ha
1951-52	0.05	—	0.60	52.00	—	536
1961-62	0.34	19.0	2.20	82.71	4.3	705
1971-72	2.66	20.6	16.20	105.17	2.2	858
1981-82	6.07	7.8	34.30	133.30	2.2	1,032
1991-92	12.73	7.0	69.80	168.37	2.1	1,382
1998-99	16.67	3.4	89.80	202.60	2.3	1,627

Domestic Capacity and Production of N and P₂O₅

What started as a small fertiliser industry, with a capacity of 89,000 tons of N and 28,000 tons of P₂O₅ in 1951-52, has now become a giant with a total capacity of 10.94 million tons of N and 3.20 million tons of P₂O₅ in 1998-99. While there has been a sustained increase in N capacity, the trend in P₂O₅ has been less encouraging.

Domestic production of nitrogenous fertilisers increased from 29,000 tons in 1951-52 to 10.48 million tons in 1998-99. The increased production in nitrogenous fertilisers has come by building new capacity over the years and also from obtaining higher operational efficiency. Production of phosphatic fertilisers also increased from 10,000 tons in 1951-52 to 3.17 million tons in 1998-99. All-India capacity utilization of N and P₂O₅ has gradually improved over the years and is now being maintained at around 100 per cent level of N and P₂O₅ fertilisers.

India's fertiliser production strategy has been aiming at self-reliance in fertiliser production and

indigenisation of the industry. Presently, some sick units are not operational and some others are not being fully utilised. Since these plants are highly capital-intensive and the fertiliser demand is more than the production, full utilisation of existing capacity through revitalization of sick plants, expansion of existing plants and new grassroots plant are being planned.

The new capacities which have been set up recently and are under implementation during the Ninth Plan period are expected to yield an additional capacity of 3.36 million tons of N [7.1 million tons of urea] and 1.45 million tons of P₂O₅. [Table-IV].

Table-IV: New Urea Capacity in India during the Ninth Five-Year Plan

['000 tons]

Producer	Location	Extra Capacity	Feed Stock
<u>Completed</u>			
IFFCO	Aonla, UP	726	Natural Gas
IFFCO	Kalol, Gujarat	150	[Revamp]
IFFCO	Phulpur, UP	726	Naphtha
Madras Fertilisers	Manali, Tamilnadu	115	[Revamp]
National Fertiliser	Vijaipur, MP	726	Natural Gas
Nagarjuna Fertiliser	Kakinada, AP	495	Naphtha
<u>Under Implementation</u>			
Duncan Industries	200	[Revamp]	
National Fertiliser	Nangal, Punjab	210	[Revamp]
RCF	Thal Vaishet, Maharashtra	110	[Revamp]
Chambal Fertiliser	Gadepan, Rajasthan	775	Naphtha
IFFCO	Nellore, AP	726	Naphtha
KRIBHCO	Gorakhpur, UP	726	-
RCF	Thal	726	-
<u>Under Consideration</u>			
NFL	Panipat, Haryana	726	-
TOTAL NEW CAPACITY		7.1 million tons per annum	

Investment in Fertiliser Industry

Fertiliser production is capital-intensive, and presently the cost of production of indigenous material is high and returns on investment are low. Uncertain policy environment is also not encouraging the investment in this sector. The Indian fertiliser industry which achieved phenomenal growth in the eighties, witnessed tapering off in the growth during the nineties. Presently, as on March 31, 1999, the public, private and cooperative sector share 41, 37 and 22% of N capacity, respectively, whereas their share in P₂O₅ capacity is 25, 65 and 10% respectively. In the recent past, the fertiliser industry has not

attracted much investment. New grassroots plants have not been established. In spite of liberalised economy and delicensing of fertiliser industry no multinational has invested in fertiliser sector in India so far.

Four fertiliser projects, with a total investment of over Rs. 56.00 billion, are being considered by the Government of India to meet the shortfall in urea, which is estimated to be about 4.95 million tons by 2003. The projects being considered are IFFCO's Nellore [Rs. 16.70 billion], RCF Thal Expansion [Rs. 12.63 billion], KRIBHCO Hazira Expansion [Rs. 12.68 billion] and KRIBHCO's project at Gorakhpur [Rs. 14.79 billion]. Each project will have a capacity of 0.77 million tons of urea per annum.

Capital cost reduction of the fertiliser plants is another area of challenge. Changes in metallurgy of the equipments, improvement in catalysts and an efficient project management may possibly lead to capital cost reductions.

Imports of Fertilisers: Fertiliser consumption in India has always exceeded the domestic production both in case of nitrogenous and phosphatic. The entire requirement of potassic fertilisers is imported, as there are no indigenous raw materials available. India's fertiliser consumption has increased faster than fertiliser production. As a result, India has always been a net fertiliser importer. India mainly imports Urea, Di-Ammonium Phosphate (DAP) and Muriate of Potash (MOP). Imports constitute about 19% of the total fertiliser consumption. After decontrol of phosphatic and potassic fertiliser in August 1992 and consequent sharp increase in their farm gate prices, there was depression in the demand for these fertilisers. Consequently, the volume of imports of DAP and MOP got reduced in the following years. In the case of nitrogenous fertilisers a few expansions are on the anvil and therefore, near self-sufficiency is likely to be achieved by the turn of the century. Urea import has reduced drastically in 1998-99. Urea is usually imported from CIS countries, East Germany and Middle-East countries.

As fertiliser is related to food production, dependence on import in a free market environment becomes a sensitive issue. Our past experience have shown that being a bulk buyer, whenever India has entered the international market for the imports, price of fertiliser in international market has increased significantly. Therefore, the country must have its indigenous capacity for fertiliser production. Import should be restricted to meet the gap between demand and domestic supply and not on the basis of make or buy option. Import duty may be levied to discourage dumping as and when required.

Fertiliser Consumption - Low Level of Consumption: Considering the consumption level in some developed countries, where it is more than 400 kg/ha of major nutrients, as in Netherlands, Korea, Japan and Belgium, the per hectare consumption of fertiliser nutrients in India is still very low at 88 kg/ha. Even our neighbours, in the subcontinent, have higher per hectare consumption of fertiliser nutrients [Pakistan 102.3 kg and Bangladesh 108 kg]. Within the country, there is large discrepancy in fertiliser use amongst different states [Table-V]. The highest per hectare fertiliser nutrients consumption is in Pondicherry and Delhi [467 and 363 kg] followed by Punjab 170.9 kg, Haryana 140.1 kg, Tamil Nadu 135.3 kg and Andhra Pradesh 132.4 kg. In the states of Maharashtra, Kerala, Jammu & Kashmir, Madhya Pradesh, Rajasthan, Himachal, Orissa, Manipur, Goa and Assam fertiliser consumption is less than the national average. Arunachal Pradesh, Mizoram, Nagaland, Sikkim have less than 10 kg/ha of fertiliser nutrients consumption.

Table-V: Fertilizer Consumption [kg/ha], Percentage of Net Irrigated Area to Net Cropped Area, Average Yield of Foodgrains

State	Fertiliser Consumption kg/ha 1998-99	% of Irrigated Area 1994-95	Average yield Foodgrains kg/ha 1996-97
Assam	18.5	20.6	1,294
Bihar	88.8	47.9	1,560
Orrisa	31.2	33.2	873
West Bengal	119.9	35.0	2,133
Haryana	141.2	76.4	2,843
Himachal Pradesh	39.7	17.5	1,562
Jammu & Kashmir	66.0	41.6	1,508
Punjab	177.4	93.7	3,787
Uttar Pradesh	119.9	67.4	2,083
Andhra Pradesh	153.4	38.2	1,776
Karnataka	96.0	22.3	1,272
Kerala	59.2	16.0	1,863
Tamil Nadu	150.6	50.1	1,787
Gujarat	101.1	31.2	1,303
Madhya Pradesh	48.4	29.6	1,106
Rajasthan	37.0	28.5	998
Maharashtra	78.0	14.3	1,058
All-India	89.8	37.1	1,601

Imbalanced NPK Ratio: The ideal N : P₂O₅ : K₂O ratio, aggregated for the country as a whole, is 4:2:1. However, during 1992-93 after the decontrol of phosphatic and potassic fertilisers, the NPK consumption ratio distorted to 9.5:3.2:1, and still continues to be quite wide at 8.4:3.0:1 [1998-99] as compared to 5.9:2.4:1 before the decontrol of phosphatic and potassic fertilisers in 1991-92. Such imbalanced application of fertiliser is bound to affect the crop productivity and soil fertility in the long run. To correct the imbalance, Government introduced the scheme of *ad hoc* concession in September 1992, to cover all decontrolled fertilisers [DAP, MOP and Complex fertilisers]. The objective of the scheme was to facilitate corresponding reduction in the selling price of these fertilisers. Under it, concession at prescribed rates e.g., Rs 1,000 per ton on DAP, was given to manufacturers to facilitate corresponding reduction in selling price to farmers. The scheme continues to date with increase in concession rates e.g. indigenous DAP to Rs. 3,000 per ton, w.e.f. July 6, 1996, Rs.3,750 per ton w.e.f. 1.4.97, Rs. 4,400 per ton w.e.f. 1.4.98 and Rs. 4,600 with effect from April 1999.

The revised estimate for concession on decontrolled phosphatic and potassic fertilisers for 1998-99 was Rs. 37.90 billion. The budget for 1999-2000 has made a provision of Rs. 45.00 billion towards concession on decontrolled phosphatic and potassic fertilisers. This concession on other NP and

NPK complexes was fixed on pro-rata basis based on the P and K content of the grade. The increase in *ad hoc* concessions on phosphatic and potassic fertilisers is a step towards achieving better balance in fertiliser use, however, its impact on NPK use ratio is not very much evident as unit price of the major nutrients is still very much imbalanced.

Besides imbalanced use of NPK, deficiencies of other secondary and micro-nutrients are also becoming apparent now. The concept of balanced fertiliser application, therefore, has to consider these elements, particularly sulphur, zinc and iron. Low organic matter content in Indian soils and lack of adequate sources for micro-nutrients make it imperative to increase use of organic sources like FYM, green manure, bio-gas slurry etc. Thus, there is need to practice Integrated Plant Nutrient Supply System [IPNS] to bring back the balance in soil fertility and fertiliser use.

Fertiliser use efficiency: The low efficiency of fertilizer use in India is a matter of concern. Nitrogen use efficiency in rice crop is only 30-35%, with an overall efficiency level at 50%. Phosphatic fertilisers are the costliest on Rs/kg of nutrient basis but their use efficiency is 20-25% only. Efficiency of potash is around 80%. Efficient utilisation of fertiliser, therefore, is key to economics of fertiliser application and environment friendly sustainable agriculture. Adoption of the best time, method and dose of fertiliser application by the farmers is essential to achieve higher efficiency of fertiliser use. Soil testing to determine the fertiliser need, suitable fertiliser drills for placement of fertilisers, promotion of slow release materials, IPNS and other improved agronomic practices will certainly help in increasing efficiency of applied fertilisers.

Policies to Sustain Growth

The stability of macro economic factors such as the exchange rate, foreign exchange availability, inflationary pressures, and capital markets, in addition to micro economic factors such as pricing, marketing, and credit availability, play the most crucial role in the growth and performance of the fertiliser sector. Future performance and growth of the fertiliser industry at the national level will depend on a conducive trade policy, designed to protect the interests of both fertiliser producers and farmers.

Future Outlook: (Ninth Plan Perspective)

Demand-Supply Scenario in Fertilizer: The Demand-Supply scenario in fertilisers has been worked out by the Working Group on Fertilizers for the Ninth Plan [1997-98 to 2001-02] on the basis of the estimated demand and production projections in terms of N and P₂O₅ nutrients. The increase in production [supply] will be 4.86 million tons, most of it is confined to nitrogen resulting from the commissioning of the expansions, new plants or joint ventures abroad. Production of N is expected to increase from 9.7 million tons in 1997-98 to 14.0 million tons in 2001-02. The Group estimated that the available phosphate supply will increase from 2.8 million tons of P₂O₅ in 1997-98 and reach 3.3 million tons in 2001-02. The demand for N, P₂O₅, K₂O has also been estimated upto 2006-2007 [terminal year of the Tenth Plan] at 16.35, 6.65 and 2.60 millions tons, respectively.

The Group also considered the details of estimates made by various agencies like Fertiliser Association of India [FAI], National Informatic Centre [NIC] and Department of Agriculture and Cooperation [DAC], Government of India and concluded that in the terminal year of Ninth Plan there is likely to be a surplus of N supplies to the extent of 0.63 million tons. However, it may be worthwhile to note that some of the projects have not materialised and finally N supplies might also show a deficit. There would be a shortfall in phosphate to the extent of 1.34 million tons. The entire demand of 1.83 million

tons of potassic fertilisers would be met from imports. The Working Group has indicated that without the price correction the N:P2O5:K2O ratio will continue to be distorted. Hence, the final projections have been worked out taking into account the projections made by NIC, FAI and DAC as well as a price correction calculated to bring about an improvement in the NPK balance.

Global Fertiliser Requirement: During the 1990-2020 period, global fertiliser demand is projected to increase 1.2% per year. In absolute amounts, it is projected to increase from about 144 million tons in 1990 to 208 million tons in 2020. It is assumed that currently 1 ton of fertiliser nutrients yields 10 tons of cereal in the developing countries, and 15 tons in the developed countries. It is expected that by 2020 technological and policy-related changes will improve these rates by 20 to 30 percent.

Under the cereal production approach, the world will need to use about 263 million tons of fertiliser nutrients, leaving a shortfall of 55 million tons. Furthermore, the developed countries will have a surplus of 8 million tons, whereas the developing countries will have a shortfall of 63 million tons [Table-VI]. Although application of animal manure and atmospheric deposits would reduce a part of these shortfalls, the deficits will have an adverse effect on food security and resource conservation in the developing countries unless additional efforts are made to promote higher levels of fertiliser use in an environmentally sound manner.

Table-VI: Global Fertiliser Demand vs Fertiliser Requirement by 2020
[million tons, for total NPK]

Economic Region	Fertiliser Demand	Fertiliser Requirements [Cereal Production approach]
World	208	262.9
Developed Countries	86.4	77.6
Developing Countries	121.6	185.3

Future Challenges

Production of more food from a diminishing resource base, requiring new agricultural technologies and management systems providing increased productivity per unit of land, water, energy, labour and investment. Part of this will involve focussing research on neglected crops such as minor millets, grain legumes and tubers, which can perform in times of environmental stress and in neglected areas such as arid and semi-arid coastal and mountain areas.

The economic dimensions of food nutrient security require the promotion of sustainable livelihoods through multiple income earning opportunities such as livestock, fish and agro-processing and agri-business should be taken to poor families through rural value-added enterprises partnerships with the private sectors.

Resource poor farmers need to be enabled with the provision of basic infrastructure, information and training, technology, regulatory framework and facilities etc. before they are in a position to compete in open markets. Resource poor farmers may not be able to adjust at all, at least at present. In such cases, liberalisation may mean retreat into a mainly subsistence agriculture, with a few selected cash crops. It is also likely to mean a greater migration into cities.

This country has tremendous potential for agriculture development and its contribution to national

economy. A system approach for the capital building and investment-oriented agriculture will revolutionize Indian economy and provide a sound base for many other related industries like sugar, textile, processed food etc. A blend of traditional wisdom based on centuries of experience with modern knowledge and technologies will be the key to economic renaissance. A changed farmer, who can gain from the information base now available, will be the carrier of this mechanism. Indian farmer has shown adaptability to change and he will again rise to our expectations to transform India into an agri-based economic power.

In the future, the emphasis should be on “growth with management” rather than “growth” *per se*. This new strategy of growth with management will involve challenges in several areas: fertiliser use efficiency, energy consumption efficiency, policy and organisational reforms, environmental protection, and human and institutional capacity building. A successful resolution will require a high degree of political commitment and pragmatic solutions leading to conducive and stable policies, appropriate organisational arrangements, and adequate institutional and physical infrastructure.

“A blend of traditional wisdom based on centuries of experience with modern knowledge and technologies will be the key to economic renaissance. A changed farmer, who can gain from the information base now available, will be the carrier of this mechanism. The Indian farmer has shown adaptability to change and he will again rise to our expectations to transform India into an agri-based economic power.”

Cooperative Development

– A Case Study of ICA-IFFCO Collaboration for Global Food Security

Virendra Kumar

IFFCO - a cooperative sector giant and a premier organisation is relentlessly engaged in strengthening the cooperative systems and services to the rural community in particular. Though IFFCO is engaged in manufacturing and promotion of fertilisers, the extension and educational programmes organised by the Society centered on scientific agriculture and with emphasis on promoting balanced use of fertiliser. Such efforts have benefited the farmers and their cooperatives immensely. IFFCO's strong foundation is based on the principles and philosophy of Cooperation translated into practice. IFFCO's growth is largely because of its firm, consistent and genuine commitment to these universally-accepted Principles of Cooperation.

A multi-faceted and multi-pronged approach, envisioning, professionalism, corporate planning and commitment to achieve customer satisfaction are some of the guiding principles. These are helping IFFCO to maintain and sustain holistic organisational culture based on teamwork, harmonious relationships and collective decision-making. Dr Virendra Kumar is the Marketing Director on the Board of Directors of the IFFCO. He is also the current Chairperson of the ICA Regional Committee on Agriculture for Asia and the Pacific.

Role of Agricultural Cooperatives in the Indian Economy

Agricultural cooperatives play a very important role touching almost every aspect of the human life. When the agricultural cooperatives deal with credit functions, they are concerned with the household income and its expenditure by the farmers. When the agricultural cooperatives deal with the supply of agricultural inputs, their main concern remains the nutrition for the population through foodgrain production. When the agricultural cooperatives deal with the plant protection, their concern remains for the health of the plant, health of the consumer i.e., the population. Even the animal health aspect is taken care of since fodder is another important ingredient in crop production chain. In many sectors the cooperatives have made significant contribution. In the case of sugar production and handloom it is particularly remarkable as the contribution is touching almost 60% of the total [Table-I].

The National Agricultural Cooperative Marketing Federation of India Limited [NAFED] is engaged in procurement, processing, distribution, export and import of selected agricultural commodities. The National Cooperative Tobacco Growers' Federation Ltd, the National Consumers' Cooperative Federation [NCCF] and the Tribal Cooperative marketing Development Federation of India limited [TRIFED] are a few other organizations of significance in the cooperative sector. The share of cooperatives in the total marketing of agricultural commodities, however, is still small. The two major fertiliser cooperatives i.e., the IFFCO [Indian Farmers' Fertiliser Cooperative Limited] and the KRIBHCO [Krishak

Bharati Cooperative Limited], have also been engaged in the production and marketing of high quality fertilisers, adequately supported by extension services to the farmer-members.

Table-I: Status of Agricultural Cooperatives in National Economy

Extent of agricultural credit disbursed	...	...	...	...	...	...	46%
Fertiliser distributed	...	...	...	...	...	...	31%
Production of fertilisers	...	...	...	...	...	...	21%
Sugar production	...	...	...	...	...	...	55%
Handlooms	...	...	...	...	...	...	55%
Wheat procurement	...	...	...	...	...	...	30%
Jute procurement	...	...	...	...	...	...	21%
Retail Fair Price Shops	...	...	...	...	...	...	28%
Storage facility (Rural)	...	...	...	...	...	...	62%
Fishermen in cooperatives	...	...	...	...	...	...	22%

Challenges to Cooperatives in Liberalised Economy

The Cooperative Identity: The image of a "true cooperative" depends on the extent it faithfully translates the Cooperative Principles into practice. The International Cooperative Alliance [ICA] at its Manchester Conference in September, 1995 adopted a Statement on Cooperative Identity [ISCI]; according to which the cooperative is defined as: "An autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise."

Cooperatives are based on the values of self-help, democracy, equality, equity, solidarity, honesty, openness, social responsibility and caring for others. These cooperative values are inherent in the seven Cooperative Principles around which all cooperatives function. Therefore, in the emerging scenario where the fears loom large for dilution in social values, culture, erosion of local resources, less advantage to weaker sections, the cooperatives with their true identity seem to be the only answer at present to rebuild the society for a better quality of life.

Education to Members for Increased Member Participation: This is inherent as a cardinal Cooperative Principle that cooperatives have to be "member-driven" enterprises. Due to some reason or the other it is observed that the participation of the members is not to the desired extent. The attendance in the General Body is mostly around 30 to 40%. Therefore, a greater emphasis is required to spread and multiply the cooperative education for increased member participation in management as well as the economic stake in the cooperative. However, in some of the successful cooperatives the attendance in their General Body Meetings is as high as 90-95%.

Structural Reforms: Structural reforms or reorganization has become the most significant aspect of market-oriented economy. There is a need to take up comprehensive structural reforms in the cooperative sector particularly, the creation of strong primaries, the backbone of cooperative system; and self-reliant and competitive federal structure which will be responsive to the opportunities of the emerging market economy. Federations are for primaries and it is their responsibility and accountability to

strengthen their basic structure. At the institutional level, reforms in cooperative legislation are to be expedited to provide opportunities to cooperatives at par with the private sector. Over-control and over-regulation by government should be discouraged so that the cooperative system restores cooperative identity and enabled to stand on its own to gain benefits from the new policy of liberalisation. The role of the Registrar of Cooperative Societies is to be redefined as a promoter of cooperative system rather than the administrator and controller of the cooperatives.

Cooperatives and Members' Expectations: The main point is that the members should not run after their cooperative to provide them with services and facilities - it should be the cooperative which should, on its own, be keen to offer a variety of services and facilities to its members. Member is a radiant factor from which the power of agricultural cooperatives emanates. Member is the key and the main source of economic strength of the cooperative. Member should not feel that he is dependent on the cooperative. He has several other options which may not be economically attractive for him. It is the cooperative which should be dependent on the member. It is often heard that cooperatives do not do enough for their members. For the cooperative, the focus should be on the member and his business potentials, rather than on itself.

HRA Needs of Agricultural Cooperatives: Member development in agricultural cooperatives should essentially aim at inculcating sensitivity toward member economic participation. Following areas of training can be considered to educate members for securing their better participation: [i] Concept of profitability and making cooperative a profit centre; [ii] Interpersonal relations with peers and networking with supporting institutions; [iii] Manage the change, competitive marketing strategy and micro-planning; [iv] Entrepreneurial skills; [v] Coordination and leadership skills; and [vi] Access to market information and management systems.

Global Food Security: The world today is facing many challenges: prominent among these are sustainable development, environmental degradation, and food security for growing population. The United Nations population projections indicate that world population will increase to 8.3 billion in 2025 and 10 billion in 2050 from the present level of 5.8 billion. Such unprecedented growth in population necessitates food production to be almost doubled by 2050. The UN estimates also indicate that almost 800 million people in developing countries today face chronic under-nutrition, and some 200 million children under the age of five suffer from protein and energy deficiencies. At present, as many as 88 nations fall into the category of low-income food deficit countries: 42 in sub-Saharan Africa, 19 in Asia and the Pacific, 9 in Latin America and the Caribbean, 6 in North-East/North Africa and 12 in Europe/Commonwealth of Independent States.

Decreasing per capita availability of arable land is further complicating the slowing pace of growth in agricultural output. Thus, the need to intensify agricultural production from the infinite natural resources has assumed greater significance. In meeting this challenge, fertilisers have an important role for two reasons. First, they facilitate the adoption of yield-increasing technologies and thereby promote sustainable growth of food production on limited cultivable land. Second, they help to replenish nutrients removed by crops and, therefore, prevent soil degradation and preserve the resource base.

World Cereal Production: FAO's latest forecast on cereal production for the year 1998 stands at 1.892 million tons only. The situation is not at all that favourable if we take as a yardstick of the cereal stocks available in the world. Indeed, cereal stocks declined from 456 million tons in 1986 to 330 million tons in 1998. The FAO considers that a range of 17 to 18% is the minimum necessary to safeguard world food security. Foodgrain prices are gaining new height, causing serious implications for low-income food deficit countries.

A larger increase in cereal production would be needed if stocks were to be satisfactorily replenished. In the developing countries of South and South-East Asia, Latin America and Africa the situation is much more critical. Their population is increasing very rapidly straining their capacity to produce enough food. Per capita foodgrain production has actually declined in the past 20 years. The Asian and Pacific region contributes about 44% of the world's food production against the population of 58%. The per capita availability of arable land, however, will continue to decline fast and it is estimated that it will be around 0.20 ha per person by the year 2025.

Rice and wheat are the major cereal crops. World average yield of rice has increased from 2.77 t/ha in 1980 to 3.75 t/ha in 1998. Productivity gains are noticed in almost all countries listed but the USA and China made rapid stride whereas it declined in Russia. In Australia, Egypt, Japan, USA, Morocco, Republic of Korea, Spain, China and Italy, the rice yield is above the world average yield level. Other countries, namely, Russian Federation, India, Bangladesh, South Africa etc. are below the world average. China and Japan have achieved very high productivity both before and after green revolution. Prior to 1950, rice yield in China was only 1.5 tons/ha, which touched 6.1 t/ha in 1998.

World wheat productivity jumped from 1.9 t/ha in 1980 to 2.63 t/ha in 1998. The highest productivity of wheat is 8.1 t/ha in Belgium, followed by 7.6 t/ha in France, 7.5 t/ha in U.K., 7.4 t/ha in Netherlands, 7.3 t/ha in Denmark, 7.2 t/ha in Germany, 4.2 to 6.0 t/ha in Mexico, New Zealand and Egypt. Wheat yield of 8.1 t/ha obtained in Belgium is nearly three and half times of the world average. In the past 15 years, both China and India increased wheat productivity significantly. However, productivity of wheat had decreased in Russia.

Crop Productivity and Fertiliser Use in the Asian Region: Fertiliser consumption per unit of land in Asia varies considerably ranging from below 36 to over 471 kg per ha. Similarly, the productivity of crops also varies considerably from less than 2 to over 6 tons per hectare [Table-II]. Countries like Bangladesh, India, Nepal, Thailand are below the world average productivity of cereal crops. The productivity of pulse crops in the region is also below the world average. There is sufficient scope to increase the crop productivity through adoption of improved agricultural practices.

IFFCO : A Case Study in Cooperative Development

The IFFCO - a cooperative sector giant and a premier organisation is relentlessly engaged in strengthening the cooperative systems and services to the rural community in particular. Though IFFCO is engaged in manufacturing and promotion of fertilizers throughout the country, the extension and educational programmes organised by the Society centered on scientific agriculture and with emphasis on promoting balanced use of fertiliser. Such efforts have benefited the farmers and the cooperatives immensely. IFFCO's strong foundation is grounded on the principles and philosophy of Cooperation translated into practice. IFFCO's growth is largely because of its continued firm, consistent and genuine commitment to these universally-accepted principles.

A multi-faceted and multi-pronged approach, envisioning, professionalism, corporate planning and commitment to achieve customer satisfaction are some of the guiding principles. These are helping IFFCO to maintain and sustain holistic organisational culture based on team work, harmonious relationships and collective decision-making. By virtue of dedicated service to the community, the Cooperative has established an image of efficiency and services in Asia and more as an ideal cooperative model.

The IFFCO is an unique example of the world's greatest demonstration of cooperative-to-cooperative

Table-II: Fertiliser Consumption per hectare and Average Yield of Cereals and Pulses in selected Countries in Asia

Country	Per Hectare Fertiliser Consumption [kg/ha] 1997	Average Yield			
		Cereals [kg/ha]		Pulses [kg/ha]	
		1997	1998	1997	1998
Bangladesh	130.1	2,706	2,669	765	757
China	262.3	4,805	4,811	1,376	1,521
India	95.3	2,245	2,207	584	584
Indonesia	139.0	4,011	3,789	1,605	1,605
Japan	351.6	6,064	5,849	1,833	1,833
Korea, Rep	471.1	6,631	6,631	1,127	1,127
Malaysia	-	2,959	2,957	-	-
Philippines	67.9	2,375	2,241	786	786
Sri Lanka	111.7	3,143	3,156	604	604
Thailand	-	2,410	2,466	807	843
Vietnam	-	3,777	3,838	667	685
Myanmar	-	2,938	2,931	689	671
Asia	-	3,028	3,059	704	728
World	90.9	2,967	2,970	807	837

Source: *Fertiliser Statistics [1998-99], FAI, India.*

initiative of cooperative institutions of India and the United States of America. The American cooperatives, influenced by the fact that the cooperatives in India which had been controlling over 70% of the total fertiliser sales in the country, and yet had no control on fertiliser production, decided to extend help to the Indian cooperatives in setting up their own production facilities. The Cooperative League of USA through Cooperative Fertiliser International, a consortium of cooperative fertiliser units, suggested to the Government of India for the establishment of fertiliser manufacturing facilities in the cooperative sector. Accordingly, the IFFCO came into being, and was registered as a cooperative society on November 3, 1967. IFFCO, is thus, the result of cooperation and collaboration between the Cooperative Movements in the two countries.

IFFCO established four manufacturing units viz., Kalol and Kandla in Gujarat and Phulpur and Aonla in UP with a total production capacity of 2.6 million tons of urea and complex fertiliser. As on 1st April, 1999, the urea capacity of IFFCO stood at 3.2 million tons. The year 1999 has been a year of great achievements for IFFCO. The Society had also completed 32 years in the service of the farmers. In order to make the country self-reliant in foodgrain production, the Society contributed its share by attaining highest-ever capacity utilisation. During the period April-March 1998-99, IFFCO achieved an overall capacity utilization of 115% in the case of Nitrogen, and 162% in case of P2O5. IFFCO has sold 4.62 million tons of fertilisers material during April-March 1998-99 and has earned a pre-tax profit of Rs. 3,458 million during this period.

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The Phulpur plant bagged the FAI Award for the year 1997-98 on Environmental Protection. The Kandla Unit won FAI Award 1997-98 and 1998-99 for Best Overall Performance of an operating fertiliser plant for P205. The Marketing Division received ISO-9002 Certification in June 1998 on Quality Assurance and Marketing activities. IFFCO markets its products exclusively through the cooperative network and its sales performance has all along been commendable from the beginning of commercial production. The thrust of marketing philosophy is to strengthen the cooperative distribution system at the primary agricultural societies level so that they emerge strong to face the competition in the open market. The Society has achieved a sales turnover of Rs. 38,240 million during 1998-99.

Principles of Cooperation put into Practice - the IFFCO Model

The image of a "true cooperative" depends on the extent it faithfully translates the Cooperative Principles into practice. Cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity.

The universally-accepted Principles of Cooperation are: [01] Voluntary and Open Membership; [02] Democratic Member Control; [03] Member Economic Participation; [04] Autonomy and Independence; [05] Education, Training and Information; [06] Cooperation among Cooperatives; and [07] Concern for the Community.

The Society has tried to blend its business operations with cooperative methods and techniques. Some instances of this operating philosophy are given below:

- a. The membership of IFFCO is open to all cooperative societies from primary level in the village to district, state or national cooperative federations of agricultural, credit, marketing, processing, supply and other agricultural cooperative societies. These societies chose to become members of IFFCO voluntarily without being subjected to any economic pressure or government regulations. They have contributed willingly to the share capital of IFFCO. Over the years, IFFCO has grown from strength to strength from a membership of mere 57 societies in 1967 to 35,482 in 1999.
- b. The affairs of the Society are governed and supervised by a democratically-elected body which guides the management of IFFCO. IFFCO Board is a mix of elected and nominated members, which manages the organisational affairs and administration through the Chief Executive i.e., Managing Director, Marketing Director and the Finance Director who are appointed by the Board of Directors with the approval of Appointments Committee of the Cabinet of the Government of India.
- c. The member-cooperatives have been participating in the share capital of IFFCO and contributed an amount of Rs. 788 million in 1998.
- d. The 30-member Board of Directors of IFFCO is responsible for direction and management affairs of the Society within the broad policies laid down by the Representative General Body. The Board consists of 12 representatives from the state federations, 5 directors nominated by the Government of India, 8 directors elected by the Representative General Body, Chairman of National Cooperative Union of India, Managing Director of National Cooperative Development Corporation, and three Functional Directors which include the Chief Executive/Managing Director, Finance Director and the Marketing Director.
- e. Keeping in view the specific requirement of an area, IFFCO has evolved various programmes for the benefit of farmer-members. These generally include demonstrations on farmers' fields, field

days, farmers' meetings, crop seminars, various agricultural campaigns, distribution of agricultural implements and plant protection equipment etc.

To assist agricultural research, the Society has established 15 Professorial Chairs in several universities and institutions of higher learning in India in the disciplines of Agronomy, Soil Science, Extension, Cooperation, Agricultural Economics and Fertiliser Technology including a Professorial Chair at NCUI's Vaikunth Mehta National Institute of Cooperative Management [VAMNICOM], Pune, India.

IFFCO organises training programmes for cooperative personnel at grassroots level who are actively in contact with the farming community. The cooperative personnel are trained about the package of practices for various crops, balanced fertilisation programme, efficient fertiliser use, fertiliser logistics and also rural marketing techniques. IFFCO also organises seminars on "Fertiliser Marketing through Cooperatives" at its Fertiliser Marketing Development Institute [FMDI], Gurgaon, for cooperative personnel and field workers.

IFFCO has made significant contribution towards the cooperative education programme through National Cooperative Union of India [NCUI]. Each year a handsome amount is being paid from the profit and since 1985-86 a total of almost Rs. 104 million has been paid towards the cooperative education fund by IFFCO, the highest contribution paid to NCUI by any single organisation in the country.

- f. IFFCO has promoted a sister-organisation, Krishak Bharati Cooperative Limited [KRIBHCO] with an investment of Rs. 970 million to its share capital. It has also invested Rs. 100,000 each in the Indian Tourism Cooperative Limited [COOPTOUR] and National Films and Fine Arts Cooperative Limited [NAFFAC]. The Society has also made an investment of Rs. 100,000 in Maharashtra State Cooperative Bank Limited. It has also promoted The Cooperative Rural Development Trust [CORDET] which provides practical training to the farmers to improve their skills in agricultural production, dairy, horticulture, poultry, fisheries. The Trust also inculcates professional leadership at village level.

The IFFCO is an active member of the International Cooperative Alliance [ICA], National Cooperative Business Association of the United States [NCBA] and Agriculture Cooperative Development International [ACDI]. The Marketing Director is currently [since 1998] the Chairman of the ICA Regional Committee on Agriculture for Asia-Pacific.

- g. Cooperatives, as organisations, exist for the benefit of their members. Cooperatives have special responsibility to ensure the development of their community economically, socially and culturally. As an organisation that is keenly interested in the development of farming community, the IFFCO initiated the Village Adoption Programme in order to bring about an overall improvement in the quality of life of the farming community through integrated rural development.

Special Features of IFFCO's Strength

The organisation is basically an industrial house. The distinctive feature is that this organisation is run as a cooperative enterprise and which is owned by the farmers. In its operations the basic strengths are the highest technological and professional methods and techniques employed and an active collaboration with its constituents established i.e., the cooperative members. Since the organisation touches the most critical segments of life of farmer-members, special attention is paid to the

ambient areas. These include, among others, cooperative development strategies, members' development and that of their institutions, member participation, research and development, inter-action with industrial partners, staff development, concern for the community and participation in national and international activities, institutions and programmes. A brief description follows:

IFFDC Project: The Indian Farm Forestry Development Cooperative Limited [IFFDC] has been promoted by IFFCO and registered as a multi-state cooperative society. At present, the IFFDC is maintaining a pilot forestry project of IFFCO started in 1986-87 and also the IFFDC project sponsored by IFFCO and India-Canada Environment Facility [ICEF] for a period of 5 years since April 1995. As in March 1998, 16,000 ha of land has been afforested through the formation of 120 primary farm forestry cooperatives.

Special Projects: To facilitate transfer of technology, certain special projects have been launched in the areas of dry land agriculture, tribal/backward area development, land reclamation, bio-fertilisers, bio-pesticides, plastics in agriculture, farm implements, micro-irrigation system, Integrated Plant Nutrient Management System [IPNS], wasteland development, watershed management. The FAO-colaborated project on IPNS envisage bringing out an IPNS manual based on IFFCO-IPNS experience for extension workers and others. Pilot work on Integrated Pest Management [IPM] was also introduced at selected locations.

Transfer of Technology: IFFCO has engaged more than 600 graduates and post graduates in agriculture to propagate balanced fertilisation and help disseminate the latest agriculture technology to the farming community.

Corporate Planning: In order to meet emerging challenges and retain its status as the largest producer and distributor of chemical fertilisers in the country, a comprehensive medium-term plan entitled Vision 2000 has been prepared which envisages expansion of the existing units, setting up of grassroots urea production units inside and outside India. It is also contemplating to launch Vision 2005 which will focus on strengthening the cooperative system and infrastructure.

Total Quality Management [TQM]: The IFFCO from its very beginning, has been emphasising on quality in every aspect of organisation which has become its thrust area. New quality systems are being implemented and the coveted ISO-9001 Certification has been received by its Kalol Plant for quality assurance in production, installation and services. The Marketing Division has acquired ISO-9002 Certificate from BVQI in June 1998 on the scope of "Marketing Fertilisers, Strengthening Cooperatives and Providing Services to the Farmers and Rural Community". IFFCO's production units are also contemplating award of ISO-9002 and ISO-14000.

Human Resource Development: With a view to meeting challenges and harnessing new opportunities arising consequent to the economic liberalisation, IFFCO's HRD policies aim at a holistic approach to improving all aspects of the organisation. IFFCO, as a foresighted employer, is conscious about the welfare of its employees and their families. To achieve this objective, IFFCO has promoted inter-unit sports festivals, quiz contests, cultural programmes, etc. which have been very successfully organised in different locations and at regular intervals.

Cooperative Development Plan of IFFCO

All along, IFFCO has followed a policy of educating the farmers about the use of fertilisers, through its field staff at the grassroots level. The scheme is for the promotion of cooperatives extending beyond the agriculture sector. Besides strengthening the cooperative fertiliser distribution system,

IFFCO is contributing to the improvement in the health of grassroots level cooperative societies by paying regular dividends, quantity and patronage rebates. In addition, a large number of cooperative seminars, training programmes for cooperative personnel, promotional and extension programmes are undertaken to strengthen Indian cooperative sector. IFFCO has planned to adopt 500 village cooperatives in the first phase of development. In all 1,500 societies will be developed. These societies are provided financial, infrastructural and managerial assistance.

The IFFCO has promoted IFFCO-NCDC societies and has instituted annual awards for '*Best Cooperator*' and '*Sahakarita Bandhu*' [Cooperative Brother], to honour the individual contributions made for the development of cooperative philosophy in the country. IFFCO has made significant contribution towards the cooperative education programme through National Cooperative Union of India [NCUI]. Other development programmes are: Strengthening management services, corporate planning, market planning & research, HRD and R&D, promotion and participation in cultural development, utilisation of the creativity and innovativeness of employees and members of their families and fostering a sense of belonging, involvement and commitment to the objectives for its continued success.

Collaboration with the ICA and its Regional Office for Asia-Pacific

The IFFCO was admitted to membership of the International Cooperative Alliance [ICA] in the year 1979. Since then the relationship between ICA and IFFCO has grown stronger. Our participation in ICA Congresses, technical seminars, workshops and training programmes has always been acknowledged and recognised positively. IFFCO officials have contributed in crystallising several basic issues for the development of cooperatives particularly in the Asia and Pacific Region.

The IFFCO had participated in a project study on "Cooperative and Environment for Sustainable Development" conducted jointly with ICA ROAP in 1992. The Study included analysing the role of cooperatives in environment management in five countries of Asia viz., India, Indonesia, the Philippines, Thailand and Japan. As a result of this field study, a publication entitled "Cooperatives and Environment" written by Dr G.C. Shrotriya of IFFCO and Dr Daman Prakash of ICA was issued. The Gender Advisor from the ICA Regional Office serves on the Technical Steering Committee of the IFFCO. A senior officer of the Marketing Division has served as a Consultant-cum-Coordinator for the 13th ICA-Japan International Training Course on "Strengthening Management of Agricultural Cooperatives in Asia-Pacific" a part of which was held at FMDI, Gurgaon, in January-February 1999. The IFFCO Managing Director had participated and initiated topical discussions at the International Cooperative Agricultural Organisation of the ICA. The Marketing Director had actively led the ICA Regional Committee on Agriculture for Asia and the Pacific as its Vice-Chairperson, and since 1998, has been its Chairperson. The successful conduct of 14th ICA-Japan international training programme at FMDI during the period January 02-February 16 2000 is enough indication of IFFCO's growing relationship with ICA.

The compilation and editing of the technical papers presented by the IFFCO faculty resulted into the publication of a technical book entitled "Paradigm Shift in the Management of Agricultural Cooperatives in Asia". The publication funded by the IFFCO was published under the joint banner of the ICA ROAP and the IFFCO. The papers presented at the 14th training course by the IFFCO faculty members and other guest speakers have now been compiled and edited by Dr Daman Prakash of the ICA and our Chief Manager, Dr GC Shrotriya and the present book entitled "Total Quality Management Practices in Agricultural Cooperatives in Asia" has been published jointly by the ICA ROAP and the

IFFCO. The two publications have been our major contributions to the literature on agricultural cooperatives in Asia.

Being a fertiliser producing and marketing cooperative, IFFCO is always interested in agricultural development activities of cooperatives in India. We have shared this experience with other cooperatives of developing nations. Most of the delegations coming from Asia-Pacific and other Regions have paid visit to our various adopted villages, agricultural extension activities, and met with senior level officers and field workers. The IFFCO has, all along, played an active role in the Agricultural Committee Meetings and technical discussions.

“Cooperatives, as organisations, exist for the benefit of their members. Cooperatives have special responsibility to ensure the development of their community economically, socially and culturally.”

IFFCO'S March Towards the New Millennium

D.K. Bhatt

Born as a multi-unit Cooperative Society on 3rd November 1967, IFFCO blossomed into the largest manufacturer and distributor of fertilisers in India. With an authorised capital of Rs. 10,000 million, its membership extends to over 35,000 cooperative societies through which its products – NPK, DAP and Urea – are channelised in 22 states and two union territories in the country. The Society came into being with a modest equity capital of Rs. 0.6 million in 1967-68 that grew to Rs. 3,838.7 million in 1998-99. It realised its dreams of acquiring an impregnable status of global fertiliser major by expanding its production facilities at Aonla, Kalol, Phulpur and Kandla in quick succession. During 1998-99, IFFCO sold the highest 3.34 million tons of urea while the total sales of Urea, NPK and DAP also stood at an all time high of 4.62 million tons. The Society earned a pre-tax profit of Rs. 3458.1 million during 1998-99. The Marketing Division was awarded ISO-9002 Certificate for marketing fertilisers, strengthening cooperatives and providing services to farmers and rural community.

Right from the beginning IFFCO has been straining every nerve to inform and educate farmers through dedicated field team at the grassroots level. Its need-based educational and promotional programmes like crop demonstrations, field days, farmers' meetings, seed multiplication, village adoption, crop seminars, special campaigns are proving to be effective in transfer of technology. Mr DK Bhatt is the Executive Director of the Marketing Division of the IFFCO.

The IFFCO is Born

The Indian Farmers' Fertiliser Cooperative Limited, popularly known as IFFCO, has emerged as the pioneering venture in the Cooperative Sector. Born as a multi-unit cooperative society on 3rd November 1967, IFFCO witnessed a meteoric rise and blossomed into the largest manufacturer and marketer of fertilisers in the country. With an authorised capital of Rs. 10,000 million, its membership extends to over 35,000 cooperative societies through which its products – NPK, DAP and Urea – are channelised in 22 states and two union territories in the country. The society came into being with a modest equity capital of Rs. 0.6 million in 1967-68 that grew to Rs. 3,838.7 million in 1998-99. It realised its dreams of acquiring an impregnable status of global fertiliser major by expanding its production facilities at Aonla, Kalol, Phulpur and Kandla in quick succession.

IFFCO alone contributed about 17.6% of nitrogenous and 16.3% phosphatic fertilisers produced in the country during 1998-99.

Plants

IFFCO has to its credit four state-of-the-art fertiliser plants at Kalol and Kandla in Gujarat and Phulpur and Aonla in Uttar Pradesh with a total capacity of producing more than 4.7 million tons of fertiliser material.

During the year 1998-99 these plants achieved an all time high record production of 3.61 million tons of urea and 1.30 million tons of NPK/DAP, thus totaling a quantity of 4.92 million tons of fertiliser material registering capacity utilisation of 115% for nitrogen and 162% for phosphate.

The biggest ammonia-urea complex in the world, based on naphtha as feedstock, the Phulpur plant was crowned with FAI's Best Environment Protection Award during 1997-98 while Kandla Unit bagged FAI's Best Overall Performance Award for the same year. With the commissioning of all the four expansion Projects within the time schedule and costs, IFFCO has set a record by any international standard, thus fulfilling its dream of Vision-2000.

Sales & Financial Performance

On the sales front the IFFCO surpassed its own previous record and established new landmarks. During 1998-99, IFFCO sold the highest 3.34 million tons of urea while the total sales of Urea, NPK and DAP also stood at an all time high of 4.62 million tons. The Society earned a pre-tax profit of Rs. 3,458 million during 1998-99. The Marketing Division was awarded ISO-9002 Certificate for marketing fertilisers, strengthening cooperatives and providing services to farmers and rural community.

Fillip to Rural Development

Right from the beginning IFFCO has been straining every nerve to inform and educate farmers through dedicated field team at the grassroots level. Its need-based educational and promotional programmes like crop demonstrations, field days, farmers' meetings, seed multiplication, village adoption, crop seminars, special campaigns are proving to be effective in transfer of technology.

The society has also pressed into service 167 Farmers' Service Centres spread over length and breadth of the country for extending technical guidance and making available all vital agro-inputs under one roof especially for small and marginal farmers. Special projects on different aspects of hi-tech agriculture such as drip irrigation, bio-pesticides, bio-fertilisers, use of plastics in agriculture, agriculture implements, watershed management, wasteland development, micro-irrigation etc., have also been launched.

External Investments

Apart from its own growth and service to farmers, IFFCO has made investments in Krishak Bharati Cooperative Limited [KRIBHCO], Godavari Fertilisers and Chemicals Ltd. [GFCL], Industries Chimiques Du Senegal [ICS], Indian Potash Limited [IPL], Maharashtra State Cooperative Bank Ltd., India Tourism Cooperative Limited [COOPTOUR] and National Film and Fine Arts Cooperative Limited [NAFFAC].

New Ventures

Enhancing Production Capacity: The Society is planning to set up grassroots urea plant at Nellore in Andhra Pradesh to fill the gap between demand and supply of nitrogenous fertilisers in the country. This project will have a capacity of producing 0.72 million tons of urea per annum. It is also exploring the possibility of participating in joint venture for Ammonia/Urea plants abroad along with Indian partners in Iran and Oman.

Liquid Cargo Jetty: IFFCO's own liquid cargo jetty for unloading liquid raw materials i.e., phosphoric acid and ammonia for Kandla was commissioned in May, 1998 and is fully operational now.

Computers and Communication: IFFCO has introduced modern decision support systems to improve and support the management at the head office, plants, marketing offices and field offices. A number of application softwares have been developed for strengthening managerial control and improving operational efficiency. It has been done through a well-knit computer-link through NICNET Satellite Communication. Local Area Network [LAN] has also been introduced at all the zonal offices for better coordination and monitoring of a multitude of activities. The Wide Area Network [WAN] has been established in the Society providing the users with the facilities of e-mail, electronic workflow, access to Internet and IFFCO'S own Internet called "IFFCONET". Efforts are on to further these networks to remote areas for providing technical information to the farming community.

Social Development Programme

The Society initiates development of model agricultural villages through village adoption. Many of the 465 villages adopted are economically backward. Development of dryland farming, reclamation of soils, production of quality seeds, and increasing rice productivity in potential areas as well as development of tribal and backward belts are also being undertaken.

As a tribute to freedom fighters, IFFCO got compiled and published a collection of patriotic poems, songs, lyrics sung during the freedom struggle especially between 1857 and 1947. The book in Hindi entitled "Azadi Ki Agni Shikhayen" was released last year and distributed free of cost.

"Vision-2005"

The Society is formulating another five-year plan titled "Vision-2005" for further growth and development which apart from further enhancing the production capacity by setting up new grassroots plants, joint ventures outside India, exploring diversification schemes will also focus on strengthening cooperative system and cooperative infrastructure.

"It may be important to realise that in most poor, food insecure areas and countries, the two greatest potential resources available to address the problems of hunger and malnutrition are the local people and the agricultural productivity of land and water. To make sustainable improvements, investments will be needed in both of these resources. Investing in people will need to come in the form of education, clean water and sanitation, health and social services and when needed, direct food and nutrition support. Such investments are essential if the corresponding investments in agriculture and its productive sub-sector are to pay off. A hungry and malnourished population can neither work, nor learn nor prosper."

Management of Food Security and Contribution of Agricultural Cooperatives

S.L. Tripathi

The root cause for non-availability of adequate quantities of nutritious food is the poverty. In India alone nearly 320 million people live below poverty line. Nearly 50% of the children below 5 years of age are malnourished. Since mothers are malnourished, one-third of the newborn are of low weight. Poverty has been identified as the root cause for household food in-security and therefore, actions that are related to attaining food security would necessarily have to be linked to the issues of poverty alleviation. The vulnerable groups include marginal farmers landless or temporary labourers, small-scale fishermen, forest labourers, urban poor etc. Within these groups again the most affected lots are the children and the women.

In essence, the issues of food security can be broken down to production of foodgrains, price policy, public procurement of foodgrains, price policy, public procurement of foodgrains, buffer-stocks, public distribution and international trade on one side, and population policy and planning and overall socio-economic development policy especially those related to income and employment generation, education, health, safe drinking water, housing and sanitation, on the other. Dr Tripathi until recently was the Chief Director [Cooperation] with the Government of India in the Ministry of Agriculture. He had served the Vaikunth Mehta National Institute of Cooperative Management-VAMNICOM, Pune as Professor on IFFCO Chair.

Introduction

Food clothing and shelter are the fundamental of human rights. Without food nothing happens - no economic and social development, no political development etc. History shows that under nutrition whether caused by war, drought, poverty or natural disaster has always caused widespread sufferings to humanity. Freedom from hunger, therefore, remains a long cherished goal for the humanity.

Food security means access by all people at all time to safe and nutritious food to maintain a healthy and active life. It is a life free from the scourge of malnutrition and starvation. The food security, therefore, entails long-term as well as short-term strategies for making adequate quantities of nutritious food available to the entire populace of the country. The long-term strategy deals with devising prospective plans to raise agricultural productivity and ensuring national food supplies, while the short-term strategy deals with meeting the immediate food and nutritional needs.

It is estimated that nearly 840 million people world over are chronically under-nourished, unable to grow or obtain enough food to lead a healthy and active life. This population includes more than 200 million children under the age of 5 years who go to bed hungry every night or lack essential protein and calories required for their growing bodies. The chronically under-nourished populace live in the Third World countries comprising of Africa, Latin America, Asia and so on.

Levels of Food Security

There could be three levels at which food security could be ensured. These are, household level, national level and global level. A brief description follows:

Household Food Security: At the household level, food security could be defined as the capacity of the family to procure a stable and sustainable basket of food to ensure adequate dietary intake for each member of the family at all times in order to lead an active and healthy life. In individual household, food security is a daily concern of consumption and inter-household resource allocation. Each household, therefore, strives to fulfil the demand of obtaining adequate, available and affordable food to fulfil the needs of the family members. The majority of households in the Third World countries, belonging to the marginalised sector of the society, lack either the productive resources to produce enough food or economic recourse [poverty] to obtain food through the market system, which, in turn, leads to a tenuous food security situation. Often ignorance of the public distribution system or inadequate market facilities hampers access to food among certain sub-groups in a community.

National Food Security: The national food security refers to the availability of enough food for the entire populace of the country. This could be ensured by increasing term production through the adoption of modern farm technologies, avoiding post-harvest losses through scientific storage and processing. For the purpose long-term and short-term strategies at macro-[National] level have to be devised by the countries. This could include making available adequate quantities of quality seeds, fertilisers, agro-chemicals, water, storage, agro-processing facilities and suitable land-tenure system etc.

Besides, increasing farm production within the country, in case of need, efforts should also be made to import foods to meet the requirements of the population of the country as a short-term measure. Every nation, therefore, will have to have long-term as well as short-term policies for ensuring food security.

Global Food Security: In order to meet the food security globally, efforts should be made to provide food to the hungry nations in case of needs such as drought, natural hazards etc. For this purpose, international organisations such as Food and Agriculture Organisation of the United Nations [FAO] is making efforts to increase food production world over. The World Trade Organisation [WTO] is trying to regulate marketing of agricultural commodities world over.

Poverty is the Main Cause

The root cause for non-availability of adequate quantities of nutritious food is the poverty. In India alone nearly 320 million people live below poverty line. Nearly 50% of the children below 5 years of age are malnourished. Since mothers are malnourished, one-thirds of the newborn are of low weight. Poverty has been identified as the root cause for household food in-security and therefore, actions that are related to attaining food security would necessarily have to be linked to the issues of poverty alleviation. The vulnerable groups include marginal farmers landless or temporary labourers, small-scale fishermen, forest labourers, urban poor etc. Within these groups again the most affected lots are the children and the women.

The under-nutrition, therefore, is not only just a manifestation of poverty but perpetuates poverty as well setting off a vicious circle. The food security is a complex issue having several dimensions such as poverty, unemployment, famine, natural hazards, gender discrimination, equity, starvation, population growth, political reasons and so on.

Basic Issues Involved

The overall food security at the national level entails three basic issues viz., *availability*, *stability* and *accessibility*. *Availability* of enough food for all can be attained through increasing agricultural production within the country and also fostering international trade to import food, if necessary. The *stability* calls for undertaking appropriate pre-emptive steps through which harmful, suspended and inter-annual instability of supplies of food can be reduced. Built in stability needs to be installed in the production, prices, marketing and distribution systems. Natural and man-made disasters can often be anticipated and even prevented. Prompt and efficient emergency service mechanism, which is already in place, can largely mitigate the sufferings of people displaced or affected by natural calamities. *Accessibility* to adequate and safe food by all may be made possible by carefully taking into consideration the important factors followed by sound governmental interventions and policies. The vast majority of malnourished, either cannot produce or cannot afford to buy enough food. They do not have, in the first instance, adequate access to natural resources, jobs, income or social security.

In essence, the issues of food security can be broken down to production of foodgrains, price policy, public procurement of foodgrains, buffer-stocks, public distribution and international trade on one side, and population policy and planning and overall socio-economic development policy especially those related to income and employment generation, education, health, safe drinking water, housing and sanitation, on the other.

Food Situation

Although remarkable progress has been made during the last 25 years on the food production front, but with the rapid increase in the population in developing countries, this progress has been negated. Though India has kept famine and starvation at bay thanks to the investment in agriculture and Green Revolution – the food situation, however, remained erratic. There has been a drastic slow down of agricultural growth in the world in the first half of the '90s when cereal output stagnated and fluctuated widely leading to fall in per capita production. Since the nineties average annual growth foodgrains in India, for example has been 1.73% as compared to annual average population growth of 1.85%, speaking loudly of the challenges that stare us.

The rate of growth of foodgrains in the traditional Green Revolution areas of Punjab, Haryana, Western UP seem to be much lower than that of all the all-India growth rate. The stagnation or decline of growth rate has been ascribed to the onset of second generation problems - essentially comprising of soil fatigue due to intensive agriculture, saturation of HYVs in terms of yield, coverage and absence of any significant technological breakthrough, declining response to higher input use especially of fertiliser, declining water table and the increasing incidence of water-logging and salinity.

Second set originates from the increasing pressure on national agricultural sector to meet the demands triggered by rising population, growth decline in people's income, change in expenditure, and consumption pattern and commercial requirements in the backdrop of the progressive deterioration of the quality of our production environment. The assumptions of food demands vary from source to source.

Against India's Planning Commission's estimates of 300 million tons of foodgrains by 2007, the World Bank projects a demand for 2000 at 205 MT on a growth rate of GDP at 4% p.a. Planning Commission estimates 219 MT as demand by 2000 at a projected growth of 2% p.a. and Lester Brown of the World Watch Institute [WWI] in "Full House and Who Will Feed China" estimate India will be forced to import upto 45 MT of foodgrains by 2030. Amidst these speculations, this year's [1998] estimated

production of 202 million tons is heartening specially against the anticipated current need of 200 million tons of foodgrains. However, we need to reassure that our performance is sustained through persistent efforts backed by continued technological innovations and a holistic orientation towards environment and sustainability.

Some Significant Developments

Here are some of the important and significant developments that seem to have profound influence on the world food and economic environment scenario:

- a. Economic stability and structural adjustment policies significantly affecting agriculture and trade, which remained, extended further with the advent of the WTO;
- b. Concerns about natural resource depletion and degradation and the environmental aspects of food quality also increased attention to sustainable and environmentally sound approach;
- c. Decreasing flow of international development assistance especially in the areas of agriculture and rural development;
- d. State involvement in development – in research, extension, infrastructure etc. - gradually decreasing the emergence of new actors – NGOs, Self-Help Groups [SHGs], regional development banks, private sector with involvement of direct foreign investment;
- e. New methods of collecting and analysing information on global food and agriculture making it possible to draw up prompt and effective plan of action;
- f. Revolution in communication and information technology that reduce the response time and quality of intervention; and
- g. Advances in agricultural sectors and technologies especially in the areas of biotechnology that can revolutionise the production scenario.

Policy Interventions

With this backdrop, the question that will continue to engage our attention is how to ensure that all people get access to good quality, safe and nutritious food or in the words of Noble Laureate Amartya Sen “the issue of food entitlement”. The answer is as complicated as the enormity of the problem having several economic, political, social and environmental dimensions. Admittedly, the challenge of food security calls for action on many inter-related areas at the policy formulation levels, such as:

- a. Adopting overall development strategies and micro-economic policies that would create conditions for growth with equity;
- b. Accelerating growth in the food and agricultural sectors and promoting rural development that consciously focuses on the poor;
- c. Improving access to land and other natural resources with clear focus on sustainability and conservation;
- d. Providing credit for poor households in an easy, adequate and convenient manner;
- e. Introducing more and more income-generating schemes and programmes strengthening the wage employment framework;
- f. Stabilising food supplies through an efficient, people-friendly, safety-net system -specially

ensuring effective coverage to the vulnerable people, the marginalised sections of the community, the women and the children:

- g. Improving emergency preparedness in planning providing food aid, and strengthening the ongoing mechanisms of household food security; and
- h. Increasing employment opportunities – especially at the rural level to see that the economy offers an opportunity to everyone for better income and employment generation so that the poor can access food through enhanced purchasing power.

Contribution of Agricultural Cooperatives

Agricultural cooperatives have been playing a significant role in ensuring food security in various ways such as:

- a. *Providing Agricultural Inputs including Credit:* the Central Cooperative Banks through Primary Agricultural Credit Societies [PACS] meet Short-term credit needs of the farmers. The Cooperative Agricultural & Rural Development Banks [which were earlier known as land development banks] meet investment credit needs. The PACSs are also distributing farm inputs like seeds, fertiliser, agro-chemicals and farm implements thus ensuring agricultural production;
- b. *Marketing of Farm Produce:* The marketable surplus of farm produce such as foodgrains, pulses, oilseeds etc. are marketed by the cooperative institutions like agricultural marketing societies at the grassroots level, state marketing federations and the National Agricultural Cooperative Marketing Federation of India [NAFED] at the state and national levels. The export and import of agricultural commodities is handled by the NAFED. The marketing structure ensures remunerative prices to the farmers, which is so essential for sustainable growth of the agricultural development. Besides, the Government of India schemes of “Minimum Price Support”, in case of foodgrains, oilseeds and pulses, and “Market Intervention Schemes” in case of perishable agricultural and horticultural commodities, are implemented through the NAFED. These schemes protect farmers from distress sales of farm produce, thus providing help in agricultural and horticultural development on a sustained basis;
- c. *Agro-Processing:* In order to provide the benefit of value-addition and also protect farmers of sugarcane and other bulky commodities like cotton, cooperative units in these sectors have been encouraged. These are sugar mills, rice mills, daal mills, cotton-ginning and pressing cooperatives, jute-ginning and pressing cooperatives, oil processing cooperatives, cooperative paper mills, cooperative distilleries, dairy cooperatives, vegetable, powerloom cooperatives etc. have been established. These cooperatives not only add value but also increase the shelf life of the perishable commodities; thus ensuring food supplies and sustained agricultural development;
- d. *Storage:* With a view to minimise the storage losses, scientific storage facilities such as cold storage, in case of fruits and vegetables warehousing facilities in other commodities have been extended through the organisation of the cooperative societies and warehousing corporations. These also help in agricultural development on a sustained basis; and
- e. *Production of Fertiliser:* Fertiliser is the most important input for sustained agricultural development. In order to ensure availability of fertilisers the Indian Farmers’ Fertiliser Cooperative Limited [IFFCO] and the Krishak Bharti Cooperative Limited [KRIBHCO] have been established.

These cooperatives, besides production of fertilisers and agro-chemicals, to a limited extent, carry out various agricultural development programmes, such as field days, farmers' training, field demonstrations etc. through their field force.

Distribution of Consumer Items

In order to protect the consumers from traders, distribution of consumer items such as foodgrains, sugar, kerosene, textile etc. have been launched after post-World War-II. As of now [1998-99] there are 450,000 retail outlets of Fair Price Shops operating throughout the country. These ensure public distribution of essential commodities and ensure food security, especially to the poor and vulnerable groups of the society. However, in order to reduce the multiple implications of enormous food subsidy, the procurement, buffer stocking, storage, transportation etc. are required to be made more sustainable, efficient and target-oriented. The whole system needs to be revamped to make it better-managed, clean and need-based. The revised PDS and targeted PDS are attempted to seek improvement in servicing the poor section of the society in an exclusive manner.

The village employment programmes [e.g., JRY, EAS etc.] and area-based targeting [YTDP, RPDS etc.] are primarily intended to create safety-net through improving their purchasing power, for the disadvantaged sections of the community.

Management of Food Security

In order to ensure a sustainable food security system in place some of the action points may be to:

- Ensure an enabling political, social and economic environment designed to create the best conditions for the eradication of poverty and for a durable peace, based on full and equal participation of women and men, which is most conducive to achieving sustainable food security for all;
- Implement policies aimed at eradicating poverty and inequality and improving physical and economic access by all, at all times, to sufficient, nutritionally adequate and safe food and its effective utilisation;
- Pursue participatory and sustainable food production practices in agriculture, fisheries, forestry and rural development with pragmatic policies which are essential to adequate and reliable food supplies at the household, national, regional and global levels, and combat pests, droughts and desertification, considering the multifunctional character of agriculture;
- Put in place a mechanism that will ensure that food, agricultural trade and overall trade policies are conducive to fostering food security for all through a fair and market-oriented world trade system;
- Endeavour to prevent as well as be prepared for natural disasters and man-made emergencies and to meet transitory and emergency food requirements in ways that encourage recovery, rehabilitation, development and a capacity to satisfy future needs; and
- Promote optimal allocation and use of public and private investments to foster human resources, sustainable food, agriculture, fisheries and forestry systems, and rural development, in high and low potential areas.

Summing Up

It may be important to realise that in most poor, food insecure areas and countries, the two greatest potential resources available to address the problems of hunger and malnutrition are the local people and the agricultural productivity of land and water. To make sustainable improvements, investments will be needed in both of these resources. Investing in people will need to come in the form of education, clean water and sanitation, health and social services and when needed, direct food and nutrition support. Such investments are essential if the corresponding investments in agriculture and its productive sub-sector are to pay off. A hungry and malnourished population can neither work, nor learn nor prosper.

The key lesson is the need to take into account the human dimensions of the problem by helping people help themselves gathering common wisdom and putting up their collective efforts. We need to find out how to encourage and empower people to secure their fundamental right to food.

“The under-nutrition is not only just a manifestation of poverty but perpetuates poverty as well setting off a vicious circle. The food security is a complex issue having several dimensions such as poverty, unemployment, famine, natural hazards, gender discrimination, equity, starvation, population growth, political reasons and so on.”

Quality Management in HRD Functions in Cooperatives

C.S. Rao

Product and service quality are becoming national concepts to participate effectively in global economy. Total Quality Management [TQM] is concerned with the integration of all efforts in the organisation towards quality and customer care. TQM represents a customer-oriented and quality focused management philosophy. Total quality management is often regarded as successful largely due to the commitment and vision of the people at the top and strong leadership. In TQM process, leadership to a great extent is inbuilt. The satisfaction of the ultimate user of the products of the IFFCO, the farmer, needs a total satisfaction, and it is, therefore, the ultimate goal of the IFFCO to provide quality products and quality services to the end-user. The acquisition of ISO-9002 Certification is due to the implementation of TQM concepts in the organisation in all fields – the products, the services, board-member relationship, organisation-employee relationship etc.

TQM is concerned with the integration of all the efforts of an organisation towards quality improvement, quality development and quality maintenance for meeting complete customer satisfaction. It develops a culture where each employee can directly participate in areas and decisions concerning his work. HRD is an ongoing and continuous function. It continues to focus on improving the human processes in the IFFCO. Dr CS Rao is the Chief Manager [Human Resources Development] in the IFFCO.

Total Quality Management-TQM

Total Quality Management [TQM] is creating a revolution in manufacturing and service organisations throughout the world. TQM coupled with other processes such as ISO-9000 International Quality Systems holds the key for achieving competitiveness. TQM cannot exist in a vacuum. Suitable technological and managerial practices have to be continuously adopted to produce 'World Class Quality'.

TQM is intended to bridge the gap by identifying customer [both internal and external] requirements and taking steps to meet them on immediate and long-term basis. The feeling 'Quality costs too much' is really a myth, since the corporate strategy to focus on quality and customer invariably enhances market share and gives competitive edge and improved profitability.

The Scenario

In the global scenario, a few important events have taken place almost simultaneously. The first one relates to the economic unification of European Nations, forming a single large cartel of customers with uniform policy towards import of goods and services. These customers put together represent about 22% of the world's trade and business. This is also coupled with various deadlines when all the trade barriers among these nations will go down. All those countries who are doing business with EC

expect that market forces will intensify and ISO-9000 will become a prerequisite for doing trade.

The second event which has happened back at India is the disappearance of controls and regulations signifying the end of the so-called *licence raj*. Economic liberalisation and openness are being pursued now. This might have been triggered off by the fast deteriorating foreign exchange situation and resultant pressures from IMF or World Bank, but the process has started and is shaping up in the form of gradual and phased removal of restrictions.

The failure of socialist model of managing economy in the Soviet Union as a third event has reinforced the belief of many countries in market-driven economy. In India the economy with little or no protection will now be governed by open competition. This has focussed the attention of industry on one aspect of business which has all along been neglected i.e., quality. The Indian product has, in general, been considered as indifferently produced and poorly finished, shabbily packed and lacking in design, performance and reliability. The situation is fast changing with quality assuming the status of a corporate strategy, a large number of companies are focussing their thrust on quality.

Quality is a Strategic Issue

World-class organisations have to make major changes in their business performance in their business performance and customer orientation as a result of ever-changing global market conditions. The present era has seen that quality has moved from a shop-floor control technique to a strategy where it is the driving force of the whole business encircling the entire gamut of an organisation's activities.

Several organisations can produce zero defect products but the quality still may not be right. There are several functions and departments which can let the company down. Many situations have been observed where the customers are happy with the product but they are not happy with the company.

At present, emphasis has rightly shifted from mechanisms and methods of controlling quality at the operational level to total quality management throughout the business cycle with adaptability and flexibility to improve quality continuously and to meet customer demands cheerfully. Quality is, therefore, a strategic issue and it should be addressed accordingly. It should be used as a strategic weapon to meet the challenges of competition. In short, TQM is an evolutionary process and has not appeared overnight. It has moved from Inspection to Quality Control to Quality Assurance and finally to strategic level as Total Quality Management.

The Big "Q"

Quality has to be adopted as a corporate strategy. There are lot of lessons to be learned from the experience of applications of universal concepts and processes which make an organisation world class. The first lesson is to adopt the concept of Big "Q". The term Big "Q" is a label for the enlarged scope of managing for quality. The principal features of this enlargement are as follows:

Old Quality is:	New Quality is:
Technical	Strategic
About products	About organisations
Led by experts	Led by management
For inspectors	For everyone

Higher grade	The appropriate grade
About control	About improvement
About specifications	About customer specifications
[Small “q”]	[Big “Q”]

The trend towards the adoption of Big “Q” concept in India is growing fast and is perhaps irreversible.

Achieving World Class Quality

World class quality is the result of several management concepts and processes that are continuously pursued and implemented in an organisation to impact work culture, work ethics and attitudes of all the people. It is a combination of many inter linked processes and practices directed at quality and customer. World class quality, therefore, consists of Total Quality Management, Quality Systems such as ISO-9000, Management Practices, Changing Technology, Benchmarking and such other practices.

First-Line Empowerment

Attempts at work force participation have not proved successful. Both unions and management use such mechanisms as a boxing ring and someone always loses. TQM approach provides an answer to transform not only employee-employee relationship but also focusses attention on economic development. Under the concept of people or front-line-empowerment, the organisation transfers certain critical responsibilities for relations with customers to the people down the line. TQM is a “win-win” approach. Relationships transcend beyond merely the economic give-and-take and everybody works purposefully, with pride, towards a common goal-total quality.

Workers are empowered to perform work earlier done by supervisors, managers, inspectors and others. The scope of their job often gets extended across functional lines. The empowerment concept may extend to include customers and suppliers, both internal and external.

Quite often, individual jobs become team jobs and workers become team members. The self-supervising and self-inspecting concepts provide workers with a sense of understanding and ownership which contributes significantly to the quality of worklife. But, this needs extensive training programmes to be initiated. Workers have to be trained to perform multiple tasks in order to provide flexibility in job assignment. They need to be trained to be competent in all the processes of managing for quality. The empowerment concept delegates much managerial details to the workers, thereby liberating managing the business. This leads to reduction in the number of layers of supervision and the flattening of the organisation chart.

Total Quality Management-TQM

Product and service quality are becoming national concepts to participate effectively in global economy. Total Quality Management [TQM] is concerned with the integration of all efforts in the organisation towards quality and customer care. TQM represents a customer oriented and quality focused management philosophy. Quantum jumps in productivity can be achieved through total quality efforts. TQM enhances quality of worklife, employee satisfaction through participation and involvement and consequently the image of the organisation. It is a fundamental shift from what has gone before and is considered a thought revolution in management.

TQM has evolved and developed into its present form from quality control and quality assurance. Quality is primarily a customer issue. It arises because customers require products and services which not only meet the performance requirements but also provide satisfaction in terms of safety, durability and pride of ownership. In an organisation, the achievement of quality standards is not restricted to the shop-floor or production department. It extends to all parts of the business from market analysis, conceptual design to marketing and distribution network. TQM, therefore, has to be driven through the entire range of business activities.

By involving everyone from Chief Executive to the junior-most employee in the society's quality mission, the cooperative will be on its way to becoming a total quality cooperative. In TQM, it is not only the external customer who has to be satisfied but also the internal customers. Each department, section and person must recognise the internal customers and outputs that meet their requirements. This concept of internal customers and their satisfaction provides the basis for establishing competitive measures, benchmarking, performance targets, better communication and in consequence the process of continuous quality improvements. This is the true aim of TQM and the only basis on which the organisation can achieve world-class quality and manufacturing performance.

A Quality Culture

Total Quality is an approach to improve the effectiveness and flexibility of an organisation as a whole. This is possible only when each function and each person develops an attitude for quality to prevent and eliminate errors, waste, rework etc. Teamwork, participation and communication are keywords in the process of total quality. Total quality can be achieved by creating this cultural change in an organisation.

Quality is not the result of gimmicks, tricks or fads; it comes from developing a culture of openness, trust, fairness, integrity and hard work. Quality, therefore, is what you make it. Quality can only be achieved by creating a quality culture and not by technical application alone. Quality cannot be improved by high investment in technology alone. Quality comes from people. Quality is the result of attitudes and values. Organisational climate and culture decide the quality of products and services. TQM provides an opportunity to people to rethink about their value systems and beliefs.

Why TQM Now?

TQM has emerged as one of the most integrative mechanisms of organisation development and improvement. It represents a complete way of managing an organisation with a focus on quality and customer. The unrelenting increase in the intensity of commercial competition world-wide demands that organisations must continuously strive to improve the efficiency of their operations. Quality, therefore, has become a corporate strategy of doing business. It is no longer an option, it is a positive requirement. Among many other benefits, TQM results in: Committed customers; Increased productivity; Reduced costs; Better profits; Improved institutional image; Employee motivation; Team spirit and increased participation; Improvements in attitudes and value system; Dedicated management; and Positive organisational culture.

Today, many organisations recognise that they have to change the way they manage their business, because their traditional customer base is being eroded. They realise that they have to become competitive and have to follow the leaders in the business, who seek total quality in every sense.

Defining TQM

‘TQM is an approach for continuously improving the quality of goods and services delivered through the participation of all levels and functions of the organisation’.

‘TQM is an integrated organisation approach in delighting customers [both external and internal] by meeting their expectations on a continuous basis through everyone involved with the organisation’s working on continuous improvement in all products/processes alongwith proper problem solving methodology’.

‘British Standard BS-7850 Part I:1992 on Total Quality Management Guide to Management Principles defines TQM as ‘Management philosophy and company practices that aim to harness the human and material resources of an organisation in the most effective way to achieve the objectives of the organisation’.

TQM: ‘Involve all aspects of business enterprise or the organisation in satisfying customer requirements all the time through a system of planning, control and continuous improvement’.

TQM Model

The Oakland Model defines TQM in a pyramid form with five different components :

- *Management Commitment:* The role of leading and introducing change has to stem from the senior management. The success achieved in TQM directly depends upon their commitment. The entire company management has to be committed to it and not just few individuals;
- *Customer-Supplier Chains:* This concept is at the heart of Oakland model. It is guided by the improvement in processes and management of these processes;
- *Systems:* The systems for quality management needs to be documented to ensure procedure compliance;
- *SPC Tools:* One of the important requirements of TQM is to continuously upgrade the process capability and continuously measure and control performance. This is achieved by applying statistical process control tools and techniques.
- *Team Work:* This component means that a culture based on teamwork, participation and implemented throughout the organisation.

An Integrated TQM Model

It takes ten components to be implemented in an integrated way to achieve total quality. They are called components as all of them are necessarily required to become a total quality cooperative:

1. *Quality Policy and its Communication:* A sound quality policy is a fundamental requirement if an organisation is to start implementing TQM. The TQM foundation consists of strategic quality management, executive leadership and a continual focus on the customer. Therefore, the first thing is a clear vision of where the organisation is going. This must be clearly stated, documented and communicated in the form of Quality Policy to every member of the organisation in a language he or she understands. This has to be followed by defining clearly the key objectives and quality goals that must be achieved if the cooperative is to realise its vision. The Quality policy helps in creating an understanding of mission and vision i.e., oneness in the organisation:

2. *Team Work and Participation:* The total quality process involved participation of all functions of an organisation and all the people of each function. The complexity of the present day processes operated in the industry and services places them beyond the control of any one individual. The only way to tackle such processes is through the use of team working. For effectiveness, teamwork and participation should be structured and institutionalised within the organisation. The known and tested methods of doing this are: Quality Improvement Teams [QIT] or Cross Functional Management Teams; Quality Circles; and Suggestion Schemes:

3. *Problem-Solving Tools and Techniques:* Teamwork and participation which is an important component of TQM will be effective only when quality improvement teams use various tools and technique to identify, analyse and solve problems. The use of tools and techniques will also develop lateral thinking in the people to bring out the real creative potential in them. An attitude of problem solving i.e., 'There is always scope for improvement' should pervade the entire organisation. Problems, therefore, have to be allowed to surface so that they can be solved:

4. *Standardization:* Standardization is a management tool for encouraging and securing optimum utilisation of resources and maximum efficiency of operations through formal establishment of the most suitable, pre-determined solution and answers to recurring problems and needs. Standards may be technical specifications and design, procurement, production and control or administrative specifications in supervision and management. They may deal with products, processes, methods, material, parts, inspections, tests, procedures or other types of requirements:

5. *Design and Implementation of Quality System:* The quality system represents an assembly of organisation structure, responsibilities, procedures, processes and resources for implementing quality management. It is, therefore, necessary for each organisation to develop and use a well-documented quality system. The ISO-9000 series brought out by International Organisation for Standardisation [ISO] sets out the methods by which a management system, incorporating all the activities associated with quality, can be implemented in an organisation to ensure the specified performance requirements and needs of the customers:

6. *Quality Costs and Measurements:* People used to have a stereotyped belief that high quality means high cost. It has now been demonstrated that quality improvement programmes really bring down the cost. It is estimated that manufacturing companies spend about 10 to 25% of sales revenue as cost due to poor quality or not doing things right, offering a tremendous potential for saving. Once the cost parameters are laid down then measurements can be exercised through bench marking leading to continuous improvement:

7. *Process Control:* The emphasis in quality improvement is on prevention and not on correcting and reworking at post-production stage. Control of processes becomes important so that the processes do not produce defectives or rejects. The main objective of process control is to immediately give a feedback to initiate necessary action. Continuous quality improvement is achieved using statistical process control:

8. *Customer-Supplier Integration:* Customer Supplier Integration refers to identifying the mutual needs, expectations and responsibilities and fulfilling them to the utmost satisfaction of all concerned. Only then the total quality process ensures this integration, 'zero defects' objective can be achieved. The organisation has to extend its quality improvement efforts to its suppliers. 'The next process is customer' has to be understood and ingrained in the organisation culture.

9. *Education and Training:* Prof K. Ishikawa, one of the world's foremost authorities on quality

management considered that TQM begins with education and training must be started in all the organisations for improvement in skills, knowledge and attitudes on quality". It is, therefore, necessary to initiate training programmes for everyone from top to bottom in the organisation on TQM based on needs analysis on continuous basis:

10. *Quality Audit and Review*: Quality audit and management review forms an important component of total quality process. It is an independent and systematic examination conducted to compare the given aspects of quality performance with the standards or specifications. It is carried out by those people who have no direct responsibility for performance under review. There are generally three kinds of audit and review which are performed: Product oriented; Process oriented; System oriented. Each organisation should develop and institutionalise an internal quality auditing system for addressing the customer requirements and complaints and internal quality problems.

Thus, TQM is concerned with the integration of all the efforts of an organisation towards quality development and quality maintenance to meet full customer satisfaction. It develops a culture where each employees can directly participate in areas and decision concerning his work. It, therefore, builds positive attitudes in employees towards quality, and respect for other leading to a work place that is meaningful. TQM, is an approach to improve the effectiveness and flexibility of an organisation, as a whole. TQM will not succeed if line managers, HRD people and employees fail to work together. TQM can't be brought overnight but can be achieved through a gradual process. It is the single most important management methodology available to achieve and maintain world-class performance and competitiveness.

TQM is not only the "Management of Quality" but also the "quality of Management". It is fitting to quote here Dr. Deming and Peter Drucker: "You can begin anything you want, as long as you start now". -W. Edwards Deming: "What we need to learn from the Japanese is not what to do, but to do it". -Peter Drucker.

Quality Management in HRD functions of Cooperatives with special reference to IFFCO

Total quality process has to be driven through the entire business and not just a few functions. Quite often, many companies implement one aspect of TQM and claim success. While it is right that success can be seen even when a company adopts adhoc interventions of some of the components of TQM, the real benefits will be realised only when TQM is adopted company-wide. It has also been seen that efforts directed at total quality may not provide competitive advantage unless the styles and practices of human resource management are coupled with it for continuous change.

The necessary change required for the implementation of TQM are more in terms of attitudes and beliefs to make organisations world-class to deliver world-class quality. Mr Suzaki K. [1987] in his book "The New Manufacturing Challenge - Techniques for Continuous Improvement" suggests: "We may grasp an idea intellectually, but our hearts may not be in it enough to put it into practice". However, changing people's attitudes for the introduction of total quality process is a daunting task. It will be possible only when individuals are motivated.

The management practices can be translated in the variety of ways such as, establishing a culture which treats problems as opportunities for improvement rather than blaming people. Some of the related factors are: 1] Leadership; 2] Encouraging Teamwork; 3] Communication; 4] Trust; 5] Flexibility; 6] Focus on Problem Solving; 7] Recognition; 8] Quality Awareness; and 9] Training. A brief description of a few of them follows:

[1] *Leadership*: Total quality management is often regarded as successful largely due to the commitment and vision of the people at the top and strong leadership. Leadership, in fact, can take many styles based on situation and transformational factors. The kind of leadership needed in times of crisis is very different from is needed in times of stability. Leadership is about wanting things to happen.

The responsibility cannot be forced down the throats of the people. TQM is management- led, but, to a large extent, bottom supported activity. Authoritarian styles certainly pose a major obstacle to success in the implementation of TQM. Leadership is about representation of a general consensus rather than dictating terms of higher performance. Quality is achieved through people by knowledge and creativity input, skills and discipline. TQM represents a corporate transformation and therefore this change has to be managed by a strong leadership.

In TQM process, leadership to a great extent is also in-built. For example, the definition of corporate strategy and objectives in the form of quality policy is the first step in TQM, followed by preparation of quality plan. It cannot happen unless the board room members are involved.

[2] *Encouraging Teamwork*: The attention in total quality process has to shift from individuals to teams. The team working can be very effective if it is accepted as the philosophy of doing jobs and is supported in action by management. The participative approach is characterised by several types of employee groups. These are variously known as quality circles, quality improvement teams, cross-functional management teams, employee involvement teams, taskforces, advisory councils, work groups etc. The elements of the process of teamwork are as follows:

- The teams would have an objective to develop the team members, individual abilities as well as make improvements for the benefit of the organisation;
- The team members would help each other in solving problems, learning and developing, thus encouraging good team spirit;
- Creativity and innovation would be encouraged. Domination and criticism with the team to be avoided;
- In such teams, employees are encouraged to participate and not forced;
- All team members are trained in problem solving tools and techniques; and
- The support and involvement of management is essential.

Trust and cooperation should be the keyword in such participative forums. It is vital that the management provides time and resources for the teams to operate effectively.

[3] *The Power of Communication*: In TQM, both the internal communication within an organisation and the communication between suppliers and customers are essential requirements to make an organisation world-class. Communication can be characterised by the suppliers' depth of knowledge and their level of understanding of customer requirements. The process depends upon a variety of inputs coming from customers and various other people who represent the personal contact between the company and its customers. The complexity is determined by the degree of involvement and the level of information sharing resources and knowledge.

[4] *Communciation for Quality Improvement*: Effective communication is a two-way process. Some of the essential factors of communication for quality improvements are: Suggestion schemes; Departmental talk-ins; Poster campaigns; Competitions Prizes/Awards and Presentations; Demonstrations; House journals or newsletters; Opinion surveys.

[5] *Training for Quality*: Prof K. Ishikawa who is regarded as the father of quality in Japan has said in his book on “What is Total Quality Control-The Japanese Way” that quality starts with education and ends with education and training. Training for quality should be continuous to meet not only the changes in technology but also the changes in the environment of the organisation. Training must be a part of the company’s quality policy. Training should be planned based on the assessment of training needs and the responsibility should be allocated to a person specifically. The training has to be linked to the quality performance of the company. Over-training may be better than less training - it would never go a waste.

The concepts, processes and achievement of world-class quality can be summarised as follows:

Characteristic	Present Status	In World-Class Quality & TQM
Quality	Quality is applied to products alone	Quality is applied in all activities of the organisation including products
Definition of Quality	Quality is defined as conformance to specifications	Quality is defined as full customer satisfaction
Practised by	Quality is practised By quality control specialists	In TQM, quality is practised by everyone
Measurement	Quality is measured by percentage defects	Quality is measured by process capability
Quality and Costs	Existing quality is achieved at high cost	Better products and services at lower cost
Employee Training	There is limited Training for employees on quality or there is none	Training on quality is continuous to impact attitudes
Audit	Quality audits are rare if ever conducted	It becomes an on-going activity in TQM
Technology	Technology is viewed as static or adhoc improvement	Here, the concept is changing technology:the upgradation is continuous and up-to-date
Target	Target setting is done using Management by Objectives [MBO]	Target is set using PDCA [Plan, Do, Check and Action] cycle

Primary Commercial	To earn profits generally with short-term view	Primary commercial objective taken as improvement in competitive position
Work force	Seen as a cost	Seen as an asset
Role of Supervision	Generally taken as issuing instructions or top-down management	To provide leadership, support and training with full team work and participation
Driven by	Considered as a routine activity	Driven by top management team with Chief Executive's involvement
Taken as	Quality is taken as a function-quality control strategy.	Quality is considered as and adopted as a policy.

TQM IN IFFCO

Setting up of the HRD Section: With a view to enhancing employees capabilities and for attaining both organisational and personal goals, the HRD Section was set up in the year 1988. The aim of the HRD was designing appropriate action strategies for strengthening the human resource systems and organisational processes.

HRD Philosophy: The basic philosophy of IFFCO's approach to HRD as approved by the Board is based on the following objectives: a] Creating an ambiance of excellence in every sphere of organisational activities; b] Generating a feeling of confidence, dignity and self-esteem for spurring people to greater endeavors; c] Conferring recognition and rewards, both tangible and non-tangible commensurate with accomplishment of tasks; d] Evolving an organisational milieu, where there is free flow of ideas and openness and authenticity in interpersonal relations; and e] Enabling the employee to realise his potential to the maximum extent possible, through sharpening of skills and harnessing of expertise.

HRD Accomplishments So Far: Broadly, the HRD initiatives can be summed up as having two dimensions: First, Examine the existing Human Resource Development system within the organisation and bringing in appropriate changes through redesigning and integration. This was necessary as organisational transformation through TQM warrants a thorough understanding of principles behind human behaviour and the culture of the organisation; and Secondly, Upgrade the variety of skills at different levels and improve HRD climate in the organisation.

The following HRD activities have been conducted so far: i] HRD Climate Survey; ii] Introspection workshops; iii] Performance Appraisal System; iv] Induction process; v] Career planning, recruitment and promotion; vi] Survey on socio-economic impact of IFFCO's plants; vii] ISO 9000 certification; viii] Upgradation of skills and knowledge through: (a) Fertiliser Marketing Development Institute & Training Centres all over IFFCO; (b) Cordet; (c) Motilal Nehru Farmers' Training Institute; (d) Instituting IFFCO chairs; (e) Training and Visits Programme; (f) Nominations into programmes within the

country and abroad; ix] Small Group Activities; x] Cultural Festivals and Sports Meets; xi] Jawahar Lal Nehru Memorial lectures; xii] Constitution of Manoranjan Clubs & Jagriti Ladies' Clubs; xiii] Strengthening of Cooperatives; and xv] Celebration of 50th year of India's Independence. These are examined here one by one:

HRD Climate Survey: A diagnostic survey covering all units was undertaken to find out the perceptions of the employees on the existing HRD climate and other related sub-systems operating in the organisation. The survey revealed the need for personal goal setting as a basis for objective appraisal, appropriate job rotation and relevant training. Accordingly, 'Personal goal setting process' and 'Role Analysis Technique' were selected as the cornerstone of the HRD Model for toning up of HRD systems and improving work culture, and skills. To formalise and validate the model, workshops were conducted at plants by HRD group to analyse the focal role through a systematic exercise of Role Analysis at Senior level and identification of key result areas within the organisation for goal setting.

Introspection Workshops: A series of Introspection Workshops were held under the aegis of ISISD with the objective of improving the work culture at IFFCO. The participants reflected on the strengths, weaknesses, opportunities and threats of the organisation.

Performance Appraisal System: IFFCO had been following a trait-centred performance appraisal system for its employees in the beginning. Organisational Development activities suggested that the appraisal system was inadequate and deficient. A new Performance Appraisal System was evolved over a period of two years taking into account the feedback obtained in 39 base level and two apex level workshops conducted by HRD group at units and HO covering nearly 400 officers. The new system incorporates self-appraisal, performance counseling, potential appraisal and moderation of ranking.

Induction Process: As trainees were inducted directly at the plant level, a perception of the integrated organisation was lacking among the trainees. To rectify this, HRD group implemented a new induction process in which the trainees joined at the corporate office, New Delhi. A feeling of belonging and awareness was generated among the newcomers by organising Induction Programme at FMDI, Gurgaon. During this programme, top management group of IFFCO met the new entrants.

Career Planning, Recruitment and Promotion: As an outcome of the additional departments created over a period of time and to provide growth opportunities to its employees, there was an overhaul of the career planning, recruitment and promotion guidelines for IFFCO. This resulted in increased morale and reduced turnover.

Survey on Socio-Economic Impact of IFFCO's Plants: HRD group coordinated an extensive survey to assess the HRD Climate in the organisation and socio-economic impact of IFFCO's fertiliser plants and its agricultural and promotional activities. The objective of the survey which began in 1997 was to examine the employees self-motivation and satisfaction and to look into the socio-economic impact of IFFCO's fertiliser plants and its agricultural and promotional activities.

ISO-9000 Certification: What cannot be measured, cannot be improved. So continuous improvements as a part of TQ approach have to be rationalised with reference to benchmarks. With this in mind and in order to meet emerging global competition, the Total Quality Movement was initiated to achieve total employee and customer satisfaction leading to innovation, dynamism, corporate growth and prosperity. New quality systems were implemented at all the Units to improve the quality of work-life of the employees. During 1997, Kalol Unit received the coveted ISO-9001 award from BVQI. The Marketing Division followed suit and it also bagged the ISO-9002 certification from BVQI during 1998.

New Aonla Unit and Phulpur Unit of IFFCO are progressing fast to bag ISO accreditations.

Upgradation of Skills and Knowledge: This programme is aimed at improving the ability and capacity of the organisation and of its employees to strengthen the overall performance and quality of the products and services. The following are the methods and means employed:

[a] *Training:* Behavioural processes are central to TQM. The HRD section and training departments at the Units help in not only keeping IFFCO's 6,000 employees skills updated and finely-honed but also add new skills when required. Every employee is given opportunity to develop himself. Continuous training and retraining, a positive work culture and participative style of management have led to the development of a committed and motivated work force and enhanced productivity and quality levels. This is evident in the record-breaking performance of our Society. As computerisation is fast spreading in the organisation, Computer training programmes on Windows, Lotus smart suite, Fox pro and Oracle have been taken up with a renewed vigor and today IFFCO is the leader in IT.

[b] *Community development programmes:* IFFCO continues to pay special attention to the development of employees' spouses and children also. These are Inter Unit Quiz Contest.

[c] *Fertiliser Marketing Development Institute [FMDI]:* In order to upgrade the skills, explore the potential for growth and improve the competence of its work force at all levels, a FMDI has been set up at Gurgaon. FMDI is the nerve centre for Human Resource Development at IFFCO. It is primarily meant for imparting training to its employees and other cooperative personnel. A variety of training programmes are conducted. Some of them are: 1] Workmen, supervisors, middle management & senior executives; 2] House wives & children; 3] Marketing Development Programmes for Cooperative personnel from all over the country; and 4] International training programmes organised for the ICA, IFDC, etc.

[d] *Cooperative Rural Development Trust [CORDET]:* IFFCO promoted Cooperative Rural Development Trust [CORDET] in the year 1979 to provide education and training to farmers on various aspects of crop production, horticulture, animal husbandry, farm machinery etc. CORDET has established Motilal Nehru Farmers' Training Institute at Phulpur. Presently, the Trust is operating at two places viz., Phulpur in Uttar Pradesh and Kalol in Gujarat. Since their inception, about 40,000 farmers have been trained. In addition to imparting training CORDET also produces quality seeds and saplings of fruit, ornamental and forestry plants.

[e] *Motilal Nehru Farmers' Training Institute:* Motilal Nehru Farmers' Training Institute, Phulpur established under CORDET, is IFFCO's second training institute. It provides practical training to the farmers and their families to improve their skills in agricultural production, dairy, horticulture, poultry, fisheries and developing professional leadership at village level.

[f] *IFFCO Chairs in Agriculture, Fertiliser Technology and Cooperative Education:* In order to maintain linkages with the key national agricultural universities, IFFCO has established 15 Chairs - one each in 13 Agricultural Universities and one in Vaikunt Mehta National Institute of Cooperative Management, Pune and one in Banaras Hindu University. These Chairs are instituted in the disciplines of Agronomy, Soil Science, Extension, Cooperation, Fertilizer technology, Agro-Economics and Chemical Engineering.

[g] *Training and Visits Programme:* IFFCO initiated Training and Visit [T&V] programme with the objective of imparting training to the farmers on various aspects of crop production, animal husbandry, pisciculture etc. In this programme practicing farmers, in groups of 40,

from the States are taken to nearby Agriculture University and Research Institute for a period of 5 days. Field visits are also organised for the benefit of farmers. IFFCO conducts nearly 30 such programmes in a year.

Other activities are: Small Group Activities, Cultural festivals and Sports Meets, Institution of the Jawahar Lal Nehru Memorial lectures; Constitution of Manoranjan Club and Jagriti Ladies' Clubs; Strengthening of Cooperatives,

IT in IFFCO: IT penetration, both in breadth and depth was an important dimension in the multifaceted growth of IFFCO in the recent years. IFFCO's wide area network [WAN] was strengthened with 64 kbps VSATs. Lotus Domino Servers were installed at the corporate office, the production units and the zonal marketing offices to facilitate e-mail based messaging and to initiate electronic paper-less interaction. Video Conference facilities are installed between zonal marketing offices and senior executives at the corporate office to facilitate effective monitoring and smooth flow of communication.

Conclusion

Thus, TQM is concerned with the integration of all the efforts of an organisation towards quality improvement, quality development and quality maintenance for meeting complete customer satisfaction. It develops a culture where each employee can directly participate in areas and decisions concerning his work. It, therefore, builds positive attitudes in employees towards quality, and respect for others leading to meaningful work and enhanced quality of life. TQM is an approach to improve the effectiveness and flexibility of an organisation, as a whole. TQM will not succeed if line managers, HRD people and employees fail to work together. Also, TQM can't be achieved overnight but through a gradual planned process. Likewise, as HRD is an ongoing and continuous function, it continues to focus on improving the human processes in IFFCO. It has reaped a rich harvest by harnessing the power of TQM which is the single most important management methodology available to achieve and maintain world class performance and competitiveness.



“Total quality is an approach to improve the effectiveness and flexibility of an organisation as a whole. This is possible only when each function and each person develops an attitude for quality to prevent and eliminate errors, waste, rework etc. Teamwork, participation and communication are keywords in the process of total quality. Total quality can be achieved by creating this cultural change in an organisation.”

Quality System Standards in ISO-9001 and Implementation of ISO-9002 in IFFCO Marketing Division

A.K. Alambain

The Indian Farmers' Fertiliser Cooperative Limited [IFFCO] is committed to quality right from the date of its inception and has been maintaining it all along its journey of success. IFFCO's products carry no other names than IFFCO itself, which are established as quality products, thus IFFCO has acquired synonymy for Quality. In consonance with its innovative and challenging spirits, the IFFCO Marketing Division envisioned to acquire international quality certificate through recognised ISO-9002 Certification exclusively for Marketing. In 1996, ISO-9001 Certification was acquired by the IFFCO Kalol Plant. In the Marketing Conference at Lucknow, a topic on Total Quality Management was delivered by the Director, Total Quality Associates [TQA], New Delhi, and it was resolved to go for ISO-9002 in Marketing Division. This was obtained in June 1998. In future, ISO Certification will become more and more stringent and hard to achieve and maintain especially after new version of ISO-9000:2000 is introduced. Mr AK Alambain is the Chief Manager [Marketing] with the IFFCO, New Delhi. He is also designated Management Representative for ISO implementation in the Marketing Division of the IFFCO.

The ISO – An Introduction

The International Organisation for Standards [ISO] is an organisation with a membership of 107 countries. A majority of countries have contributed in the formation of this specialised international organisation. There are two types of membership: "P" and "O" - Primary and Observer membership. Although all members contribute their mite in formulating international standards, yet only the Primary Members have the right to voting. 90% voting is mandatory for adoption of international standards.

The central office of ISO is located in Geneva, working since 1947. India is a Primary Member represented through the Bureau of Indian Standards - BIS [formerly known as Indian Standards Institution – ISI]. Likewise national standards body of each country is a single point contact for ISO. ISO has so far developed 10,700 international standards majority of which are Product Standards starting from nut-bolts to ship and aircraft, including technical product specification standards.

The Organisation works through Technical Committees [TCs]. A technical committee is further split into Sub-Committees. Sub-Committees function through Working Groups. ISO-9000 Standards were published for the first time in 1987, and the First Revision took place in 1994. Second Revision of ISO-9002:2000 will be published in the last quarter of 2000. 1-1/2 years' time will be given to all companies to implement ISO-9000:2000. Till then, both ISO-9002:1994 and 2000 will function concurrently and prospective companies will have the option of embracing either version.

ISO-9000 Standards were developed by ISO Technical Committee No. 176 participated by 300 persons working in different sub-committees and 15 working groups. The process of standardisation passes through several working drafts by Working Groups. The second phase is Committee Draft [CD1, CD2,....]. Third stage is Draft International Standard [DIS] whereas the fourth stage is FDIS [Final Draft International Standards]. Before it becomes IS [International Standard], it requires 90% votes. It is stipulated that a revision takes place after every five years. 1st ISO Standards took 9 long years between 1978 and 1987, whereas First Revision involved 4 years between 1990 and 1994 while latest revision has taken 6 years to be published by the end of year 2000.

ISO in India

More than 4,000 companies in India have secured certification which include Central and State Governments, public and private organisations covering manufacturing, service organisations, defence establishments, research organisations, importers-exporters, software companies, as well as hospitals, hotels, engineering colleges and schools etc. To name a few: Apollo Hospital, Hyderabad; Regional Engineering College, Jaipur; BSES [formerly known as BEST], Mumbai; and a branch of PWD in Maharashtra. Out of 4000+ Certificate-holders, only 800-900 establishments of Central and State Governments have opted for ISO Certification; otherwise the majority comes from private sector.

There are around 20 certifying agencies. The family of ISO-9000 : 1994 is detailed below:

ISO-9000:1994	Guidelines for Selection and Use
ISO-9001:1994	Model for quality assurance in design/development, production, installation and servicing.
ISO-9002:1994	Model for quality assurance in production, installation and servicing.
ISO-9003:1994	Model for quality assurance in final inspection and test.
ISO-9004:1994	Guidelines to Quality Management and Quality System Elements.
ISO-8402:1994	Quality Management and quality assurance-vocabulary.

Apart from this family of Quality Management System [QMS], there is another International Standard ISO: 14000 which deals with Environment Management System [EMS] in the production units.

Implementation of ISO-9002 in IFFCO Marketing Division

How the ISO entered Marketing Division: The IFFCO is committed to quality right from the date of its inception and has been maintaining it all along its journey of success. IFFCO’s products carry no other names than IFFCO itself, which are established as quality products, thus IFFCO has acquired synonymy for QUALITY. In consonance with its innovative and challenging spirits, the IFFCO Marketing Division envisioned to acquire international quality certificate through recognised ISO-9002 Certification exclusively for MARKETING. In 1996, ISO-9002 Certification was acquired by the IFFCO Kalol Plant. In the Marketing Conference at Lucknow, a topic on Total Quality Management was delivered by the Director, Total Quality Associates [TQA], New Delhi, and it was resolved to go for ISO-9002 in Marketing Division also, endorsing the action of IFFCO Kalol Plant.

Quality Awareness: To meet the challenge demanding on maintenance of ‘Quality and Customer

Satisfaction', IFFCO Marketing Division's maiden Top Management Awareness and Documentation Training Programme on ISO-9002 was organised during March 7-8, 1997 at the FMDI, Gurgaon, attended by 24 participants including Marketing Director and all the Zonal Managers. This was followed by a series of Awareness Programmes for the senior executives of Marketing Division from all over the country. In all, 9 such programmes were organised.

Similar Awareness Programmes were organised for field personnel imparting knowledge on various aspects of ISO-9002 Standards: Relevance, context and development; Interpretation of ISO clauses and requirements; and Implementation of Quality System Procedures.

The staff at Marketing Central Office [MKCO] was divided into three groups of 31, 31 and 30 people and Awareness Programmes were conducted in September, 1997. Another similar programme was organised for 25 MKCO Personnel in April 1998.

Documentation of Quality System Procedures: Four workshops were organised during August-September 1997 at FMDI, Gurgaon for documentation of 41 Quality System Procedures [QSPs]. First Core Group Meeting took place at FMDI during September 16-20, 1997 whereas Second Core Group Meeting was organised during October 20-25, 1997 at the same venue. 16th May, 1997 was fixed for drafting Quality Policy of IFFCO Marketing Division.

The IFFCO marketing network and its manifold services to the society at large, our Quality System Procedures have run into two big volumes of about 550 pages, which, perhaps, is the largest documentation in the World. But, we are stipulating to reduce this voluminous documentation especially by further rationalisation of Forms and Formats. For achieving this goal, we will organise discipline/function-wise workshops e.g., Personnel & Administration [P&A], Agriculture Services Department [ASD], Farmers' Service Centre [FSC], Seed Multiplication Programme [SMP].

On completion of documentation, a "Workshop on Orientation, Implementation and Launching ISO-9002 in Marketing Division" was organised at FMDI during Nov. 28-29, 1997 where Marketing Director formally launched ISO-9002 in IFFCO Marketing Division. We, then, applied for Pre-assessment to BVQI, Mumbai: Certification Agency on 27.1.1998 and Pre-assessment was fixed for May 4-7, 1998.

Quality Audit: Awareness Programmes and Documentation was a preparatory phase followed by launching and implementation thereof, but it could be of no meaning unless auditing took place. In order to ensure effective quality auditing, we needed a team of our own *Internal Qualified Auditors*. During June 9-13, 1997 and July 7-11, 1997, two training programmes were organised for Internal Quality Auditors. Total Quality Associates [TQA], New Delhi engaged as Consultants since 30.1.1997, organised these two groups of 20 participants each. Another group, of Area Managers and Deputy Area Managers, numbering 30, was imparted training on Quality Auditing Skills, during July 13-15 and July 28-29, 1997. The TQA arranged similar programmes outside IFFCO and thus they certified approximately 90 personnel, including 13 IRCA [INTEC-UK] qualified Lead Assessors, to act as Internal Quality Auditors.

Events in ISO-9002 Certification: The success depends on the effective sequence of vision, planning, preparation, execution, auditing, correction/prevention and improvement. Accordingly, ISO-9002 Implementation Schedule was charted and also revised.

Implementation of ISO-9002: Since the IFFCO has, of its free will and accord, opted for ISO-9002, the system is owned by IFFCO Marketing Division as a whole. After owning the system, faith in and allegiance to it is the second step forward and utilising system is a continuous process of marching ahead for achieving the desired goals built in the system. Sh. VK Kaul, BVQI Auditor during Pre-

Assessment Audit in early May, 1998, pointed out: "'Proficiency' of the people of IFFCO is, no doubt, appreciable, but it needs to be translated into 'efficiency' proved through verifiable records". He added further that "evidence of compliance is very much necessary" which we have to exhibit in total compliance.

The mechanism of implementation comprises of components like responsibility of top management evincing interest in creating atmosphere of acceptance and ownership by one and all; and also ensuring continuity in implementation and continuous improvements. The need is felt to have quality focus right from suppliers upto customers. The concept of Quality Assurance is to produce and deliver *quality by plan* and *not by chance*. Marketing Director at one point of time had rightly said: "Joint General Manager/Zonal Manager will be personally responsible for the successful conduct of these training and awareness programmes..." so is the case with implementation.

Workshop on Rationalisation of Forms & Formats: A Workshop on Rationalisation of Forms & Formats was organised during May 3-7, 1999 at FMDJ consequent upon collective efforts of Zonal-level Committees constituted for this purpose. This Workshop has brought improvements in our QSPs and the formats annexed thereto. We still endeavour to make changes based on various audits and experiences of users. We aim at making it user-friendly by incorporating suggestions, eradicating difficulties/discomforts and accommodating observations; all these improvements are now much easier to be carried out through the platform of ISO.

The ISO-9000 standards have several benefits like:

- Internationally recognised standard
- Improved confidence for customer and employees
- Customer satisfaction and competitive advantage
- Focus on prevention and platform for improvement
- Improved communication and evidence of management control
- Greater consistency and uniformity of action and so the quality
- Formal definition of Quality Policy, Objectives, Responsibilities and Authorities
- Less rejects, rework, duplicate work and scrap [less cost]
- A corporate image for quality.

Although we are facing teething trouble during initial stages of implementation of Quality System, yet we are confident of gaining maturity during second and third year of its launching. At the same time, we feel pleasure noticing that the Quality System is gaining momentum as is evident from lesser number of Non-Conformity Reports [NCRs] under Clause 4.9 of ISO-9002:1994, as compared to audits in the initial stages of launching. We have voluntarily opted for Quality System and we commit ourselves to maintain continuity of Certificate of Approval for all times to come. Resistance to change is a universal phenomenon because long-term gains are not visible immediately. We are thankful to ISO for bringing in ultimate uniformity, optimum utility and economy in terms of time, energy and money.

Once acquired the certificate and the benefits accruing therefrom, it is imperative to continue with it whole-heartedly. The Certificate of Approval of ISO-9002 dated 30th June, 1998 was awarded to the IFFCO Marketing Division. It is valid for a period of three years from 5th June, 1998 with the given scope of: "*Marketing Fertilisers, Strengthening Cooperatives and Providing Services to farmers*

and the rural community". The employees of IFFCO Kalol Plant, Marketing Division and Aonla Plant cannot afford to turn their backs to the given scopes as enshrined in IFFCO Bye-laws by the founding fathers of IFFCO which forms the basic policy of IFFCO for all times to come.

Surveillance Audit by BVQI: In order to determine the effectiveness of the Quality System, quality audits are carried out. The Certification Body - BVQI - conducts Routine Surveillance at six-monthly intervals in order to monitor continuing conformance with "THE STANDARD" of ISO-9002. We have passed through first Surveillance during December 16-19, 1998 and second Routine Surveillance visit by BVQI during June 28 to July 2, 1999 and the latest one during December 17-24, 1999.

We are subjected to our own Quality Management System and in accordance with the requirement of Quality Standards of ISO-9002:1994, it demands a total compliance to requirements like:

1. Management Review Committee Meetings at all the three levels, viz., Marketing Central Office [MKCO], Zonal Office [ZO], State Office [SO];
2. Quality Planning;
3. Internal Quality Audits - Minimum twice a year;
4. Effective Handling Customer Complaints including control of non-conforming products;
5. Corrective & Preventive Actions;
6. Document and Data Control - including amendments;
7. Quality Records;
8. Training;
9. Use of Statistical Techniques.

Conclusion

We cannot conclude here and now forthwith because of continuity in implementation and improvements. We rather need to embrace and own it for the ultimate benefit of we all and IFFCO as a whole. In future, ISO Certification will become more and more stringent and hard to achieve and maintain in due course especially after new version of ISO 9000: 2000.

"The concept of Quality Assurance is to produce and deliver quality by plan and not by chance."

Management of Agro-Input Distribution in Cooperatives

R.C. Gupta

Cooperatives in India are very actively and intimately involved in several agriculture related activities. The most important activities are the disbursement of production credit and distribution of fertilisers and other inputs viz., seeds, pesticides and agricultural implements. Cooperatives are also involved in procurement of farm produce, processing and marketing of oilseeds, cotton, sugar, milk and milk products, distribution of essential commodities, clothes, kerosene oil and other merchandise etc. Currently, cooperatives are playing a significant role both in production and marketing of fertilisers.

Agricultural cooperatives in India are the backbone of the cooperative system and involved in variety of functions and serving the rural masses by providing credit, fertilisers, seeds, agro-chemicals, agricultural implements etc. Their role has been commendable and helped in making essential inputs availability to the rural masses. These need to be further strengthened. Mr RC Gupta is working as Joint General Manager [Marketing] with the IFFCO.

Cooperative Movement in India

The Cooperative Movement in India started way back in 1904. Till 1939, cooperatives in India were involved only in distribution of credit to the members. Its activities got diversified to the distribution of consumer articles and also some agricultural inputs in the rural areas over a period of time. Subsequently, based on the suggestions made by different committees and commissions, the cooperatives were given a significant role in distribution of fertilisers. Currently, cooperatives are playing a significant role both in production and marketing of fertilisers.

Cooperatives in India are very actively and intimately involved in several agriculture related activities. The most important activities are the disbursement of production credit and distribution of fertilisers and other inputs viz., seeds, pesticides and agricultural implements. Cooperatives are also involved in procurement of farm produce, processing and marketing of oilseeds, cotton, sugar, milk and milk products, distribution of essential commodities, clothes, kerosene oil and other merchandise etc.

Role of Cooperatives in Agricultural Credit Disbursement

Cooperatives play a very important role in the disbursement of agricultural credit. Credit is needed both by the distribution channel as well as by the farmers. The distribution channel needs it to finance the fertiliser business and farmers need it for meeting various needs for agricultural production including purchasing fertilisers.

The credit needed by the farmers for purchase of fertilisers and other inputs is called 'short-term' credit or 'production credit' whereas credit needed by the distribution channel is called 'distribution credit'. Cooperatives also play a very important role in disbursement of 'medium-term' and 'long-term' credit needed by the farmers for purchasing agricultural equipments viz., tractors, installation of

tubewells and land development works etc.

In India, 78% of the farmers belong to the category of small and marginal farmers. They depend heavily on credit for their agricultural operations. These farmers will not be able to adopt the modern agricultural practices unless they are supported by a system which ensures adequate and timely availability of credit on reasonable terms and conditions. Credit in India is made available to the farmers through a multi-agency network consisting of cooperatives, commercial banks, Regional Rural Banks [RRBs] and private money lenders. Cooperatives accounts for a larger proportion [60%] of the agricultural credit made available to the farmers.

National Bank for Agriculture and Rural Development [NABARD] was established in the year 1982 by an Act of Parliament and was entrusted with all matters concerning policy, planning and operation in the field of credit for agriculture and other economic activities in the rural areas. Before that, this job was being done by Reserve Bank of India itself. NABARD works for progressive institutionalisation of the rural credit and ensures that the demands for credit from agriculture including the new and upcoming areas like floriculture, tissue culture, bio-fertilisers, sprinkler irrigation, drip irrigation etc. are met.

The medium and long-term of loans are disbursed to the farmers through Primary Land Development Banks [757] who draw their finances from Central Land Development Banks [20] who, in turn, draw their finances from NABARD. As for the short-term credit, this is disbursed to the farmers through Primary Agricultural Credit Societies [PACS - 66,200] who draw their finances from Central Cooperative Banks [363] who, in turn, draw their finances from the State Cooperative Banks [29]. The State Cooperative Banks draw their finances from the NABARD.

The agency-wise flow of institutional credit to agriculture during the years 1991-92 to 1996-97 is given in the following Table-I:

Table-I: Flow of Institutional Credit to Agriculture [Rs. Million]

Agency	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (Est.)
Cooperative Banks						
Short-terms	78390	72500	83310	93280	110580	125950
Medium/Long	22780	21560	21480	26160	32810	43920
Sub Total	101170	94060	104790	119440	143390	169870
Regional Rural Banks						
Short-terms	7320	7750	9450	10800	*	*
Medium/Long	450	4770	5550	6000	*	*
Sub Total	9770	12520	15000	16800	*	*
Commercial Banks						
Short-terms	27000	39720	59750	71580	88170	109820
Medium/Long	27000	41140	40780	56290	78200	100850
Sub Total	54000	80860	100530	12787	166370	210670
Total	164940	187440	220320	264110	309760	380540

*Included in Commercial Bank

Role of Cooperatives in Fertiliser Distribution

Introduction: Agriculture continues to be the mainstay of India's national economy. Its contribution to India's Gross Domestic Product [GDP] is about 25%. Nearly two-thirds of the population still depends on this sector directly or indirectly. Self-sufficiency in foodgrains has been the basic objective of India's policy on agriculture. Foodgrain production has increased from the level of 52,000 tons in 1951-52 to 203 million tons in 1998-99. The present population of the country is about 980 million and is likely to touch 1.340 billion by the year 2020. To feed this level of population, India has to produce 293 million tons of foodgrains from the present level of 203 million tons which is, no doubt, a gigantic task.

The vital role of fertilisers in increasing agricultural production is well recognised. Since, the land:man ratio is declining due to increasing population, the additional foodgrain production has to come by increasing the productivity of land under cultivation. Adoption of modern agricultural practices is the only way for increasing agricultural productivity. This calls for application of inputs like chemical fertilisers, high yielding seeds and pesticides besides use of mechanical equipments like seed-cum-fertiliser drills, sprayers, pump sets etc. Chemical fertilisers are very costly, particularly the phosphatic and potassic ones, which have been decontrolled with effect from 25th August, 1992. Urea, of course, is relatively low priced and consequently its use is on the higher side as compared to phosphatic fertilisers leading to distortion in the NPK ratios. The ideal NPK ratio for Indian soils is considered to be 4:2:1. In the year prior to decontrol i.e., 1990-91, NPK ratio was near to normal at 5.9:2.4:1. However, it has distorted over a period of time and in the year 1998-99, it was 8.5:3.1:1. Unless balanced nutrients are applied, the productivity cannot be sustained.

Fertiliser Distribution Channels: Fertilisers are produced/imported at about 200 locations in the country and distributed to the farmers scattered through the length and breadth of the country in about 600,000 villages through a network comprising of private and institutional channels. Some quantities are also made available through manufacturers' own outlets. Private trade accounts for about 60% of the total fertilisers distributed in the country followed by institutional agencies at 35% and remaining 5% through the manufacturers' own outlets. Among the institutional agencies, cooperatives are the main agencies which alone account for nearly 31% of the total fertiliser business. The total number of fertiliser salepoints in the country is 272,000; out of which about 70,000 [26%] are institutional agencies' salepoints [mainly cooperatives] and the remaining 202,000 [74%] are controlled by the private trade.

Cooperative Channels: Cooperatives are the main institutional agency in the country handling fertilisers. Cooperative network, at present, comprises of 29 state level marketing federations, 171 district level marketing societies and about 66,200 village level cooperative societies. These village level cooperative societies are generally called Primary Agricultural Credit Societies [PACS]. These societies are the backbone of the cooperative marketing system. These societies are well spread in the entire country covering 97% of the 0.6 million villages and 95% of the farming families.

The other main institutional agencies engaged in the distribution of fertilisers are State Agro-Industries Development Corporations, Commodity Federations and State Departments of Agriculture etc. They operate both through their own sale depots as well as through the private dealers' network. However, their share is only marginal.

The cooperative structure differs from state to state and societies at different levels [district/taluka/village] perform different functions in different states. Generally, the cooperative network operates

through a three-tier system. However, in some states such as Haryana, the cooperative marketing system operates on a two-tier basis, while in some others like Gujarat a four-tier system exists. At the state level, apex cooperative marketing federations act as wholesalers; marketing societies at district/taluka level as sub-wholesalers while PACS, PAMS [Primary Agricultural Marketing Societies] at grassroots level act as retailers.

The function of state level apex cooperative marketing federations differ from state to state. In some states, the Federations are actively involved in fertiliser business like Gujarat, Haryana, West Bengal, Madhya Pradesh etc. and they act as the wholesalers for the entire state. In some States like Uttar Pradesh, they are not directly involved in the fertiliser business and do the job of liaison and coordination only for which they are getting service charges from the fertiliser suppliers. In UP, the state federation is also doing warehousing as well as transportation job both for IFFCO and KRIBHCO - the only manufacturers in the cooperative sector. In the states where federations are not involved in fertiliser business, the manufacturers are supplying fertilisers directly to the lower societies at the district/village level and the societies are getting full or near full distribution margin which has improved the financial health of these societies.

Current Cooperative Fertiliser Distribution Status

Presently, in Gujarat, Haryana, Madhya Pradesh, West Bengal, Tamil Nadu, Jammu & Kashmir, Himachal Pradesh and Assam, in the cooperative sector, fertiliser supplies are made to the apex cooperative marketing federations only and they act as wholesalers. Direct supplies are not there at all. Only small quantities under the special scheme like IFFCO-NCDC Scheme in Haryana and IFFCO societies adoption programme in MP are supplied directly to the societies. In these states district level societies operate as sub-wholesalers. In the states like Punjab, Karnataka, Maharashtra, Orissa, AP and Kerala, both the systems i.e., supply through federation as well as direct supply to the societies are prevalent. As a result, some of the societies at the lower levels are getting supplies directly from the manufacturers while others are getting from the federations. However, in the states of UP and Bihar, supplies of fertilisers are made to the village level societies directly by the manufacturers.

In states where state level federations act as wholesalers, the manufacturer has to deal with only one agency. Consequently, the job of sales planning, movement and stocks planning, realisation of sales proceeds etc. becomes very easy. In states where the manufacturer deals with the lower tier cooperatives directly, the volume of work increases manifold and it becomes much more complex. The material has to be released to individual societies and the sales proceeds realisation has also to be done at that level only. This requires deployment of larger field force. Decentralised release system leads to establishing larger number of warehouses and correspondingly larger inventory. This all increases the operating cost.

Manufacturers' Own Outlets

Some manufacturers viz., IFFCO, KRIBHCO, GSFC, GNFC and NFL have their own retail outlets called Farmers' Service Centres or Service Centres or Farm Information Centres etc. In these outlets, agricultural inputs like fertilisers, seeds, agro-chemicals and agricultural implements etc. are made available to the farmers under one roof along with agricultural production technology literature.

The main motto of these service centres is not only to provide all quality agro-inputs to the farmers but also educating them on scientific agriculture by providing technical know-how in the field of

agriculture. This helps the farmers in increasing their agricultural productivity and profitability. Promotion activities are also carried out in the villages located around these centres [within a radius of 8-10 kms] which includes demonstrations, farmers' meetings, soil test campaigns, crop seminars etc. In addition, social campaigns like tree plantations, medical check-up, veterinary check up etc. are also organised. They also serve the purpose of additional and alternative distribution channel for the organisation.

Linkage in disbursement of Production Credit and Agro-Input Distribution

As already mentioned elsewhere in this paper a large number of farmers in India particularly the small and marginal farmers depend upon credit for purchase of fertilisers and other inputs. A very strong point with the cooperative is that the Primary Agricultural Credit Societies which are involved in disbursement of agro-inputs also extend production credit to the member-farmers for purchasing these inputs. Moreover, in many states a part of the credit is disbursed in the kind form; mainly in the form of fertiliser, and also other agro-inputs. The greatest advantage of this arrangement is that farmers are saved from the hassels of getting different inputs from different places.

Conclusions

Agricultural cooperatives in India are the backbone of the cooperative system and involved in variety of functions and serving the rural masses by providing credit, fertilisers, seeds, agro-chemicals, agricultural implements etc. Their role has been commendable and helped in making essential inputs availability to the rural masses. These need to be further strengthened.

“In order to have a proper control on the management of assets and resources of cooperatives and to attract right type of objective leaders it is much better that the posts of chairmen and other board members are compensated and their retirement ages fixed. Such leaders will then know how much they can get from their cooperatives rather than their enjoying the perks and resources on an open-ended scale. The cost of compensation is certainly less than hosting an honorary office-bearer.”

Management of Warehousing System in India

B.P. Govil

Fertilisers alone constitute major chunk of input needed for agricultural production. More than 521.62 million tons of agricultural produce is available annually, most part of which need to be stored before it is consumed in different parts of the country. A properly planned storage infrastructure for agricultural input and output is, therefore, necessary.

Proper storage leads to: a] minimising losses in transit and storage; b] ensuring availability of fertilizers to farmers at required stage and at reasonable price; c] avoiding distress sale by the farmers; d] reducing margins of middle man; and e] ensuring availability of agriculture produce to the consumers at reasonable price. Warehousing is considered as a sort of regulating factor of supply and demand from the time of plenty to the time of need. Warehousing serves as a regulatory function in various economies. Today, all over the world, the demand of scientific warehousing is increasing.

Scientific warehousing came into existence in India in 1957 with the inception of Central Warehousing Corporation [CWC] when it was recognized as a key link in the marketing field. Warehousing constituteS one of the components of distribution. IFFCO started warehouse operations during 1975-76 when its first two Fertiliser Plants came into production. The space hired by IFFCO in 1997-98 was to the extent of 0.7 million tons. Space was hired from CWC and SWC. IFFCO started utilizing godown facility of the cooperatives from 1987-88 with 33% reservation. The space with the cooperatives has since increased to about 45%. Dr BP Govil is the Joint General Manager [Marketing] with the IFFCO, New Delhi.

Introduction

The Indian economy is primarily based on agriculture. 70% of country's population lives in rural areas and depends on agriculture which is practiced on 163.71 million ha. of land. Seed, fertilizer and agro-chemicals constitute major inputs which need to be stored before their timely application. Fertilizers alone constitute major chunk of input needed for agricultural production. More than 521.62 million tonnes of agricultural produce is available annually [Table-I], most part of which need to be stored before it is consumed in different parts of the country. A properly planned storage infrastructure for agricultural input and output is, therefore, necessary.

Table-I: Production of Various Agricultural Commodities During 1997-98

Commodity	Area [mil. ha]	Production [mil. ton]
Foodgrains	124.07	201.00
Oil Seeds	25.66	22.11
Cotton	8.90	11.14
Jute	1.11	11.12
Sugarcane	3.97	276.25
Total	163.71	521.62

In brief, proper storage leads to: a) minimise losses in transit and storage; b) ensure availability of fertilisers to farmers at required stage and at reasonable price; c) avoid distress sale by the farmers; d) reduce margins of middle man; and e) ensure availability of agriculture produce to the consumers at reasonable price.

The demand for storage space will keep on increasing in the times to come as requirement for various inputs and need for storage of the outputs will keep on increasing. The Planning Commission has drawn an Agricultural Perspective Plan for the country for the years to come. Details are given in Table-II.

Table-II: Agricultural Perspective Plan

Variable	2001-02	2006-07
Land [mill. ha.]		
Net Area Sown	141.0	141.0
Gross cropped area	197.2	203.4
Irrigation [mill. ha.]	102.0	114.0
Fertiliser nutrients [mill t.]	23.7	30.0
Cotton [mill. Bales]	18.0	23.0
Sugarcane [mill t.]	335.0	408.0
Foodgrains [mill t.]	245.0	285.0
Oilseeds [mill. t.]	29.0	37.0

It may be noted that for the year 2006-07, the demand for agricultural products like foodgrains, sugarcane, cotton etc. would be much higher than at present. Likewise the requirement for input like fertilizer would be about 30 million tons of fertiliser nutrients, as against 16.7 million tons during 1998-99.

Warehousing

Broadly speaking, the warehousing can be defined as a scientifically planned infrastructure for orderly accommodation and handling of goods and materials. It involves the deposit of goods, commodities [under the provisions of the Warehousing Corporation Act, 1962] and wares in the warehouses for safe custody and return on payment of storage charges.

The warehousing operation basically involves cost of labour, space and equipments. Warehousing in advanced countries is an essential step in commercial distribution of goods from producers/manufacturers to consumers. Warehousing is considered as a sort of regulating factor of supply and demand from the time of plenty to the time of need. Thus, warehousing serves as a regulatory function in various economies. Today, all over the world, the demand of scientific warehousing is increasing. Scientific warehousing came into existence in India in 1957 with the inception of Central Warehousing Corporation [CWC] when it was recognized as a key link in the marketing field. Warehousing constitute one of the components of distribution.

Storage Capacity

In India, there is a three-tier system of storage viz., national/state level, district level and village level. The Food Corporation of India [FCI] constructs godowns for storage of food grains procured by it for distribution of buffer stocking primarily at national/state and district levels at certain nodal points keeping in view its requirements. The CWC is providing warehousing facility at the centres of all-India importance and SWCs and State governments at the centres of State and district level importance for general purpose including the requirement of FCI. The cooperatives are providing storage facilities at the primary and marketing societies level which are located at village/taluka level. The storage capacity created at the rural level by cooperatives is primarily utilised for fertiliser, implements, seed, pesticides etc. The storage capacity created by various agencies is given in Table-III.

Table-III: Storage Capacities Created by Various Agencies

Agency	Capacity [mill. Ton]
Food Corporation of India [1.10.97]	21.38
CWC	7.22
SWC	10.81
Cooperatives through NCDC [31.3.97]	13.62
Department of Rural Development	2.12
Various agencies through NABARD	13.50
State Government Agencies [30.6.96]	8.21
Total	76.86

The CWC and SWC have 2,000 warehouses with storage capacity of 18.2 million tons. Cooperatives have about 64,261 warehouses with a capacity of 13.5 million tons. Out of 64,261 cooperative godowns, 54,898 are located in rural areas and remaining 9,363 are marketing godowns. Not more than 40% of the storage capacity is available for fertilizer storage. There is a plan to create additional storage capacity during the Ninth Five-Year Plan 1997-98 to 2001-02 as per details given in Table-IV.

**Table-IV : Storage Capacity Likely to be
Created During IX-Plan [1997-98 to 2001-02]**

[a] With the assistance of NCDC	...	...	...	...	0.45 mill. tons
[b] With the assistance from international agencies				...	0.35 mill. tons
Total expected storage capacity...	...	...	...	...	0.80 mill. tons

Warehousing for Chemical Fertilisers

Among various inputs, fertilisers constitute the major commodity to be stored in different warehouses throughout the country. Over the years, the fertiliser consumption has increased many fold. It has increased from almost negligible in 1950 to 16.7 million tons in 1998-99. In terms of fertiliser materials, 34.74 million tons fertilisers of various types were handled during 1997-98 by a net work of agro retailers comprising of 248,000 salespoints. As for 50 kg packs, the number comes to about 695 million bags. The fertiliser materials are of different nature like granuler, in powder form, varying hygroscopicity etc. and, therefore, need to be scientifically stored.

Briefly, some of the special requirements necessitating fertiliser warehousing are: A] bulk of fertiliser consumption takes place in 3 or 4 short spells; B] supply points are limited to a few hundred manufacturing units or ports, whereas, farmers' consumers are spread all over the country; C] fertilisers need to be made available to farmers at their door steps at the appropriate time. This is possible only with a wide spread network of field warehouses from where the retailers can draw their requirements; D] Railways are over-burdened and are not able to meet wagon requirements of fertiliser industry. This, coupled with low priority for fertiliser movement, makes it unavoidable to position fertilisers well before the commencement of the season nearer to the consuming centres and to meet the peak demand. Placing fertilizers nearer to the consuming points will result in better sales and low producers inventory level.

All these considerations warrant setting up of wide network of intermediate storage points at strategic locations.

Ideal Storage

Fertilisers require properly designed warehouses for its storage. The ISI has laid down specifications for fertiliser storage [1971]. Fertilisers are hygroscopic in nature and tend to cake when exposed to moisture. Hence, fertilisers need special packaging material. Also, the warehouses structure should be leak and damp proof. The warehouses should have proper aeration facility and capable of being shut down during the period of inclement weather. In India, bagged storage is still the common practice as against bulk storage in many developed countries. Effort should, however, be made to avoid use of "hooks" during handling and stacking of bags.

As per ISO-9002 specifications, specified in QSP-37 of IFFCO ISO implementation, the stocks may be stored at a minimum of 60 cms away from the walls. The normal size of a stack is recommended as 30' x20' leaving a minimum of 75 cms distance between the stacks. Generally, fertiliser is stored upto 20 layers. During emergency, it can be increased to 30 layers but in that case the increased layers should be reduced upto 25 within one month period and upto 20 in six months period.

Proper stacking is an integral part of scientific storage. It should ensure effective utilisation of space, proper handling, counting and preservation. At the rake points, manufacturers, generally utilize the

space of CWC and SWC. They may also act as handling agents for the depositors/companies.

Inventory Management

In order to ensure timely availability of fertilisers, a net work of warehouses is required to be established in the consumption areas and at convenient locations. Demand of the territory to be catered through a particular warehouse and the sale pattern of the territory will primarily determine the storage capacity of that warehouse. Inventory management is extremely important in order to optimize the space and ensure maximum economy. The inventory should be just adequate to achieve the desired sales and avoid high carrying cost. The question of having buffer godowns will depend on the production level of an organisation and the necessity of storing stocks in high consuming areas. It is normally economical to have minimum space and more turn over rather than large space.

In recent past, there has been an enormous increase in the storage costs. In 1983, the cost of storing with CWC/SWC used to be Rs. 4 to 5 per ton/month which has now increased to more than Rs. 20. The total storage costs have further gone up on account of high fertiliser inventories in the wake of glut situation for urea in the market. Well-planned and organised system of storage of fertiliser through primary, secondary and retail point warehouses will minimise losses in transit and storage. It will also economize on handling.

Warehousing of Fertilizer by IFFCO

IFFCO started warehouse operations during 1975-76 when the first two fertiliser plants came into production. The space hired by IFFCO in 1997-98 was to the extent of 0.7 million tons. Space was hired from CWC and SWC. IFFCO started utilising godown facility of the cooperatives from 1987-88 with 33% reservation. The space with the cooperatives has since increased to about 45%. Some of the States like Gujarat and UP would have 60-80% space reserved with the cooperatives.

CWC/SWC have standard terms and conditions and being government agencies, letter of request is sent by IFFCO State Marketing Manager [SMM] for reservation of space. For cooperative societies Memorandum of Understanding [MOU] is entered into and finalised by the SMM. Space from private agencies is normally not hired by IFFCO except in exigencies.

IFFCO's sales volume is going up and is expected to be about 5.5 million tons by the turn of the century. Therefore, warehouse planning assumes great importance. IFFCO intends to take advantage of the warehousing facilities with the cooperative sector in the interior areas so that the material is available to the farmers in villages at the right time. The intention is also to increase the business of cooperatives and the turn over of IFFCO to economise on the cost.

IFFCO also intends to create buffer storage points at strategic locations with CWC, SWC and cooperatives for not only clearing the silo of the plants promptly but also facilitate positioning fertiliser at the strategic locations. This system will help in quick delivery during the peak period of demand. The buffer godowns are located at some selected rake points in high consumption areas as also at one or two locations in less accessible States like Assam.

Central Warehousing Corporation (CWC)

The Central Warehousing Corporation came into being in 1957. It pioneered the public warehouse concept in India. The Corporation was initially set up with the specific purpose of storing foodgrains. As the trade and industry developed, the Corporation was called upon to play a greater role. Pres-

ently, the CWC has scientific storage, procurement and transportation facilities for more than 400 commodities in 459 warehouses with a capacity of more than 7.3 million tons. CWC is an equal shareholder with the respective State Governments in the equity of 16 SWCs throughout the country. As on 31.3.1998, the SWCs were operating 1,365 warehouses with an aggregate capacity [owned & hired] of 10.78 million tonne. The total investment of CWC in the equity of SWCs as on 31.3.1998 was Rs. 508.05 million.

Today, the CWC along with its 16 state subsidiaries runs more than 2,000 warehouses across India. It accounts for over 105 million sq. meter of space. Besides storage linked activities, CWC service also includes handling and transportation of goods to and from warehouses, clearing and forwarding and procurement and distribution on behalf of depositors. Consultations for construction of warehouses is another area of expertise. CWC operates 25 container freight stations and clearance depots all over India apart from 3 air cargo complexes which provide valuable support services to the export and import trade. CWC is now in a position to extend helping hand to other developing nations offering consultancy for setting up a warehousing chain.

In the spirit of globalisation, the Corporation also plans to set up warehousing complexes overseas. Plans are afoot to enter a cold chain network through provision of cold hubs at strategic locations for preservation of horticultural and agricultural perishables. CWC has also tapped the tremendous potential of liquid cargo storage in tanks. It has expertise in infrastructure provision for conceived satellite freight cities at major international airports to boost intra global trade. The Organization is governed by a Board of Directors with Managing Director as the Chief Executive.

“Agricultural cooperatives in India are the backbone of the cooperative system and involved in variety of functions and serving the rural masses by providing credit, fertilisers, seeds, agro-chemicals, agricultural implements etc. Their role has been commendable and helped in making essential inputs availability to the rural masses. These need to be further strengthened.”

Management of Agricultural Services Provided by IFFCO

G.C. Shrotriya

IFFCO is better known for its promotional and educational programmes. A variety of need-based programmes have been introduced from time to time to make IFFCO a household name in rural India. With the intensively ramified network of cooperative outlets it has become essential to put IFFCO promotional and educational programmes uniformly all over in the marketing territory. In addition to farmers' education and fertiliser promotion activities a number of other programmes have been undertaken by IFFCO for the betterment of quality of life of rural community and building cooperative culture. IFFCO presently would like to continue these programmes. However, the emphasis in the future programme will be focused on balanced fertilisation, fertiliser use efficiency, promotion of bio-fertiliser, IPNS, natural resource management and environment-friendly sustainable agriculture. The programmes will have linkages with the promotion of sales of IFFCO fertilisers particularly in areas with low fertiliser consumption which need further efforts of market development.

As a future strategy of extension education, IFFCO wishes to develop some of the cooperative societies as AGRI-INFO CENTRES using internet communication technology. Geographical Information System [GIS] using satellite pictures on natural resource of the area including information on crop vigour etc. shall be available on IFFCONET to enable extension workers to advise farmers on optimisation of natural resources and taking care of crop and soil health on ongoing basis. The system will also have information on improved technology and input availability. Dr GC Shrotriya is the Chief Manager [Agri.Services] with the Marketing Division of the IFFCO.

IFFCO was conceived on the principle that cooperatives from different States would contribute to the share holding of IFFCO and also act as its marketers. Cooperatives, were not equipped to undertake the responsibility of promoting IFFCO's grades which were new to the Indian farmers. Thus, in order to popularise its products and to create a ready market for them before its plants went into production, IFFCO took upon itself the responsibility of undertaking systematic promotional and educational programmes, through a well-conceived approach.

01 Seeding Programme

A seeding programme during the three-year construction period had the advantage of: [1] acquainting farmers with the benefits of using fertilisers distributed by IFFCO; [2] giving IFFCO's promotion staff experience in analysing field conditions and problems and making specific recommendations; [3] building up data on local agronomic and cooperative conditions; [4] stimulating better promotion and administration of fertiliser distribution by IFFCO and its member-cooperatives; and [5] giving the marketing staff experience in distribution of fertiliser realisation of sale proceeds and various accounting procedures.

In the beginning IFFCO's promotional programmes included only four activities viz., Two-Plot Demonstrations, Block Sowing Demonstrations, Farmers' Meetings and Field Days. From time to time, the IFFCO has reoriented its educational and promotional activities to meet the emerging needs. More and more activities were added to this basket of agricultural services, and today about two dozen activities as per the need of the particular location are carried out.

02 Farmers' Education Programmes

Location specific crop production technologies for increasing productivity of crops and fertiliser use efficiency are evolved continuously at the agricultural research stations. It is important that these technologies are quickly disseminated on the farmers field. Organising extension and promotional programmes with a coordinated approach, alongwith other experts and the extension workers is very important for advising the farmers on the adoption of agricultural technology. Farmers' extension education programmes deployed by IFFCO are described below:

Demonstrations: Conducting crop demonstrations on farmers' fields is the most effective method of convincing the farmers on the adoption of agricultural technology to improve crop yield and fertiliser use efficiency. IFFCO is laying great importance to this programme. Demonstration on various crops are conducted on farmers' fields through different approaches.

Two-Plots Demonstrations: In this type of demonstration recommended practice of fertiliser use is compared with farmers practice. About 1,000 two-plots demonstrations are conducted every year in large number of kharif and rabi crops. So far over 23,000 demonstrations have been laid out wherein the average yield increase in recommended practice over farmer's own practice of fertiliser use was 15-60% higher in different crops.

Block Demonstrations: A compact block of 20 ha is selected for these demonstrations with a subsidy of 50% for the supply of inputs to the farmers. These demonstrations are specifically laid out on pulse and oilseed crops or local crop of the area to increase the productivity. It is observed that fertiliser use in these crops is very low and therefore there is a scope to increase fertiliser use by convincing the farmers on a larger block. About 200 or more large scale block demonstrations are laid out every year.

Critical Input Package Demonstration: In order to cover large number of farmers in newly-adopted IFFCO villages critical input package comprising of seed, fertiliser and agro-chemicals are supplied for raising a good crop. Micro-nutrients are also supplied if the soil is deficient. These inputs are supplied to a group of 50 farming families in IFFCO villages for 2/4 crop seasons. IFFCO covers about 20,000 farmers every year under this programme. Over 222,000 farmers have been benefited since the inception of this programme in the year 1983-84.

03 Field Programmes

IFFCO has developed a wide range of field programmes to suit the requirements of a large number of farmers at various locations. These programmes support the demonstration activity on farmers' field. They include farmers' meetings, field days, crop seminars, agricultural and social campaigns. These programmes are organized well in advance of the sowing season to impart knowledge to the farmers so that they can adopt the improved technology to increase the crop productivity and fertiliser use efficiency. In these programmes agricultural universities, State Departments of Agriculture, voluntary organisations, cooperative institutes and other developmental agencies are involved to help the farmers to solve their problems. A brief description follows:

Farmers' Meetings: Through farmers' meetings which are usually organised at a common place in the village, farmers are imparted knowledge about improved crop production technology. They are also educated about the role of plant nutrients and other aspects of crop production through charts, slides, films etc. This is a very important activity as farmers are directly involved in the communication process. Every year more than 2,000 farmers' meetings are organised. Since the inception of programme about 47,200 farmers meetings have been organised.

Field Days: Field day programmes are organised on demonstration plots which help the farmers to appreciate the difference arising due to demonstration effect. The farmers are informed well in advance to participate in field day programme. Farmers from neighbouring villages are also given pre- intimation for participation in the programme. District authorities are also invited to participate in the function. Farmers on whose field demonstration is laid out share their experiences for raising a good crop. This provides an excellent opportunity for the interaction among the farmers and extension workers to further disseminate the agricultural technology for raising a good crop. This programme is organised when the crop reaches maturity. About 800 field days are organised on demonstration plots each year.

Crop Seminars: This is a very important programme organised before sowing. It is an occasion where agricultural scientists are involved to remove the doubts concerning crop production and fertiliser use. Besides, farmers also get the benefit of participation of the officials from cooperative banks and agricultural departments for solving their problems. Presently more than 200 crop seminars are organised on various crops each year. A total of 2735 crop seminars were organised during the period from 1977-78 to 1997-98.

Agricultural and Social Campaigns: Besides organising field programmes on crop production, IFFCO is also organising various campaigns on agricultural and social aspects. These include soil and water analysis, seed treatment plant protection, rat control, tree plantation, save grain campaign, weed control, medical and veterinary checkup etc. Farmers are educated on the importance of theme of the campaigns through demonstrations.

Training Programmes and Visits: IFFCO has started a special programme for farmers to impart training on different aspects of crop production and allied activities. Training is given by agricultural scientists at the agricultural universities and research institutions of different states. Groups of 40 farmers in each group of farmers around 35 years of age are selected to attend a 5-days training programme at different locations. The selection of the farmers is done by a committee of officials of agricultural/cooperative departments and IFFCO's directors/RGB members. The programme benefits more than 1,500 farmers every year.

Advisory Committee Meetings: It is important to take stock of the situation on fertiliser supply and promotional programmes organised during the year. The advisory committee meetings are organised at the district, state and zonal levels with an objective to apprise the Government officials, IFFCO Directors and RGB members about IFFCO's work and seek their opinion for further improvement. In these meetings, progress and planning of sales and promotional activities are discussed and corrective measures are suggested to overcome various problems.

04 Soil Testing

Soil testing is one of the important tools to know the nutrient requirement for a crop/cropping sequence. This helps to economise on cost of fertiliser and also in increasing fertiliser use efficiency. Keeping in view the importance of soil test, IFFCO has pressed into service two mobile soil testing

vans for soil analysis on farmers' fields. The first van became operative in April 1988 and the second van in April 1990. These vans are equipped with soil analysis facilities and fitted with audio-visual aids for publicity purposes. IFFCO has also produced films on crop production, balanced fertilisation and agricultural development which are screened regularly through these vans. The data reveal that there is a definite change in fertility status of the soil analysed over a period of time and trend is from high to medium to low in nutrients. Immediate measures to replenish plant nutrients if not taken, the fertility status will further go down reducing crop productivity.

IFFCO has also set up two static soil testing laboratories at CORDET, Kalol [Gujarat] and Phulpur [Uttar Pradesh] each having an analysing capacity of 25,000 soil samples annually. IFFCO's field staff, through soil test campaigns, sends soil samples to these laboratories for analysis. Soil testing facilities available at state government laboratories and agricultural universities are also used for analysis. Both the CORDET soil testing labs till now starting from the year 1980-81 have analysed 542,000 samples. IFFCO field staff in 8,031 soil sampling campaigns had collected over 800,000 samples and got these analysed in CORDET and other labs.

05 Seed Multiplication Programme

Seed Multiplication Programme was initiated by IFFCO in the year 1978 in the states of Haryana and Punjab through registered seed growers. Since then IFFCO seed has been in great demand among the farmers. Later, the programme was extended to other states. IFFCO is now taking up collaborative SMP by helping other seed corporations/state seed corporations. Most of IFFCO's large scale block demonstrations have also been converted into seed multiplication plots. Seed produced by IFFCO is sold to the farmers through IFFCO Farmers' Service Centres and IFFCO-NCDC adopted societies. In Uttar Pradesh, IFFCO seed is also sold through the Department of Agriculture & Cooperation and through marketing federation's sale points. IFFCO's own programme has been taken up in the states of Haryana, UP, and Punjab whereas collaborative programmes are operational in the states of Punjab, UP, Bihar, Rajasthan, Gujarat, Madhya Pradesh, Orissa, West Bengal, Andhra Pradesh, Karnataka, Tamil Nadu and Kerala. Annually more than 7,000 ha area is covered under this programme with an expected seed production of about 20,000 tonnes. We do not intend to further expand the programme because it would require further specialised manpower.

06 Village Adoption Programme

It is indeed a difficult task for any single agency to approach individually and work with every farming family of over 0.6 million villages in the country. It is, therefore, of utmost importance to develop a model village which will set a trend in neighbouring villages. To bring about an overall development in the farming families through integrated rural development programme with special emphasis on agricultural development, IFFCO adopts a village for a limited period of 3 to 5 years. Villages are selected by IFFCO on following lines: a] It should have potential for agricultural development and located in backward areas; b] It should have farming families between 100-200 for effective monitoring; c] It should not have been adopted by any other agency; d] The farming families should be ready to extend cooperation in implementing the developmental activities; and, e] It should be nearer to the Head Quarter of IFFCO's Field Officer for a closer supervision.

Planning and Execution of the Programme: Bench mark survey of the village is conducted prior to selection of village keeping in view the following aspects: i] Location, existing infrastructure like educational and health facilities, post office etc.; ii] Number of families - farming and non-farming, size of land holding, geographical area, net and gross cropped and irrigated area, cropwise area, produc-

tivity and production under local and HYV, cropping sequence etc.; iii] Soil fertility status, soil type and extent of problematic soil; and iv] Cropwise fertiliser use and share of fertiliser consumption, method of fertiliser use, credit facility, input delivery system, loan recovery etc. A village coordinator is identified in each village during the adoption period. He is preferably a resident of the same village and acts as a link between IFFCO and farming families. He involves himself in IFFCO's field programmes and looks after maintenance of agricultural equipments provided for community use in the village.

Action Plan: Once the bench mark survey of the village is available, constraints analysis is made to draw specific action plan for the farming families. Planning efforts are always made to involve all the farming families in the developmental activities. Timely visits are made by IFFCO's officials for implementation of programmes which are monitored at Area Office level.

Monitoring and Evaluation: The village adoption programme is monitored, from time to time, by IFFCO Field Officers and reviewed at Area Office level. While evaluating the programme, emphasis is laid on following parameters: Increase in fertiliser consumption, area under HYV crops, irrigation and input use; Improvement in basic amenities and facilities like health, education, transport, communication, drinking water etc.; Improvement in crop loan recovery; and Number of promotional programmes organised.

While organising the field programmes, emphasis is laid on improving efficient use of inputs particularly fertilisers. Seed-cum-fertiliser drill, plant protection equipments like sprayers, dusters etc. are made available for community use in the village. Wherever required, soil augers, sickles and other necessary equipments are also supplied to the farming families. Social aspects like human and animal health care, village sanitation, promoting animal husbandry as a subsidiary activity, installation of bio-gas, solar cookers, family welfare programmes, social forestry etc. are also kept in view while planning the developmental activities. Youth Club and Mahila Mandal are also involved in the programmes. Schemes like supply of books to children, construction of smokeless chulhas, distribution of storage bins, training on fruit and food preservation are imparted in villages. In a particular year about 500 villages are adopted by IFFCO, at least one village by a Field Officer. Till now about 2,550 villages have been covered under this programme.

07 Promotion and Publicity Activities

Fertiliser promotion is one of the important component in fertiliser marketing. The objective is to create awareness about fertilisers and provide technical information on the improved agricultural practices and fertiliser use so as to increase the productivity and fertiliser use efficiency. Mass media approach is followed in fertiliser promotion. A description of the methods adopted follows:

Radio, Television and Press: These are effective and powerful medium of communication and the message is conveyed even in remote and inaccessible areas in a short time. IFFCO has been taking the advantage of the media for promotion of fertiliser use. IFFCO's field staff often deliver talks on AIR and Doordarshan. Popular articles on fertiliser use and crop production are also published in local and national level newspapers.

Fairs and Exhibitions: Fairs and Exhibitions are organised at local and national level to appraise the farmers about achievements in agricultural development through audio-visual aids. This medium has a mass appeal. IFFCO avails the opportunity to participate in such popular programmes.

Technical Literature: Publication and updating of technical literature from time to time in regional languages on crop production practices and fertiliser use is very important. This include crop folders,

leaflets, pamphlets etc. which gives a brief account on crop production technology. IFFCO has brought out five volumes of its publication entitled 'Soil Fertility and Fertiliser Use'. This is a comprehensive publication covering wide range of topics on sustainable agricultural production. All the five volumes have become very popular nationally and Internationally.

Hoarding and Roadside Sign Boards: IFFCO is effectively making use of the state and national highways and also market places for promoting the concept of balanced fertiliser use by erecting hoardings and roadside sign boards, wall paintings etc. The front walls of village cooperative societies and panchayats have been painted with slogans promoting balanced and efficient fertiliser use.

Crop Films: Understanding the importance of electronic media and popularisation of videos, IFFCO has developed 8 crop films depicting the package of practices for the benefit of farmers. These films are of 15 minutes duration and cover important crops like rice, wheat, maize, pearl millet, cotton, sugarcane, soyabean and mustard. These films are regularly screened through two mobile soil testing vans and also in field programmes. IFFCO has also prepared 15 films in regional languages on balanced fertilisation. These have become extremely popular among farmers. Recently a film on Integrated Plant Nutrient System [IPNS] was also produced.

08 Special Projects

Crop production technologies developed by agricultural universities and research institutes particularly with respect to improving productivity of crops and fertiliser use efficiency and also for natural resource management need to be demonstrated on the farmers' field for subsequent adoption by them and other farmers. IFFCO has undertaken various special projects under specific situation like dry land, problematic soils, tribal and backward areas etc. The special projects are initiated with an objective to help the farmers to grow a good crop with technological interventions and subsequently adopt the new technology. The projects are operational on the following theme: [1] Dry Land Farming/Area Development; [2] Land Reclamation; [3] Tribal Area Development; [4] Lab-to-Land Programme; [5] High-Tech Projects; and [6] Integrated Plant Nutrient System.

The constraint analysis for each project is done through a bench mark survey of the project area and then an action plan is drawn for a period of 3 to 5 years. The project is monitored and evaluated for the progress such as increase in HYV area, crop yield, fertiliser consumption etc. In the past two decades IFFCO has successfully completed 34 projects in different specialised areas.

09 High-Tech Projects

Technological advancement in the field of agriculture has brought considerable changes over conventional technologies. The new technologies are also high-tech. These technologies need special efforts for their dissemination. IFFCO has identified some of these technologies for wider adoption and implementation. Five such special projects, one in each IFFCO Zone were launched during 1995-96 for a period of three years. These projects, also referred as Zonal projects are as under:

North Zone	...	...	...	...	Bio-Pesticides
East Zone	...	...	...	...	Bio-Fertiliser
West Zone	...	...	...	...	Micro-Irrigation System
South Zone	...	...	...	...	Agricultural Implements

Project on Promotion of Bio-Pesticides: Though the per hectare use of chemical pesticides in India is much less as compared to many developed countries, yet the problem caused by their unregulated

use is quite severe, particularly in some commercial crops. Indiscriminate use of chemical pesticides may also lead to environmental problem and food poisoning, therefore, the emphasis is being shifted to the concept of Integrated Pest Management [IPM]. IPM envisages a judicious mix of all techniques - cultural, mechanical, biological and chemical for keeping the pest population below economic injury level [EIL]. Biological control, a method to suppress insect and diseases with the help of living organism can provide reliable and safe alternative to excessive pesticide use. The project on promotion of bio-pesticides aims at popularising bio-pesticide use as IPM component in the major pest prone area of North India. The project has been initiated at 10 locations in the states of Punjab, Haryana and Rajasthan covering cotton, sugarcane, rice and vegetable crops.

Training programmes for the project staff and farmers on IPM technology in general and bio-pesticides technology in particular have been organised to understand and adopt the technology. Collaboration of Agricultural Universities and bio-pesticide manufacturers have been sought to demonstrate the technology on farmers' fields. *Bacillus thuringiensis* var *kurstaki* [BTK], Nuclear Polyhedrosis Virus [HPV] and *Granulosis* Virus [GV] were introduced on the demonstration crops. Pheromones traps and IPM kits were provided at all the sites. Initial results have showed that use of chemical pesticides can be reduced considerably without affecting the yields.

Project on Bio-Fertilisers: The project is being implemented in district Midnapur, Murshidabad, Birbhum, Burdwan and Hoogly of West Bengal. Various bio-fertilisers like Rhizobium, Azotobacter, Azolla and PSB were applied to specified crops in large areas. Results of the field demonstrations undertaken during kharif 96, and kharif 97 in Burdwan Area Office is highlighted in Table-I. The programme is being implemented in collaboration with the Department of Agriculture and BCKVV, Kalyani.

Table-I: Results of Bio-Fertiliser Demonstrations in Rice Crop

Name of District	Birbhum	Hooghly	Burdwan
Kharif-96			
No. of Villages	13	2	27
No. of Packets	15,900	200	8,000
No. of Farmers	862	50	1,636
Yield [q/ha] Treated	55.2	56.0	52.5
Yield [q/ha] Untreated	50.6	54.8	47.5
% increase	9.1	2.1	10.5
Kharif-97			
Biofertiliser used	PSB	PSB	PSB
No. of Packets	11,000	7,000	14,000
No. of Beneficiary	840	821	1,014
Yield [q/ha] Treated	53.8	51.0	52.9
Yield [q/ha] Untreated	49	48	50.0
% Increase	9.8%	6.2%	5.8%

Project on Micro-Irrigation System: A project on increasing water use efficiency [WUE] through micro-irrigation System [MIS] has been initiated from 1995-96 for a period of 3 years. The project has been launched in collaboration with the State Department of Agriculture, Cooperative Sugar Factory, Thane and the College of Agriculture, Pune. The operational area of the project is limited to Haveli block in district Pune in the State of Maharashtra. The primary objective of the project is to propagate the concept of micro-irrigation system to increase WUE and thereby increasing irrigation/cropping intensity and productivity of sugarcane, horticultural and vegetable crops.

Besides encouraging installation of drip irrigation on 553 wells in 10 cluster of villages, intensive education programme was also planned. Results of the activities in terms of productivity enhancement, increase in irrigated area and fertiliser consumption, are given in Table-II.

Table-II: Achievements from MIS Project

Particulars	Sugarcane	Veg/ Hort. crops	Total
1. MIS installed [No.]	208	345	553
2. Area covered [ha]	159	279	438
3. Crop productivity [t/ha]			
1994-95	91.3	26.9 [Tomato]	—
1997-98	120.8	36.1	—
4. Fertilizer Consumption [kg/ha]			
1994-95	—	—	45.33
1997-98	—	—	84.25

Project on Agricultural Implements: The project on use of agricultural implements for improving the crop productivity has been assigned to South Zone and is being implemented in the selected areas of the states of Andhra Pradesh, Tamil Nadu and Karnataka. Project reports for all the three states were prepared in consultation with the Department of Agriculture and State Agricultural University. The actual implementation had started from 1996-97.

Fifteen villages in Podalkur Mandal [Nellore], A.O. Nellore of Andhra Pradesh, 10 villages in Arcot and Walaja taluka [N.A. Ambedkar] and 5 villages in Kancheepuram taluka [Chengelpet MGR], A.O. Vellore of Tamil Nadu and 5 villages in K.R Pet taluka [Mandya], A.O. Hassan of Karnataka are covered for the project implementation. Rice, Ragi, Sugarcane, Groundnut and Pulses crops received priority in the use of implements under this project. The project activities are being implemented through local cooperatives, which, in turn, have been strengthened because of increased turn-over and diversified activities. A large number of agricultural machinery and implements were distributed in the project village depending upon the identified need of the villages.

Impact of the project activities in terms of crop productivity, fertiliser consumption, business turn-over of the cooperative society in the village of Area Office Hassan of Karnataka are presented in Table-III. Almost identical impact was observed in the other areas of project implementation.

Table-III: Impact of Agricultural Implement Project in Hassan Area

Particulars	[base year 1995-96]	1996-96	1997-98
1. Crop Productivity [kg/ha]			
Rice	3,730	4,000	4,300
Sugarcane	105,400	120,600	135,000
Ragi	2,400	2,450	2,500
Banana	51,300	5,200	53,700
2. Fertiliser Consumption [kg/ha]	46.18	54.24	59.96
3. Turnover of Coop. [Rs. Million]	47.60	56.60	77.30
4. Cooperative Membership	7761	8006	8272

Project on the Use of Plastics in Agriculture: Plasticulture has shown potential in enhancing over all agricultural efficiency, particularly water-use efficiency thereby increasing productivity, minimising post-harvest losses and better utilisation of resources. Use of plastics in irrigation and water management has proved successful in increasing water-use efficiency to a great extent. The project on use of plastics in agriculture has been undertaken in Madihan and Bighapure block of district Mirzapur and Unnao, in UP, respectively, Motipure block of Muzaffarpur district in Bihar.

Project activities in Madihan block envisage management of run off water through construction of small check points at several locations on natural water course and harnessing the available water for crop production by installation of pumps and use of plastic pipe and channels for field irrigation. About 10,000 meter of PUC pipes will be provided to the farmers in selected villages. To economise the water use 50 plastic sprinkler sets will also be provided. Plastic mulch will also be introduced in these villages. A demonstration of 10 ha on plastic mulch thus will be created. Similar programmes will also be taken in other two blocks of the project districts with additional activities of plastic ponds. Plastics for post-harvest storage and plastic green houses is also encouraged. To popularise the concept the field activities will be backed by extension programmes of farmers education on use of plastic in agriculture. The programme was initiated in the year 1996-97. Impact of some of these activities is highlighted in Table-IV.

Project on Integrated Plant Nutrition System [IPNS]: The IFFCO has initiated ON-FARM studies on IPNS with the following objectives: [a] to integrate various sources of plant nutrients; [b] to promote nutrient application based on soil test; and [c] to incorporate pulses, oilseeds, green manure, vegetable crop as a 2nd and or 3rd crop in the cropping sequence to maintain soil fertility and generate additional income to the farmer.

IFFCO IPNS studies started in 1993 with a case study of village Mattersham [Hissar], Haryana with an objective to explore the possibilities of working out the plant nutrient resource inventory of a farmer. The study revealed: 1] Reluctance of farmers to include green manure in cropping sequence; 2] Need for promotion of pit method of FYM preparation; and 3] Reluctance of farmers to install bio-gas plant due to space problem and operational maintenance. An effort was also made to work out the apparent balance sheet of nutrients which revealed negative balance of nutrients in soils based on one year of cropping sequence. The studies provided a very good feedback to the research workers and extensionists about the status of agriculture in general, and fertiliser use in particular, on farmers'

fields. These studies also revealed the level of nutrients used and their likely deteriorating effect on soil health which may form a base for formulating nutrient management research programme both under ON-FARM and ON-STATION conditions.

Table-IV: Impact of Project Activities in Mirzapur & Unnao Districts [UP]

Activity	Sprinkler Sets	HDPE Pipe	Borewell	Check dam	
No. of Farmers	20	49	8	26	
Cropped Area [ha]					
1995-96	4.41	2.63	2.32		
1997-98	6.57	3.76	4.22		
Irrigated Area [ha]					
1995-96	3.26	1.90	1.43	4.00	
1997-98	5.41	3.34	4.33	13.50	
Fertiliser Consumption [kg/ha]					
1995-96	84.00	82.67	80.25	75.00	
1997-98	119.80	107.14	130.00	90.50	
Yield of Crops [q/ha]					
Paddy	1995-96	29.25	29.12	33.33	17.50
	1997-98	39.40	39.25	47.00	26.50
Wheat	1995-96	26.17	26.42	33.37	16.00
	1997-98	36.45	36.87	46.12	25.43

IFFCO carried out ON-FARM studies at 8 locations in different agro-climatic zones of the country on 7 farmers' fields at each location from rainy season [Kharif] of 1994 in collaboration with IFFCO Professor Chair in Agronomy and Soil Science disciplines in agricultural universities and also at the CORDET, Phulpur. The farmers' practice was compared with IPNS practice in a cropping sequence. The programme of IPNS was further expanded as an extension arm of the main 8 IPNS field studies during 1995-96 to around 50 locations on two farmers' fields at each location. Data reveal that crop yield with IPNS practice has been higher as compared to farmers' practice at all the locations by about 20-25% and also there was a reduction in the application of nutrients through fertilisers.

IFFCO-FAO Collaboration on IPNS: Two missions from the FAO of the United Nations have collaborated with IFFCO in ascertaining the apparent nutrient balance sheet under ON-FARM condition. A case study of village Kazipura and Bayana in Ghaziabad, Uttar Pradesh showed that farmers are able to manage their soil through judicious application of FYM. In another study in village Kanech in Ludhiana district of Punjab, it was found that the cropping intensity of 198% is not sustainable as soil is mined of its nitrogen and potassium reserves as insufficient quantity of organic matter is added into the system.

10 Research and Development

IFFCO Professorial Chairs: The agricultural universities and research institution has played a commendable role in developing location specific crop production technology and its dissemination at

the farmers level. IFFCO instituted 14 Professorial Chairs in various universities and one at Vaikunth Mehta National Institute of Cooperative Management, [VAMNICOM], Pune, for collaborative work and also to seek their guidance in the field programmes on various aspects of crop production. These Chairs are instituted in the disciplines of Agronomy, Soil Science, Extension, Cooperation, Agro-Economics and Fertiliser Technology. These Chairs are facilitated by resource persons drawn from national institutes to review and formulate action plans. Professorial Chairs operating at various universities or research institutions are given in Table-V.

Table-V: IFFCO Professor Chairs at Universities and Research Institutions

Sr No.	Institution	Date of Initiation
I Agronomy		
01	Punjab Agricultural University, Ludhiana	Aug 1980
02	Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, Indore Campus	Jan 1982
03	Andhra Pradesh Agricultural University, Hyderabad	May 1982
04	Chandra Shekhar Azad University of Agri & Technology, Kanpur	Dec 1985
05	Tamilnadu Agricultural University, Coimbatore	Dec 1985
06	Bidhan Chandra Krishi Vishwa Vidyalaya, Nadia, West Bengal	Apr 1986
II Soil Sciences		
07	Gujarat Agricultural University, Junagarh	Jun 1980
08	Govind Ballabh Pant University of Agri & Technology, Pantnagar	Oct 1980
09	CCS Haryana Agriculture University, Hissar	Mar 1982
10.	Orissa University of Agriculture & Technology, Bhubneshwar	Feb 1985
III Extension and Cooperation		
11.	University of Agricultural Science, Bangalore	Aug 1980
12.	Rajasthan Agricultural University, Bikaner, Udaipur Campus	Apr 1981
13.	Vaikunth Mehta National Institute of Cooperative Management, Pune	Dec 1981
IV Agro-Economics		
14.	Kerala Agricultural University, Vellanikkara, Thrissur	May 1995
V Fertiliser Technology		
15.	Banaras Hindu University, Varanasi	May 1998

Soil-Test-Based Trials on Farmers' Fields: Understanding the importance of soil test, IFFCO conducted soil test based trials on farmers' fields from 1992 to 1995 in 108 villages covering 92 districts in 14 states of India with a broad objective to demonstrate the comparative efficacy of soil test based recommendations under ON-FARM conditions. These trials were conducted on the same site and in the same cropping sequence during the period of study. The trials were laid out in Randomized Block Design with four replications and five treatments viz., a] Control; b] NPK dose as per farmers'

practice; c] Soil-test-based recommended dose of NPK; d] Generalised recommended dose of NPK and e] 150% of the recommended dose of NPK. No organics were added during the period of study in any of the treatment. Secondary and micro-nutrients were, however, applied as per the recommendation in all the treatments. A total of 511 trials were conducted on 15 crops. Results of the trials revealed that nutrient application based on soil test has advantage in increasing the grain yield, and response over other treatments. Field days and visits were organised on the trial sites to show the treatment differences to the visiting farmers. It is, therefore, necessary to strengthen our efforts of promotion of nutrient application based on soil test on farmers' fields in the overall economic interest of the farmers and health of the soil.

11 Conclusion

IFFCO is better known for its promotional and educational programmes. A variety of need-based programmes have been introduced from time to time to make IFFCO a household name in the rural areas. With the intensively ramified network of cooperative outlets it has become essential to put IFFCO promotional and educational programmes uniformly all over in the marketing territory. In addition to farmers' education and fertiliser promotion activities a number of other programmes have been undertaken by IFFCO for the betterment of quality of life of rural community and building cooperative culture. IFFCO presently would like to continue these programmes. However, the emphasis in the future programme will be focused on balanced fertilisation, fertiliser use efficiency, promotion of bio-fertiliser, IPNS, natural resource management and environment-friendly sustainable agriculture. The programmes will have linkages with the promotion of sales of IFFCO fertilisers particularly in areas with low fertiliser consumption which need further efforts of market development.

As a future strategy of extension education, IFFCO wishes to develop some of the cooperative societies as AGRI-INFO CENTRES using internet communication technology. Geographical Information System [GIS] using satellite pictures on natural resource of the area including information on crop vigour etc. shall be available on IFFCONET to enable extension workers to advise farmers on optimisation of natural resources and taking care of crop and soil health on ongoing basis. The system will also have information on improved technology and input availability.

“Resource poor farmers need to be enabled with the provision of basic infrastructure, information and training, technology, regulatory framework and facilities etc. before they are in a position to compete in open markets.”

Governance in Agricultural Cooperatives in Asia

Gopal N. Saxena

In cooperatives, the term "governance" implies democratic control through member participation and transparency in management systems of which the trust and mutuality are the foundations. In setting-up the good governance for effective functioning, some fundamental guiding objects like shared goals, relations built on trust, operational interdependence, relative equality in size and continued active dialogue with the members are of prime importance. Broadly, for cooperatives, the governance can be termed as a meaningful harmonious rhythmic relationship between the cooperative organisation and its members and constituents for achieving the common objectives through inter-dependence, observing cooperative values to the extent possible. However, no hard and fast rule, guidelines, or for that matter, a definition of governance could be given.

Essential expected role of the elected leadership in setting up a good governance, therefore, would be to take care of the members needs, transparency and right of information to members, develop consensus in decision-making [democratic decision where the dissent is not to be overlooked] and above all, to ward off the interference by the non-stakeholders like government and politicians. In order that the cooperatives remain member-driven, the autonomy of the Board is important. Redefining the role of federal structure, institution of professional management and value-based management and social audit are some other key aspects of governance in cooperatives. Dr Gopal N. Saxena is the Joint General Manager [Cooperative Services] with the IFFCO.

Defining Governance

Governance is a broad term and cannot be defined in exact frame and parameters. The parameters for governance will differ from organisation to organisation and institution to institution depending upon their needs and the character of the organisation. The "governance" for any government in a country will depend upon the nature of the legislation, the form of the government and the state of the people governed by it. Similarly, for a private organisation, the "governance" will depend upon the type of the business, masses catered, interest of the stakeholders and the fulfillment of the objects for which it has been established. Likewise, the "governance" for cooperative bodies will largely depend upon the form of the cooperatives, purpose for which they have been formed, the existing law for the cooperatives and the business carried out and the objects, and the people involved with these organisations. The broad basic factors, which influence the "governance" in a cooperative organisation, are discussed in this paper.

The Parameters

The ICA Centennial Congress held at Manchester in 1995, adopted the definition of a cooperative as: *"A cooperative is an autonomous association of persons united voluntarily to meet their common*

economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.”

The autonomy of any economic enterprise will mainly depend on the level of its being self-reliant and financially viable. Since it is inherent in the functioning of cooperatives to follow the values of self-help, self-responsibility, democracy, equality, equity and solidarity, the principles of governance in cooperatives will, therefore, chiefly revolve around its autonomy and taking the enterprise to self-reliance by enthusing the members for their increased active participation in managing the affairs of the society for achieving the identified common objects through healthy professional management practices.

The Governance

In cooperatives, the “governance” implies democratic control through member participation and transparency in management systems to which the trust and mutuality are the foundations. In setting-up the good governance for effective functioning, some fundamental guiding objects like shared goals, relations built on trust, operational interdependence, relative equality in size and continued active dialogue with the members are of prime importance. Broadly, for cooperatives, the governance can be termed as a meaningful harmonious rhythmic relationship between the cooperative organisation and its members and constituents for achieving the common objectives through inter-dependence, observing cooperative values to the extent possible. However, no hard and fast rule, guidelines, or for that matter, a definition of governance could be given.

In a cooperative society, it is very essential that the critical balance between the needs of the members expressed through the democratically elected leadership be implemented by the professional executives to the entire satisfaction of the members of the cooperative society. This tight rope balance can function pragmatically only when the enlightened democratic leadership assumes the role of monitoring and supervising the implementation of economic and social needs expressed by the members without interfering with the implementation process by the professional team.

Since the cooperative organisation is ‘democratically’ controlled, the members and their expressed opinions form an important ingredient of the governance. Therefore, the system of governance in cooperatives is relatively a complex system compared to private enterprises, because ensuring retention of control by members, to a great extent, depends on the awareness, understanding and knowledge of the elected representative about the cooperative philosophy, responsibility and their own role in the management. In order to insulate itself from the outside interference such as political and government, the prevailing legislation made for the cooperatives will also play a great role. Therefore, the good governance in a cooperative society will largely depend upon the following factors: Awareness to Elected Representatives; Cooperative Law; Role of Government; Federal Structure; Professional Management; Value-based Management; and Social Audit.

Awareness to Elected Representatives

It is an accepted fact that an enlightened democratic leadership will play a crucial role in setting up the good governance in any cooperative society. Since the cooperatives thus far have evolved out of the weaker sections unfortunately their representatives are scantily aware about responsibilities and role they are supposed to play. Their knowledge about the business dimensions, vision, business acumen and sharpness to take control of the business initiatives is far from desirable. Therefore, in case a healthy environment for good governance, if it is to be set up, there is an absolute need to make them aware about the existing laws for cooperatives, awareness about their role and fraternising them with

the existing business environment. This is a very sensitive and difficult task which, if the existing "subordinate executives" do not perform, the parameters for good governance in a cooperative cannot be established. The role of subordinate professional executives becomes more difficult most of the times as the cooperative leaders think that their knowledge does not require any supplement.

Besides, it has also been observed at most of times that the professionals also exploit this inherent weakness and take away the control and initiatives from the elected representatives. In this situation the organisation shirks from catering to the felt needs of the members and, thus, actually functions as a private business enterprise.

Essential expected role of the elected leadership in setting up a good governance, therefore, would be to take care of the members' needs, transparency and right of information to members, develop consensus in decision-making [democratic decision where the dissent is not to be overlooked] and above all, to ward off the interference by the non-stakeholders like government and politicians. In order that the cooperatives remain member-driven, the autonomy of the Board is important.

Recently, the Confederation of Indian Industries [CII] has set up a committee of leading industrialists in India on "Desirable Corporate Governance in India". One very vital thing, which has been mentioned regarding the functioning of the Board in any corporate entity, is reproduced below:

"It has been proved time and again in the USA, Great Britain, Germany and many other OECD countries that the quality of the Board – and, hence, corporate governance – improves with the induction of outside professionals as non-executive directors."

As a recent article put it: "*Obviously not all well-governed companies do well in the market place. Nor do the badly governed ones always sink. But even the best performers risk stumbling some day if they lack strong and independent Board of Directors.*"

Cooperative Law

In most countries the 'cooperatives' were recognised as an important economic tool, therefore, were, in most cases, formed at the 'encouragement' from the Government. Besides, due to their vast network and location in interiors, also prompted the Government to use the cooperative system as the 'arm' of government. The involvement of weaker section and convening to government were instrumental in evolution of cooperative laws giving more control to government. Consequently, most provisions in the cooperative law are restrictive rather than promoting the interests of the members. Therefore, there is an urgent need to amend the existing cooperative law in such a fashion that the initiative rests with the members and the members' interest is protected and promoted. The government initiatives have reached to such a level that a general impression of cooperatives is that they are "created by statute, they are controlled by statute and so, there can be no objection to statutory interference with their composition on the ground of contravening of the individual right of freedom of association". In present cooperative forms since the interest of the members has taken a back seat and the cooperatives, by and large, have become government-directed and government-controlled bodies, in such a scenario, the governance in cooperatives becomes meaningless.

In the past, a number of high-profile studies were conducted, at least in India, which suggested a thorough review and revision of cooperative legislation in the country, making it more member-oriented, member-driven, member-friendly and business-oriented. So far, only very meek efforts have been made to really do something constructive. The Cooperative Law remains the same – in the name of reducing the powers of the Registrar, more bureaucratic hurdles have been created and thus

smothering the initiatives of grass-roots level members. Governance should, in fact, be with the consent of the people and in the interest of the people. Governance should be based on some ethics, principles, values and norms. Creating parallel and the so-called "autonomous cooperative laws" are no solution – one law governs cooperatives with government financial stake and another law governs the cooperatives where there are no government stakes. These are the academic exercises, which may add to the confusion and miseries of ordinary members who are still trying to fully comprehend the essence of 'Cooperation'. Most cooperative bodies which are formed to play important role including lobbying with the Government are also not independent; they are already under the control of the State and operate "outside the purview" of the prevailing government laws. Good governance emerges through honest application of prevailing laws and respecting the spirit behind these prevailing laws. Circumventing the cooperative laws for self-interest does not qualify to be called as good governance. People look for a role model, people look for good governance, people respect and abide by the "rule of law".

The Role of the Government

In view of the existing scenario and discussion as above, it becomes evident that in setting up the nature of governance in the cooperatives, the role of the government in the promotion and development of cooperatives cannot be ignored. The main components of governance are the Principles of Cooperation defined by ICA and which are universally accepted and the legal framework [which has been provided by the state through the cooperative legislation and cooperative policies]. Whereas the prime importance of the rights and duties of members of cooperatives and cooperative members in governance cannot be overlooked, at the same time, it is essential to examine the rights and duties of the state vis-a-vis the Cooperative Movement. In most countries, the role of the Registrar of Cooperative Societies has no longer remained of a "friend, philosopher and guide" of the Cooperative Movement, but this office is now, in most cases, being used as a 'single' key option to exercise control. A large number of cooperative institutions, especially the most lucrative ones e.g., the cooperative banks, marketing federations, sugar cooperatives, dairy federations, housing federation are all headed now by the government officers or government nominees. Two pretexts i.e., involvement of sizeable money in the cooperatives, and secondly, safeguarding the interest of poor members come very handy to the government. This is not entirely true. Such nominations are also highly politically-oriented and politically-motivated. This can be established by the naked fact that as and when there is a change in ruling party, there are mass suppressions and changes in nominations in cooperatives.

From an international stand point, it is worthwhile to make a mention of the guidelines aimed at creating a supporting environment for the development of cooperatives, which have recently been suggested to the UN Secretary-General for securing the approval of the UN General Assembly. After nearly 30 years of substantial changes in global economic and social conditions in the Cooperative Movement and in the relations between it and the governments, there was a need to change the tone and emphasis to reassess the underlying concepts of aid to cooperatives and to include matters not addressed by it.

Appreciating the urgent need for guidance to many governments on policy regarding cooperatives and the Cooperative Movement the International Cooperative Movement comprehensively reviewed its values and principles and the nature of its proper relationship with other sections of the society, including government, and adopted a new Statement on the Cooperative Identity at the Centennial Congress of the ICA in 1995.

The objectives of such guidelines are expected to be as follows:

- Government to recognise the Cooperative Movement as a distinct and major stakeholder in both national and international affairs;
- Governments recognise that the Cooperative Movement is highly democratic, locally autonomous but internationally integrated, and a form of organisation of associations and enterprises whereby citizens themselves rely on self-help and their own responsibility to meet goals that include not only economic but social and environmental objectives;
- Governments seek to support the Cooperative Movement and to work closely with it to develop an effective partnership to achieve their respective goals;
- Government to take into account the special character of cooperatives and the Cooperative Movement, which differs significantly from that of associations and enterprises not organised according to cooperative values and principles.

Governance, and for that matter, good governance, is not the game of singles. In this case, the governments and the Cooperative Movement have to join forces to bring about positive changes in favour of the ultimate basic members.

Federal Structure

In order to effectively serve its members and to also strengthen and propagate the Cooperative Movement, it is desirable that the cooperatives not only have a well-knit and widely spread structure at different levels through multi-tiered structure, the federation aspect of cooperatives has also been expressed in the 6th ICA Principle of Cooperation "Cooperation among Cooperatives". The 6th ICA Cooperative Principle states: "*Cooperatives serve their members most effectively and strengthen the Cooperative Movement by working together through local, national, regional and international structures.*"

It may, however, be ensured that these upper tiers do not grow at the cost of primaries. The upper federal tiers of cooperatives should be made to play more positive role in promoting the interests of primaries rather than acting as their competitors. The various tiers should function through "interdependence" so that the need for each tier remains in prominence.

Professional Management

Whereas it is the collective responsibility of the Board of Directors to further and protect the interests of the members and carry out the business of the cooperative society according to expressed needs by the members, the role of "professionals" in setting up good governance cannot be ignored. Taking advantage of the lack of awareness about cooperatives and the business, often the expert professionals dominate the cooperative governance and often indulge in such activities, which are neither the social nor the cultural needs of the members. It is, therefore, imperative that the professionals who are associated actively in the jobs of the cooperatives should be necessarily inducted into understanding cooperative philosophy, cooperative way of functioning and, above all, respecting the democratically expressed needs of the members.

Value-based Management

The relation of the professional managers with the Board and vice-versa has been attracting the attention of the Cooperative Movement in Asia. The "Value-based Professional Management" which has been introduced by the Leicester University, is being intensely debated now days. The concept

of value-based management emanates out of the thinking that there should be only one unified board in a cooperative society to build a collective competency by bringing in professional managers as a united team on the Board to achieve the objects of the cooperative society. The team of professional managers on the board, such as functional directors, allows them to comprehend the thinking of the elected leaders in its totality and thus are able to serve their members without compromising their professional management capabilities.

The concept of the value-based management is adjudged to be better to any other corporate competitor because cooperatives are owned by members who are also the users of these services generated by it and not merely customers alone. The underlying current of this concept is that the professional managers must lead first and management of implementation afterwards. This concept will have ample scope to allow policy formation to be driven by both member-lead philosophy and business results.

Social Audit

To judge the affectivity of a cooperative society to the purposes it has been formed besides the financial and management audit, the society should also conduct social audit so that it may receive a positive feed back about the reach of the services it is rendering to its members.

“Good governance emerges through honest application of and adherence to prevailing laws and by respecting the spirit behind these prevailing laws. Circumventing the cooperative laws for self-interest does not qualify to be called as good governance in cooperatives. People look for a ‘role model’, people look for good governance, and people generally respect and abide by the rule of law.”

Governance in the Management of Cooperatives

Daman Prakash

The four key components of governance are accountability, transparency, predictability and participation. Governance is not government as such. Governance is one of the characteristics of any institution which is concerned with governance, or management of governance. Governance is the reflection of the quality of management and the delivery of its services. Governance means the way those with power use that power. A contributory factor to bad governance is corruption – political, economic and social. Cooperative institutions operate within the four walls of the universally-accepted Principles of Cooperation. Cooperatives are little democracies operating at the doorstep of basic members enabling the members to make use of their cooperatives to satisfy their economic and social needs through benefits and services. Good governance emerges through honest application of and adherence to prevailing laws and by respecting the spirit behind these prevailing laws. Circumventing the cooperative laws for self-interest does not qualify to be called as good governance in cooperatives. People look for a 'role model', people look for good governance, and people generally respect and abide by the 'rule of law'. It is for the national apex unions and federations to get together in the name of their constituents and the Cooperative Movement, as a whole, and unitedly prevail upon the government to review and revise the existing cooperative legislation to make it more member-friendly. Dr Daman Prakash is the Senior Consultant and Project Director with the International Cooperative Alliance Regional Office for Asia and the Pacific.

Introducing Governance

Governance is not government as such. Governance is one of the characteristic of any institution that is concerned with governance, or management of governance. Governance is the reflection of the quality of management. Each nation's path to good governance is different, depending on culture, geography, political and administrative traditions, economic conditions, and many others.

Governance is a simple concept at heart: *good governance is good government*. The concept relates to the quality of the relationship between government and the citizens [cooperative and its members] for whom it exists to "serve" and "protect". To put it more precisely and simply, governance means *the way those with power use that power*. The concept, therefore, has political and economic dimensions. Issues of political governance include the mechanism by which the public's political preferences are ascertained and leaders chosen. These are the fundamental governance concerns.

The instrumental nature of governance implies that the four governance pillars are universally applicable regardless of the economic orientation, strategic priorities, or policy choice of the government in question.

Four Pillars of Governance

[Source: Annual Report 1998 of the Asian Development Bank]

The four key components of governance are accountability, transparency, predictability and participation.

Accountability is the capacity to call officials to account for their actions. Effective accountability has two components: "answerability" and "consequences". "Answerability" is the requirement to respond periodically to questions concerning one's official actions. There is also a need for predictable and meaningful consequences, without which accountability is only a time-consuming formality. In addition, both internal [administrative] and external accountability are needed. Particularly with the dramatic improvements in information and communication technology, external accountability through feedback from service-users and the citizenry can now be obtained at low cost and for a greater variety of government activities, and is an essential adjunct to improving efficiency and effectiveness of public service delivery.

Transparency entails low-cost access to relevant information. Reliable and timely economic and financial information is a must for the public [normally through the filter of responsible media]. It is essential not only that information be provided, but also that it be relevant and understandable. [Dumping on the private sector vast amounts of raw economic information does not improve transparency].

Predictability results primarily from laws and regulations that are clear, known in advance and uniformly and effectively enforced. Lack of predictability makes it difficult for public officials to plan for the provision of services [and is an excellent alibi for non-performance]. Predictability of government economic actions is also needed as an indicator on which the private sector can rely to make its own production, marketing, and investment decisions. Most importantly, to be predictable, the application of economic regulations must be effective, fair and uniform.

Participation is needed to obtain reliable information and to serve as a reality check and watchdog for government action. Among other things, participation by external entities is needed as a spur to government operational efficiency, and feedback by users of public services is necessary for monitoring access to and quality of the services.

Empirical evidence suggests that a strong "civil society" plays a critical role in advancing good governance. Improving formal rules and organisations without any change in informal customs and ways of doing business avails little: importing procedures and mechanisms without reference to the incentive and local capacity framework is likely to be fruitless; interacting only with central government or indeed, only with government, is not conducive to good implementation of reforms. Above all, governance intervention should encourage the formation of social capital i.e., the stock of trust and information exchange at the base of civil society.

Governance and Corruption

It is interesting to notice that the menace of corruption is now faced not only by the large business corporations or business houses, but also by respected international organisations including the large financing agencies. All of them are concerned with this evil and keenly wish to get rid of it. We have been hearing of kickbacks in contracts and other business operations. These are, of course, not unusual but the tendencies of getting richer fastest are rapidly spreading. It is hard to imagine that good governance can be achieved without the elimination of corruption. Satisfaction of self-interest

propagates corruption, and corruption in any form, leads to the establishment of bad governance. The Asian Development Bank in its latest report has spoken at length of this phenomenon. Corruption, which is a strong contributory factor to bad governance, can be defined briefly as the use of public or private office for personal gain.

Samples of corrupt activities of greatest interest to the Bank [Asian Development Bank] include:

- Design or selection of uneconomical projects because of opportunities for kickbacks and patronage;
- Procurement fraud;
- Illicit payments to government officials to facilitate access to goods, services, or information to which the public is not entitled, to deny the public access to goods and services to which it is legally entitled, or to prevent the application of rules and regulations in a fair and consistent manner;
- Misappropriation of confidential information for personal gain, such as using knowledge about public transportation routings to invest in real estate that is likely to appreciate;
- Deliberate disclosure of false or misleading information on the financial status of corporations;
- Theft or embezzlement of public property and monies;
- Sale of official posts or promotion, or nepotism; and
- Extortion and the abuse of public office, such as using the threat of a tax audit or legal sanctions to extract personal favours.

Some Reflections on “Governance” [Good/Bad]

Governance and the Principles of Cooperation: When we discuss about governance we cannot remain ignorant of the role of the government in the promotion and development of cooperatives. Governance emanates from the guiding principles [which have been established by the International Cooperative Alliance in the form of Principles of Cooperation and which are universally-accepted for the last 105 years] and the legal framework [which has been provided by the State through the Cooperative legislation and Cooperative policies]. We are always and already conscious of the rights and duties of members of cooperatives and member-cooperatives. We should also take note of the rights and duties of the State vis-à-vis the Cooperative Movement.

In the past, we have been hearing of the golden phrase directed at the Registrar of Cooperative Societies as “*friend, philosopher and guide*” of the Cooperative Movement. In the present-day context, this phrase has neutralized to the extent that the original phrase is now sadly a part of history. A large number of cooperative institutions in India, for instance, especially the most lucrative ones e.g., the cooperative banks, marketing federations, sugar cooperatives, dairy federations, housing federation are all headed now by the government officers or government nominees. It is assumed that there are no qualified, well-trained and competent managers within the Cooperative Movement. Two premises are often cited for such nominations: first, a lot of government money is supposed to be involved in such cooperatives and hence it ‘naturally’ becomes the right of the government to step in to ‘safeguard’ these institutions, and secondly, the interests of poor members have to be ‘protected’ and ‘safeguarded’. On both counts, the logic does not hold water. Such nominations are also highly politically-oriented and politically-motivated – the ruling parties through their governments have, of course, also to safeguard their own interests! Interestingly, every political party when not in power

swears that such things would not happen when they ascend the throne. But somehow and sadly the game remains the same, only the faces change. Demolition of duly elected boards continue to take place.

Cooperative Legislation: In the past, a number of high-profile studies were conducted, at least in India, which with all seriousness and a great amount of honesty and objectivity had suggested a thorough review and revision of cooperative legislation in the country, making it more member-oriented, member-driven, member-friendly and business-oriented. So far, only very meek efforts have been made to really do something constructive. Only the promises were religiously made and that too in loud voices. The Cooperative Law still remains the same except for some cosmetic touches here and there. In the name of reducing the powers of the Registrar and loosening government controls, more bureaucratic hurdles have been established thereby smothering the initiatives of grass-roots level members. Governance should, in fact, be with the consent of the people and in the interest of the people. Governance should logically be based on some ethics, principles, values and norms.

Creating parallel and the so-called “autonomous cooperative laws” are no solution – cooperatives having government financial stake are governed by one law and the cooperatives where there are no government stakes are governed by another law. These are mere academic exercises in futility and only for the elite. Such so-called ‘progressive and democratic’ initiatives tend to add to the confusion and miseries of ordinary members and solve no problems. Such efforts are the indicators of frustration and are only an interim measure. These measures, however, provide some solace to honest cooperators to temporarily escape from the bureaucratic wrangles of cooperative departmental officials and politicians who matter or dare to temper with the well-established norms, ethics and systems.

In having a more member-driven cooperative law, the national federations have to play an important role. The role of the national apex unions and federations which are supposed to represent the Movement as its spokesman at various national and international fora becomes more pronounced. These institutions, through their ethical governance, set an example for others to follow and thwart the anxious designs of the government to make inroads into the management of their affairs directly or indirectly – to satisfy the wishes of politicians and the bureaucrats. The situation gets worse when the national leadership, in order to satisfy their self-interests e.g., overshooting the mandate of term of their office etc., succumb to external directives and hidden high ambitions. Consequently, the leadership is tempted to temper with the sanctity and ethical values of the charter and manipulate the well-established norms, precedents and practices. The governance thus is eclipsed with methods which run contrary to the spirit of the Principles and Values of Cooperation. The national apex institutions and naturally their affiliates then rapidly slide into the arms of government and consequently cannot provide a ‘role model’. Frustration then sets in and the constituents begin to ask: ‘what is the use of these national apex institutions if they cannot secure the freedom of action for them’, ‘whose interests are they safeguarding anyway’, ‘then why should we have general meetings and elect office-bearers if they have to serve the interests of the government’ etc. etc.

Good governance emerges through honest application of prevailing laws and respecting the spirit behind these prevailing laws. Circumventing the cooperative laws for self-interest does not qualify to be called as good governance in cooperatives. People look for a role model, people look for good governance, people respect and abide by the “rule of law” in which they lay their faith and trust. It is for the national unions and federations to get together in the name of their constituents and the Cooperative Movement and unitedly prevail upon the government to review and revise the existing cooperative legislation and make it more member-friendly.

Indicators of Good Governance: In the context of cooperative organisations, the system of governance, including the size and composition of the board of directors, need to be driven by the purpose and objectives of the business. The right board of directors is the one that can best help to deliver the benefits and services to the members which are at the root of the organisation's purpose and prime objectives. The overall system for the direction and management of the organisation, encompasses all aspects of the process from the members' meeting to the formulation and execution of business policy.

Some of the possible indicators of good governance in cooperatives could be: how much of awareness the leaders and members have about the Principles of Cooperation and the basic values of the Cooperative Philosophy; how clearly they understand the ethical and moral elements which are the essential components of the Cooperative Philosophy as a whole; how different is the cooperative enterprise from a private enterprise or a state enterprise; how conscious are the board members about their rights and responsibilities; to what extent the Board members realise that they are accountable and answerable to the members who have reposed their confidence in them; how much of operational powers are delegated to the chief executive; how smooth are the communication channels between the board and the chief executive; whether any code of conduct/ethics has been developed and accepted by the organisation and its affiliates; how much is the level of transparency in dealing with the employees; how smooth is the channel of communication between the cooperative and its stakeholders and business partners; whether there is any discipline outlined on the use of assets of the organisation; how often are the meetings held [on schedule and in accordance with the law and bylaws]; and to what extent the cooperative institution obeys the directives of the State at the cost of its autonomy and freedom of action; etc. etc.

The Principle of Accountability and Answerability: It has often been found that the honorary office-bearers of cooperatives tend to prove to be more expensive to the organisation than the paid board members – they often make use of the facilities of the organisation without any compensation being paid to the organisation – perhaps as a matter of right! Honorary Chairman/Presidents tend to become full-time working officials thereby disregarding and eroding the status and authority of the chief executive officer and other managers. While taking critical decisions [especially the economic decisions] chief executives are hardly consulted by the committee members – they tend to distribute the benefits [rather, kick-backs] among themselves! In order to have a proper control on the management of assets and resources of cooperatives and to attract right type of objective leaders it is much better that the posts of chairmen and other board members are compensated through monthly/yearly wages and their retirement ages fixed. Such leaders will then know how much they can get from their cooperatives rather than their enjoying the perks and resources on an open-ended scale. The cost of compensation is certain far lower than that of hosting the honorary office-bearers.

There are cooperatives – examples are not lacking – whose leaders have been found misusing the assets and resources of their cooperatives for self-gain. Such representatives were monopolising the seats of leadership; perpetuating themselves and projecting their own image at the expense of the institution; using cooperatives as springboards for entry into active politics or using cooperatives as rehabilitating posts after rejections from active politics; treating cooperatives as their personal properties [rather fiefdoms]; providing employment to their own relatives and friends; using cooperative business opportunities to expand their own private business; borrowing money from the cooperatives and not repaying their loans. Leaders tend to perpetuate themselves. In developing countries, this tendency is accentuated by the prevalent social stratification.

A recent study of the structure of cooperative leadership in rural India has shown that: a) a majority

of the presidents of cooperatives is big landlords; b) all presidents belong to the dominant caste; c) election of president is unanimous and ritualistic; and d) most of the office-bearers have political affiliations.

Cooperatives and the International Platform

Cooperative institutions are people's organisations which are formed by the members [voluntarily], owned by them [by purchasing shares and on payment of prescribed admission fee and by agreeing to abide by the bylaws, rules and policies of the cooperative], and run by them [democratically and in accordance with the universally-accepted Principles of Cooperation and through the management organs – elected or employed], to satisfy their social and economic needs [through active participation and mutual help]. Cooperative institutions throughout the world have carved out a place for themselves and have rightfully established themselves in the form of an independent sector – the cooperative sector – along with the other two sectors, the private and public sectors. Examples of success are available in many countries where cooperative institutions have not only met the economic needs of their members but have also played a significant role in the social development of their members and the human community in general.

Contrary to the common belief that cooperative institutions do not deliver social goods, some of the recent studies strengthen the argument that cooperatives are indeed people's organisations which can respond effectively to the felt-needs of their members. A closer social audit of such institutions would reveal that leaders with vision in collaboration with the enlightened membership and with the cooperation of dedicated and devoted management can transform our 'civil society' into a place of security and satisfaction.

Cooperatives also have all the basic ingredients which constitute a State i.e., territory, government, population and sovereignty. The State is superior to the cooperative institution in the sense that sovereignty is absolute in the case of the State, while the cooperatives have to operate within the sovereignty framework of the State. So cooperatives have the following components i.e., Territory [it is called the area of operation of a cooperative – a village, a town, a province or the entire country], Government [it is the democratic control exercised by the members on the affairs of the institution through the general body, managing committee and sub-committees etc.], Population [this means the membership which have formed the cooperative through a legal process of payment of admission fee and purchase of shares and subscribing to abide by the bylaws], and Sovereignty [in the case of cooperatives it is the general meeting of the members which enjoys the powers of creating bylaws and enacting various rules and policies which are binding on all the members]. The law within which the cooperative operates is enacted by the sovereign State. The limitations for the two are drawn naturally. The flashpoint comes when crossing the limits comes into play. The question of rights and responsibilities thus becomes supreme. The State has obligations towards the community and the cooperative also has obligations towards its members and towards the State.

Challenges of Governance before Cooperatives: Cooperatives are now faced with new challenges in the context of open market economy and the pressures of competition. A large number of multi-million dollar worth business houses across the world have collapsed. It is interesting to note that not a single cooperative – primary, secondary or national – has folded up even in the developing countries. There must be some reason behind their strength! It is their combined bargaining power. They are owned and managed by the members who wish to satisfy their social and economic needs. They sustain because they are governed well. Many of the cooperative institutions in the developing

countries still prefer to follow traditional methods and techniques of doing business. They do not grasp the gravity of situation easily and their reactions to market manipulations are rather low. They need to learn to live in the new environs to be able to safeguard the interests of their members and, of course, of their own. These institutions have to do a very critical scan of their methods and improve their services and business practices. Their greatest strength is the unity of their basic members who have exhibited enormous faith and trust in the objectives of their cooperatives which they themselves have created and managed. It is, however, a different question – how well-managed, but they have continued to perform their functions and serve their members. They manage to survive and maintain their existence.

From an international stand point, it is worthwhile to make a mention of the *guidelines aimed at creating a supporting environment for the development of cooperatives*, which have recently been suggested to the UN Secretary-General for securing the approval of the United Nations General Assembly. After nearly 30 years of substantial changes in global economic and social conditions in the Cooperative Movement and in the relations between it and the governments, there was a need to change the tone and emphasis to reassess the underlying concepts of aid to cooperatives and to include matters not addressed by it.

There was an urgent need for guidance to many governments on policy regarding cooperatives and the Cooperative Movement in view of the importance of the Movement and to imbibe the elements of good governance within the cooperative institutions. The International Cooperative Movement itself had comprehensively reviewed its values and principles and the nature of its proper relationship with other sections of the society, including government, and adopted a new Statement on the Cooperative Identity at the Centennial Congress of the ICA held in Manchester in 1995.

The objectives of such guidelines are expected to be as follows:

- Government to recognise the Cooperative Movement as a distinct and major stakeholder in both national and international affairs;
- Governments recognise that the Cooperative Movement is highly democratic, locally autonomous but internationally integrated, and a form of organisation of associations and enterprises whereby citizens themselves rely on self-help and their own responsibility to meet goals that include not only economic but social and environmental objectives;
- Governments seek to support the Cooperative Movement and to work closely with it to develop an effective partnership to achieve their respective goals;
- Government to take into account the special character of cooperatives and the Cooperative Movement, which differs significantly from that of associations and enterprises not organised according to cooperative values and principles.

Governance, and for that matter, good governance, is not the game of singles. In this case, the governments and the Cooperative Movement have to join forces to bring about positive changes in favour of the ultimate basic members. Cooperatives have enormous strength to work as pressure groups.

Good Governance Calls for Harmony, Not the Perpetuation of Conflicts

Cooperatives are not and need not to be completely under the shadow of the government. They are recognised by the State and hence a legal identity has been accorded to them through the instruments

and functionaries of the government. Both of them are concerned with the well-being of the people. They are not the rivals to each other. They are the equal partners in the process of social and economic development. The point of conflict arises when the people's organisations are controlled, manipulated and managed by the government leaving the owners high and dry, and, when their rights and initiatives are encroached upon. There is a need for instituting the feelings of harmony rather than perpetuating conflicts. When the government begins to understand its parental or equal partnership role towards cooperatives, that is the beginning of a good governance. Cooperatives, on their own part, have also the obligation to strengthen good governance within their own methods and systems.

Due to lack of understanding of cooperative organisation and its business, certain disputes arise. There are a large number of cases pending before cooperative tribunals and courts which result into high unnecessary expenses being incurred by cooperatives mostly in defending the wrong decisions taken by the leaders to serve their self-interests. Conflicts arise when the business federations forget their role as coordinators, guides and promoters. Instead they tend to take on the business of their own constituent-members by competing with them and depriving them of exercising their decision-making initiatives and rights. The federations clearly overstep their limitations and infringe on the freedom and area of operation of their members. Such conflicts can easily be avoided if there were codes of ethics agreed upon by the various sectors of the Cooperative Movement. A code of conduct/ethics is an effective means of reducing areas of friction, misunderstanding, toning down the hard feelings and promoting a healthy climate to give the leaders and others a chance to institute a good governance through the instrument of harmony.

It is worthwhile quoting a few recommendations that were made by the Corporate Governance Working Group of the Cooperative Union Ltd. [UK] in April 1994:

“The President/Chairman should stand back sufficiently from the day-to-day running of the business to ensure that the Board is in full control of the society's affairs and alert to its obligations to its members:

“The positions of Chief Executive and Secretary should not be occupied by the same person, except, possibly in the case of the smallest societies:

“All directors should have access to the Secretary and the removal of a person from this office should be a matter for the whole Board;

“Each cooperative society should develop and introduce its own Code of Business Ethics.”

A number of Cooperative Movements in developed countries have strongly stressed on the following points for the cooperatives and cooperative leaders to follow:

-Better transparency and accountability is established by holding statutory meetings regularly, in time, in a democratic fashion and relevant documents e.g., agenda notes, audit reports and working reports being supplied to the members sufficiently in advance;

-Honorary office-bearers tend to prove to be more expensive to the institution. They should be paid and they should be assigned specific tasks to ensure their genuine participation in the affairs of the cooperative on the principle of accountability;

-The entire Board is collectively responsible for the business performance of the cooperatives [including losses];

-Board members and the chief executive should have their job descriptions written down for

a better participation, decision-making and follow-up:

-There should be a constant flow of information through consultations and documentation between the Board and the chief executive of the organisation, and all decisions taken in the Board should be in the knowledge of the chief executive to ensure a proper implementation; etc. etc.

Conclusion

The four key components of governance are accountability, transparency, predictability and participation. Governance is not government as such. Governance is one of the characteristics of any institution which is concerned with governance, or management of governance. Governance is the reflection of the quality of management. Governance means the way those with power use that power. A contributory factor to bad governance is corruption – political [manipulations, blackmailing, creating political constituencies through vote banks], economic [financial irregularities, kickbacks], and social [hoodwinking of the community, through fear and threats, disruption of peace]. Cooperative institutions operate within the four walls of the universally-accepted Principles and Values of Cooperation. Cooperatives are little democracies operating at the doorstep of basic members enabling them to make use of their cooperatives to derive social and economic services in the best interests of the community as a whole.

Good governance emerges through honest application of prevailing laws and respecting the spirit behind these prevailing laws. Circumventing the cooperative laws for self-interest does not qualify to be called as good governance in cooperatives. People look for a 'role model', people look for good governance and people generally respect and abide by the 'rule of law' in which they lay their faith and trust.

It is for the national unions and federations to get together in the name of their constituents and the Cooperative Movement, as a whole, and unitedly prevail upon the government to review and revise the existing cooperative legislation and related policies to make them more member-friendly. It is equally essential for the federations and top leaders to present "role models" for their constituents to follow. Only then good governance has better chances to prevail and develop further to strengthen the elements of a civil society.

"Four pillars of governance are: Accountability [is the capacity to call officials to account for their actions]; Transparency [entails low-cost access to relevant information]; Predictability [results primarily from laws and regulations that are clear, known in advance and uniformly and effectively enforced]; and Participation [is needed to obtain reliable information and to serve as a reality check and watchdog for government action]. Governance interventions should encourage the formation of social capital i.e., the stock of trust and information exchange at the base of civil society."

Management of Cooperative Legislation and Legal Framework in Asia-Pacific Region

– A Review

G.K. Sharma

It has been found that in the Asia-Pacific Region even today a vast majority of cooperative leadership continues to look towards government for guidance and financial support more than towards their members. Such an attitude has made the governments more conscious of their right not only to govern the cooperative institutions [using the cooperative law and government financial inputs as pretexts] but also control their destinies. If this attitude is not changed, both by the Governments and cooperative leaders, cooperatives will not be able to stand long. In the present scenario of Open Market system and stiff competition from multinationals and other private enterprises, Cooperatives will have to compete and justify their existence by showing efficiency, better services and competence. This will also need extensive, major and urgent changes in the existing cooperative legislative structure. With their hands and feet tied under the existing laws and with a variety of over-riding powers of the government, in many cases, cooperatives will not be able to compete and stand with the market forces. Therefore, there is a need to examine the various existing cooperative laws in the countries in today's context and changes brought so that the cooperatives are able to stand and play an effective role to serve their members and needs of the society at large in matters such as environment protection, food security, gender integration etc.

The present paper is largely based on his publication entitled "Cooperative Laws in Asia and the Pacific" and on his experiences of working with the International Labour Office [as its Regional Advisor on Cooperatives for Asia and the Pacific], the International Cooperative Alliance [as its Regional Director for Asia and the Pacific], the National Agricultural Cooperative Marketing Federation of India-NAFED [as its Managing Director] and with various other governmental and non-governmental organisations in India.

Historical Background

Early Cooperatives Laws in Europe: The first attempt for the systematic self-regulation of the cooperatives could be found in the model rules or by-laws adopted by the third Cooperative Congress of UK in 1832. These model rules were further expanded and recast in the "Laws and Objects of the Rochdale Society of Equitable Pioneers" in 1844 which ensured *discipline, commitment, honesty and transparency* in the working by the members and office-bearers and proved the basis of success of the cooperatives in UK and Europe, and, in course of time, became the basis of the Cooperative Principles. The first separate law for cooperatives in Europe was in UK in 1952 called "The Provident and Industrial Societies Act" and, in Austria, Law on Cooperative Credit Societies' in the same year. The UK Law was enacted due to various constraints in the Friendly Societies Act under which cooperatives were registered in the UK before this Act. The cooperatives, their leaders and Christian

socials were actively involved in the framing of this law. The next country to have cooperative law was Germany.

In Germany, in the middle of the 19th century, there was no appropriate legal framework for cooperatives. In order to be registered and to obtain the legal status they had to seek the approval of the government, which could be withdrawn at any time. With the initiative of Hermann Schulze-Delitzsch a draft cooperative society bill was approved in 1860 at the annual general meeting of the Federation of Credit and Savings Societies as a basis for the Prussian Act governing the legal conditions of cooperatives under private law promulgated in 1867. The application of this Cooperative Societies Act was extended to other German states in 1868 and 1871.

The third country to have the cooperative law was the Netherlands in 1876. These three cooperative laws provided the framework for most of the Asian Cooperative Laws though they changed the spirit considerably.

Asian Situation and Cooperative Laws

The success stories of Rochdale Pioneers and Raiffeisen Credit Movement had created keen interest in many of the Asian countries. There were initial attempts to organise cooperatives by the people and social reformers in many countries in Asia during the 2nd half of the 19th century, particularly in Japan, India, Indonesia and Australia. The first International Cooperative Congress in 1895 held in London was attended by Australian and Indian participants. The next one to join the ICA from Asia was Japan in 1910. However the most Asian countries being under colonial rule, the people initiative to promote cooperatives was taken over by government officials and the people lost interest. Thus the growth of cooperatives became slow in most countries with the exception of Australia and Japan. It picked up only when these countries got freedom and had their own national governments.

The cooperative laws in colonial Asian countries were drafted by the foreign bureaucrats and cooperatives or cooperators were not involved as in the case of UK, Germany, and other European countries. Thus in the framing of cooperative laws main consideration had been, "what is good considered by the state and not by the members or the people". The cooperatives were made to look towards the Department and not to their members for guidance and working. The post of Registrar was borrowed from the United Kingdom. The Registrar under the Friendly Societies' Act and later on under Prudence and Industrial Society Act. There the Registrar was concerned with the registration and dissolution of cooperative societies, and collection of annual returns of their activities only. In Margaret Digby's "Agricultural Cooperatives in the Commonwealth" about the enactment of Cooperative law in India it is stated "It soon became apparent, however that in a country like India, where rural leaders were few, and over 90% of the population was illiterate, the Registrar would have to do more than record and correct. He and his staff would have to initiate, educate, organise and supervise and both their numbers and importance would be greater than had been anticipated from the study of European models". Ir. Asnawi Hassan in Development of Cooperative Legislation in Indonesia states: "the Netherlands Indies Government suspected the cooperatives as an organisation which could be utilised as a political level and encourage the people to live independently in the economic field and not on the colonial government". Thus the Registrar was called "*the Friend, Philosopher and Guide*" and no cooperative could afford to go against his wishes. Under these laws there is no obligation on the society to deal with members only, as is the case in Japan and Australia. In Japan a cooperative can do business with only members and only to a limited extent the business with non-members is permitted under the cooperative law. Similarly, under the Australian federal law on taxation if the business in a cooperative is less than 90% from members no tax benefits are available.

Thus in the first half of the 20th century colonial governments in most countries in Asia tried to control local cooperative leadership and people not having faith in the State-favoured leadership and in the Government, the growth of cooperatives remained rather slow. In Japan and South Korea during Second World War cooperatives were replaced by farmers associations and there also the agricultural cooperative got a setback.

The situation changed considerably in the second half of the present century when most countries got freedom and national governments took over. Practically in all countries cooperatives were considered as an instrument of bringing socio-economic development and particularly agricultural production and rural development. Governments provided liberal financial assistance and support to the cooperatives. In the process while quantitatively cooperative grew manifold it suffered in quality. In many countries cooperatives lost their basic character and became more of state agencies. In many countries cooperatives laws were modified to vest more and more arbitrary powers into the cooperative department. The situation further worsened by using these powers for the benefit of politician and bureaucrats. As a reaction to this the Royal Commission on the Cooperative Movement of Ceylon has this to say:-

“It is notorious and scandalous that cooperative societies and the Cooperative Movement generally in Ceylon have been outrageously misused by certain politicians to serve their own ends. In some places their machinations have gone far to undermine two levels of organisation.....In many societies the politicians are in almost absolute control of the movement with the result that non-political initiative and leadership have been pushed into the background and silenced. In such a situation neither cooperators nor government can play their respective roles properly and the whole system suffers.”

The above observation is relevant to not only Ceylon but many other developing countries in the region.

To find out a solution to these unfortunate developments and to work out collaborative strategy for the growth of cooperatives in the right direction, the ICA ROAP decided to convene periodical conferences of Cooperative Ministers, Cooperative Leaders and UN agencies interested in the development of cooperatives. The first such conference was held in Sydney in February 1990. The conference made exhaustive recommendations in this regard. The subject of role of governments towards cooperatives was again considered by the Second Cooperative Ministers' Conference held in Jakarta in February 1992, Third Cooperative Ministers' Conference was held in Colombo in July 1994 and the Fourth Conference in Chiangmai, Thailand in March 1997.

Many important recommendations related to cooperative laws were made in these conferences. Some of them are:

- i. Enactment of progressive cooperative laws in conformity with Cooperative Principles. [Sydney 3.5 and Chiangmai 3.9];
- ii. Transfer of functions of audit, inspection, supervision and responsibility for elections, etc. to cooperatives. [Sydney 3.9 and Chiangmai];
- iii. Discontinuation of the practice of ex-officio holding of elective offices by government officers. [Sydney 3.19];
- iv. Instead of dissolving the entire elected board for any irregularities, erring individual members of the board of director/office-bearers should be brought to book. In the event of inevitability of

- removal of board, the management should be entrusted to the concerned federal organisation. [Sydney 3.20];
- v. Governments' collaboration in cooperative development is vital to strengthen co-operative values in several ways, particularly providing appropriate cooperative legislation and administrative policies. [Jakarta 0.5];
 - vi. The cooperative values need to be safeguarded while extending government financial and other assistance. [Colombo 0.6];
 - vii. Cooperative elections, audit, education and training should, as far as possible, be undertaken by the cooperatives themselves. The governments, however, may continue to extend assistance for audit, education, and training. [Colombo 1.10];
 - viii. Cooperatives by nature are autonomous institutions. The government should play the role of a facilitator through policy initiative and should nurse and nurture them to play their full role as people's organisations. Giving and receiving of assistance - financial, managerial or otherwise - itself is not infringement of autonomy, provided it is done on mutually agreed terms. [Chiangmai 2];
 - ix. Discontinuation of the practice of ex-officio holding of elective offices by government officers. [Chiangmai 3.19];
 - x. Instead of dissolving the entire elected board for any irregularities, erring individual members of the board of directors/office-bearers - should be brought to book. In the event of inevitability of removal of board, the management should be entrusted to the concerned federal organisation. [Chiangmai 3.20].

At the global level also, ICA was concerned with developments in developing countries as also industrialised countries. While the problem in developing countries has been the over involvement of Governments with cooperatives, in industrialised countries it is the excess domination of professionals: the effect of both being members losing their involvement and interest. Thus in the ICA Manchester Congress in September, 1995, not only the Cooperative Principles have been revised, but also a universally agreed definition and cooperative values have been included in the ICA Statement on Cooperative Identity [ISCI] [*which is reproduced at the end of this paper for reference purposes*]. This should help distinguish between the genuine and pseudo-cooperatives.

Cooperative Legislation and Legal Framework

Historical Background - UK and Europe: The Asian Cooperative Movement was greatly influenced by Cooperative Development in Europe. While there were considerable similarities in socio-economic situations between Asia and Europe during the 18th and 19th century: to a certain extent agricultural and rural economy in many parts of Asia was better than many countries of Europe. The Cooperative Movement in Europe was an attempt to fight poverty and exploitation, by the working classes, artisans etc. supported by many social thinkers and reformers particularly due to the deteriorating socio-economic conditions of workers as a result of industrial revolution. These cooperatives were registered under the normal laws of the country, or even where specific laws were enacted, they were to provide them legal status and facilitate their working and allowed full freedom to frame their own rules of governance. Thus the Law has never interfered in the self-regulation of cooperatives.

Model Cooperative Rules in 1832: The first attempt for the systematic self-regulation of cooperatives could be found in the model rules or bye-laws adopted by the third Cooperative Congress held

in London from April 23 to 30, 1832. The Rev. Mr. Dunn brought up the report of the committee appointed to draw up the rules and regulations of cooperative societies and were as follows:

- i. Let it be universally understood that the grand ultimate object of all cooperative societies whether engaged in trading, manufacturing or agricultural pursuits, is community on land;
- ii. To effect this important purpose, a weekly subscription, either in money, goods or labour from a penny to any other amount agreed upon, is indispensably necessary to be continued from year to year, until a capital sufficient to accomplish the object of the society be accumulated;
- iii. The next preliminary step to be pursued as auxiliary to the former will be for the society to purchase at wholesale price, articles of ordinary consumption of the most genuine description, in order to be retailed at the market prices for the purchase of further accumulation. The adoption of these instructions will, of course, be regulated by the circumstances and inclinations of particular societies;
- iv. We would observe that the immediate benefit derivable from these societies in their successful approximation of community, are the mutual employment of members, the establishment of schools for education of children, and of libraries and reading rooms for adults;
- v. *In order to ensure without any possibility of failure the successful consummation of these desirable objects, it is the unanimous decision of the delegates here assembled, that the capital accumulated by such associations should be rendered indivisible, and any trading societies formed for the accumulation of profits, with a view to making a dividend thereof at some future period, cannot be recognised by this congress as identified with the cooperative world, nor adopted into that great social family which is now rapidly advancing to a state of independent and equalised community;*
- vi. It is deemed more especially essential in all the trading transactions of co-operative societies that credit shall be neither taken nor given as deviation from this important principle has been the sole cause of the destruction of so many previous societies, and this painfully operated to retard the general progress of co-operation. In order to carry this important measure into successful operation, the congress recommend that in case of want of employment among the members, means should be taken by the society, if possible, to provide them some employment as local circumstances may admit. In cases of sickness, should there be no other sources of relief, pecuniary assistance may be given from the funds belonging to the society, or from individual subscription amongst the members;
- vii. The congress is of the opinion that it is extremely inimical to the principles of co-operation and productive of the most serious consequences, to permit an individual who is already a member of one society to become a member of another". This report was unanimously adopted.

It could be seen that these model rules were greatly influenced by Robert Owen's vision of "Community on Land" when Rule 1 states "Let it be universally understood that the grand ultimate object of all cooperative societies whether engaged in trading, manufacturing or agricultural pursuits is community on land".

The other important features of these rules were:

- i. Every member had to give weekly subscription in money, labour or goods till the society collected the required capital. This was an important rule [Rule 2] which in course of time many cooperatives lost sight of and just buying one or two shares was considered the only obligation of members to avail of the same benefits as of others who might have subscribed much larger

capital to the society. This rule finds place in the new rules adopted by the Manchester Congress in 1995 in the 3rd Principle "members economic participation":

- ii. The model rules provided that a cooperative should not make profits for the sake of giving dividends and the capital accumulated should be indivisible. [Rule 5];
- iii. Rule 6 debars taking or giving anything on credit. This rule was relevant more at that time than today as the banking and lending facilities were not developed at that time and was deleted from Cooperative Principles by the ICA later on;
- iv. These rules were for all types of cooperatives and under its objectives along with providing employment, taking care of member needs in difficult times was also encouraged.

Rochdale Rules 1844: The next attempt to make such rules was in 1844 in Rochdale. The model rules were based more on ideals than practical experience. These rules were modified and expanded based on the experience of the past and analysis of causes of the failures of co-operatives. in the laws and objects of the Rochdale Society of Equitable Pioneers in 1844. These Rules contained 34 articles against 7 in the model rules and were based more with practical needs than on future dreams.

The important feature of this law and objects were: The objective of "Community on Land" was replaced by "the objects and plans of this society are to form arrangements for the pecuniary benefits, and the improvement of the social and domestic conditions of the members by raising a sufficient amount of capital..." The law also deals with various activities and facilities which the co-operative would undertake to achieve its objective which included, trading, manufacturing, running a store, buy and rent land and even open a temperance hotel to encourage prohibition.

The law provided for governance body that included President, Treasurer, Secretary, three trustees and five directors and they had to meet every Tuesday at eight in the evening in the committee room. The general meeting was to be held on the first Monday of the month of January, March, July and October again at 8 O' clock to consider quarterly financial reports, position of funds and stocks held. The law also provided that AGM would be held on "First Market Tuesday" on which occasion a dinner shall be provided at a charge of one shilling each person, and one week's notice. The board based on quarterly result, paid 3-1/2% interest on shares which was later on raised to 5% as also, the remaining profit to be paid to each member as patronage rebate.

The importance of this law lies in the clarity and demarcation of responsibility and accountability of office-bearers, employees, and members as also transparency in operations. It is a combination of objectives, governance and a code of conduct for all concerned. *These regulations were self-made, self-imposed and were not enforced by government or any external agency.* Even today if these strict rules are adopted and followed by any co-operative, its chances of success would be much higher.

Cooperatives in Europe are governed by four types of laws: i] Specific laws enacted for cooperatives; ii] Commercial laws with specific cooperative provisions; iii] Commercial laws; and iv] Bye-laws alone.

Margaret Digby in her "Digest of Cooperative Law" has distinguished cooperative laws into six different kinds: i] British [industrial and provident type]: This form applies to Industrial Consumers' Societies; ii] Germany and Austria [Central European type]: Here the legislation has been designed to meet the needs partially of consumers and of credit societies; iii] France [Latin Type: The cooperatives are primarily placed under the commercial code. But the law is supplemented by decrees applying to special branches of cooperation]; iv] Denmark and Scandinavian Countries: Total absence of cooperative law as in Denmark and its presence in a primitive stage in other Scandinavian countries is a

peculiar feature of the flourishing movement in these countries; v] USA: Here the typical form is based on large scale agricultural marketing organisations, single cultivation and compulsory marketing contract, and ultimately introducing compulsory cooperative marketing.; and vi] Here the combination of various types of legislation is prevalent e.g., in Japan, Latin and Central European countries, these characteristics are combined.

Cooperative Laws in Asia

Japan was the first country in Asia to have a cooperative law in 1900 [Sagyō Kumiai law] based on German cooperative law. In 1943 this law was amalgamated with other farm laws which had no cooperative contents. This was changed in 1947 with separate cooperative laws for different types of cooperatives. South Korea followed the Japan model and having multi Cooperative Laws as in Japan. The next cooperative law was in India in 1904 by the British which included present Pakistan, Bangladesh and Myanmar. In 1919 Cooperation was made a State subject and every state in having its own law. Based on the Indian Cooperative law, Sri Lanka enacted Cooperative Law in 1911, Thailand in 1916, Fiji in 1919, Malaysia in 1922, China in 1934 and Nepal in 1959. Indonesia had the Cooperative Law in 1915 under the Dutch based on Netherlands Law of 1876. Australia had cooperatives as early as Japan and India but they were registered under the Companies Act and much later some of the states started enacting their own cooperative laws giving option to cooperatives to get registered under either of these two laws. These laws have been changed and updated from time to time and dealt in my earlier paper of 1997

The Challenges

The present co-operative laws in Asia are the products of the period when co-operatives were extensively supported by the Government and used for their planned development programs. Since the introduction of market economy and globalisation of trade, state support to cooperatives is constantly declining. However, no perceptible change is taking place in the cooperative laws and government-cooperative relationship. The government continues to exercise their control on the working of cooperatives including interference in the day-to-day affairs in many countries.

The cooperative leadership also continues to look towards government for guidance and financial support more than towards their members. If this attitude is not changed, both by the Governments and cooperative leaders, cooperatives will not be able to stand long. *Cooperatives will have to compete and justify their existence by showing efficiency, better services and competence.* This will also need extensive, major and urgent changes in the existing cooperative legislative structure. With their hands and feet tied under the existing laws, in many cases, cooperatives will not be able to compete and stand with the market forces. Therefore, there is a need to examine the various existing cooperative laws in the countries in today's context and changes brought so that the cooperatives are able to stand and play an effective role to serve their members and needs of the society at large in matters such as environment protection, food security, gender integration etc.

Object of Cooperative Law: Cooperative Law is not an absolute necessity for a country. In a country like Denmark, cooperatives are governed by their byelaws only. In many European countries, the cooperatives are regulated by Commercial laws, without any specific cooperative laws. However, practically all countries in Asia have specific cooperative laws. Only in Australia, cooperatives have option to get themselves registered either under the State Cooperative Law or under the Federal Corporation law. However, only when they have more than 90% business with members, they can get tax benefits under the federal revenue law as cooperatives.

The object of enacting cooperative law should be to give a legal status to the co-operatives and facilitate their working. It should also ensure that cooperatives work as genuine cooperatives according to the universally-accepted Cooperative Principles and the ICA Statement of Cooperative Identity [ISCI]. The legal framework of cooperatives consists of the law, rules made under it and the byelaws adopted by the members of cooperatives in accordance with the act and rules. All these together lay down procedure for the organisation and working of cooperatives and protect and preserve their cooperative character.

The Cooperative Law, thus, should facilitate the working and should not curtail the autonomous working of cooperatives and change their basic character. The day-to-day working regulations should be included in the byelaws. Mr PE Weeraman, the Regional Director of ICA ROAP in the seventies on the subject stated: "the greatest contribution that a government can make to the development of a Cooperative Movement is to enact legislation that would give a legal framework and the necessary safeguards and privileges that would create an atmosphere conducive to cooperative development".

As mentioned above, the Cooperative Law consists of Cooperative Act enacted by the legislature of the country, in some countries Rules framed by the Government and subsidiary of the Act and Byelaws as adopted by the members and registered under the Act. In case of conflict between the three i.e., Act, Rules and the Byelaws, the Act is supreme, followed by the Rules and then the Byelaws.

The Act should include the basic provisions relating to the Cooperative Principles, membership, registration requirements, management pattern, arbitration, liquidation, etc. *The best law is the one which is simple and brief, which can be understood by the common man and does not need a plethora of rules thereunder.* The details of working should be left to the members to be included in the byelaws.

Management: In the first half of the 20th century cooperative first started as credit cooperatives and then to supply inputs up to the farmers and help in marketing of their produces. During this period the villages were quite backward, isolated and cut off from town and cities. In the second half of the century things have changed fast particularly due to improvement in communications and road, rail infrastructure and consequently rural villages are no more absolute domain of cooperatives and small shopkeepers. Increasingly, big business houses and even the multinationals, are trying to penetrate rural villages considering the vast market potential due to increasing rural economic prosperity. Due to these changes in the rural areas agricultural cooperatives have to restructure their management practices and to what extent the legal structure is inducive to these changes is important. Cooperative management comes under five heads namely, AGM, Board, Chairman, Chief Executive and other committee.

Audit: In some countries law provides that audit will be done by the department either by department auditors or qualified auditors appointed by the department [Bangladesh, India, Nepal, Fiji, Thailand, Sri Lanka]. In others, there is provision of audit committee or auditors to be appointed by the General Body [Korea, Japan, Philippines, Malaysia, Indonesia]. Audit should be the authority of General Body, and the department should not get involved in the annual audit in view of a large number of cooperatives involved and increasing turnover and complexities. However, if the department wants they can have audit periodically in the form of management audit to ensure their supervision.

Funds: Funds of cooperative usually consist of the following sources: [i] Share capital and deposit from members; [ii] Own funds from profits and savings; [iii] Borrowing from cooperative banks/

commercial banks; [iv] Loan assistance from Government and other sources. With the diversification of business and advanced technologies being adopted, capital needs of cooperatives are bound to increase. The scope of increasing capital and constraints under the existing laws therefore needs consideration.

To conclude, cooperative laws are important instruments to sculpture the shape of cooperatives. Positive and progressive laws encourage members to participate and involve in the activities and affairs of their cooperatives, while regulatory and restrictive laws discourage them. Cooperative laws ought to be development-oriented and facilitate the working of cooperatives. They must sensitize people to work in conformity with Cooperative Values and Cooperative Principles which, as such, have been laid down in ICA Cooperative Identity Statement. There should be on-going monitoring to ensure their adoption in day-to-day working of cooperatives; otherwise they would carry no value. In the changing socio-economic scenario of Asia-Pacific Region, cooperatives have vast potential for expansion, development and serving the ordinary people. Let the law support people's initiative for true and genuine cooperatives. The existing laws do not respond to the present changing global economic environment. Therefore, the existing laws need changes and amendments in the light of Cooperative Ministers' Conference recommendations and the Cooperative Identity Statement. The earlier it is done the better it would be.

It must be stressed that cooperators have also to be responsive to the changes and challenges of present times. They should use cooperative laws, and their own efforts, to strengthen the cooperative structure and system for the benefit of millions of cooperative members, who need them to improve their living and does not remain a tool in the hands of vested interest.

Summary of Findings and Recommendations

Based on a survey of cooperative legislation in the ICA region countries it has been found that the cooperative laws need a review, revision and reformulation on a continuing basis in the light of the ICA Statement of Cooperative Identity [ISCI] and in the context of the present-day changed social and economic priorities and strategies with a view to make them more member-friendly, easy-to-follow, and easy-to-apply. Some of the governments in the Region have taken the initiative in this direction, but still a lot more needs to be done to make specific and clear policy statements and to allow the members themselves to run their own cooperatives. Some of the key findings of the survey are given below:

- 01 Present cooperative laws are the product of the period when cooperatives are extensively supported by the Government and used for their planned development programmes. Since the introduction of market economy and globalisation of trade state support to cooperatives has been constantly declining. However, no perceptible change is taking place in the cooperative laws and Government-Cooperative relationship;
- 02 Cooperatives will have to compete and justify their existence by showing efficiency, better services and competence. This will also need changes in the existing cooperative legislative structure;
- 03 In Asia, at present, there are two types of Cooperative Laws prevailing viz., [i] a Common Law for all types of cooperatives; and [ii] Sectoral Laws;
- 04 The purpose of enacting cooperative law should be to give a legal status to the cooperatives and facilitate their working. The legal framework of cooperatives consists of the law, rules made under it and the bye-laws adopted by the members of a cooperative in accordance with the act

and rules. The Cooperative Law thus should facilitate the working of cooperatives and should not curtail the autonomous working and change their basic character:

- 05 The objectives of cooperatives, definitions and preambles either have been mentioned very differently in laws or they do not find any reference at all. To bring clarity in thought and action in and about cooperatives it will be desirable to include/replace Cooperative Principles, definitions and values as included in the Statement of Cooperative Identity as adopted by the ICA Manchester Congress and as recommended by the Cooperative Ministers' Conference:
- 06 There should be time limit for the registering authority for registration. This could be around 60 days. In case of failure to register within the time limit, the cooperative could be deemed registered as is the case in Japan and the Philippines:
- 07 The discretion of viability of the society should not be left to the Registering Authority. The better thing would be to follow the Fiji provision where the registering authority, if doubtful about the viability, is allowed to issue provisional registration for a maximum period of two years:
- 08 Registering Authority should satisfy himself with two things primarily before registration: [a] the application and bye-laws are in conformity with the laws and cooperative identify statement; and [b] the members are capable of using the services of the proposed cooperative:
- 09 To a make a cooperative a genuine members oriented member use base institution, it is necessary to ensure that a member uses the services and if he fails to use the services his membership shall cease after a year as provided in Korean Law. If this is not feasible then he should loose his right to vote and contest elections. The principle should be: *no use of service no participation in the management*;
- 10 There should also be a provision in the law that if a cooperative fails to have less than certain percentage of business with members it should cease to be treated as a cooperative. The reasonable range will be sixty to eighty percent:
- 11 The minimum quorum for AGM should be not less than 50% if the society fails to have AGM for consecutive three years for want of quorum it is a clear indication that members have lost interest in the society and it should be wound up:
- 12 The General Body should be the final authority in all matters of the society and should not be subject to the approval by the Registrar in financial matters expect under contractual obligations [Bangladesh];
- 13 Proxy within family members could be provided:
- 14 It should not be obligatory for the society to invite the Registrar [Malaysia] to attend AGM. It should be at the discretion of the society. However, there could be a provision to send agenda and minutes of the AGM to the RCS:
- 15 The powers and functional areas of Board, Chairman and Chief Executive should be clearly defined in the law:
- 16 The Chairman should be either a Chairman in which case he should preside over the meetings and be a friend, philosopher and guide to the Chief Executive and should not try to direct him or interfere in business or administrative affairs. In case he is to be involved in business and administration affairs [South Korea] he should be a whole time person and be designated accordingly:

- 17 The performance of the Board should be the preview of General Body and not RCS except when the Board is guilty of contravention of Act, rules, bye-laws or laws of the land;
- 18 If the irregularities are of serious nature and the General Body fails to rectify them, action could be initiated to have fresh elections or cancel the registration of the society as civil/criminal actions against the concerned officers. But Department should not create vested interests by dissolving the Board and running the society departmentally;
- 19 Powers of appointment of Chief Executive should be with the Board subject to the rectification by the General Body and Department should be involved;
- 20 In countries where law provides monist system be changed to dualist system to facilitate transfer of audit work from department to cooperatives;
- 21 The audit should be the authority of the General Body and department should not get involved in the annual audit in view of a large number of cooperatives involved and increasing turnover and complexities. However, if the department wants it can have audit periodically in the form of management audit to ensure their supervision;
- 22 Most laws provide concessions, facilities and tax exemptions and financial support for the cooperatives. In some cases these facilities are without strings. In others provisions are made empowering government to involve/interfere in the management/business of the cooperatives. The right approach would be that the cooperative laws should not include provisions of such type which interfere in the management as this would be against the Cooperative Principles. However, as and when any financial assistance is provided it may be laid down in its lending terms and then it should be left to the cooperative to accept the assistance or not;
- 23 In countries where arbitration provision is provided is not included and business associates be allowed to become nominal members to avoid civil legislation;
- 24 In the case of the Philippines even the public officials interfering in the internal working of a cooperative have been covered under the offence. This provision is to discourage political and bureaucratic interference into the working of cooperatives which are not uncommon in many countries and is worth consideration by other countries;
- 25 The provision of regular inspection as provided in Japan is needed in other laws also ensuring that every cooperative is inspected by the Department, if not every year, at least once in 3 years or so;
- 26 The department take immediate action in case of any contravention of law and bye-laws and laws of the land detected in enquiry other irregularities, rectification should be the responsibility of the Board of Directors/General Body;
- 27 The winding up process takes too long in some cases, even decades, though in most laws a time limit is prescribed. The suggestions, therefore, in this regard be considered;
- 28 In countries where the administrative authorities have been authorised to make rules under the law the rules at times go beyond the spirit of the law. The practice followed by Japan, South Korea, Indonesia should be adopted by other countries by having no rules.

In Conclusion

It has been found that in the Asia-Pacific Region even today a vast majority of cooperative leadership continues to look towards government for guidance and financial support more than towards their

members. Such an attitude has made the governments more conscious of their right not only to govern the cooperative institutions [using the cooperative law and government financial inputs as pretexts] but also control their destinies. If this attitude is not changed, both by the Governments and cooperative leaders, cooperatives will not be able to stand long. In the present scenario of Open Market system and stiff competition from multinationals and other private enterprises, *Cooperatives will have to compete and justify their existence by showing efficiency, better services and competence*. This will also need extensive, major and urgent changes in the existing co-operative legislative structure.

With their hands and feet tied under the existing laws and with a variety of over-riding powers of the government, in many cases, cooperatives will not be able to compete and stand with the market forces. Therefore, there is need to examine the various existing cooperative laws in the countries in today's context and changes brought so that the cooperatives are able to stand and play an effective role to serve their members and needs of the society at large in matters such as environment protection, food security, gender integration etc.

“In the present scenario of Open Market System and stiff competition from multinationals and other private enterprises, Cooperatives will have to compete and justify their existence by showing efficiency, better services and competence”

ICA STATEMENT OF COOPERATIVE IDENTITY [ISCI]

The ICA General Assembly held on 23rd September 1995 in Manchester, adopted the new Principles of Cooperation recommended by the ICA Board of Directors and the ICA Congress after global study and review by a committee headed by Prof Ian McPherson from Canada. The process started with a paper presented by Lars Marcus, the then President of the ICA, at the ICA Congress held in 1988 at Stockholm. Sven Ake Book, a cooperative specialist from Sweden was detailed to undertake a research into Cooperative Values and Principles in the context of modern global environment of cooperatives who presented his report to the ICA Congress held in Tokyo in 1992. The General Assembly appointed a committee, headed by Prof McPherson for a review of the Cooperative Principles. The Manchester Congress adopted a Statement of Cooperative Identity which contains the definition, values and the Principles of Cooperation.

DEFINITION

A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.

VALUES

Cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others.

THE PRINCIPLES OF COOPERATION

The Cooperative Principles are guidelines by which cooperatives put their values into practice.

First Principle

Voluntary and Open Membership

Cooperatives are voluntary organisations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.

Second Principle

Democratic Member Control

Cooperatives are democratic organisations controlled by their members, who actively participate in setting their policies and making decisions. Men and women, serving as elected representatives, are accountable to the membership. In primary cooperatives, members have equal voting rights [one member, one vote], and cooperatives at other levels are also organised in a democratic manner.

Third Principle
Member Economic Participation

Members contribute equitably to, and democratically control, the capital of their cooperative. At least a part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their cooperatives, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

Fourth Principle
Autonomy and Independence

Cooperatives are autonomous, self-help organisations controlled by their members. If they enter into agreements with other organisations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

Fifth Principle
Education, Training and Information

Cooperatives provide education and training for their members, elected representatives, managers, and employees, so that they can contribute effectively to the development of their cooperatives. They inform the general public – particularly young people and opinion leaders – about the nature and benefits of Cooperation.

Sixth Principle
Cooperation among Cooperatives

Cooperatives serve their members most effectively and strengthen the Cooperative Movement by working together through local, national, regional and international structures.

Seventh Principle
Concern for the Community

Cooperatives work for the sustainable development of their communities through policies approved by their members.

Recent Developments in the Management of Cooperatives in Asia-Pacific

B.D. Sharma

With the intensification of process of liberalisation and globalisation of national economies, cooperatives in most of the countries of Asia are passing through a phase of transition from a State-sponsored to a member-based and member-controlled cooperative system having full autonomy in their management and being effectively adapted to the market. The process of transition has impacted the role perception of cooperatives. Emerging trend, in this context, within the cooperatives and the government is that cooperatives will continue to play a meaningful role in the spheres of agriculture and rural development, consumer protection and social sector development. In the field of poverty alleviation too, cooperatives may provide effective institutional support by organising the poor on self-help basis.

Cooperatives should not expect any preferential treatment at the level of the government to perform their role in the above mentioned functional areas. Besides they are also expected to compete well in the market in providing services to their members in a cost-effective manner to prove their efficacy and relevance. In a nutshell, the real challenge before cooperative managers and board members is how to synergise members' needs with market effectively to ensure the sustainability of cooperative enterprise in a competitive environment. Inert enterprises may wither away. Another implication of this challenge is the possibility of entrapment of cooperatives in the modes and practices of management followed by the private sector. Therefore, cooperatives need to evolve their own management pattern that enable them to preserve and protect their identity at the market place. Mr BD Sharma is Director [SOWECA] with the ICA Regional Office for Asia and the Pacific. Before joining the ICA, he was the Chief Executive of the National Cooperative Union of India.

Background

The Asia Pacific Region is characterised by a very high degree of diversity in its geographic, ethnic, religious and socio-economic situations. With five distinct sub-regions – Central Asia, West Asia, South-East Asia, South-Asia, Far-East and Pacific -- the Region reflects different stages of economic growth. These economies may, broadly be classified into four kinds: [a] Developed Economies; [b] Developing Economies; [c] Economies in Transition; and [d] the Least-Developed Economies. Most of the countries have agrarian economies with small holders and low level of technology compounded by resource constraints.

The Region has witnessed different phases of economic evolution – from subsistence economies crossing the stages of feudalism, and socialist economies. The current phase of free economy reflects the following characteristic features of economies in the Asian Region:

- Pre-dominance of market
- Liberalisation
- Globalisation
- Competition
- Technology with focus on wider application of information technology.

The diversity in socio-economic conditions in the Region and perceptions of the State have been very important factors to influence the course of cooperative development.

Cooperative System

Three kinds of cooperative systems have been operating in Asia:

- [a] State-sponsored – where cooperatives have been accepted and adopted as an instrument of economic planning and development by the State;
- [b] State-supported but member-based cooperative system – where the State creates conducive environment for cooperative growth through enabling policies and legislation; and
- [c] Autonomous and independent cooperative system consisting of member-based and member-controlled cooperatives that imbibe cooperative values and principles enunciated in the ICA Cooperative Identity Statement.

With the intensification of process of liberalisation and globalisation of national economies, cooperatives in most of the countries of Asia are passing through a phase of transition from a State-sponsored to a member-based and member-controlled cooperative system having full autonomy in their management and being effectively adapted to the market. In other words the transition focuses on development of member-centric and market-driven cooperatives.

The process of transition has impacted the role perception of cooperatives. Emerging trend, in this context, within the cooperatives and the government is that cooperatives will continue to play a meaningful role in the spheres of agriculture and rural development, consumer protection and social sector development. In the field of poverty alleviation too, cooperatives may provide effective institutional support by organising the poor on self-help basis. Important functional areas that could be visualised for cooperatives in a globalised and liberalised economy may be as follows:

- [a] Building infrastructure for efficient delivery of products and services to their members;
- [b] Developing management and entrepreneurial capabilities of members and their leaders; and
- [c] Mobilisation of Resources.

But the cooperatives should not expect any preferential treatment at the level of the government to perform their role in the above mentioned functional areas. Besides they are also expected to compete well in the market in providing services to their members in a cost-effective manner to prove their efficacy and relevance. In a nutshell, the real challenge before cooperative managers and board members is how to synergise members' needs with market effectively to ensure the sustainability of cooperative enterprise in a competitive environment. Inert enterprises may wither away. Another implication of this challenge is the possibility of entrapment of cooperatives in the modes and practices of management followed by the private sector. Therefore, cooperatives need to evolve their own management pattern that enable them to preserve and protect their identity at the market place.

Need for Value-Based Professional Management in Cooperatives [VBPM]

In order to enable cooperatives to protect their identity in a competitive market place, emphasis is now given on integration of value-based professional management in cooperatives by evolving appropriate managerial system that will have appropriate blending of cooperative values and principles enunciated in ICA Cooperative Identity Statement in the business practices of cooperatives. In 1998, the ICA ROAP had convened an international seminar on this issue. The seminar had evolved framework of training modules for integrating the concept of VBPM at the level of members, board members, managers and organisational structure of cooperatives. Some of the cooperatives have also evolved the code of best practices that will imbibe transparency and accountability in the management of cooperative and will also enable them to effectively articulate their concern for community and meaningful role in strengthening civil society. This may also call for implementation of the concept of Social Audit of the operations of cooperatives.

Role of Government

Viewed in the above context, the role of Government is also being subjected to transformation. Its role as creator, manager and controller of cooperative is being replaced as that of a partner and enabler to create a conducive policy and legal environment to ensure that:

- [i] Autonomy and independence of cooperatives is strengthened;
- [ii] Self-regulation process within cooperatives is catalysed;
- [iii] A fair playing field for cooperatives is provided to facilitate them to compete in the market without any hurdles; and
- [iv] Support services, namely, audit, training and consultancy are restructured and entrusted to cooperatives themselves.

Structural Issues

Important structural issues that have emerged are two: [a] the issue of size; and [b] the role of federations. Cooperatives in most of the countries have been concerned about the size of their operations that should ensure their viability in a competitive market. While size is influenced by the kind of operations and market environment, important consideration in this regard has to be the viability and cost effectiveness of operations, and consequential yield of surpluses for further capital formation within the enterprises. Nevertheless, the cooperatives will now have to compete with giant multinational and corporate sector. In view of this, each cooperative will have to decide its own strategy to define the size with the explicit consent of the members.

In all the countries of the Region, organisational structure of cooperatives is federal. Important consideration behind creation of federations was to provide linkages of primary cooperatives with secondary and tertiary levels of economies. Further, the federations were expected to provide institutional and business support to the primaries. However, over the years, while federations of business cooperatives have grown stronger, their constituents continue to be weak. In a number of countries, there is a view that federations have become strong at the cost of their members. The situation needs to be changed by reorienting the working of federations and strengthening inter-cooperative relationships.

Cooperative Governance

With the paradigm shift from a State-sponsored to member-centric cooperative system various aspects of governance of cooperatives e.g., concept of stakeholders, democratic member control, inter-relationships between various constituents of management and role of manager are being redefined. Briefly the trends are:

- [i] Concept of stakeholders is made more broad-based by including members, managers, employees, government financing institutions, and community as principal stakeholders in a cooperative;
- [ii] Strengthening democratic member control based on transparency and accountability of management towards members;
- [iii] Clear definition and demarcation of functional authority and relationships among members, board members and managers in the cooperative law and bye-laws;
- [iv] Empowerment of cooperative managers for taking strategic management decisions at operational level based on policies formulated by the members and the board; and
- [v] Creating efficient systems and tools for internal control within the cooperative enterprise.

Capital Mobilisation

In Asia important sources for cooperative capital are members' equity, borrowing from financial institutions and government. Cooperatives have also created their own financial institutional framework in the form of credit unions and cooperative banks. In spite of this, their access to capital market is very limited due to restrictive cooperative laws and organisational constraints. To get over the problem of capitalisation, some of the steps taken by cooperatives in the Region include linkages between members' equity with the extent of services availed, conversion of patronage dividend into equity sharers, inviting non-member non-voting share, tapping capital market through issue of bonds, debentures, establishment of holding/subsidiary etc.

Human Resource Management (HRM)

HRM/HRD policies and programmes have been conditioned by the government, which generally provides major chunk of finance in a very large number of countries in the Region. Lack of proper corporate vision and apathetic attitude of the federations further compound the problem. However, of late, there has been a great deal of diversification of HRD programmes and the following issues are engaging attention of cooperatives:

- [a] Autonomy of HRD institutions;
- [b] Expansion of HRD programmes to meet emerging needs;
- [c] Funding of HRD institutions by the Movement itself so as to break their dependence on government funding support.

Networking

Interdependence and application of information technology are two most distinctive features of the modern era. No institution can survive in a globalised competitive market without having meaningful networking with others. Networking in cooperatives has to be at two levels – one, within its own organisational structures and, the other, with even private sector through strategic alliances based on

members' needs. It is encouraging to note that cooperatives in most of the countries are making efforts to become information technology savy. However, in the sphere of networking, a lot remains to be done.

"A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise." ... "Cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others."

Management of Women Cooperatives and Women-in-Cooperative Development – An Indian Profile

Anita Manchanda

On the dawn of the 21st century we have two grand visions for women, the economic vision and the social vision. Within this overall vision, cooperatives share a responsibility to develop a rising gender vision for the women of India. Men can contribute to this vision by improving their attitude and behaviour towards women so that those women can perform a leadership role. Formation of policies, which are gender sensitive, is the need of the hour. What is needed is worldwide awareness on equal rights for women in property and removal of gender bias in family laws.

Cooperative organisation must adjust to change and that is where leadership and participation come in. Changing processes require openness, transparency and willing participation if they are to produce any impact. Critical scales can be achieved only if most of the work force is involved and feels responsible for creating and implementing the change. To involve women in the changing process, cooperatives have to create an inspiring environment in which they can develop their creativity and actively support the organisational change process. To many people these changes are threatening and this is a crucial point when a leader can turn crisis into a possibility rather than a threat. The key responsibility of the women leader is to make every one aware of the need for change. They should keep in mind the history and culture of the organisation. Ms Anita Manchanda is working as Director with the National Cooperative Union of India.

The Vision

On the dawn of the 21st century we have two grand visions for women, the economic vision and the social vision. Within this overall vision, cooperatives share a responsibility to develop a rising gender vision for the women of India. Men can contribute to this vision by improving their attitude and behaviour towards women so those women can perform a leadership role. The awareness of a vision itself has an uplifting impact on one's growth and performance. Success depends on the woman's own introspection and awareness of her core competencies in her conceptual knowledge of cooperatives, behavioural skills in communication, motivation, team spirit and leadership and her skill in applying knowledge, doing things and achieving results. Formation of policies, which are gender sensitive, is the need of the hour. What is needed is worldwide awareness on equal rights for women in property and removal of gender bias in family laws.

The Focus

Though women are still far from enjoying rights and opportunities granted to them under the Constitution of India, fortunately today the focus has changed from men to women and their issues have come on the national agenda. It has forced the society to redefine the role and status of women in

relation to the growth and development of mankind and to ensure that she gets equal opportunities with due weightage to her domestic responsibilities. The economic empowerment of women aims at bringing the women in the mainstream of national development.

National Plan of Action

The Government of India formulated a National Plan of Action for Women suggesting the legislative measures, administrative measures, employment opportunities, health care, and facilities for working women and promotion of voluntary efforts. The main objective of the development programmes was to raise the socio-economic status of women in order to bring them into the mainstream of national development. The approach was to inculcate confidence among women and create awareness about their potential for development as also their rights and privileges through education.

From Basic Needs to the Basic Rights

To reach a practical recognition of women and girls as human and realize their rights, we must understand and recognise the basic needs of females as the ones which the society has an obligation to satisfy. The shift in development thinking from meeting basic needs to asserting basic rights is a long process, promoted by women making links all over the world. Firstly linking women's needs to development, then women's rights to development, later women's rights to human rights and now women's needs to human rights. Human rights approach to development of women would mean that women would no longer be seen as "beneficiaries" of development policies but as persons entitled to the benefits of development. This approach means that development has to be redefined to include the elimination of discrimination against women. Recognising the principle of women's human rights will eventually lead to female humans being valued as individuals. Then women need to understand that if rights are not considered to be universal they will be overcome by notions of cultural and religious diversity which erode women's rights. For cooperatives, working with empowerment agenda means that it is more pressing than ever to explore the linkages which exist between women's economic participation and in decision-making within home and their ultimate empowerment.

Keeping these objectives in mind, new frontiers can be explored and new approaches can be evolved for protecting women's rights not only as producers/providers but also as individuals with human grace and dignity. The National Perspective Plan for Women [1988-2000] suggested strategies for overall development of women by 2000 A.D.

Women Cooperatives in India

The Women's Cooperative Movement in India began in the early seventies. The areas of activities in which exclusive women cooperatives are functioning may be classified into two broad categories: i) Production or worker's cooperatives; and ii) Service cooperatives. The women production cooperatives include dairy, fishery, industrial, and handloom societies. In this category the women members work together in groups - as part or whole-time basis - and earn income. These societies, in majority, are self-managed with direct participation, mutual help and self-reliance. Service societies include women's consumer cooperatives, thrift and credit cooperatives and urban cooperative banks. The size of membership in these societies is large as compared to the production societies.

Women Urban Cooperative Banks: The Women's Urban Cooperative Banks are doing commendable job especially in the States of Maharashtra, Gujarat, Tamil Nadu, Madhya Pradesh, Andhra Pradesh and Karnataka to the desired level of satisfaction and full competence as scheduled banks of the

Reserve Bank of India. These banks are not only dealing with credit business but are also assisting unemployed women and youth in setting up their business on individual or cooperative basis. The National Commission of Women [1988] had observed that Banks managed by women have proved to be more advantageous and within the reach of women.

Self-Employed Women's Association [SEWA]: Based on Gandhian values and methods, the SEWA started functioning in 1972 with the basic objective of enhancing socio-economic status of the women workers. Today with 100,000 members of various castes and communities in the six States of India, the SEWA has multi-faceted activities including organisation and promotion of cooperatives. It is not meant merely for solving workers' economic problems but also attempts to address the totality of their lives and ensures that they obtain the recognition that is due to them in our society. Today SEWA is a movement. It has shown remarkable adaptability in reshaping itself and the lives of women. Its strategic steps, over a period of two decades, have mobilised women at the grassroots level. Such type of empowerment of women is possible because they are flexible enough to seek new solutions to new problems. SEWA has been well described as a "fore-runner" of an emerging global movement of Self-Help Groups.

Dairy Cooperatives and Women Empowerment: The cooperative dairy industry in India is the largest in Asia. Though there are around 20% women members of dairy cooperatives, but more than women undertake 95% of dairy production. The NDDDB evolved Leadership Development Programmes for women so that they participate in the Annual General Body Meeting and become managing committee members. This helps in increasing their assets and they develop saving habit. Women always spend money on family health, education of the children and on consumer goods enhancing the economic status of the family.

Constraints faced by Women vis-à-vis Their Participation in Cooperatives

Legislative: The Cooperative Societies' Acts are apparently gender neutral but they are implicitly gender-blind. There are no women-specific provisions in the statutes, which can be clearly stated to be framed for the benefit of women. There is a provision of "one-family-one-member" norm under the Cooperative Societies' Acts. It is quite apparent that if only one member from a household or family is to become a member of a cooperative, it will be the husband or the male member as the assets are in the name of the head of the household. Women, therefore, are deprived of membership, partnership as well as decision-making power in cooperatives – the access to and control over resources such as land and property being with male members. They are also denied the credit facilities being the wives of defaulter members. There is no provision for joint membership in PACS or in any other cooperative society. The Cooperative Societies' Acts do not provide for reservation of seats in membership or in the elected boards of the cooperatives where women may participate in the decision-making.

Social: The main reasons for socio-economic inequalities can be attributed to the structural obstacles arising from the fundamental conflict between the feudal culture and the cooperative culture. While the feudal culture is based on hierarchy and unequal relations among people, the very basis of the cooperative culture is equality amongst the members. The four key institutions i.e. the family, community, market and State, not only govern human existence but form the very basis of social construction for both men and women within them. A brief description follows:

Family: Women are discriminated from the cradle to the grave and even before birth. Within the family, the members are governed by a set of norms and practices made by the head of the

household who exercise power, authority and control over the members. Since men have access and control over resources, their role is clearly defined as “bread winner” and women are supposed to confine themselves to the role of “home makers” and thus they are unable to take an initiative to become members of cooperatives. Division of functions of men and women should be redefined as their roles are changing. The Rural women have a low self-image and do not consider themselves to be making a substantial contribution even though they are engaged in the production process.

Community: The Indian community reinforces men’s dominant positions: Women’s restricted mobility within the family leads to further restricting her mobility in the community; Traditional values reinforce women’s home-maker role: Rigid caste hierarchies play a negative role and forbid women to mobilise on a common platform and work in cooperation.

Market: Market is characterised by rigid timings often not suitable for women due to their reproductive chores. Mostly men can only have access to the market.

State: The cooperative policies are framed by men at the national level, which primarily exclude women’s interests.

Financial and Professional: Financial and professional assistance to women’s cooperatives is also negligible. The activities trickle down to the women and children within the household through male heads of households. What is needed is that they should trickle down from women to men and children. That will change the very complexion of the society. The future of the country lies with the women. When the women moves, the family moves, the community moves, the village moves and the whole country moves.

Administrative: There is no national cooperative policy on women involvement defining the role of cooperative institutions in the socio-economic development of women especially the women belonging to the weaker sections. There are no specific programmes either relating to cooperative credit, marketing or training assistance for bringing self-employed women or women in unorganised sector into the Cooperative Movement. The impact of this indifference is well-reflected in the profile of participation and membership of women in cooperatives.

Educational: The facilities of cooperative education are limited to a few districts only. In view of women’s traditional role and lower rate of literacy, education prior to registration of a society and continuous programmes after the registration are necessary. The inadequate cooperative education facilities hamper women participation in the Movement.

Cooperative Education and Training for Women

Women cooperatives cannot function properly in the absence of facilities for cooperative education and training. The basic reason is that woman literacy in rural areas is at low level. Besides there are other factors viz., lack of awareness, social taboos, purdah system, etc. In order to create awareness about the potentials of cooperatives, to assist and guide them in the matter relating to registration/management of cooperatives, availing the benefits of various schemes and programmes, it is necessary to extend the facilities of extension services alongwith cooperative education, training and leadership development programmes to women from the grass root to higher levels. Of late women’s cooperative education programme has been intensively linked up with socio-economic development of women.

These programmes are development-oriented and need-based. Cooperatives are the nucleus of development. Since the existing women cooperatives should be strengthened, new women cooperatives should be organised and dormant societies should be revitalised. The education and training programmes need to be so planned that they concretise the objectives leading to socio-economic development of women-members in the true sense. The major thrust of the programme should be on creation of income-generating opportunities, diversifying such activities if need be, enabling the members to increase their income levels. Such opportunities may be created in the areas of dairy, animal husbandry, sericulture, fisheries, handicrafts, handloom, social forestry, horticulture etc. depending on the degree of women's involvement in the total employment system of the area. Developing occupational skill of members is important which should be undertaken as a part of women development programmes. Bringing a change in the attitude is also important for which various developmental programmes should be introduced in collaboration with concerned agencies/departments.

The activities for different target groups should be organised by Lady Cooperative Education Instructors/organisers keeping in view the objectives of the society and the needs and expectations of the members. The existing schemes of different departments relating to employment generation, adult literacy, health, nutrition, family planning etc. should be linked up with women cooperatives and pre-cooperative Self-Help Groups and fully utilised for the development of women-members.

Gender Issues in Cooperatives

Gender integration in the overall process of development is yet another strategy for women development. Like other global Cooperative Movements, mixed membership is prevalent in the Indian Cooperative Movement also. In the absence of any macro level official data relating to women membership in mixed gender cooperatives, the actual participation could not be ascertained. The micro level studies undertaken by NCUI from time to time has indicated that mixed gender membership commonly is found in urban areas especially in consumer cooperatives and salary earners' thrift-credit cooperatives and urban cooperative banks. With the introduction of structural adjustment programmes and liberalisation of national economy, women are motivated to assert for their rightful place in the mainstream of national development. Areas of concern for gender integration in cooperatives are:

- [01] Recognising the role of women for development of cooperatives;
- [02] Efforts should be made to increase women membership so as to enhance women participation in cooperative development;
- [03] Identification of practical and strategic needs of women and organisation of women cooperatives on the basis of the need identification;
- [04] Creation of on-going mechanism within the cooperatives to facilitate implementation of the programmes for women development;
- [05] Sensitisation of members, elected management and the employees of the cooperatives about the significance of gender integration through gender awareness programmes;
- [06] To create a system in cooperatives enabling women to have equal access to financial, credit, educational resources;
- [07] Creation of necessary legislative framework which would ensure women's involvement and participation in cooperatives; and

[08] Establishment of linkages with sister cooperative organisations, government, development agencies and NGOs to materialise the objectives of the gender integration;

Development of Women Leadership in Cooperatives

Involvement of women in the Cooperative Movement as members and active participants grants women opportunities of decision-making, planning and accessibility to cooperative services. On the other hand, women get a self-managed institutional forum for expressing their views and measures on important legislative and administrative policies concerning women. With the principles of open membership and democratic management, Cooperation is the most appropriate system for the overall development of women especially the women belonging to socially backward and economically weaker sections of our country's population.

In the cooperative sector, women need to be empowered in membership, employment management, administration and decision-making because women are the prime consumers and the prime producers of the cooperative services. The tradition of centralised structure in many developing countries have certainly contributed to make domination and gender inequalities and this makes it more difficult for cooperatives to mainstream women. Women are marginalised in leadership as they are conditioned to become members but not leaders. And this is the main reason why women members refrain from seeking elections to the board of cooperatives. Some of the other reasons are: lack of time; fear of proving incompetent ; lack of money incentives as leaders duties are mainly honorary duties; family matters.

Search for Cooperative Women Leaders: The search for cooperative women leaders can be looked at two levels. At one level one can address concerns on how one can attract, groom and retain good talent and also issues on systems and processes to contain in an atmosphere where these are likely to go out of hand and explode. But this search can also be perceived at a more interesting and meaningful level. The search is in terms of her mission, her purpose and her relevance. In the process the new women will emerge – more wise, educated and scissored to lead.

In cooperatives the women leaders should have a sound idea about how a cooperative society should function, give directions, should be able to read a balance sheet, the necessity for the apex organisations to have good auditors working for the local societies, helping the boards to control and develop their business and ideas about cooperative international trade disregarding national boundaries. To go around the society and ask people for their ideas and suggestions that could mobilise people to save money, create societies and to develop industries.

Cooperative Leadership Training for Women

Preparation for leadership is important. In the Leadership Development Programmes for Women under the auspices of NCUI/NCCT, the women elected to the committee are invited to a programme which has following contents: Status of women in India, literacy, employment; Approach to women development through cooperatives; Gender sensitisation; Management of women cooperatives; Decision making, leadership, function of cooperative leaders; Strengthening of women cooperatives by adoption of Self-Help Groups; Sectoral Cooperatives thrust areas, cost of production, quality control, share capital, funds; Human Resource Development in cooperatives – cooperative training, cooperative education, facilities for women cooperators; Formation of an action plan for developing their own societies (individual exercise)

Status of the Existing Programmes: The training programmes provide skill and information that is relevant to make women realise their self-esteem; a crucial value that makes a women complete and forward looking – a women of action, purpose and confidence. Everyday there is more and more evidence that as women get more aware and better-informed, their self-confidence increases and they become more sure of themselves. They want to have more control over the matters that concern them and make their own decisions.

In India, women participation in the leadership programmes is so skeleton that a proper evaluation cannot be conducted. However, the training institutes have made the following observations:

- In case of exclusive women programmes, the participation of women is high as compared to the mixed gender programmes;
- The women members and the women leaders prefer short duration courses and do not want to go far from their homes. So 'spot programmes' and 'near home programmes' have better participation from women;
- Women prefer to have training in their local language as they feel comfortable and participate actively compared to foreign language;
- Provision of safe and convenient accommodation ensures better response for training programmes organised for women;
- Women trainers are preferred by women participants in general so that they can express their views without any inherent hesitations;
- Elder women participate more in numbers perhaps due to lessor domestic pressures;
- Women prefer informal deliberations and group activities in training programmes rather than formal presentations; and
- Women in general evaluate the training programmes more objectively than men do.

Performance Indicators: What are the criteria for evaluating the performance of the leaders? In case of managers it is not difficult but in case of elected directors it is difficult to evaluate the performance. Ability, personality opinions attitudes are the pre-conditions for performance. To assess the non-performance we have to lay down the performance indicators as it is observable and measurable. Performance objective is not a mere guideline for leaders; it is used for problem analysis leading to remedying actions, leading to improvement, leading to increase efficiency. We can draw up a "Leadership profile" and compare it with the profile of actual performance. For the non-performance problem analysis should be carried out and then take suitable action to remedy the problem. There is also a need to develop the gender development indicators and situational profile of women at global, national, state, district and primary level cooperatives.

The Change

Cooperative organisation must adjust to change and that is where leadership and participation come in. Changing processes require openness, transparency and willing participation if they are to produce any impact. Critical scales can be achieved only if most of the work force is involved and feels responsible for creating and implementing the change. To involve women in the changing process, cooperatives have to create an inspiring environment in which they can develop their creativity and actively support the organisational change process. To many people these changes are threatening and this is a crucial point when a leader can turn crisis into a possibility rather than a threat. The key

responsibility of the women leader is to make every one aware of the need for change. They should keep in mind the history and culture of the organisation. For that women have to use their resources to the fullest extent in the education and training of women leaders. We should see what has been our strength and how can we use this in tackling the new problems around us – a task not only for women leaders but for women members and employees also. So every change should be from a position of strength not weakness.

“To involve women in the changing process, cooperatives have to create an inspiring environment in which they can develop their creativity and actively support the organisational change process. To many people these changes are threatening and this is a crucial point when a leader can turn crisis into a possibility rather than a threat.”

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ICA STATEMENT OF COOPERATIVE IDENTITY [ISCI]

The ICA General Assembly held on 23rd September 1995 in Manchester, adopted the new Principles of Cooperation recommended by the ICA Board of Directors and the ICA Congress after global study and review by a committee headed by Prof Ian McPherson from Canada. The process started with a paper presented by Lars Marcus, the then President of the ICA, at the ICA Congress held in 1988 at Stockholm. Sven Ake Book, a cooperative specialist from Sweden was detailed to undertake a research into Cooperative Values and Principles in the context of modern global environment of cooperatives who presented his report to the ICA Congress held in Tokyo in 1992. The General Assembly appointed a committee, headed by Prof McPherson for a review of the Cooperative Principles. The Manchester Congress adopted a Statement of Cooperative Identity which contains the definition, values and the Principles of Cooperation.

DEFINITION

A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.

VALUES

Cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others.

THE PRINCIPLES OF COOPERATION

The Cooperative Principles are guidelines by which cooperatives put their values into practice.

First Principle

Voluntary and Open Membership

Cooperatives are voluntary organisations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.

Second Principle

Democratic Member Control

Cooperatives are democratic organisations controlled by their members, who actively participate in setting their policies and making decisions. Men and women, serving as elected representatives, are accountable to the membership. In primary cooperatives, members have equal voting rights [one member, one vote], and cooperatives at other levels are also organised in a democratic manner.

Third Principle
Member Economic Participation

Members contribute equitably to, and democratically control, the capital of their cooperative. At least a part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their cooperatives, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

Fourth Principle
Autonomy and Independence

Cooperatives are autonomous, self-help organisations controlled by their members. If they enter into agreements with other organisations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

Fifth Principle
Education, Training and Information

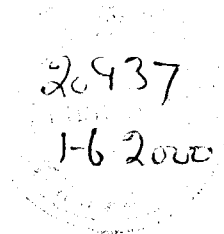
Cooperatives provide education and training for their members, elected representatives, managers, and employees, so that they can contribute effectively to the development of their cooperatives. They inform the general public – particularly young people and opinion leaders – about the nature and benefits of Cooperation.

Sixth Principle
Cooperation among Cooperatives

Cooperatives serve their members most effectively and strengthen the Cooperative Movement by working together through local, national, regional and international structures.

Seventh Principle
Concern for the Community

Cooperatives work for the sustainable development of their communities through policies approved by their members.



The ICA Regional Office for Asia and the Pacific [ICA ROAP] established in 1960 in India serves 68 national level organisations from 28 countries, and one international organisation [ACCU], representing nearly 550 million individual cooperators. Its main activities include: Coordination of cooperative development efforts within the Region and promotion of exchange and experiences; Project identification, formulation and evaluation; Promotion of establishment and development of national cooperative apex organisations; and Organisation of seminars, conferences and technical meetings on specific subjects including support for programmes aimed at the involvement of women and youth in cooperative activities.

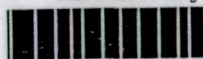
The ICA enjoys Category-I Consultative Status with the United Nations Economic and Social Council [UN/ECOSOC] and has active working relations with UN and other international organisations.

The Indian Farmers' Fertiliser Cooperative Limited [IFFCO], a member-organisation of the International Cooperative Alliance, was registered on November 3, 1967, under the Multi-State Cooperative Societies' Act. The ISO-9002 Certified IFFCO is owned by 34,420 cooperatives with a paid-up share capital of Indian Rs 3,739 million. Its current [1997-98] networth is Rs 18.17 billion. It was established with the primary objective of production and distribution of fertilisers. The four state-of-the-art plants located at Kandla, Kalol, Phulpur and Aonla produced a total of 4.16 million tons of fertilisers at an overall average capacity utilisation of 112%. It alone accounts for 64% of the installed capacity of Nitrogen and the total of the Phosphate capacity in the Indian cooperative sector. The production consisted of 2.88 million tons of urea and 1.272 million tons of NPK/DAP.

The IFFCO has a strong farm extension programme which consists of demonstration farms, field days, farmers' meetings, crop seminars, social development activities in its adopted villages, and extensive education, extension and training programmes for the farmers. It operates its Fertiliser Marketing Development Institute [FMDI] besides several farmers' training centres and has established specialised professorial Chairs in a number of universities and institutions of higher learning and research. It has been responsible for the creation of other organisations e.g., Krishak Bharti Cooperative Limited [KRIBHCO], Cooperative Rural Development Trust [CORDET], Indian Farm Forestry Development Cooperative Limited [IFFDC] etc.

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