CHAPTER - VII

FINDINGS PROBLEMS

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SUGGESTIONS

FINDINGS PROBLEMS
AND
SUGGESTIONS
The Review

The review reveals the following:

General Observations

Sugar being an important element to form carbohydrate is one of the three main human nutrients that not only provides human body with heat energy and undergoes the process of metabolism along with cells making up important material necessary for human organism, but also offers a sweet enjoyment for people in taste and makes food more energetic and soft. It has a corrosion preventive and fresh keeping function in some kinds of food.

The study has been the performance of co-operative sugar factories with reference to selected societies. The study considered the co-operative sector of the sugar industry as it is organised and contributing to the total sugar production and providing employment opportunities.
A brief summary of the various aspects examined in several chapters, findings, problems identified, suggestions to improve the working and policy implications are presented in this chapter.

The study reviews the historical events in the growth and development of sugar industry and its structure and working aspects. Historical information relating to sugar industry has been traced since 1912, during the Five Year Plans in general as well as industrial co-operative movement. The study covered the trend in India and also in the State of Andhra Pradesh.

The study is based on the analysis of the data collected from primary and secondary sources.

The Study started with the formulation of the research design and further examination of the evolution of the sugar industry in general and the co-operative efforts in sugar industry. This is followed by the examination of the performance in sugar co-operatives in relation to production, finance and marketing. The study analysed in detail their technical performance in production in areas like sugarcane procurement and sugar production.

This is followed by the analysis of financial performance with reference to members’ stake in the share capital, the extent of
government participation, funding agencies etc. The study also examined the issues of marketing of sugar, liquidity, profitability and solvency of the co-operative sector. As against this background, the present study is addressed to examine various facets to accomplish the objectives of the study.

In recent years, sugar industry in general has grown in India phenomenally particularly during the Five Year Plans and no one could have anticipated such a rapid growth in the early 1950s.

Sugar is a sweet substance that is obtained from sugarcane, sugar beet or from the juice of certain other plants. It may be sugar in crystallized or powdered form containing 90 per cent or more of sucrose. In modern days, sugar is produced by vacuum process.

In India, sugarcane is a chief commercial crop. India is the birth place for sugarcane cultivation and production of sugar. There are many evidences to show that the production of white sugar from sugarcane has been a very old industry in India. It used to be shipped to other countries and as such India enjoyed monopoly once in the world sugar market.

Till 1930s India was almost entirely dependent on imports of refined sugar. Subsequently, the Indian sugar industry was given protection. The Report of the Tariff Board, 1931 recommended to
encourage the expansion of the white sugar industry. The National Sugar Institute was established in 1936 to extend services to the sugar industry by way of providing technical assistance, preparation of specifications, research and development etc.

After the grant of protection to the sugar industry there was a sudden spurt in the number of sugar factories in India. The protection of sugar industry was continued till the commencement of planned industrial development. The Five Year Plans gave emphasis for balanced regional development and development of backward regions.

The development of the sugar industry has been regulated by the Government under the provisions of the Industries Development Regulation Act, 1951.

The Indian Institute of Sugarcane Research was established in 1952 to conduct researches on applied aspects of sugarcane culture and to coordinate the research work done in different parts of the country.

In the year 1955 and 1958 various expert committees/commissions were constituted to examine the cost structure of sugar. In the year 1961 the Central Government passed the Central Molasses Control Order, 1961.
A dual pricing policy for sugar was introduced in 1967 to protect the weaker sections among the consumers. The Sen Commission 1964 and Bhargava Commission 1974 were the crucial expert committees whose recommendations formed the basis for Government's policies on sugarcane and sugar.

The Levy Sugar (Control) Order, 1979 empowered the Government to collect levy sugar from the manufacturers. For the purpose of development of sugar industry a separate legislation was enacted known as Sugar Development Fund Act, 1982 to be utilized for making loans, facilitating rehabilitation and modernization etc.

Licenses for the establishment of sugar factories were later subjected to the condition that the distance between the proposed new factory and already licensed one should be 25 kilometres.

The minimum economic size of the sugar factory to be set up during the Eighth Plan period was retained at 2500 tonnes crushing per day. The high power committee on sugar industry 1997 made a number of recommendations for various policy issues and institutional framework relating to the sugar industry, trade and sugarcane cultivation in India.
The ‘sugar industry’ is the second largest processing industry in the country and is the backbone of rural economy. About 430 sugar factories in the country process approximately 50% of the sugarcane and produce more than 150.0 lakh MT of sugar. The industry has greatly aided socio-economic development in rural areas. It is the largest single employer in rural India, employing about 35 lakh workers. During the last decade most of the times, the country remained the world’s highest producer of sugar and created its own records.1

India is now a sugar bowl of the world. We already have a carry forward stock of 11.7 million tonnes and the country is expected to produce around 17 million tonnes of sugar in the year 2001-02. Thus India will have 28.7 million tonnes of sugar leaving surplus of approximately 13 million tonnes. India will be in a position to export sugar if the policy of compulsory bagging in jute bags as against overseas requirement of 50 kg. poly bags is lifted. Controls are lifted totally, although the process of decontrol is already quite in advance.2

Sugar co-operatives are of immense importance to cane growers. They have been suffering from a number of weaknesses. The co-operatives are designed to eliminate or solve their problems. They are designed not only to facilitate the production process but also to promote the economic interest of the growers.
The following are the main motivations for cane growers to unite by forming co-operative organization.

1. Economically weak cane growers can not fight against brute market forces.
2. They can not obtain economies of large scale production by his own efforts.
3. Majority of cane growers are small and marginal and geographically widely scattered.
4. The product is highly perishable in nature.
5. The market is highly imperfect.
6. Lack of sufficient and suitable storage and processing facilities.
7. Lack of required finance to meet the form and household needs.
8. Cane growers got sucked into the vicious circle of middlemen.
9. The marketing of agricultural product like sugarcane is quite complicated.
10. Lack of means of transport and communication.
11. Otherwise the cane growers can not become the owners of a sugar factory.

All the above reasons and host of other problems encourage them to form sugar co-operatives.
The First Five Year Plan (1951-56) could not see improvement in the co-operative sector of the sugar industry and the plan finished with only 3 co-operative sugar factories on the map of India’s sugar industry. The country was still not self-sufficient and had to import 0.73 million tonnes and 0.57 million tonnes sugar in 1953-54 and 1954-55 respectively.

The growing India could not afford such a strain on its foreign exchange. The planners realized the importance of rural industrialization and the Government of India took a decision in 1956 to give preference to co-operative sugar factories for licensing under the Industrial (Development and Regulation) Act, 1951. This preference gave real impetus for the growth of the sugar industry. From a mere 0.5% in India’s total sugar production in 1950-51, the co-operatives’ share grew to 14.9% in 1960-61.

Though the co-operatives were progressing, there was hardly any homogeneity as there was no proper organization to give them proper direction. The National Federation of Co-operative Sugar Factories Ltd (NFCSF) was established in 1960 when India had only 174 sugar mills and only 30 were in co-operative sector. The establishment of the NFCSF changed the scenario. Sugar production started picking up and made rapid strides. The co-operative sector of sugar industry in India
had the proud privilege of producing more than 10 million tonnes of sugar last year, thus, becoming second only to Brazil. During the year 2000-01, the co-operative sector produced 10.5 million tonnes of sugar as against 18.5 million tonnes by all factories.

The total number of working sugar factories grew to 259 in co-operative sector as compared to 436 working sugar factories in all sectors. The journey of half a century has been long and arduous for the co-operative sugar factories but a fruitful one. From a mere 0.5% of the total sugar production in 1950-51, the co-operatives grew to about 57% in 2000-01, which by all means is an achievement to be proud of. The number of sugar factories, sugar production and their percentage since 1960-61 to 2000-01 (every 5 years) in co-operatives and all India was as given in the table.³

India, perhaps has the largest co-operative movement in the world. The co-operative movement in sugar industry, in the real sense came in after India’s independence. The co-operators of that generation were really visionaries who knew that agricultural-based country requires mobilization of rural economy through industrialization.

The exact date of origin of industrial co-operatives is not known but it has roughly completed around 100 years of existence.
At present, the co-operative movement has reached almost every nook and corner of our country and millions of growers and villagers are involved in this venture. The co-operative enterprise in all varied activities in the field of agriculture and industry are an effective means of development for a country like India, which has around 2/3\textsuperscript{rd} of its population based in villages. The exploitation of the poor has effectively been checked to some extent by the co-operative movement. The development of the rural areas is effectively taking shape by good co-operative governance.

The fluctuations in area under cane cultivation are guided by the prevailing prices of sugarcane, the price of gur and Khandsari and also the returns from alternative crops like tobacco, turmeric, cotton, etc., and depend considerably on the policies adopted by the Government with regard to the price of cane and sugar. The area under cultivation may fluctuate very violently and can not be controlled by any policy of the Government.

The early efforts to help cane growers to protect from being exploited by the middlemen and to ensure reasonable price to the cane growers marked the beginning of growth and development of co-operative movement to organize sugar factories on large scale. Such
steps were taken in the country after independence and after the launch of the planned economic development.

The early co-operators felt that the ills of cane growers could be cared by the co-operative principles and evolved a scheme in 1950s. But it must be pointed out that the co-operative movement in sugar industry has not achieved much experience in dealing with the peculiar problems of the cane growers.

The co-operative efforts of the cane growers in the production and marketing of sugar had been there since 1930s in India and such efforts were highly praised.

The unprecedented growth of the co-operative sugar sector has been assisted by the policy decisions of the Government to encourage and give preference to co-operative sector in establishing large scale sugar factories. On the other hand, the central financing institutions particularly the National Co-operative Development Corporation has been extending financial and non-financial support to the co-operative sector of the sugar industry. In addition the Government’s active participation in the share capital of the societies and the state partnership in co-operative movement further encouraged the co-operative movement.
Thus the multiple efforts in an integrated manner acted as a prime mover in promoting the rapid growth of the sugar industry in cooperative sector. In this way co-operatives have now come to occupy a position of eminence in the entire agro-processing sector of the country.

The role of sugar co-operatives in backward areas has special significance. The state has a distinct feature in co-operative movement particularly in industrial co-operative movement. The movement in the state had originated under varying set of circumstances, because it was for long included in the then composite Madras state. Thus the state obtained the industrial co-operative movement partly from the Madras state.

The industrial co-operative knowledge in neighbouring states is also calculated to have its impact on the progress of sugar movement in this part of the country. Thus the sugar co-operative movement that developed in the State in general and in the regions of the State in particular developed under peculiar political, social and economic background. For the state did not posses unique in having had the original impetus as was prevailing in the state in particular and the country in general.
The sugar industrial co-operative society means a co-operative society registered under the co-operative legislation for the purpose of improving productive, marketing and other services. As observed earlier in so far as the structure of sugar co-operatives in the state is essentially a federal one with a tall three tier structure.

At the grass root level there exists the primary sugar factory working for production. Secondly, at the state level there exists an apex state federation to which all primary co-operative sugar factories are affiliated. At national level there is a national federation.

**Main Findings**

INDUSCOS, as popularly called, stands for Industrial Co-operatives. The Indian Industrial Commission as early as in 1918 first blessed and gave a distinctly co-operative bias to the cottage and small scale industries. The industrial co-operatives were not a species within the private and public sector, but it is an independent group organization of people for mutual and common benefit. There were only two sugar factories in co-operative sector in the year 1950-51.

The number increased to 220 by 1990-91. The rapid progress is due to preferential treatment in licensing policy towards co-operative sector and share capital participation of the State Government. By the
end of the year 2001 the number of factories in co-operative sector increased to 259. The state-wise distribution analysis reveals that as against 259 co-operative sugar factories as many as 128 were located in Maharashtra alone.

The co-operative sugar movement may be implied to mean an economic organization of cane growers and others who voluntarily subscribe themselves to undertake collective production, marketing, finance and ultimately to promote the economic interest of the cane growers.

Andhra Pradesh is the birth place of co-operative sugar movement. The first co-operative sugar factory by name Etikoppaka Co-operative Agricultural and Industrial Society Limited was established in the country in 1930s itself. It may be referred to as a historical event in the sphere of co-operative sugar industry.

This was the only factory in the state in co-operative sector during pre-plan period. The establishment of sugar factories in co-operative sector gained the momentum only after the advent of planning. During the plan period, the preferential treatment of the Government for sugar production in co-operative sector, financial assistance, share capital participation, guarantee, licensing policy in favour of co-
operative sector etc., have contributed towards the development of co-operative sugar sector.

Thus today there are 18 factories in co-operative sector as against 40 sugar factories in the state.

The co-operative sugar sector is essentially a three tier system, a federal structure. At the gross root level there are primary co-operative sugar factories, at the state level there is an apex society called Andhra Pradesh Federation of Co-operative Sugar Factories. At the national level there is a National Federation of Co-operative Sugar Factories.

The feasibility of location of sugar factories was discussed in chapter 4. In this section the size, location and raw material aspects were emphasized. Sugarcane is the principal raw material for the sugar factories to manufacture crystal sugar. The evidence indicates that sugarcane cultivation has originated in India. There are several varieties of sugarcane under cultivation called Indian cane, Singapore cane, China cane, Batavian cane, Otaheite cane etc.

In the State, under different factory zones, depending on climatic factors and soil nature, different varieties of sugarcane were cultivated. Sugarcane is an annual crop which is cultivated in the fields for about 12-16 months. As such there are three main planting periods such as
autumn, spring and summer. The crops are popularly called as Adsali and Eksali. If the duration of cane crop covers a period of 18 months it is called adsali crop, and if it is one year it is called as eksali crop.

The sugarcane producing areas in the State may be divided into three fairly distinct economic regions namely Coastal Andhra, Rayalaseema and Telangana regions. The major sugarcane growing districts in Coastal Andhra are Visakhapatnam, East Godavari, West Godavari and Krishna districts. In Telangana region Nizamabad and Medak are the major cane producing districts. In Rayalaseema, Chittoor district is the major sugarcane producing area.

Though the cane is grown in the majority of districts, its cultivation is highly concentrated in coastal districts. On an average about 60 per cent of the State’s sugarcane comes from coastal region. In Rayalaseema region 82 to 85 per cent of sugarcane comes only from Chittoor district.

Co-operative sugar factory-wise area under sugarcane cultivation data were presented in Table 4.01.

The sample district was Chittoor from which two co-operative sugar factories were selected. One is Tirupati and the other is Chittoor. The cane area under cultivation within the jurisdiction of Tirupati
factory was 4.55 thousand hectares while under the jurisdiction of the Chittoor factory it was 4.94 thousand hectares. There is a system of cane area reservation for each factory zone. The cane growers falling under reserved area of the factory are required to supply the cane to the specified factory within the jurisdiction of reserved area. The offer and acceptance of cane supply under an agreement are regulated by Andhra Pradesh Sugarcane (Regulation of Supply and Purchase) Rules, 1961.

The sample units contracted total area of 8.33 thousand hectares in 2000-01. Year-wise and factory-wise area contracted along with growth rate were indicated in Table 4.03 in Chapter 4. Regarding quantity of cane contracted, the data shown in Table 4.04 revealed that 5.39 lakh metric tonnes of cane was contracted.

Every supply member of the respective co-operative factory is bound to grow sugarcane every year for supply to the society. Generally the bye-laws prescribe the quantity of cane to be supplied at 8 tonnes of cane per each share of value of Rs.100 held by the member.

The cane cultivation programme formulated by the society are to be followed by the every supply member. If any cane grower member fails to supply sugarcane without valid reasons the society will take
appropriate action against him in addition to penalty. The amount of fine imposed is recoverable as debt due to the society from the cane bill.

Statutory minimum price is the price for the cane to be payable by the factories which is the national price. The Commission for Agricultural Costs and Prices fixes statutory minimum price for cane keeping in view the cost of sugar for public distribution.

The figures relating to minimum statutory price along with premium on every 0.1 per cent increase in recovery were shown in Table 4.06.

State advised cane price is the price for the cane fixed by the State Government which is generally over and above the statutory minimum price.

Table 4.09 in Chapter 4 shows comparative picture of statutory price and state advised price factory-wise.

Every sugar factory has to pay purchase tax at prescribed rate per metric tonne of sugarcane purchased. The amount so collected will be utilized for the development of sugarcane rows and cane in the operational area of the factories.
Under Sugar Development Fund Rules the factories can take financial assistance for irrigation, pest control, using improved varieties of sugarcane etc.

In Chapter 5 the performance of sample co-operative sugar factories in converting cane to white sugar was analysed. The crushing operations start every year during the month of November and end in the month of April. Year-wise starting and closing dates of crushing operations are shown in Table 5.01.

The sugar industry is a seasonal one and works only 4-6 months on an average in a year. The Tirupati factory worked a maximum number of 230- days during the period of observation. The Chittoor factory worked for 258 days in 1994-95 which is the maximum during the period.

The percentage distribution of net days to gross days particulars were shown in Table 5.03.

The analysis of the number of hours lost is also desirable to know the reasons to take appropriate measures. The hours lost ranged between 600 hours and 1671 hours.

The trend of unit-wise hours worked and hours lost was shown in Table 5.04.
Cane crushing is an important phase in production process on which juice recovery and sugar production depend. The Tirupati factory crushed a maximum quantity of 3.34 lakh metric tonnes in the year 1994-95 and the lowest of 1.14 lakh metric tonnes in 1992-93. On the other hand the Chittoor factory crushed the highest of 4.23 lakh metric tonnes and 1.96 lakh metric tonnes as the lowest quantity during the period under study.

The technical performance of reduced mill extraction and reduced boiling house recovery details were shown in Table 5.07.

As regarding capacity utilization is concerned the technical results were shown in Table 5.08.

Juice recovery performance indicates the percentage of juice extraction from the cane, which contains 10 per cent of sugar. None of the sample factories achieved 10 per cent recovery during the period under study. The main causes for low recovery may be long length of crushing season, quality of cane, pest and diseases etc.

The data relating to quantity of sugar production were arranged in Table 5.10. The total quantity of sugar produced was 6.04 lakh quintals, it being as the highest quantity and the lowest quantity was 2.93 lakh quintals during the period under study.
Sugar factories produced by-products such as molasses, bagasse, press-mud, filter cake and cane crush. Among them molasses and bagasse constitute the important by-products having considerable economic value.

The total quantity of molasses produced by the sample units was 36.22 thousand metric tonnes which was the highest during the period of study.

In Table 5.12 the figures relating to bagasse production were presented.

The aspects relating to marketing mechanism of sugar as well as financial performance of the sample units were emphasized in detail in chapter 6. Sugar is one of the food products falling under the purview of the Essential Commodities Act, 1955. The marketing system operates under a series of regulations and controls right from the point of sale of sugar. They cover controlling prices, regulating licenses, permits, storage, transport, distribution, disposal, acquisition, use and consumption of sugar.

For the first time in the year 1942 the statutory control on sugar was imposed. Till 1966-67 sugar prices were controlled for 16 years and
decontrolled for 10 years. The trend of control, decontrol and partial control details were given in Table 6.01 in chapter 6.

Later dual pricing mechanism was introduced under which sugar marketing operates today in two forms namely levy sugar and free sugar. The levy and free proportions are fixed by the Government which may vary from time to time.

In Table 6.02 the issue prices data relating to levy sugar were furnished.

Levy sugar means that quantity of sugar which every factory has to surrender to the Government. Free sugar means the prescribed quantity which each sugar factory is free to sell in open market. The year-wise particulars of levy sugar and free sugar percentages prescribed by the Government indicating partial control, decontrol, voluntary distribution and monthly release mechanism were arranged in Table 6.03.

The Government of India introduced a buffer stock scheme to purchase such quantity of sugar and storing in Government godowns which is termed as buffer stock. The objects of buffer stock creation are to relieve the sugar factories from holding excess stock, to relieve from getting money locked up in holding stock, to be used for export and
using in times of scarcity of sugar. Sugar Development Fund Rules, 1983 provide for creation of buffer stock.

The analysis of marketing mechanism in chapter 6 clearly reveals that the sugar industry is slowly but inexorably moving towards total decontrol. Further the Government under economic reforms is being committed to complete decontrol of sugar in a phased manner. The reduction is seen in a gradual decline to 40%, 30% and 15% with effect from February 2001. The Indian Sugar Exim Corporation (ISEC) is the principal nodal body for exports and imports of sugar. The Indian Sugar and General Industry Export Import Corporation has been acting as handling agent attending to all operational matters right from procurement of sugar upto shipment.

The Export Promotion Act, 1958 was withdrawn by the Presidential Ordinance (PO) in the year 1997, which affected badly the export front. Sugar also appeared in World Trade Organization (WTO) under liberalization for Agrifood products. Recently Indian Sugar Market entered into forward trading.

There were 24,905 members in the two sample societies. They include supply members, non-supply members, Government, co-operative societies, etc.
As regards sources of funds the sugar factories have raised funds by issue of share capital, state assistance under state partnership, borrowing from central financial institutions, loans and subsidies.

The share capital contributed by the members constitutes the primary and permanent source. The composition and year-wise figures of share capital contribution by the members, government and other sources were arranged in tables.

The amount of share capital contribution by the Government constituted major proportion compared to members. The State Government is empowered to extend state aid to industrial societies by way of loans, advances, subscribing to share capital and guarantee the repayment of the principal and interest. The non-refundable deposits collected from the members is also an important source of financial resource. It is an amount deducted from the amount due to members for the cane supplied by them at the rate of not less than Rs.5 per tonne of sugarcane delivered to the societies.

Reserves and surplus constitute as ploughing back of profits, which is an internal financing. Thus the reserves built up by the societies amounted to Rs.2054.89 lakhs.
Total borrowings from various sources accounted for Rs.2564.48 lakhs.

The study also mainly concerned with the analysis of net financial and working results of the sample sugar co-operative units in terms of profits, earned or losses sustained. The study found that the financial results had not at all been satisfactory during the years under observation. They have recorded accumulated losses whose figures were arranged in Table 6.07 in chapter 6.

The reasons for continuous incurring of losses and accumulated losses were analysed from the view point of conversion cost, manpower cost and sugarcane cost which constitute major components of total cost of production. The conversion cost is a cost incurred to convert sugarcane into finished or semi-finished products.

In Tirupati factory the sugarcane cost constituted 60.55 per cent and conversion cost 39.45 per cent to total production cost. In the case of Chittoor factory they respectively constitute 54.25 per cent and 45.75 per cent to total production cost.
PROBLEMS AND SUGGESTIONS

1. Restructuring

The process of economic liberalization which was introduced in 1991 has sparked a number of debates on the issues in the context of liberalization, globalization and privatization. While the Indian industry is trying to restructure to meet the competition, the co-operative sugar industry should be restructured as dynamic entity to strengthen the sector and to improve its competitiveness in the context of the emerging challenges.

On the other hand, the sector finds that the competition is increasingly becoming tough and at the movement we are also hearing the possibilities of recession and economic slow down. In the context of liberalization, we have seen the changes and challenges facing the co-operative sector.

2. Under-Utilization of Capacity

One of the main constraints in the optimum utilization of capacity in case of sample co-operative sugar factories under study has been the short fall in cane supplies despite the agreement of the growers of the factory zone with the factory management to supply a specified quantity
of cane. When the prices of gur and Khandsari sugar are on the high side, the manufacturers offer higher rate for sugarcane supplied than that the statutory minimum cane price fixed by the Central Government and State advised cane price.

This problem can be solved only if the cane growers are loyal to the co-operative principles, to the management and continue to supply to their own factories irrespective of higher prices offered by outsiders.

Though there are statutory obligations between the society and cane grower to ensure adequate supply, they did not help in practice for smooth functioning. In addition such a situation has to be changed by making all cane growers of the respective factory zone as members of the co-operative society who actually run the society and the profit and loss is shared by the grower members themselves. It is envisaged that such an involvement of the members will ensure smooth functioning of the factory.

3. Poor Recovery

The deterioration of sugarcane after harvest is especially important because the price of the cane is paid on the basis of weight. The harvested sugarcane on storage undergoes deterioration till it is milled. The reason for poor recovery is staling of cane, which is caused
due to time lag between harvesting and crushing. Sometimes due to unavoidable circumstances like power cut, failure of transport facilities, repairs, cleaning etc., the harvested cane can not be crushed immediately.

The loss in cane weight may occur due to physical change such as evaporation of water and chemical change. Some studies found that there is a high degree of correlation between loss in weight of cane after harvest with meteorological factors like temperature, humidity, evaporation and wind velocity.

4. Gur and Khand Sugar

Sugar production also suffered by drought in the district during the plantation season which reduced the yield of sugarcane. This distressing situation is further aggravated by the high prices of gur and Khandsari. Khandsari is not subject to tax. They are not required to pay neither statutory price nor state advised price. Khandsari and vacuum pan sugar factories are not operating on equal footing. Gur producers are offering high price to farmers because of illicit distillation, higher liquor market and large scale smuggling to border areas.
5. Utilization of By-Product

Bagasse is one of the by-products of sugar factories. Presently it is being burnt as fuel in furnaces in boiling section. But it has a golden economic value provided it is economically utilized. The bagasse fired boilers can be replaced to coal or oil fired boilers. By using alternative fuel the bagasse can economically be used which will reduce the cost of production. Bagasse is used as raw material in paper mills to produce paper and boards.

6. Cane Diversion

Khandsari units are responsible for creating many problems in sugar industry. Cane growers divert cane from their sugar factory zones to Khandsari units which offer more price than the statutory minimum price and state advised cane price. Therefore Khandsari units necessarily have to be brought under the discipline of price regulation and allotment of area. Fixing the cane price on quality basis is more desirable than just paying on quantity basis where the cane contains poor juice.

Regulations have to be made in such a way that the cane registered with a factory is not diverted to Khandsari or gur. Further it should be made binding with the society to accept all the cane grown in their respective zones and agreed upon with the grower. At present it is
evident that there is unhealthy competition between the three sweetening agents namely sugar, Khandsari and gur. This type of competition is not good and should be eliminated and a workable legislative, informal and disciplined formula should be evolved so that each sector can function effectively without detriment to others.

7. Cost of Production

The cost of production of sugar is comparatively high in India and can be brought down to world levels if the cane is grown in only those regions where it thrives well and produces high cane yields with improved recovery aided by modern technology. If the efficiency of utilization of all the by-products into valuable industrial products is improved implementing the latest technology, the profitability of sugar complex can be significantly augmented.

The co-operative sugar factories are under great pressure to reduce the production cost. This has to come on top priority in the context of increasing liberalization and global competition. For this the increased inefficiency, productivity, conservation of energy and consumables are the key factors. This will help to a great extent to overcome the present uncomfortable situation in the world market and economic stress relieving on home front.
8. Poor Financial Results

There are many causes for incurring losses. Some of them were attributable to causes inside the factory and some outside the factory. However, the causes were not uniform and similar in all years. Different years incurred losses on account of different causes, particular and peculiar to them. It is not out of place here to identify in general the principal causes for incurring losses. They are:

1. Under utilization of installed capacity of plant for want of adequate quantity of cane.

2. The unrealistic fixation of minimum statutory cane price and levy sugar price by the Government without due consideration of cost of production of sugarcane and sugar.

3. High cost of cane purchase due to fixation of high price for the cane by the State Government and higher payment by the factories in order to attract cane for crushing and to ensure a reasonable price to the cane growers.

4. Unfavourable seasonal conditions and prevalence of red-rot disease in the crop.

5. Loss of many working hours due to cane shortage, process defects, breakdowns and repairs.
6. The percentage of juice recovery has been low. The poor quality of cane, inefficient extraction of juice and scale insects disease have been the causes for poor recovery of juice.

7. Wrong selection of site for the location of the factories, so that the plant has to procure the cane from distant places resulting in delay and high transportation cost.

8. Diversion of cane to jaggery-making when its price rules high. The members prefer to divert their cane to jaggery making.

9. The factories are denied the advantage of open market price which is generally higher than levy sugar price.

10. The other causes are higher quota of levy sugar, fluctuations, controls and regulations over sugar marketing.

9. Adhoc Policies

Apart from climatic factors and cyclical swing in sugar production, it is the adhoc feature in sugar policy of the Government which has been mainly responsible for aggravating the fluctuations in sugar production. The mismatch between the sugarcane and sugar pricing policies made it virtually impossible for the sugar factories to pay sugarcane farmers their dues. This created an adverse psychological influence towards sugarcane cultivation.
The adhoc policies of the Government have not helped the co-operative sugar factories.

The policies of the central and State Governments in fixing prices of cane and levy sugar continues to remain short-sighted and of short range varying from year to year. So it is suggested that the fixation of cane price has to be decided much ahead of planting season to enable the cane growers to plan their strategy of cropping and to derive maximum profits from their small holdings. The price of cane fixed has to be realistic taking into account the cost of inputs and quantum of investment and allowing a fair amount of profit in comparison with other commercial crops.

10. Payment on Quantity Basis

The reason for static recovery situations appears due to paying sugarcane price on the basis of weight and not on recovery content. In such situation the sugarcane growers give importance to yield/weight and not to sucrose content. High yielding and high sucrose varieties have to be developed and encouraged.

It may be mentioned that India is the only country in the whole world where the price is still being paid on the basis of cane weight and not on juice recovery basis or quality. In some other countries it is paid
on quality basis by analyzing cane from each grower and according to the content of Commercial Cane Sugar (CCS).

In co-operatives the members are cane growers and suppliers of cane and therefore facilities should be made available to implement the latest cane technology and also mechanization for improving efficiency in production. A co-operative sugar factory will receive all its cane from supply members and, therefore, it is possible to analyse individual supplies of cane. So the payment on quality basis in this sector is workable. Such a system of payment link to recovery reduces the cost of production of sugar. But at present statutorily the mills are required to pay to the cane suppliers on the basis of statutory minimum price and state advised price.

11. To Bring Back Export Promotion

The Government of India should bring back the Export Promotion Act, 1958 which was repealed on January 15, 1997, though it was done with a view to increase export of sugar by permitting all to export sugar.

However, this step of the Government bounced back as no tangible export has taken place since then. This can be possible if Export Promotion Act, 1958 is brought back and the export of sugar is handed
over to Indian Sugar Industry. In view of the present price situation in
the international market it may not be possible for any individual sugar
factory to get into export market and bear losses.

12. Co-Generation

The sugar factories should go on co-generation of power by
utilizing its by-product. Bagasse is one of the by-products of the sugar
industry. It can economically be utilized for running turbines for power
generation. A number of mills outside the co-operative sector have been
using the technology for captive power generation.

Sugar industry has the potential to generate about 4,000 MW of
additional power per year utilizing bagasse for producing steam.

But the government should come forward with proper incentive
and clear cut policy and directions to the State Electricity Board for
distribution of additional power to industry by the grid. The policies of
the Government should be perfect for long term of 10-15 years to
encourage industry to invest in power generation.

13. Cane Management

The structural imbalances existing in overall working of sugar
factories is one of the reasons for poor performance. It is caused mainly
due to faulty cane management, non-availability of adequate and timely finance and the overall government policies.

The cane management is a complicated process involving various mix-up on suitable soil, adequate irrigation facilities, climate conditions, role of ratoon management, fertilizers, pest and disease control, harvesting and transportation of cane.

All these factors are to be examined by the farmers when they decide to grow cane. The farmers also have to work out the comparative cost and earnings. The prices of other commercial crops of short duration are soaring. Their annual earnings have always been higher, whereas in the case of sugarcane the farmers have to wait for 12-16 months with uncertainty about the adequate and timely payment for sugarcane supplied to the factories. The lower sugarcane price fixed from year to year discourage the farmers from cane cultivation.

In such a contrasting situation we can not expect the farmers to stabilize the sugarcane by applying higher inputs. This clear disparity is the main cause as to why the farmers shy away from cultivation of sugarcane despite the proven potentiality. Therefore, the measure is to increase the cash price payable to the farmers thereby inducing them to put adequate inputs to produce quality of cane.
14. Post Harvest Deterioration

It is suggested that steps should be taken for reducing post harvest deterioration losses. The sugarcane breeding institute has suggested the following means for reducing post harvest deterioration of losses which will improve the economics of production.

1. Identification of clones possessing high sucrose and juice quality maintenance for longer duration in the field possessing resistance to post-harvest inversion, in addition to the desirable agronomic attributes.

2. Introduction of plan and maturity based harvest and wireless system for rapid communication and organization of efficient transport for supply of fresh cane to improve quality and recovery.


5. Spraying water / formation / bactricide like polycide or bactrinol 100 on the above.

6. Dipping the cut ends immediately after harvest in bactericide / fungicide. Storing in shade and spraying the same also help in minimizing post-harvest losses.
7. Limited drawal of cane from maximum economic distance to transport sugarcane.

8. Use of chemical ripeners.

15. Modernization

The importance of renovation of plant and machinery by modernization and rehabilitation can not be overemphasized. The proper maintenance and upkeep of old and outdated plant and machinery should not be neglected and requires serious consideration. The old techniques, process and methods of production associated with old factories have already outlived their utility and as such they need rehabilitation and modernization on priority basis.

The State Government on behalf of undertakings should approach Government of India and other Central Financial Institutions like RBI, LIC, IDBI, IFCI for obtaining adequate financial and technical assistance to take up modernization work. It may be underlined in particular the need for immediate replacement of old and obsolete plants in the factories having long standing in the sugar industry.

16. Sugar Roads

The need of well organised system and efficient transport is of great importance for the development of sugar industry. As far as
possible sugarcane should not be transported by slow moving means of transport like bullock carts or rubber tyred carts to save sugar contents of the cane. The Bhargava Commission suggested that as far as possible no cane should be allowed to transport by the growers, by bullock carts over a distance of 8 kilometres.

In almost all factory units, most of the cane growers carry their cane to the factory gates or cane yard by bullock carts. On economic consideration as well as to avoid cruelty to animal and to save sugar contents, fast moving vehicles like tractors and trucks seems to be worthy. Some experts estimated that losses on this account is about 0.1 per cent and it is definitely a considerable loss to the country's economy.

Early and timely supply of cane within a time of 24 hours requires link roads and feeder roads under the factory zones. Before the start of cane transportation, it is necessary that rural roads should be maintained in proper condition through bullock carts having wheels ringed with tyres. The use of rubber tyred bullock carts should be popularized. On the other hand, mechanization of motor truck loading, unloading and transloading of cane will further improve the transportation.
17. State Advised Price

The statutory minimum price has been more or less a national price and is used only for calculating levy sugar price. The State Governments do not even wait for announcement of statutory minimum price and announce their own price. The reasons are inflationary pressure, particularly like the prices of inputs and the cane growers losing interest in growing sugarcane as they are more attracted by other cash crops like oil seeds, vegetables, sunflowers and so on. Hence the State Governments are forced to declare higher state advised price. This price has significant co-relation to cost of production of sugarcane, recovery and average sales realization.

So the state advised price should be announced well in advance of the sowing season so that cane growers are able to know in advance the floor price to which they are entitled and thereby enable them to decide to grow profitable crop.

The cane price payable to the farmers should commensurate with actual cost of cultivation including opportunity cost and comparable to price offered.

To enthuse confidence in the farmers, the entire cane price immediately be deposited in their bank account.
The announced cane price should be treated as an obligation of
the factory to the farmers and should not be subjected to adjustment
based on financial working results of the factories.

18. Nurture in Global Outlook

The sustainable co-operative development is the key issue for co-
operatives in the present economic environment. The competition is
going to be still stiff with the opening up of the economy to the world
market and also due to entry of foreign sugar form the world market at
low price. Increased productivity, world standard quality, lower cost of
production, low price of sugar and services only can help the co-
operative enterprises to succeed. In the liberalized market economy the
success is dictated by the global demand, market and expertise.

Thus today co-operative sector in sugar industry is facing severe
test for its survival. Unless the sector fits into the situation
organizationally, technically, economically and managerially and to co-
exist gracefully in a competitive environment, it cannot be independent,
dynamic and run on prudent commercial practices. To survive in the
present day’s highly and globally competitive environment and to steal
the comparative benefits in sugar, the co-operatives must develop and
nurture a global outlook. This sector must now act as a countervailing
power in the market by acting as an interface between the highly sophisticated global market on one hand, and the cane growers seeking sustainable methods of production within the rural settings, on the other.

The co-operative sector has necessarily to gear up to meet the challenges thrown open with the process of liberalization and globalization. The attitude of protection from the Government, lack of trust, passiveness, self-confidence should change and entrepreneurial aggressiveness is paramount.

19. Non-Professional Management

The general body and the managing committee are composed of members, who are mainly concerned with decision making and the management of the affairs of the factories, do not possess professional talent. The local people with vested interest and politically influential persons often influence and interface with the managing of affairs, resulting in managerial autocracy rather than democratic management by members. The factories have been receiving aid from the Government under the Co-operative Legislation under which the Government is empowered to nominate persons on the managing committee.
This amounts to interference of the officials of the Government departments in the voluntary associations like the management of co-operative sugar factories. They are self-governing institutions and the appearance of the nominees of the Government destroys the co-operative principle of exclusive management by the members. The adverse effects of this are domination, bureaucracy and officialization of the process of decision-making and managing affairs. If any resolution in the opinion of the nominee is prejudicial to the interest of the Government, the nominees’ decision is final and binding on the committee.

20. Sheltered Position

The industrial co-operative movement in the State is largely the Government-sponsored. As a matter of fact, the co-operative societies are voluntary organizations without official interference and are self-contained and self-supporting. But the State Government has been extending financial assistance to the maximum extent. It has been observed that the contribution of the State Government to the share capital of co-operative sugar factories constitutes the bulk of the total capital.
Thus industrial co-operatives are surviving today because of Government's increased scale of financial aid in the form of share capital loans, share capital participation, giving guarantee to financing institutions to raise term loans, interest subsidy, rebate, managerial subsidies, loaning of departmental personnel, special concessions, relaxations and privileges to the industrial societies etc.

To Sum up

Looking back over a period of nearly 50 years of planned development of sugar industry, a remarkable rate of progress is achieved. Beginning with the period of 1930s there was only one sugar factory established in co-operative sector.

Conclusion

Unfortunately, the co-operative sector of the sugar industry in Andhra Pradesh is passing through a critical stage. The reasons are inadequate cane supply and financial sickness. It made the Government to privatize co-operative sugar factories.

The basic co-operative spirit among the grower members and their loyalty to the institution have not been established and thus the laudable objectives of the co-operative movement have not been fulfilled.
Financially the societies have become entirely dependent on the State Government and the central financing institutions and have become liability instead of an asset to them.

The mills have been incurring losses year after year and recorded accumulated losses. As a result the arrears of cane payment to the cane grower members as well as loan instalment repayments to financing institutions have become overdue and are being liquidated by financial support doled out by the Government from time to time.

A bold and dynamic approach is needed by the state and Central Governments to bring the mills back to normal health and making them work in the true spirit of the byelaws of the co-operative societies exercising only an overview of the mills and eliminate day-to-day administration at every stage of the factory.

Competent and dynamic executives who are well versed in managing the industry and who can take appropriate decisions in the interest of the industry have to be entrusted with this challenging task of resuscitating the industry from the present morass and to infuse a sense of confidence in the administration and grower members of the co-operative society.
General Observation

The establishment of co-operative sugar factories has enabled the farmer members to set up other agro-industries. The co-operative sugar factory acts as a nucleus for social and economic development of the area around it and provides educational and medical facilities not only to its members but for the entire area around the factory. Thus it is a harbinger for rural prosperity.

Suggestions

It could thus be seen that the sugar industry, despite several vicissitudes, has come to occupy a pivotal position in the economy of the country. It is however, passing through a financial crises as well as operational problems at present because of certain unfavourable policies pursued by the Central and State Government as discussed already.

As we are aware in earlier chapters, the sugar industry in general and the co-operative sector of the sugar industry in particular is heavily regulated at every stage eventhough it is against co-operative philosophy. It is therefore desirable on the part of the Government to take appropriate action and to evolve a pragmatic and suitable formula to bring back the co-operative sector of the sugar industry to its normal health to promote the economic interest of the cane growers,
development of backward areas and keep it going as an efficient co-operative sugar sector.

The above measures would enable the factories to survive and once it is achieved, further measures can be initiated to make it stronger and more vibrant. So unless the above measures are immediately initiated, the sugar factories in co-operative sector will be in deep production and financial troubles.

To conclude, the suggestions offered above are in relation to most of the problems as identified in the study and having bearing on policy implication.

Efforts are therefore to be diverted for strengthening the existing factories than going for expansion and establishment of new factories in co-operative sector.

The future prospects for sugar factories in co-operative sector occupies pre-eminent position in view of suitability of this sector in rural areas to promote the economic interest of the cane growers and in semi-urban areas where cluster of consumers and other members are located.
On the basis of the above discussion, it will be evident that cooperative sugars have recorded outstanding performance in promoting the economic interest of cane grower members.