



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2016; 2(7): 727-730
www.allresearchjournal.com
Received: 14-05-2016
Accepted: 15-06-2016

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Growth and productivity of co-operative sugar factory in Maharashtra

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Abstract

Maharashtra sugar industry is one of the most notable and large scale sugar manufacturing sector in the country. The Maharashtra sugar industry has been contributing nearly 40% of India's, total sugar production. The pace of growth of sugar manufacturing has been massive over the past few years. The latest sugar statistics of sugar production in Maharashtra indicates that this state is doing better than the other states in the country. The sugar industry in Maharashtra is highly popular in the co-operative sector, as farmers own a portion in the sugar factories. These co-operative sugar factories are backbone of the sugar industry of Maharashtra. The Maharashtra sugar industry has been a spectacular growth owing to the different conducive in the state. One of the chief crops manufactured in Maharashtra is sugarcane with most of sugar industries been setup over the years.

Keywords: Developmental trend, production, utilization, consumption pattern, etc

Introduction

Maharashtra state is located geographically in the world's most ideal belt for growing sugarcane. It was a late starter in sugarcane cultivation compared not only to other countries located in this belt but compared even to other areas in India such as Uttar Pradesh and Bihar. These Northern States situated in subtropical belt are not located in the ideal belt. Maharashtra sugar industry is one of the most famous and large scale sugar manufacturing sectors in India. Sugar manufacturing has been growing at a massive pace since past few years and a glance at the latest statistics regarding sugar production reveals that Maharashtra is doing better than other states. The sugar industry in Maharashtra is widely popular in the co-operative sector since farmers possess a share in the sugar factories. Maharashtra has witnessed an outstanding growth in its sugar industry. Sugarcane is one of the chief crops among all other crops produce in Maharashtra. A number of sugar industries have been established in Maharashtra.

History of sugar industries in Maharashtra

British government started first sugar factory in 1919. This was the Belapur Sugar mills at Haregaon in Ahmednagar district of Maharashtra. Then R.N. Hiremath and G.N. Sahsatrabudhe introduced concept of establishment of co-operative sugar factories in 1912. First sugar factory in cooperative sector is established in 1918 in the name of 'The Neera Valley Co-operative Sugar Factory' at Baramati in Pune district. But it closed nearly. The second sugar factory was established in 1930, viz. the Walchand Sugar factory. During the period of 1933 to 1934 six new factories are established. Until 1941, 12 sugar factories were in existence in Maharashtra. In 1950, Dr. Vithalrao Vikhe Patil started Pravara Co-operative Sugar Factory at Loni in Ahmednagar district. It is a milestone of development of Co-operative sugar industry in Maharashtra. There are 199 installed sugar factories (2009- 2010) in the state but out of them 142 factories are in operation with production of sugar 7.066MTs. Before independence there was not a single cooperative sugar factory in Maharashtra. In 1948, the first cooperative sugar factory was established in Maharashtra in the Ahmednagar district, viz. the Pravara Cooperative sugar factory. From this period onwards, large numbers of cooperative sugar factories have been established in India, especially in Maharashtra. Now sugar factories have become a dominant aspect of agro industrial picture in Maharashtra.

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Statement of the Problem

Sugar industries in Maharashtra are facing financial problems in Maharashtra. The cane producers are agitating for higher prices and most of the sugar factories are unable to pay the minimum fair and Remunerative sugar price declared by the central government. Financial weaknesses are the main problem faced by sugar industry. Recently maximum sugar industries established by-product manufacturing plants to fetch financial position. Co-generation, ethanol, spirit, bio-compost, biogas, chemical, industrial alcohols are the multiple by-products that can be manufactured by sugar industries to fetch additional income.

Literature Review

Lokhande M.A. (2005) ^[1] revealed that sugar industry is the second largest agro-based industry in India. Sugar factories, particularly cooperative sugar factories in Maharashtra and other states have been instrumental in building confidence among rural people, and strengthening industrial base in rural India. In the era of globalization, sugar industry needs more competitive edge which can be given by way of modernization, enhancing productivity, and manufacturing excellent quality sugar at competitive prices. Projects based on bagasse and molasses should be initiated. Ethanol, alcohol, and paper projects have tremendous scope for development in India. In future, 10-15% ethanol may be allowed to be blended with petrol. Bagasse based power generation projects installed adjacent to each sugar factory would fulfill need of power. V. M. Hilage (1989) ^[3] studied the growth of sugar industries in India in general and co-operative sugar sector in Maharashtra in particular. The main objective of the study was to take review of methods of performance analysis and detements of performance to evaluate the performance of two selected units situated in southern Maharashtra and to study the top management style and climate of the organization for the period 1976 to 1986. The study revealed that the Co-operative Act 1904 played a significant role till 1947 in sugar sector. But the co-operative sugar sector suffered from financial weaknesses, lack of professionalism, under developed marketing system and the low production of sugar. Kakade V. B. (1995) ^[4] revealed the capacity utilization of co-operative sugar factories in Maharashtra State. The research was based on published data during the period from 1981 to 1990. The main objectives were to find out the degree of capacity utilization, BEP and variation and the cause for change in capacity utilization. The study revealed that the capacity utilization depends upon the supply of sugarcane. Joshi C. J. (1991) ^[5] analyzed the finances of sugar factories (From 1960 to 1987) in Kolhapur District of Maharashtra. The objectives were to measure the liquidity, solvency, efficiency, working capacity, profitability and socio-economic developments. The study revealed that the financial performance depends on internal and external factors; internal factors are factory maintenance, employee behavior, liquidity, solvency and profitability. The external factors were social, economic and political. The study concluded with remarks that the units should enhance their equity capital; introduce cane development programme, man

power planning and plant modernization. Ingale B.D. (2011) ^[6] in his research article discussed that the development of sugar industry in the state is progressive but after globalization support of state government is declining. So, Sugar industry in Maharashtra spacing to so many problems. Currently, a sugar cane price is a burring problem in Maharashtra state. For the season 2009-10 the central government fixed Fair and Remunerate Prices of RS.129.84 per quintal and 4 percent incremental recovery rate F.R.P. will be 9.5 percent means, recovery rate is a base of Fair Remunerate Price. Kumar Vijay (2009) ^[7] concluded that Maharashtra top in sugar production as well as recovery of sugar. Due to the weight loosing nature of sugarcane, all sugar factories are established in sugar cane area. These factories play vital role in the socio economic development of rural areas in Maharashtra. From the last two decades sugar industry in Maharashtra has facing various internal and external problems.

Objectives of the study

The principal objectives of the study are:-

1. To study the development trend in co-operative sugar industries in Maharashtra.
2. To understand the progress of sugar industry in Maharashtra.
3. To highlight on crushing of sugarcane, sugar production and Sugar Recovery Percentage of sugar industries in Maharashtra.

Research Methodology

The concern study is depending on secondary data. The data has been collected through journals, magazines, Articles published in various types of conference proceeding, Ph.D. thesis, websites, Maharashtra Rajya Sahakari Sakhar Karkhana Sangh, report of National Federation Co-operative Sugar Factories Ltd. (NFCSF), Vasant Dada Sugar Institute, Pune (VSI). The interpretation and analysis of data will be based on statistical tools and techniques.

Zone/ district wise sugar industry in Maharashtra

Maharashtra has been pioneering state with respect of setting up co-operative sugar factory and the first such factory was set up in 1948. The successful establishment and operation of this factory initiated a trend in co-operative development with rapid multiplication of co-operative factory in the state. Based on joint consideration of sugar recovery, yield and different cultural practices adopted to suit the environmental conditions the areas can be grouped into distinct zones;

1. South zone – Comprising Kolhapur, Sangli and Satara districts and extending into adjoining Karnataka state.
 2. Central zone – Comprising of Pune, Ahmednagar, Nasik, part of Sholapur and Phaltan Taluka of Satara district.
 3. Marathwada and Vidarbha Region – Comprising Marathwada and Vidarbha regions and newly developing areas of Dhule and Jalgaon districts.
- The following table no. 1 gives the detail statistics of district wise sugar factory in Maharashtra.

Table 1: District-wise of sugar factories in Maharashtra 2012-13

Sr. No.	Zones / District	Co-operative Sugar mills in operation	Private Sugar mills in operation	Total Sugar mills in operation
A) Central Maharashtra				
1	Ahmednagar	12	05	17
2	Pune	11	05	16
3	Nasik	05	03	08
4	Solapur	14	15	29
	Total	42	28	70
B) South Maharashtra				
5	Kolhapur	16	04	20
6	Sangli	12	03	15
7	Satara	08	03	11
	Total	36	10	46
C) Northeast Maharashtra				
Marathwada				
8	Aurangabad	03	03	03
9	Jalna	03	01	04
10	Beed	04	01	05
11	Parbhani	00	04	04
12	Hingoli	03	00	03
13	Nanded	03	00	03
14	Osmanabad	04	04	08
15	Latur	06	04	10
	Total	26	17	43
Vidarbha				
16	Buldhana	00	00	00
17	Yavatmal	02	01	02
18	Akola	00	00	00
19	Washim	00	00	00
20	Nagpur	00	01	01
21	Amaravati	00	01	01
22	Bhandara	00	02	02
23	Wardha	00	01	01
	Total	02	06	08
Khandesh				
24	Dhule	01	00	01
25	Nandurbar	01	01	03
26	Jalgaon	02	00	02
	Total	04	01	05
	State Total (A B C)	110	62	172

Source: Technical performance of sugar mills in Maharashtra 2012-13, VSI

From the above table no.1.1 it can be observed that there are at present 172 sugar factories in the state, out of which 109 are in co-operative sector while only 62 are in private sector. South and central Maharashtra has adequate irrigation facilities and other complementary inputs therefore maximum sugar factories are located in this area. Kolhapur has the highest number of co-operative sugar factories (16) while Solapur has the highest number of private sugar factories (15) in Maharashtra. Solapur has maximum number (29) of both co-operative (14) and private (15) sugar industries in Maharashtra. Marathwada, Vidarbha and Khandesh followed suit, lack of irrigation facilities, despite the fact that they are not gifted with the necessary factor endowments.

Progress of Sugar Industry in Maharashtra

There are some features of technical performance such as duration of season, crushing capacity and its utilization, lost hour percentage to available hours, cane quality, fiber, purity, sugar recovery, milling performance, biogas, reduced mill extraction, boiling house efficiency, total sugar losses, consumption of chemicals.

Table 1.2: Progress of sugar industry in Maharashtra

Particular	Season				
	2008-09	2009-10	2010-11	2011-12	2012-13
No. of installed sugar mills	195	199	209	215	225
Installed capacity ('000 TCD)	474.70	501.20	534.90	556.40	590.50
No. of sugar mills not in operation	50	57	42	42	54
No. of sugar mills in operation	146	142	167	173	171
Gross crushing days	107	170	186	157	130
Capacity utilization percentage	97.67	94.91	93.23	98.56	106.74
Lost hours percent to available hours	15.31	15.44	15.63	13.35	10.35
Share of state in country's sugar production (percentage)	31.16	37.79	37.41	34.54	31.96

Source: Technical performance of sugar factory in Maharashtra 2012-13, VSI Report.

From the above table and graph revealed that the technical performance of sugar mills in the state for last five seasons (2008-09 to 2012-13). Maharashtra state produced more than 7 million tonnes of sugar in each of the season except 2008-09. There are 225 sugar mills installed in the state with average sugarcane crushing capacity of each sugar mills is 2622 M.T. per day. Out of the total sugar mills in the state 24 percent mills are non-operating due to financial and other problems. The proportion of non-operating sugar mills are fluctuating. Most of the sugar mills completed their crushing season in 4 to 5 months whereas crushing season should be 6 months. Due to non-availability of sugarcane, crushing period was less than 5 months. It was reversely affected on their financial health. The share of state in country production is always more than 31 percent from 2008-09 to 2012-13.

Developmental Trend of sugar production in Maharashtra

The main factor affecting the sugar production is the availability of raw material i.e. sugarcane for crushing. Production of sugarcane and sugar in the country has shown wide fluctuations from year to year. These fluctuations are due to variations in the area under sugarcane, mainly sugarcane production depends on pattern of rainfall, incidence of disease and pests on crop, availability of seeds material, irrigation facility and availability of fertilizer as per recommendation, climatic condition, water availability during the crop growth period and most important government policy on sugarcane pricing and timely payment of cane price to the sugarcane grower. Following table show trends in sugarcane, sugar production and recovery in Maharashtra.

Table 1.3: Trends of sugarcane production in Maharashtra.

Year	Sugarcane crushed (M.T.)	Sugar production (M.T.)	Recovery (percentage)
2008-09	400.42	461.4	11.52
2009-10	614.47	710.6	11.56
2010-11	802.52	907.2	11.30
2011-12	771.08	899.6	11.67
2012-13	700.26	798.7	11.41

Sources: www.mahasugarcom.gov.in

From the above table and chart it can be said that sugarcane crushed in various seasons was always fluctuating. It is depend on rainfall and availability of water resources. The sugar production is depends on crushing of cane. Hence it was also showing fluctuating trends. Sugar production was always more than cane crushed, because average recovery more than 11 percent.

Conclusion

1. It can be concluded that South and central Maharashtra has adequate irrigation facilities and other complementary inputs therefore maximum sugar factories are located in this area whereas Marathwada, Vidarbha and Khandesh followed suit, lack of irrigation facilities, despite the fact that they are not gifted with the necessary factor endowments so that these are facing financial problems as compare to south and central Maharashtra.
2. There are 225 sugar mills installed in the state with average sugarcane crushing capacity of each sugar mills is 2622 M.T. per day. Out of the total sugar mills in the state 24 percent mills are non- operating due to financial and other problems.
3. The total crushing capacity of the established sugar factories in India is about 158.4 lakh tones and that of the Maharashtra is about 32.52 lakh tones which are 52.57 per cent of the total. Average recovery of India is low as compared to Maharashtra. In Maharashtra, average recovery is 11.40 per cent which is the highest as compared to other sugarcane producing states in India.
4. In order to utilize its capacity fully and run efficiently, the sugar mills within the industry should get uninterrupted supply of raw sugar cane uniformly throughout the seasons and the government should ensure the supply of raw inputs. There is a need of coordinated and concerted effort for appreciation and consolidation of the needs of the consumer.
5. There is an urgent need to improve in productivity both in terms of yield as well as sugar contents and recovery by adopting better harvesting practices and close coordination of sugar mills with farmers.

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