CHAPTER IX

SUMMARY, CONCLUSION AND SUGGESTIONS
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9.1. Summary:

A co-operative sugar factory in the rural area or for that matter, any agro-based large-scale industry is looked upon as a dynamic growth centre. Therefore, the study of the socio-economic impact of a sugar factory assumes great significance. Sugarcane is a cash crop and the main input for a sugar factory. Therefore, the establishment of a sugar factory increases the economic importance of sugarcane cultivation. It induces increased irrigation facilities, leads to better cropping pattern and thus increases sources of incomes and standard of living of the farmers in its area of operation. With increasing incomes from sugarcane cultivation, farmers invest in modern agricultural equipments and adopt modern methods of cultivation. The change in the cropping pattern in favour of sugarcane creates substantial addition to employment in the agricultural sector. Further it also gives seasonal employment to thousands of harvesting and transport workers during the crushing season. The establishment of the Karkhana provides jobs to its employees. Their incomes and standard of living also rise. Then it opens up avenues for various businesses and occupations on the Karkhana site itself, which increases their incomes and standard of living.

The establishment of a sugar factory leads to installation of Distillery plant, compost fertilizer plant, co-generation plant etc. Further the existence and operation of the factory develops infrastructure facilities such as construction and maintenance of roads, education, housing facilities for the sugar factory’s employees, communication system, health and medical facilities, petrol pumps, bus stops etc. Then the factory can create a Development Fund from the deductions made from the farmers’ sugarcane bills, and use it for social welfare activities such as tree planting, group marriage ceremonies, Contributions to
relief funds, cattle camps, Zunka Bhakar Kendra, sugar schools, etc. In this way a sugar factory makes all pervading and deep impact on its area of operation. It thus becomes centre of economic, social and cultural development.

9.2. Conclusion:

Important conclusion of the research work is classified into eight parts. Working of Mula Sahakari Sakhar Karkhana (henceforth is called as MSSK) and its impact on various factors are also explained. It is elaborated as follows:

9.2.1. General:

1. India is the first country, which started sugarcane production. The references to sugarcane in Hindu Mythological books precede any such references from other countries. Similarly sugarcane is mentioned in the Atharva-veda.

2. The Co-operative movement originated in the west, first in England with the establishment of the Rochdale co-operative Society in 1844, which started as a co-operative consumers’ store.

3. Co-operative movement in India had its birth in the year 1904 with the passing of co-operative societies Act. The activities started with the establishment of primary credit co-operatives, whose main function was to help small farmers with loans, instead of their being exploited by the moneylenders.

4. In the successive five year plans of the Government of India, which is meant for overall development of the country, the Co-operative Sector was given preference in every field as compared to the private and even public sector organizations.

5. There is no any other country in the world than India, having such a large and diversified co-operative movement, wherein large number of people are directly involved. About 4.88 lakh co-operative societies have been established in India with a total membership of about 190 million farmers.

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6. Maharashtra State ranks first in the country in successful implementation of the co-operative movement. There were 8990 co-operative societies functioning in Maharashtra with a total membership of 14.21 lakh at the time of independence. Today about 1,65,789 Co-operative societies are functioning in the state with a total membership of 43.90 million.

7. India ranked first in the world in sugar production in the year 2000-01. (Table No.2.2)

8. Sugar industry is the second largest agro-based industry, next textile in India.

9. The first sugar factory in India was started in 1784 by a civilian, crafts, at Sooksagar, which was privately owned. The second sugar factory was started in 1791 in Bihar by L.T. Patterson. Then in 1824 ‘Late James Fredrick Vivian Minchin’ a French gentleman started a sugar factory at ‘Aska’ in orissa.

10. In the beginning of the 20th century the first sugar factory ‘Vacuum pan technology’ was started in Bihar at ‘Saran-Marhora’ in 1904.

11. Production of sugar through co-operative processing of sugarcane was first attempted in India in 1933. There were four co-operative sugar factories by 1935 – One in Uttar-pradesh (Biswan) and the remaining three at Thummapala, Etikoppaka and Vuyyuru in Andhra Pradesh. Of these only the factory at Etikoppaka has survived and is the oldest Co-operative sugar factory today. There was no further development in this direction for nearly a decade and a half. An effective break was provided by the co-operative Sugar Factory at Pravaranagar, which was registered in 1948 in Shrirampur Taluka (now Rahata Taluka) of Ahmednagar District in Maharashtra. Pravara Co-operative Sugar factory has to be given credit for starting of sugar factories in co-operative sector in Maharashtra.

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12. In 1950-51, there were 139 sugar factories in India of which only two (1.44%) were in the co-operative sector. In 2002-03, 536 sugar factories have been established of which 311 (58.02%) are in the co-operative sector. Of the factories established in 2002-03, 453 sugar factories were in operation of which 269 (59.38%) were in the co-operative sector. (Table No. 2.4 and 2.5)

13. During the period 1950-51 to 2002-03, the share of the co-operatives in India’s sugar production went up from 0.45% to 50.45%.

14. Out of the 269 Co-operative sugar factories operating in the country, 145 (53.90%) are in Maharashtra State. Thus of the co-operative sugar factories in India, more than half are in Maharashtra State.

15. In 1950-51, of the 13 sugar factories in Maharashtra, only one (7.69%) was co-operative sector. In 2002-03, of the 160 sugar factories in the state, 145 (90.63%) were in the co-operative sector.

16. In 1950-51, sugar production in Maharashtra was 1.47 lakh tonnes in which the share of the co-operative factories was just 4.76%. In 2002-03, sugar production reached 62.21 lakh tonnes and the share of the co-operative factories went up to 94.78%. Maharashtra State ranks first in sugar production in India. (Table No. 2.8)

17. Kolhapur and Ahmednagar Districts of Maharashtra have the highest number of sugar factories in the state with 18 in each of the two districts. (Table No. 2.9)

18. With respect to area under sugarcane cultivation and production of sugarcane, Maharashtra ranks second in the country, the first being Uttar Pradesh.

19. The first sugar factory in Ahmednagar District was started by Mr. Frank Harrison, the Head of Marshal Sons and Co. Ltd., Bombay in 1919 at
Haregaon in Shrirampur Taluka. It was called Belapur Sugar Mills. This was also the first sugar factory in Maharashtra. Then in 1934 M/s. Dahanukar and Co. started two sugar factories - One Maharashtra Sugar Mills at Tilaknagar, Taluka. Shrirampur and the other at Shrigonda called Belwandi Sugar Mills. In 1939, M/s. Somaiya and Sons started Godawari Sugar Mills Ltd., Sakarwadi, Tal. Kopargaon and in 1940, another Godawari Sugar Mills Ltd. was started at Laxmiwadi, Tal. Kopargaon. In 1941, the Morarka Group started the Changdeo Sugar Mills, at Puntamba, Tal. Kopargaon. Padmashri Vitthalrao Vikhe-Patil, Late Vaikunthbhai Mehta and Dr. Dhananjayrao Gadgil brought together the farmers in Pravara region and registered the first co-operative sugar factory in Maharashtra on 31-12-1948 at Loni, Tal. Rahata. Today the factory is known as Padmashri Dr. Vitthalrao Vikhe-Patil Co-operative Sugar Factory. Its first crushing season was completed in 1950-51.

20. By the end of the year 2002-03, there were 18 sugar factories in Ahmednagar District, of which 17 are Co-operative sugar factories.

21. The average sugar recovery of all the sugar factories in Ahmednagar District in 2002-03 was 11.68%. The highest sugar recovery ratio was achieved at 12.43% by the Mula Co-operative Sugar Factory. The lowest sugar recovery was recorded by Parner Taluka Co-operative Sugar Factory at 6.67%.

22. The Mula Sahakari Sakhar Karkhana was registered on dated 27-2-1970 and it completed its first crushing season in 1978-79. Its initial daily crushing capacity was 1250 metric tonnes. It was subsequently increased to 2000 metric tonnes in 1986-87 and then to 2500 metric tonnes in 1994-95 and further to 3500 metric tonnes in 2002-03. Thus during the 24 year period, the crushing capacity has been increased by 280%.
9.2.2. Profile of Ahmednagar District and Newasa Taluka:

1. The area of Ahmednagar District is 17,412 sq. kms. and area wise it is the largest district in Maharashtra and covers 5.66% of the total geographical area of the state.

2. The total geographical area of Ahmednagar District is 17,41,271 hectares, 69.55% of which is cultivated.

3. The maximum number of landholders is in Ahmednagar District. Of the total landholders 35.13% landholders hold less than 1 hectare of land while 1.19% of the holders have 10 hectares and above holdings. Further 66.55% of marginal and small farmers have holdings of less than 2 hectares. (Table.No.3.5)

4. Jowar is the main crop grown and sugarcane is the main cash crop in Ahmednagar District.

5. In Ahmednagar District 3,82,807 hectares of land is under irrigation and largest irrigated area is in Shrigonda Taluka (60,061 hectares) followed by Newasa Taluka (58487 hectares). Akole Taluka has the least irrigated area of 8691 hectares.

6. By the end of the year 2001-02, Ahmednagar District had 8713 Co-operative societies.

7. Newasa Taluka is spread over an area of 1288.55 sq. kms. and areawise the taluka ranks 8th in the District. The taluka has 129 villages.

8. The population of Newasa Taluka increased from 1,17,706 in 1961 to 3,26,611 in 2001 and is 7.99% of the total district population.

9. Newasa Taluka has a working population of 1,26,405 persons engaged in various occupations. This is 46.29% of the taluka’s population and 8.82% of the working population of the Ahmednagar District. About 84.32% of the
taluka’s working population are engaged in agriculture and agro-related occupations.

10. The geographical area of Newasa Taluka is 7.42% of the geographical area of Ahmednagar District.

11. Of the area under irrigation in Newasa Taluka, 75.22% is well irrigated.

12. As on 31-3-2002, Newasa Taluka had 590 Co-operative societies, which is 6.77% of the societies in Ahmednagar District.

9.2.3. Mula Sahakari Sakhar Karkhana Ltd., Sonai (MSSK):

1. The MSSK is situated in the North of the Ahmednagar District Head Quarter at a distance of 38 k.m. 87 villages have been included in the MSSK’s area of operation.

2. The membership of the MSSK consists of 4 categories, viz., Producer members, Ordinary members, nominal members and beneficiary members.

3. For administrative convenience, the operations of the MSSK have been distributed among 16 departments. With the Management and Administrative structure, the working of all the persons in these departments is coordinated. The Karkhana affairs are managed by the Board of Directors elected from and by the members of the karkhana. The Managing Director is the chief officer who looks after the day-to-day management of the karkhana.

4. In 1978-79 when the karkhana was established, the paid-up capital was Rupees 90 lakh for sugarcane producer members and Rupees 10 lakh for the non-producer members (co-operative societies). By the end of the year 2001-02, these paid up capital went up to Rs.10 crore and Rs.25 lakh respectively.

5. The face value of a share of the MSSK in 1978-79 was Rs.1000. It was increased to Rs.2000 in 1984-85; to Rs.3000 in 1997-98 and further to Rs.5000 in 2001-02.
6. At the time of the establishment of the MSSK, 16,500 redeemable preference shares were issued to the State Govt., which helped the MSSK to collect Rs. 165 lakh as capital from the State Govt. The said capital was redeemed by the MSSK in seven years in annual instalments.

7. The MSSK also raised capital by accepting deposits from the sugarcane producer members. These deposits are used for expansion of the sugar factory, production of by-products, other supplementary schemes etc. By the end of the year 2001-2002, the various deposits with the MSSK amounted to Rs. 29.18 crore.

8. At the time of the formation of the MSSK, it borrowed Rs. 5.40 crore for installation of the machinery in the factory. The loan was repaid within five years. Then the MSSK again borrowed an amount of Rs.3.75 crore for installation of the Distillery. The loan was also repaid within five years. At present the MSSK has borrowed Rs. 25 crore for expansion of its crushing capacity. The loan is to be repaid in eight years.

9. By the end of the year 2001-02, the MSSK has built Reserve Fund of Rs.34.18 crore, which is used as capital by the karkhana.

10. In 1978-79, there were 3652 producer members of the karkhana and the number went up to 16,655 in 2001-02. The number of ordinary members (co-operative societies) also went up from 20 to 26 during the above period.

11. During the period 1978-79 to 2001-02, the fixed assets of the MSSK went up from Rs.7 crores to Rs. 74.58 crores.

12. During the period 1978-79 to 2002-03, the MSSK crushed 99,08,628 metric tonnes of sugarcane to produce 1,10,54,163 quintals of sugar which shows the karkhana’s performance has been quite satisfactory.
13. During the 24 years from 1979-80 to 2002-03, the average crushing days per year comes to 186 days as compared to the standard average of 160 days. This is also an indicator of satisfactory performance.

14. The proportion of sugar produced to the quantity of sugarcane crushed is called sugar recovery rate, which is treated as an important measure of efficiency of a sugar factory. It can be seen that the sugar recovery rate of the MSSK during the period 1978-79 to 2002-03, has always been higher than the national average of the sugar factories. The sugar recovery rates of the MSSK for the year 2001-02 and 2002-03 were 12.46% and 12.43% respectively. For the year 2001-02, the sugar recovery rate of the MSSK was the highest of all the sugar factories in Ahmednagar District. It stood at No.4 in the Central Maharashtra Zone consisting of Pune, Solapur, Ahmednagar and Nashik Districts. It ranked 10th in Maharashtra in this respect. Thus it can be seen that the performance of the MSSK is good.

15. The crushing utilization at 100% or above is another indicator of a sugar factory’s performance. The crushing season of 1978-79 was the trial crushing season of the MSSK. From 1979-80 to 2002-03, the annual average capacity utilization of the MSSK was 110.64%. It is clear that performance of the MSSK is satisfactory.

16. During the period 1978-79 to 2001-02, the karkhana has always paid sugarcane price higher than the minimum statutory price fixed by the Central Govt. In the year 1980-81, the MSSK paid the sugarcane price of Rs. 311 per tonne, which was the highest price in Ahmednagar District and the second highest price in Maharashtra State.

17. The Govt. of Maharashtra has appointed a committee under the chairmanship of late Gulabrao Patil to make a comprehensive study of the sick sugar factories in the state. In this context, the committee put- forth the concept of Health Index Numbers of the sugar factories. It is useful in
measuring the health or overall efficiency of a sugar factory. While calculating the health index number, the three factors, viz., crushing capacity utilization, the proportion of sugarcane crushed from its area of operation to total sugarcane crushed and the sugar recovery rate have been taken into account. Higher the Health Index Number of a sugar factory than 1, greater will be its financial health and viability. The average health number of the MSSK for the period 1978-79 to 2001-02 stands at 1.13 which shows that the MSSK is financially healthy, and strong.

9.2.4. **Impact of the MSSK on Agriculture** :

1. Right from its beginning the MSSK has been making efforts for agricultural development in its area of operation. The karkhana has a separate Agricultural Department through which it has implemented various schemes of sugarcane development. These include supply of improved seeds to the farmers. Through its sugarcane research project, it has conducted training courses for farmer members to increase sugarcane production. It has supplied Gypsum to them for salivated and ill-drained lands and helped raise soil fertility. It has planned sugarcane cultivation for steady supply of fresh sugarcane to the karkhana. It has also supplied compost manures, press mud, green manure, raw jute and dhencha seeds etc. to the members to increase sugarcane production. It has also provided members with chemical fertilizers, insecticides etc. It has also provided finance to its members for deepening of old wells, digging bore wells, for paying quotation amount for electricity connection, for paying dues of electricity bills and for paying irrigation water bills to the irrigation department. Every year it holds seminars and meetings for its members to guide them about sugarcane production.
The sugarcane producers in the area of operation of the MSSK have benefited from the above schemes. It has helped increasing the area under sugarcane cultivation as also sugarcane production.

2. The MSSK has implemented five lift irrigation projects to increase the area under sugarcane from the villages in its area of operation, which cannot avail of the waters of Mula Canal. This has benefited 1291 farmers and 7280 acres of land from 9 rainfed villages have been irrigated. The MSSK has spent Rs. 208.03 lakh for these five lift irrigation projects.

Further the MSSK has completed surveys of 13 lift irrigation projects, which may irrigate 21570 acres of land of 5222 farmers. It has also carried out surveys of 37 places for constructing Yashwant bandharas so that the rainwater will be stored and in turn, it may raise water levels of the wells in the adjoining areas. Of these the construction of 10 bandharas has been completed and the work is nearing completion at the remaining places. Because of the 10 completed Yashwant bandharas, well-water levels have increased and 2511 acres of land has been brought under irrigation. The karkhana has spent Rs.23.26 lakh for these works. Further, the karkhana has constructed Kolhapur type weirs (K.T.Weirs) at two places, viz., Newasa and Amalner in its area of operation which has irrigated 1510 acres of land and helped increasing area under sugarcane production.

3. The MSSK has arranged for supply of crop loans for sugarcane growers from Ahmednagar District Central Co-op. Bank through the primary co-operative credit societies in its area of operation. It has guaranteed repayment of the loans through the sugarcane bills of its members. Consequently, more farmers have turned to sugarcane cultivation and the area under sugarcane has expanded significantly.

4. The establishment of the MSSK has changed the cropping pattern of Newasa Taluka by increasing greatly area under sugarcane. In the year 1978-79 of
the total cropped area in Newasa Taluka, only 8.59% (9871 hectares) was under sugarcane. By 2001-02, the sugarcane area rose to 17.87% (21525 hectares). During the same period, the area under cereals, cotton, spices, oilseeds has decreased. The area under fruits, grams and vegetables has slightly increased. (Table No. 5.7.) It is thus clear that due to the increased irrigation facilities provided by the MSSK, farmers turned to sugarcane, which is a cash crop. The farmers have been earning regular and higher income from sugarcane as compared to other crops and they now look upon agriculture as a business.

5. In 1978-79, the per hectare production of sugarcane in the MSSK’s area of operation was 82.50 metric tonnes. In 2001-02 it came down to 59.16 metric tonnes. The sugarcane productivity has been adversely affected due to many causes such as lack of adequate water, absence of crop rotation, soil erosion due to mono-cropping over long periods, lack of manures, unbalanced use of chemical fertilizers. However, as compared to the areas of operation of the neighbouring sugar factories, the productivity of sugarcane in MSSK’s area of operation is satisfactory.

6. With a view to increase the area under sugarcane, the MSSK has provided financial assistance to the farmers for repairing and deepening of the old wells, Rs. 150 lakh was provided for this purpose with the help of the Central Govt. Likewise it has also arranged for loans for digging new wells from the Ahmednagar District Central Co-operative Bank. During the last 24 years an amount of Rs. 89 lakh has been distributed on this account. Thus the karkhana has helped in providing finance of Rs. 239 lakh for old and new wells. This has resulted in increased number of wells in Newasa Taluka. In the year 1978-79, Newasa Taluka had 7350 wells. During the period 1978-79 to 2001-02, wells in Newasa Taluka increased by 1914 (126%). In addition, the MSSK has also provided finance to farmers for tube wells with
the result the area under well irrigation in Newasa Taluka has been consistently increasing. During the period 1978-79 to 2001-02 the well-irrigated area in Newasa Taluka went up from 9599 hectares to 31585 hectares. During the above period the proportion of area under well irrigated to total irrigated area in Newasa Taluka rose from 38.42% to 75.22%. This has resulted in extension of area under sugarcane.

During the period 1978-79 to 2001-02, the net irrigated area of Newasa Taluka increased from 24987 hectares to 41991 hectares. Thus the net irrigated area of Newasa Taluka increased by 59.51% during the period under study.

7. After the establishment of the MSSK, the sugarcane growers in Newasa Taluka started buying modern implements for agricultural operations and discarded traditional implements. For deep ploughing for sugarcane the farmers started using animal driven iron ploughs. During the period 1978 to 2002, the number of iron ploughs in Newasa Taluka increased from 3408 to 5608. Likewise, there has been increasing use of tractors for sugarcane cultivation. During the period under study (1978 to 2002) the number of tractors in Newasa taluka shot up from 164 to 1564. The karkhana also implemented scheme for farmers to buy trucks and tractors by providing loans for the same. This has also provided them with work of sugarcane transport. Newasa Taluka has 13.43% of the tractors in Ahmednagar District and ranks second in the district in this respect.

8. After the establishment of the MSSK, farmers have been getting higher incomes from sugarcane than from other crops. Due to this more and more farmers have started using diesel oil engines. In 1978, Newasa Taluka had 1871 oil engines in use. Now almost all villages have been electrified and so the number of oils engines declined to 271 in 2002 and the use of electric pumps increased. During the period 1978 to 2002, the electric pumps
increased from 2563 to 13,645. It can thus be concluded that there has been increasing use of modern implements in agriculture and mechanization of agriculture has occurred in Newasa Taluka.

9.2.5. Impact of MSSK on Producer Members:
1. There has been change in the sources of incomes of the farmers in the MSSK’s area of operation during the period 1978-79 to 2001-02. Agriculture has been the main source of income of all the farmers. In 1978-79, 4.21% of farmers’ families received income from employment. In 2001-02, 29.32% of farmers’ families received income from employment. More members from marginal, small and medium farmers’ families have received employment income than big farmer families. Further, in 1978-79, 44.21% farmers worked as agricultural labourers. In 2001-02, the proportion was reduced to 20.35%. Then in 1978-79, 4.91% of farmers’ families received income from business source (cycle repairs shops, hotels, grocery shops etc). In 2001-02, this proportion rose to 16.84%. In 1978-79, 7.72% of farmers’ families derived income from dairy; the proportion rose to 58.95% in 2001-02. Likewise in 1978-79, just 3.16% of the families received income from hiring out agricultural implements like tractors, trucks, harrows, threshers etc. In 2001-02, 16.49% of farmers’ families received income from this source. (Table No. 5.17). It can thus be seen that due to the establishment of the MSSK, there has been increase in the sources of income of the farmers during the period under study.

2. With the establishment of the MSSK, there has been increase in the incomes of the farmers in its area of operation, which, in turn, has changed their pattern of expenditure also. In 1978-79, the farmers in the MSSK’s area of operation spend their income on food, clothing and utensils and such other items of domestic use. In 2001-02, 29.12% of the farmers spend their income on levelling of land, 88.07% of them spent their income on for digging wells,
pipelines and electric pumps. Then 32.63% of them used a part of their income for buying land, 86.32% on purchase of cattle and construction of cattle sheds, 51.23% on house construction, 31.93% on furniture, 56.14% on purchase of vehicles. A part of the increased income was spent by 75.79% of the farmers’ families on items such as marriages of their sons and daughters, education and other functions and festivals. Then 18.95% of them kept a part of their income in bank deposits. (Table No.5.18)

3. With the establishment of the MSSK, area under sugarcane was increased which resulted in increased incomes of the farmers. This naturally led to improvement in their standard of living, which got reflected in the improvement of their housing conditions. In 1978-79, only 4.56% of farmers lived in cement concrete houses. In 2001-02, this proportion increased to 23.86%. In 1978-79, 31.93% of the farmers occupied houses of medium conditions but in 2001-02, this figure went up to 64.91%. The net result of these changes has been that the proportion of farmers living in huts fell from 63.51% in 1978-79 to 11.23% in 2001-02. A large number of farmers now live in cement concrete and medium condition houses and many of them have made improvements in their houses. (Table No.5.19).

Similarly there has been increase in the range of household equipments used by the farmers. In 2001-02, 84.21% of the farmers had TV sets; 23.86% had CD players; 27.02% used fuel gas; 17.19% had refrigerators, 12.98% had air-coolers and 17.89% used telephones. In 1978-79, no farmers’ family has any of the above household equipment. In 1978-79, only 4.56% of farmers owned motorcycles. However in 2001-02, 44.56% of them used motorcycles. Likewise in 1978-79, just 0.35% of them owned jeeps/cars whereas in 2001-02, 9.82% of farmers owned jeeps/cars. (Table No.5.20)

4. The MSSK has provided a number of quality services to the farmers in its area of operation and they have benefited greatly from them. The karkhana
ensure timely supply of credit to agriculture and 96.14% of the farmers have availed of this facility. Then 89.12% of the farmers received timely supply of agricultural inputs. Further 84.91% of the farmers have been actively encouraged by the MSSK for increasing sugarcane production. The MSSK implemented a number of irrigation schemes, which have benefited 36.25% of the farmers. The karkhana held a number of sugarcane production seminar and farmers’ rallies in which 37.89% of farmers participated. Then 15.44% of the farmers have been benefited from the Bore-well scheme of the MSSK. Further, 36.84% of the farmers have been benefited by the well repairs scheme. The returnable financial assistance extended by the MSSK for Electricity connection quotation and payment of dues of electricity bills has helped 17.19% of the farmers. Similarly 28.07% of the farmers have been given returnable financial assistance to pay the water charges of the irrigation department. The various educational facilities provided with the support of the MSSK have been used by the children of 97.89% of the farmers and 5.96% of the farmers’ families have availed of the medical aid facilities extended by the karkhana. Then, members of 39.30% farmers’ families have secured employment in the MSSK and the various institutions supported by the karkhana. After the establishment of the karkhana, 28.77% of the farmers have started new businesses. During the period of 24 years from 1978-79 to 2001-02, 15.79% of the farmers have taken advantage of the karkhana’s tractors and trucks scheme. All the farmers in the MSSK’s area of operation are now following modern methods of cultivation and using modern agri. implements like iron ploughs, tractors, harrows, sowers, electric motors, submersible pumps etc.

9.2.6. Impact of the MSSK on Employment Generation:
1. After the establishment of the MSSK, there was increase both in the area under sugarcane cultivation in its area of operation as also in its crushing capacity. The distillery plant was also subsequently installed. This resulted in
increasing the number of employees of the karkhana from 756 in 1981-82 to 968 in 2001-02. In the year 2001-02, of the total employees, 45% were permanent employees, 54% seasonal employees and 1% temporary employees. Of the 87 villages in its area of operation, persons in 75 villages (86.21%) have been given employment and 89.66% of persons in its area of operation have been provided with jobs. Out of the total employees of the MSSK, 2.16% are from Newasa Taluka but from outside its area of operation and 8.16% are from outside of Newasa Taluka and its area of operation. Comparatively, they get higher wages than the agricultural labourers. The employees are now receiving wages and salaries as per the recommendations of the Fourth Sugar Wage Board.

2. Classifying the employees of the MSSK according to their land holding, it is found that 35.71% of them are marginal landholders, 28.57% are small landholders, and 24.60% are landless labourers. Only 11.12% of the employees are medium and big landholders. Thus marginal, small landholders and landless labourers constitute 88.89% of its workforce and they have a new source of income. (Table No.6.10)

3. In addition to the employment in the karkhana, 84.92% of the families of the employees have new sources of income by way of jobs, business, dairying etc. in addition to wages and salaries. (Table No. 6.11)

4. Alongwith employment in the karkhana and new sources of income, the incomes of the employees increased, which increased their wants and consequently there has been change in their pattern of expenditure. The karkhana employees spent the increased incomes for various purposes as detailed below. The percentage relates to the proportion of employees spending money on particular item to total employees.

   Land development 60.32%, purchase of land 64.29%, purchase of cattle 45.24%, house construction 68.25%, purchase of furniture 76.98%, purchase
of vehicles 71.43%, marriages, education of family members and festivals 58.73%, bank deposits 34.13%. (Table No. 6.12)

5. With the increase in incomes of the karkhana employees, there has been improvement in their standard of living. The karkhana has provided housing quarters to 24.60% of its employees. Of the total employees of the MSSK, 69.84% employees have built their own houses in their villages. At the time of the establishment of the karkhana in 1978-79 the families of its employees did not have any household equipments except household utensils. In 2001-02, all of its employees (100%) own TV sets, 47.62% of them have CD players, 59.52% of them use fuel gas, 47.62% have refrigerators, 50.79% of them have air coolers, 72.22% of them have telephone connections, 71.43% of them have motor cycles and 1.59% of them own four wheelers. Of course, the permanent employees have more household equipments than seasonal employees. But standard of living of all the employees has improved significantly.

6. Apart from wages and salaries, the MSSK has given various facilities to its employees. Every year, it gives bonus to all of its employees. Then 56.35% of its employees are benefited by payment of overtime, 96.83% avail of medical aid; 73.02% of the employees get benefit of educational facilities provided by the educational institutions with the substantial support of the MSSK. Further, 24.60% of its employees are provided with housing, accommodation and 84.92% of the employees used the credit cards to purchase various things from consumers’ stores on credit. All these benefits have increased the incomes of the employees of the MSSK.

7. Due to the establishment of the MSSK, about 9500 workers get jobs for about 160 days in every crushing season in harvesting and transporting of sugarcane. These workers come from the rainfed areas Pathardi and Jamkhed Talukas of Ahmednagar District. And also from Beed, Jalana and
Aurangabad Districts. They are mostly marginal, small and medium landholders. They migrate from their areas to the sugar factory areas in search of employment during the crushing season. The workers engaged in harvesting and transporting of sugar have their organization at the state level and their wage rates are fixed by the state Govt. During the year 1991-92, 3950 male workers and 3100 female workers were engaged in this activity and in the year 2001-02, their number rose to 4040 and 3880 respectively. Thus the total workers engaged in harvesting and transporting sugarcane during the period, 1991-92 to 2001-02 rose from 7050 to 7920. Thus during the period 870 more persons (rise by 112.34%) got jobs in these operations. The karkhana supplies every year tyre fitted bullock carts on rental basis to these workers.

8. With the starting of the MSSK, the cropping pattern in Newasa Taluka has undergone significant change. Area under sugarcane has expanded and it has become a cash crop. During the period 1978-79 to 2001-02, area under sugarcane went up from 9871 hectares to 21525 hectares, a rise by 218%. Further, the karkhana implemented various irrigation schemes like lift irrigation projects, Yashwant bandharas, Kolhapur Type Weirs which irrigated an additional area of 4520 hectares.

Right from 1978-79, the MSSK has been actively engaged in developing dairy business. Now it has become an important subsidiary occupation of the farmers. Because of all these developments, a large number of labourers are employed in agriculture and agro-related activities and their wages have also risen.

9. With the establishment of the MSSK, there has been extension of irrigation facilities in Newasa Taluka and farmers have started taking more than one crop every year. They are also using more modern implements and agriculture has been mechanized. Educated youth are now cultivating land
by using modern methods. This has resulted in additional demand for agricultural labourer. Further large employment opportunities have cropped up in sales, maintenance, repairs and spare parts etc. of these implements. The persons engaged in this business are getting good income and their standard of living has risen.

10. A number of shops and businesses have been established on and around the karkhana site from the starting of the construction work of the MSSK. By the end of 2001-02, there have been 283 business shops on the karkhana site. Above 360 persons have been self-employed and 330 persons have been employed in these shops. Thus 690 persons have been got job opportunities due to the karkhana and the site has become a flourishing business centre.

11. After the establishment of the MSSK, a number of offices and institutions have been established on the site. They include branch of Ahmednagar District Central Co-op Bank, Co-operative Consumer Stores, Workers’ Co-operative Credit Society, Sakhar Kamgar Trade Union, Sugarcane Transport Co-operative Society, Cooperative Dairy society, Co-operative poultry society, Primary school of Zilla parishad, High school, college, Co-operative credit society, Dudh sangh etc. These institutions have come into existence due to the establishment and support of the MSSK, and they provide employment to 776 persons on the karkhana site.

12. During the crushing season, the karkhana provides work to trucks and tractors to transport sugarcane. About 692 drivers and cleaners get jobs in every crushing season. A large number of buildings have also been constructed on the karkhana site, which have created job opportunities on a large scale.

13. Of the total number of agricultural labourers in the karkhana’s area of operation, 87.94% are original residents of the area and the remaining
12.06% labourers come from outside its area of operation and they have migrated for jobs created due to the establishment of the MSSK.

14. Of the agricultural labourers families in karkhana's area of operation, 48.89% agricultural labourers draw additional income from other sources such as land, employment, dairy, business etc. and 51.11% of the families are wholly dependent on the jobs provided by other farmers. Only due to the establishment of the MSSK, the sources of income for the agricultural labourers have increased.

15. Though the wages of the agricultural labourers have increased after the establishment of the MSSK, the prices of essential commodities have also shot up and so there has not been appreciable improvement in their standard of living. However, during the period 1978-79 to 2001-02, because of the karkhana, various other sources of income became available to them apart from agricultural labour wages. This is evident from the fact that many of them now use modern domestic equipments like TV sets, radios, fans, bicycles, sewing machines etc. Such labourers with diversification of incomes have spent the additional income for productive purposes also. Of the agricultural labourers, 9.21% have spent their income for land development, 6.98% on purchase of land, 5.40% on bank deposits. Then 19.68% of them have purchased cattle, 7.62% have constructed houses, 3.81% have bought furniture and 4.44% have used the additional income for marriages and education of their children.

16. Thus the agricultural labourers have reaped many direct and indirect benefits from the karkhana. About 98.10% of the agricultural labourers' families avail of educational facilities made possible due to the karkhana. Then 34.60% of the agricultural labourers families have benefited by employment to their members in the MSSK and in other institutions that have karkhana's
support. Further 38.10% of such families have availed of the medical facilities made possible by the karkhana.

9.2.7. Impact of the MSSK on Business:

1. Bagasse and molasses are the important by-products of a sugar factory. From 1978-79 to 1991-92, the MSSK sold bagasse to the paper plants of other factories and earned income of Rs. 66.59 lakh. In the year 1992, the karkhana started its own distillery plant and its bagasse since then is being used as fuel for the distillery plant, from 1992-93 to 2001-02, the karkhana supplied bagasse worth Rs. 190.06 lakh. Similarly, from 1978-79 to 1991-92, the MSSK sold its molasses to other distillery plants and earned Rs. 217.94 lakh. Due to the installation of its own distillery, from 1992-93 to 2001-02, it supplied the molasses valued at Rs. 1082.26 lakh to its own plant for manufacture of rectified spirit. Then during the period 1978-79 to 1992-93, it sold press mud of Rs. 9.07 lakh to the farmers at concessional rates to increase the fertility of the soil. In 1993 the karkhana erected compost fertilizer plant for processing press-mud and spent-wash. From 1993-94 to 2001-02 the press-mud supplied to the plant was worth Rs. 48.40 lakh. Further the MSSK earned Rs. 7.93 lakh through sale of boiler ash during the period 1978-79 to 2001-02.

2. The MSSK started its distillery plant in 1992 for production of rectified spirit and Extra Neutral Alcohol. During the period 1992-93 to 2001-02 the karkhana sold the products worth Rs. 50.25 crore and earned profit of Rs. 11.78 crore. This has enabled the karkhana to pay higher prices to sugarcane growers.

3. The compost fertilizer plant started by the karkhana produced 1 lakh metric tonnes of compost fertilizer. It was sold to the cane growers fetching an income of Rs. 73.51 lakh to the karkhana.
4. The MSSK has also commissioned the plant producing carbon dioxide. This will help in reducing air pollution and will bring to the karkhana an annual amount of Rs.4 lakh as royalty fee.

5. The MSSK has just completed installation of co-generation project with an outlay of Rs. 47 crore. The project is estimated to produce 22 megawatt of electricity. This project will provide regular power supply (24 hours) to the factory and the farmers in its area of operation. The MSSK is also making plans to produce ethanol.

6. After its establishment, the MSSK encouraged and supported a number of co-operative societies one of which is Mula Co-operation Bank. Initially its share capital was Rs.18.22 lakh. By 2002-03, the share capital reached the figure of Rs.32.80 lakh. At the time of its establishment, the Bank had deposits of Rs. 2.50 crore and by 2002-03, the deposits went up to 13.54 crore. By the end of 2002-03, it has disbursed loans of Rs. 6.37 crore among 4500 needy borrowers and helped solve the financial problems of farmers, traders, agricultural labourers etc.

7. Through the efforts of the MSSK, Mula Central Co-operative Consumers Store has been established at the factory site. It sells at reasonable prices goods of quality, such as groceries, clothes, stationery, electric goods etc. The daily average sale of the stores is around Rs. 40000 to Rs. 50000. The consumers’ store has supplied credit cards to producer members, factory employees, teaching and non-teaching staff of the Mula Education Society to buy the goods of their choice on credit. The store has also recently opened branches at Newasa and Ahmednagar.

8. Another constructive activity of the MSSK is the establishment of Workers’ Co-operative Credit Society for its employees. The society plays an important role in meeting the credit needs of the workers. During the period 1981-82 to 2001-02, the society’s share capital increased 119 times. The
loan disbursement of the society shot up from Rs. 2.18 lakh in 1981-82 to Rs. 325.26 lakh in 2001-02. The society has not only earned profit every year but it has increased every year.

9. The MSSK actively encouraged formation of Sugarcane Transport Co-operative Society in 1990 by bringing together truck owners in its area of operation. The society provides trucks on rental basis to the MSSK for transport of sugarcane.

10. With a view to develop dairy business in its area of operation, the MSSK established Mula Central Co-operative Dudh Society. It opened many milk collection centres in a number of villages. With persistent efforts of the MSSK, from 1991-92 the milk collection centres were converted into 25 independent primary cooperative dudh societies. This gave a fillip to milk production from every village in the karkhana’s area of operation. In the year 1978-79 the average daily milk collection was just around 900 litres. By 2001-02, the daily milk collection rose to 60000 litres, an increase by 66.67 times.

11. In the year 2000 the MSSK helped establishment of Newasa Taluka Dudh Vyavsayik Co-operative Sangh whose daily milk collection is 60000 litres. Every fortnight, the sangh makes milk payment of about Rs. 60 lakh. This is a very important contribution of the MSSK to the rural economy and has enhanced the economic improvement of the farmers.

12. The karkhana also made efforts to establish Mula Central Co-operative Poultry Society in 1996.

13. The karkhana opened on its site ‘Bhahini Sahakari Business Society’ a co-operative enterprise for women. It provides employment to women and helps augment their incomes.
14. There has been a large growth of population on the karkhana site after its establishment. The rising income levels of the farmers and the karkhana employees increased their wants and demand for various goods and services also rose rapidly. The result of this a large number of businessman, settled at the karkhana site. There are 283 commercial shops and establishments on the karkhana site.

15. During the period 1978-79 to 2001-02, the MSSK exported 1,66,796 quintals of sugar and earned for the country foreign exchange worth Rs. 1218.46 lakh.

16. With the establishment of the MSSK, there has been heavy turnover in the business of harvesting and transport of sugarcane. During the period 1978-79 to 2001-02, the karkhana spent a total amount of Rs. 90 crore on this account.

17. With the establishment of the MSSK, the incomes and standard of living of the businessmen residing at the karkhana site have improved. In 2001-02, 51.35% of the businessmen lived in cement concrete houses, 29.73% of them lived in medium houses and 8.11% lived in rented houses and 10.81% lived in huts. In 1978-79, the businessmen residing at the karkhana site did not have any household equipment apart from household utensils. However, in 2001-02, 78.38% of the businessmen had TV sets, 45.95% of them had CD players. Then 48.65% of businessmen used fuel gas, 54.05% of them had refrigerators and 43.24% of them owned air-coolers. Further 62.16% of them had telephones, 51.35% had motorcycles and 13.51% of them owned motorcars. It can thus be concluded that after the establishment of the karkhana, the standard of living of the families of businessmen on karkhana site improved significantly.

18. With the increase in the incomes of the above-mentioned businessmen, change in their expenditure pattern has also been noticed. It is found that
40.54% of the businessmen invested a part of their income in their running business, 16.22% of them spent a part of their income for new business. Further, 8.11% of them purchased land, 13.51% kept money in bank deposits, 13.51% of them have bought furniture, 10.81% of them purchased vehicles. And 10.81% of them spent a part of their income on the marriages and education of their offspring.

19. The families of the businessmen at the factory site have derived many direct and indirect benefits from its establishment. 59.60% of them loans on time. The educational facilities provided by the karkhana have been availed of by 91.89% of the businessmen’s families. The karkhana run dispensary has given medical facilities to 89.19% of these families. Then 10.81% of these families have their family members employed in the factory and in various institutions started by the MSSK. This has resulted in rise in their incomes and standard of living.

9.2.8. Impact of the MSSK on Infrastructure Development and Social Welfare Activities:

The MSSK with prior consent of its members has created ‘Area Development Fund’ by deducting some amount from their sugarcane bills. A number of social and cultural activities are carried out in its area of operation from this fund.

(A) Infrastructure Development:

1. The karkhana has been making all efforts to built roads and keep them in good repairs so that the harvested sugarcane is immediately transported to the factory in trucks, tractors and bullock carts. It has constructed some roads in its area of operation by spreading murum and sand; some have been laid with broken stones and some with broken stones bound with tar. A few bridges and culverts have been built on a few roads. During the period 1978-79 to 2001-02, the MSSK spent Rs.156.22 lakh on roads and repairs in its
area of operation. This has benefited all the villages in the karkhana’s area of operation.

2. In 1979, the MSSK established Mula Education Society. Its object is to bring about educational development in the karkhana’s area of operation and to provide educational facilities to the children of farmers, factory workers, agricultural labourers and businessmen etc. The society runs 4 Primary schools, 13 High schools, 1 Girls’ high school, 1 English Medium public school, 4 Junior colleges, 2 Arts, Commerce and Science Senior Colleges, 1 Agricultural college, 1 Drawing college, 1 B.Ed. college, 1 D.Ed. College. and 1 D. Pharmacy college. A total of 12482 students have been enrolled in these institutions. The society has the staff strength of 532 teachers and non-teaching staff. 40% of the students consist of women. Due to these efforts of the MSSK, the children of farmers, workers, businessmen have been provided with education at local level.

As a supplement to this work, the Society has built separate hostels for male and female students and also for working women. By the end of 2001-02, the MSSK has invested about Rs. 9 crores for educational facilities.

3. The MSSK has provided 236 housing quarters for its employees. They are also provided with drinking water, roads, electricity, playgrounds, health and educational facilities. An amount of Rs.19.05 lakh has been spent for these facilities.

4. A well-spread communication system is very essential for raising sugarcane productivity and for timely crushing of sugarcane. Each of the 16 departments of the MSSK has telephone connections and also there is a separate telephone exchange at the karkhana, from its beginning. Likewise, from 1978-79, the 10 Regional Agriculture offices in the MSSK’s area of operation have telephone connection to monitor and regulate sugarcane harvesting and its transport. This facility helps both the karkhana and the
sugarcane producers in raising sugarcane production and also to be in immediate contact with the karkhana to avoid losses of sugarcane.

5. The karkhana has established a well-equipped dispensary to cater to the needs of its workers, their family members as also the general public in its area of operation. During the period 1978-79 to 2001-02, the dispensary organized 5 family planning camps, three eye-examination camps, one leprosy detection camp and a number of blood-group testing camps for which the MSSK spent Rs. 57,200.

6. The MSSK has appointed special staff to help the sugarcane farmers in its area of operation and advise them about formation of Gobar gas plants. It gives them technical guidance and assists them in preparing loans proposals with subsidies. Loans have been obtained by 193 farmers from MSSK’s area of operation for Gobar gas plants.

7. The MSSK opened a petrol and diesel pump in 1978-79 at the karkhana site to supply diesel to trucks and tractors transporting sugarcane and also for the convenience of the public in its area of operation.

8. The karkhana has provided a bus stop with permanent shed at the karkhana site. This bus stop is very useful to the members, farmers, factory workers, and traders etc, who visit the karkhana regularly.

9. The MSSK has taken in hand construction of a marriage hall building.

10. Various institutions have come up on the karkhana site with the encouragement and support of the MSSK. These institutions provide a great many social services to the public in the karkhana’s area of operation.

(B) Social Welfare Activities of the MSSK:

During the period 1978-79 to 2001-02, the MSSK has carried out the following social welfare activities:
1. It has performed group inter-caste and inter-religious marriages of 117 couples and spent Rs. 1,40,500 for these group marriages. Each couple is presented with a set of stainless steel utensils valued at Rs.200.

2. During the last 24 years, the MSSK has been enthusiastically carrying out tree plantation programme and has so far planted and protected 2,92,765 various types of trees.

3. The MSSK has always gives financial helping hand to the Govt. and affected persons at the time of natural disasters such as floods, famines, cyclones, earthquakes etc. in any part of the country.

4. In times of drought the MSSK opened cattle camps on the karkhana site and arranged for fodder, water and shelter for 1418 cattle heads.

5. During the period 1978-79 to 2001-02, the MSSK implemented a scheme for the educated unemployed in its area of operation. Under the scheme, loans were made available from the banks for purchase of 96 tractors and 44 trucks. The youth have been given the work of transporting sugarcane.

6. Under the 20-point programme of the Govt. of India, the MSSK provided 17 landless labourers from 10 villages in its area of operation with huts at a cost of Rs. 5.50 lakh.

7. The MSSK runs a ‘Zunka Bhakar Kendra’ at the karkhana site to provide full meals at fewer prices for the benefit of sugarcane harvesting and transport workers.

8. It also runs a ‘Sugar School’ at karkhana site for educating children of the harvesting and transport workers.

9. It has given employment to 10 physically handicapped persons in the karkhana.
10. The MSSK has covered all its members with life insurance scheme- Janata Accident Insurance Policy to help the heirs of an unfortunate member meeting with an accident. Till 2001-02, the heirs of the members who died in or who were physically handicapped due to an accident have received insurance amount of Rs. 9,75,000. The insurance premium of the policies is paid by the MSSK.

11. The MSSK has provided various sports facilities at the karkhana site. It has also opened an Extra Mural Education Centre, which arranges for lectures of experts on various topics.

12. The MSSK has erected on the karkhana site, status of Chhatrapati Shivaji Maharaj, the founder of Hindavi Swaraj and of Late Yashwantraoji Chavan, the father of agro-industrial revolution.

13. On the occasion of 7th Centenary year of Shri Dnyaneshwari Grantha, the MSSK organized in 1991 the 7th centenary festival of Shri Dnyaneshwari Grantha. It also sponsored the 70th All India Marathi Sahitya Sammelan in January 1997.

14. The MSSK has started Shri Dnyaneshwar Cultural Foundation at Newasa.

9.3. Testing of Hypothesis:

The MSSK has an overall impact on the rural economy. The karkhana has proved a boon to the people in its area of operation. There has been consistent rise in the income levels and standard of living of the farmers, factory employees, agricultural labourers and businessmen on the karkhana site. Also there has been increase in rural employment. Further, the MSSK has deep impact on the irrigation facilities, co-operative movement, educational institutions, communication system, health and medical facilities as also cultural activities etc. The researcher framed the following hypothesis for testing: “The establishment of the Mula Sahakari Sakhar Karkhana has multiple impacts and has brought about positive socio-economic changes in its area of operation.”
To test the above hypothesis, the researcher got the respective Questionnaires filled in from sugarcane farmers, karkhana employees, agricultural labourers, businessmen and karkhana officials. The researcher also personally interviewed them for this study. Then various statistical data were collected from the annual reports and records of the MSSK and analyzed them. Further, the researcher also went through the studies carried out by the experts and the experienced, eminent persons about the problems faced by the sugar industry from time to time.

After considering all the aspects, it has been observed that the MSSK has provided irrigation facilities in its area of operation with the result the irrigated area has been expanded. Then the MSSK implemented various schemes for sugarcane development for supply of improved seeds to sugarcane farmers, supply of fertilizers on credit, agricultural loans etc. All these efforts have resulted in increased area under sugarcane in the MSSK’s area of operation. The sugarcane farmers have adopted modern methods of cultivation. Agricultural operations are being increasingly mechanized. It is also observed that due to the establishment of the MSSK, the incomes of the sugarcane farmers in its area of operation have increased and so in their standard of living. Similarly there has been a large employment opportunity for the people in its area of operation in the karkhana and its by-product plants. Then a large number of people have been engaged in sugarcane harvesting and transporting and in the various shops and establishments that have come up on and around karkhana site. There has been increase in the sources of incomes of the families of karkhana employees, which, in turn, raised their standard of living. Likewise, the sources of income of the agricultural labourers have also increased.

The karkhana has established distillery plant, compost fertilizer plant, and carbon dioxide gas plant. Also a large number of co-operative societies have also been established with the encouragement and support of the MSSK.
Various trading, occupational and business activities have flourished on the karkhana site. The incomes and standard of living of the families engaged in them have also increased.

Due to the establishment of the MSSK, various infrastructure facilities have increased. They include roads, educational institutions, housing quarters of its employees, communication facilities, social institutions etc. The MSSK has implemented a large number of social welfare activities, such as group marriages, tree planting, afforestation, cattle camps, financial help to educated unemployed, Sugar schools, Zunka Bhakar Kentra, Cultural programmes for its members as also in the general public in its area of operation. Due to formation of the MSSK, it has brought about positive socio-economic changes in the area of operation. The impact of the MSSK on various factors is discussed in detailed in the Chapter No. V to VIII. Important conclusions are also recorded in Chapter No. IX.

By adopting the selected research methodology, the hypothesis that the socio-economic impact of the MSSK on the various factors in its area of operation has been positive, stands proved, it is also cleared from the related chapters and conclusions part of the research work.

9.4. Suggestions:
1. The MSSK produces sugar from the sugarcane. Its crushing season generally lasts for about 160 days a year. If the MSSK adopts beet sugar technology, it can operate throughout the year and will also provide employment to a large number of people in its area of operation and help to reduce unemployment problem up to some extent. It shall also increase its profits and benefit its members with rise in their incomes.

2. The MSSK has paid the maximum cane price of Rs. 865 per tonne. However, it is observed that the producer members are demanding cane price in the range of Rs. 1000 to Rs. 1100. The sugarcane price depends on the
price of sugar and other incidental costs. Therefore, it is necessary for the MSSK to reduce its operational expenditure, which will enable it to offer higher price to sugarcane.

3. During the period, 1978-79 to 2001-02, the yield of sugarcane production per hectare has been declining in the karkhana’s area of operation. The karkhana should introduce new varieties of sugarcane and new methods of cultivation so that the yield of sugarcane per hectare increases. This will enhance the incomes of the cane-growers. At the same time, the farmers should be persuaded to follow scientific rotation of crops and not to take sugarcane production continuously from the same land. They should also be guided about balance use of fertilizers and appropriate use of water.

4. The MSSK arranges for the facility of soil analysis to the farmers in its area of operation through the research centre of Mahatma Phule Agricultural University, Rahuri. If the karkhana establishes its own soil analysis laboratory, it will help farmers to raise fertility of the soil and they can use proper doses of fertilizers and water according to the type of the soil.

5. The Panaswadi No.1 Lift irrigation scheme started by the MSSK has been closed due to financial difficulties. The karkhana should provide financial assistance and re-start the lift irrigation scheme.

6. The MSSK has to procure a large number of workers for harvesting and transporting of sugarcane. The karkhana has to incur every year huge expenditure to get the workers from outside the Taluka and the District. If use of harvesting machines is introduced, it will help to procure fresh sugarcane from the fields in the minimum possible time, which, in term will help to raise sugar recovery rate. Economy in the expenditure of harvesting and transport workers will be effected.

7. In order to improve the knowledge and skills of the elected directors, the karkhana should offer introductory courses and comprehensive training
programmes and mercantile and co-operative laws and by-laws of the karkhana. At the same time it should be made obligatory for the directors to complete such training programmes.

8. About 10 years ago, water from the Mula Dam was made available to the sugarcane crop in the karkhana’s area of operation after every 10 to 12 days. At present, water is supplied after a month. Due to inadequate water supply, the sugarcane production is declined. The karkhana should pursue the matter at the Govt. level to plan water supply after every 10 to 12 days. This will increase sugarcane production and the incomes of the sugarcane farmers.

9. Because of the expanding irrigation facilities provided by the MSSK, the area under sugarcane has consistently expanded in the MSSK’s area of operation. However, the expansion is less in rain-fed areas than in irrigated villages. The karkhana should strive to provide more irrigation facilities to the rainfed villages so that there will be increase in both the sugarcane area and incomes of the farmers.

10. The MSSK harvests mature sugarcane for crushing. However, this is done according to sowing-dates. Instead, the samples of sugarcane should be tested for sugar recovery in the karkhana’s laboratory before harvesting. This will ensure that only the mature cane is harvested. This will give more returns to the farmers.

11. It is found that in the year 2001-02, the karkhana had 30 surplus employees as per the guiding principles laid down by the State Govt. Surplus employees means additional labour cost and less price for sugarcane farmers. The karkhana should scrupulously avoid overstaffing because once an employee is appointed; it is very difficult to terminate his services. Norms of employment in sugar factory should be strictly followed by the MSSK.
12. The landholder karkhana employees in the karkhana’s area of operation who are not members of the MSSK should be persuaded to become members of the karkhana.

13. The MSSK has constructed 236 staff quarters on the karkhana site. However, taking into consideration the number of employees, the facilities are inadequate. More housing accommodation should be provided to the employees.

14. With a view to provide services on a large scale to the public in the MSSK’s area of operation, efforts should be made to open branches of Mula Central Co-operative Consumers Stores in every village in the karkhana’s area of operation.

15. The MSSK has encouraged and established a number of co-operative societies to cater to the various needs of the people. The karkhana should make all out and consist at efforts to strengthen these societies and spread the co-operative movement.

16. The karkhana should utilize its and entrepreneurial skills and leadership for development of organized ancillary industries in its area of operation, such as piggery, bakery, cattlefeed plant, artificial insemination centres etc. With such development, the incomes of marginal, small and other farmers can be increased substantially.

17. The karkhana does not have sufficient storage capacity for its molasses with the result it gets spread out in the karkhana’s surrounding areas and polluting there. To put an end to this pollution, arrangements should be made to carry the molasses through pipeline to such place where it will not be a hazard to public health.

18. It should purchase sets of blasting and boring machines for making more water available to the wells and thereby help the farmers.
19. The karkhana has opened a dispensary on the karkhana site. However, it cannot admit indoor patients. The MSSK should open a full-fledged and well-equipped hospital to treat indoor patients for the employees, agricultural labourers and general public.

20. A few of the rainfed villages in the MSSK’s area of operation have to depend on water tankers for supply of water during summer season. The karkhana should implement drinking water schemes for such villages and solve the problem forever.

21. To ensure self-development of the people in its area of operation, the MSSK should try to inculcate in them awareness of their rights as well as duties and responsibilities.

22. The MSSK should establish a small library with books, periodicals in regional language giving information about recent developments in production of sugar and sugarcane cultivation. This should be supplied to the employees, members, and sugarcane producers etc. for their guidance.

23. The karkhana should set up Agro Service Centres in its area of operation for giving servicing and repair facilities to the farmers. These centres can also be utilized for distribution of improved seeds, fertilizers, pesticides, lubricants, motor winding facilities. Then machinery required for digging wells and the technical guidance of ground water search, tractor spare parts should be provided through co-operative agencies at reasonable prices.

24. The MSSK should arrange for libraries in all the villages in its area of operation. These will help in spreading literacy and educational development of the people.

25. The MSSK should arrange for training camps for farmers to guide them about dairy and poultry businesses.
26. The MSSK should develop habit of thrift among the people in its area of operation. They should be persuaded to save for the future and encourage them to develop banking habits.

27. The karkhana should arrange for two group marriage ceremonies every year.

28. The MSSK should avail of Internet services for profitable sale of sugar. The Internet sales gives access to huge markets and give competitive prices. The higher prices give more profits to the karkhana.

29. The MSSK should set up an Entrepreneurship Guidance Cell to increase self-employment opportunities for the educated unemployed in its area of operation.