

“PRODUCTIVITY AND FINANCIAL HEALTH ANALYSIS OF TAMIL NADU CO-OPERATIVE SUGAR INDUSTRIES: A STUDY”

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Abstract

The focusing on productivity and financial health analysis of Tamilnadu Co-operative sugar industries are playing a vital role in determining the financial viability of the sugar industries. The analysis of the financial statements is the process of evaluating the financial viability, profitability ratio, long term solvency ratio, current asset, liquidity ratio and efficiency in asset utilization of the sugar industries operating in the state of Tamil Nadu during the financial year between 2008-2009 and 2016-2017. The Sugar industries are basically depending upon the agricultural production, geographical and climate conditions of the State. Knowingly the researcher made an attempt to evaluate the sugar industries, whether the financial performance and the productivity level based on the season, climate conditions, geographical area wise they are physically powerful or not in the circumstances.

Keywords: Sugar Industry, Productivity, Financial Performance

I. Introduction

India has been known as the original home of sugar and sugarcane. Indian mythology supports the above fact as it contains legends showing the origin of sugar cane. India is the second largest producer of sugarcane next to Brazil. Presently, about 4 million hectares of land are under sugarcane cultivation with an average yield of 70 tonnes per hectare.

Sugar and sugarcane have been known in our country from pre-historic times. India is the birth place of sugar cane. In 800 the BC sugar cane was taken to China. Alexander introduced it to the Western Hemisphere in 300 BC. Sugar manufacture started in India between 4th and 6th century A.D. juice was extracted from the cane by crushing it with heavy weights. The juice was then boiled and stirred until solids were formed. These solids of uneven size and shape looked like gravel and were hence called Sharkara, a Sanskrit term for gravel. China and Persia learnt the art of sugar manufacture from India in the early part of the 7th century.

II. IMPORTANCE OF THE SUGAR INDUSTRY

Sugar cane is one of the most important cash crops in India. It is perhaps one of the most regulated industries in the Indian economy. This industry was the first commodity to be brought under the control of the Government of India dating back to 1942. The sugar industry has in fact laid the foundation for the present day capitalists of India. Primarily diversified from this basic industry after independence, development of the sugar industry involves difficult policy tradeoffs in terms of growth, efficiency and equity. However, in a protected domestic market, the fastest growing sugar industry had changed in its location and urge questions relating to public policy. The new Industrial Policy Statement (1991) too surprisingly has not touched the sugar industry either in terms of de-regulation or bringing it under the umbrella of liberalization when some of the other important agro-based industries have been opened up for foreign investment.

III. SUGAR INDUSTRIES IN TAMILNADU

The sugar industry has great significance to the economy of India. It plays an eminent role in the Indian economy due to its multiple contributions in the shape of employment and provision of raw materials to other industries. Since production and productivity of sugarcane are crucial factors for the sugar industry, progress in the cultivation of cane merits our attention. Data on the cultivation of sugar cane in Tamilnadu can be found in Table 1.

Table 1
Area under sugarcane in Tamilnadu

Year	Area under Sugarcane ('000 Hectares)	Production of Cane ('000 tonnes)	Yield per Hectare (tonnes)
2008-2009	309	32804	106.2
2009-2010	293	29746	101.5
2010-2011	316	34252	108.4
2011-2012	346	38576	111.5
2012-2013	347	33919	97.7
2013-2014	313	32454	103.7
2014-2015	263	28093	106.8
2015-2016	252	25494	101.2
2016-2017	218	18988	87.1

Source: Cooperative Sugar, October 2018, Vol. 50, No. 2, pp. 54-56.

During the study period, the area of land under sugar cane raised by 10 percent during 2010-2011. The highest rate of increase in production of cane was due to an increase of 6 percent in the yield of cane per hectare during 2011-2012.

Figure – 1: Area under Sugarcane ('000 Hectares) in Tamilnadu

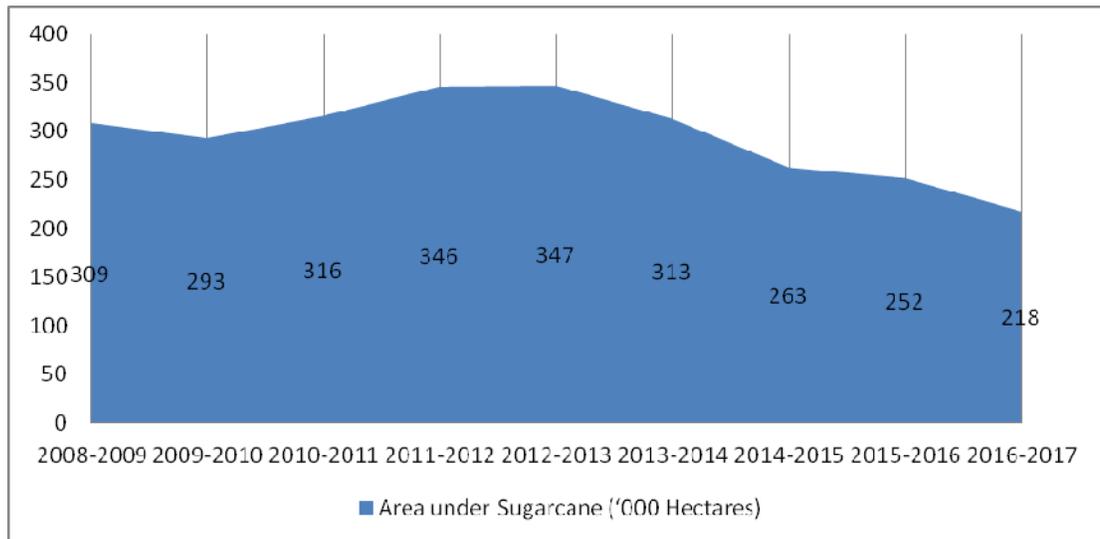


Figure – 2: Production of Cane ('000 tonnes) in Tamilnadu

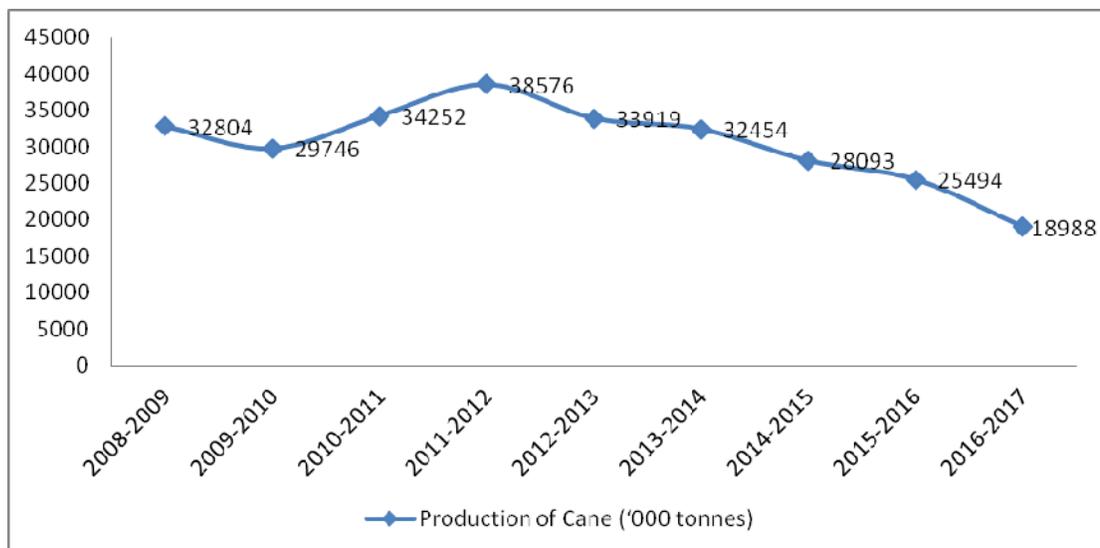
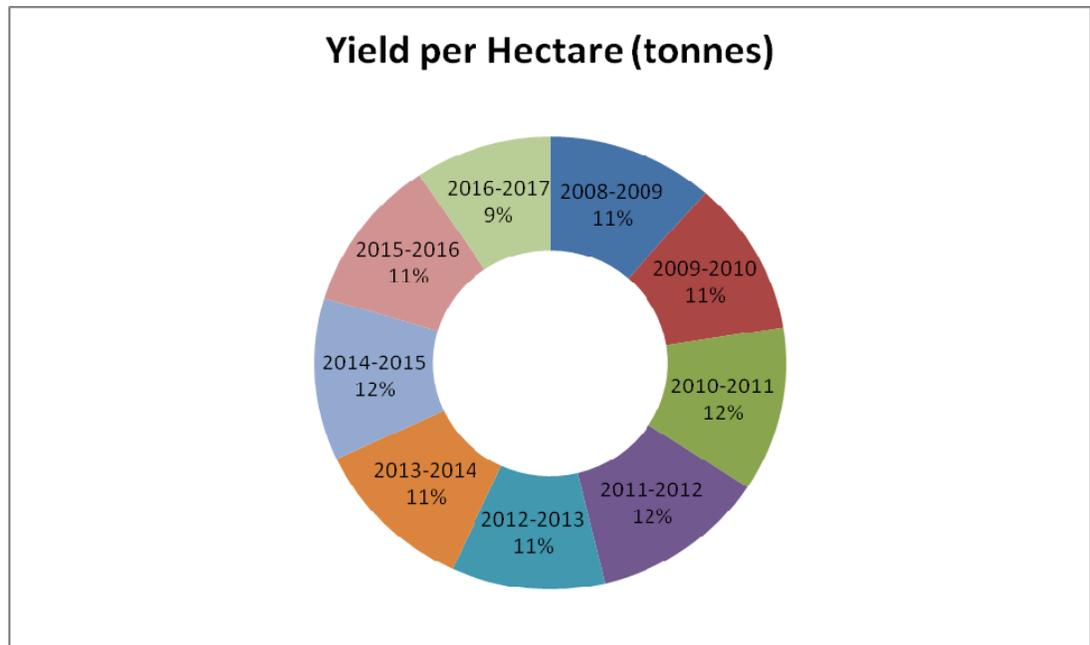


Figure – 3: Yield per Hectare (tonnes) in Tamilnadu



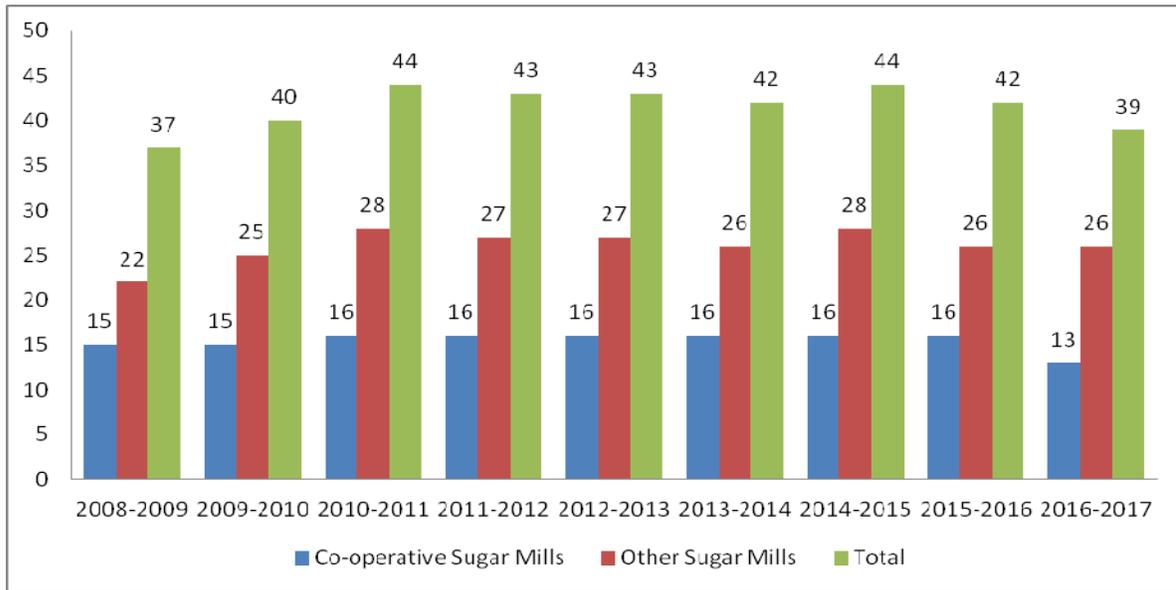
As in the rest of India, in Tamilnadu also Co-operative sugar mills function along with sugar mills the private sector. Data on number of sugar mills in Tamilnadu can be found in Table 2.

Table 2
Growth of Sugar Mills in Tamilnadu

Year	Co-operative Sugar Mills	Other Sugar Mills	Total
2008-2009	15	22	37
2009-2010	15	25	40
2010-2011	16	28	44
2011-2012	16	27	43
2012-2013	16	27	43
2013-2014	16	26	42
2014-2015	16	28	44
2015-2016	16	26	42
2016-2017	13	26	39

Source: Cooperative Sugar, October 2018, Vol. 50, No. 2, pp. 64.

Figure – 4: No. of Sugar Industries in Tamilnadu



IV. STATEMENT OF THE PROBLEM

Sugar is a consumer product; it comes under essential commodity act and every person, whether rich people or poor people are paying attention in its accessibility with adequate quantity and at a realistic cost.

The Co-operative Sugar industries actively contribute in the development of the state as well as Indian economy. It covers 4.4 lakhs acres of cultivated area and crushing 256.38 million tons of sugar cane, further it provides employment opportunities to 2.8 lakhs of people of Tamil Nadu. Its production, fixation of price and overall managerial affairs are controlled by the Government of Tamil Nadu. In a particular situation, the price is fixed on the basis of last year trends in production, its cost and other economies of previous years. Hence the sugar Industry particularly Co-operative Sugar Industries in Tamil Nadu have incurred heavy losses.

Study of the performance of these cooperative sugar industries will offer valuable feedback for strengthening them and will provide guidance in shaping the approach and policies for rural development, in general and agro - industries in particular.

V. SCOPE OF THE STUDY

“Productivity and Financial Health Analysis of Tamil Nadu Co-Operative Sugar Industries: A Study” has made an attempt to examine the various fiscal aspects of sugar industries. It examines a variety of aspects such as liquidity, solvency, turnover, efficiency, long term debt and etc. during the study period. It is an explicit study, which is restricted to

financial aspects only and it's purely based on the secondary data which also limits the scope of the study. The present study expresses the fiscal position of the sugar industries in Tamil Nadu for the study period and offers a valuable feedback for strengthening the sugar industries.

VI. OBJECTIVES OF THE STUDY

The present study aims at diagnosing the financial conditions of the Tamilnadu co-operative sugar industries in order to develop remedial measures, if required, for strengthening the finances of these mills. Specific objectives of the present exercise are as under;

- ❖ To measure the production and sales performance of the sugar industry.
- ❖ To evaluate the profitability of the selected sugar industry.
- ❖ To measure the financial health of the sugar industry.
- ❖ To identify the factors influencing financial health conditions.
- ❖ To suggest suitable measures for the development of Sugar industries.

VII. METHODOLOGY

The present study fully based on the secondary data. They are collected from the Annual reports of Tamilnadu Co-operative Sugar Industries, audited report of concern sugar mills, journals, books and websites. The purpose of this study is to examine and evaluate the profitability, liquidity, long term solvency position and efficiency in asset consumption of sugar companies under study and to offer findings and suggestions to improve the financial position of sugar companies.

The tool used for the study includes Motaal's Comprehensive Test Z – Score Ratio, Ratio Analysis, Trend Analysis, Comparative Financial statement, Common Size statement, and Correlation and to understand the actual financial position, trend projection made to projected for the following forthcoming years based on the actual position.

VIII. REVIEW OF LITERATURE

The researcher undertook a study of literature pertaining to the sugar industry in order to find out what had already been done in this field and to identify those aspects, which expected inspection. The following are the reports, books and articles consulted by the researcher;

Dr.A.P.J.Abdul Kalam (2010)ⁱ had a word for the sugar technologists, that they have to create a partnership between agricultural scientists, extension workers and farmers, so that there is persistent effort to increase the per hectare productivity in all the states of the country taking the experience of high yielding varieties of different states.

Balasubramanian (2012)ⁱⁱ in his study of the Financial Performance of Sugar Industries in India is an attempt as to review progress of sugar industry in India, understand its problems and challenges in the context of the ongoing liberalization process. He concludes in the era of globalization, sugar industry needs a more competitive edge which can be given by way of modernization, enhancing productivity, and manufacturing excellent quality sugar at competitive prices. It needs quality management at every level of activity to enhance its performance. Most of the sugar units do not have byproduct utilization plants. Projects based on bagasses and molasses should be initiated, Ethanol, alcohol, and paper projects have tremendous scope for development in India. In future, ten to fifteen percent prices should be fixed on basis of sugar recovery.

Dr. Kanagaraju P. (2012)ⁱⁱⁱ in his presentation on “ A Study on Working Capital Management in Tamilnadu Sugar Corporation Limited (TASCO)” has given the following conclusion ‘Indian sugar industry, second agro-based processing industry after the cotton textile industry in India, has a lion’s share in an accelerating industrialization process and bringing socio economic changes in underdeveloped rural areas. Sugar industry covers around 7.5% of total rural population and provides employment to 5 lakhs rural people. About 4.5 crore farmers are engaged in sugar cane cultivation in India. Sugar mills (co-operative, private and public sector) have been instrumental in initiating a number of entrepreneurial activities of rural India. Tamil Nadu public sector sugar mills incurred losses for the five years ended 31st March 2005 and their paid up capital as on that date had been completely eroded by the cumulative losses. The Arignar Anna sugar mill has incurred a loss of Rs. 6.04 crores (provisional) in 2004-05, while Perambalur sugar mill incurred a loss of Rs. 5.80 crores. The main reason for the losses incurred by these two mills was the heavy interest burden on funds borrowed from the government and other public sector undertakings. These borrowed funds were utilized as working capital that is to make payment for sugar cane procurement. Public sector sugar mills could reduce the working expenditure, the sugar mills should also be allowed to diversify their operations to increase the revenues. Byproducts of the sugar mill viz., baggage, molasses and press mud, should be gainfully utilized for increasing the rename of the mills.

Malik & et al. (2012)^{iv} in their article on Affect of Working Capital Management on Firms Profitability in Sugar Industry of Pakistan test the impact of working capital management on firm's profitability in sugar industry of Pakistan. Pearson Correlation and Multiple Linear Regression are used in this research to study the relationship between variables. The result shows that the sales growth, current ratio, Number of day's inventory and Number of day's accounts payables are significantly affecting the profitability of the firms while Sales, gearing ratio and Number of days account receivables are insignificant in the research.

Yashwant and Neeraj Kumar (2012)^y undertook a study on Financial Wealth, Health of Mawana Sugar Mill - A Case Study. In this paper an attempt has been made to study the degree of the financial health of the selected units with the help of Edward Altman's Z-score model and the comparison of wealth and health among the selected units with the help of statistical tools i.e. Mean, Standard Deviation and Coefficient of Variation. The objective of the study is to ascertain the degree of financial health condition of the selected units and the success thereof. Financial health reflects the success of the sugar mills. The scenario circles around diagnosing the wealth health of sugar mill by peeping deep into the annual reports of the concerns. The study depicts the issues relating to the financial performance only. Non-Financial aspects like marketing, personnel, etc. are not taken into consideration.

Uma Maheswari and Ramachandra Reddy (2013)^{vi} presented a paper on Working Capital Management in Sugar Mills in Chittoor District of Andhra Pradesh. The study focused on Sri Venkateswara Co-operative Sugar Factory Limited and Sagar Sugars & Allied Products Limited in Chittoor district of Andhra Pradesh. Sugar industry faces many problems such as fluctuations in the production due to inadequate availability of sugarcane and power failure. The profitability of the sugar industry is comparatively very low because of the high cost of production. In fact, some units are incurring losses continuously. The study found the industry has failed to retain more profits, consequential, been forced to define more on external sources.

Dr. Neeraj Kumar Gupta (2014)^{vii} in his paper under the title of 'Financial Wealth Health of Co-Operative Sugar Mill'. Financial health is the Stepping stones for the economic activities in every business Enterprise. Financial health reflects the success of the sugar mills. The scenario circles around diagnosing the wealth health of sugar mill by peeping deep into the annual reports of the concerns.

Goncharuk and Anatoliy (2015)^{viii} in his article entitled that How to make sugar production more effective: A case of Ukraine is devoted to the analysis of efficiency of sugar companies of Ukraine and the ways of its improving. The main factors of sugar plant inefficiency are defined and he finds that these problems have two sides: external and internal. The solving of external problems is not connected with actions of companies and depends on the government and its further policy in the field of regulation of agriculture and sugar production. The solving of internal problems of sugar companies depends on the desire and abilities of their proprietors and management to manage a business performance. Recommendations for the improvement of efficiency of sugar companies and industry based on the study are the following; attraction of large foreign investors having high-efficiency technologies, own raw-material base (beet, raw sugar) and distribution channels abroad, and directed to increasing of labour productivity, reduction of wastage, improving on energy efficiency and decreasing of materials-output ratio.

Lawrence E. (2015)^{ix} examined the status of working capital management in 300 companies including 150 companies with high level of sales and 150 companies with low level of sales. He aimed to consider different methods of working capital management, which are applied in varied size companies and also to provide a general view from common approaches used by all companies. A financial manager was recently hired by Lawrence sports to help with the current capital management challenges and opportunities Lawrence sports needs to develop a working capital policy, cash balance required credit policy suppliers negotiation strategy short term financing and measuring metrics to monitor performance against policy.

Mrs. Prabha R. (2015)^x in her study revealed that the Sugar Mills (cooperative, private, and public) have been instrumental in initiating a number of entrepreneurial activities in rural India. Indian sugar industry can be a global leader, provided, it comes out of the vicious cycle of shortage and surplus of sugar cane, lower sugarcane yield, lower sugar recovery, ever increasing production costs and mounting losses. There is a considerable scope for further reduction in the cost of production of both sugarcane and sugar in India, with the liberalization of controls on the sugar industry. If there is more liberalization in this sector, India has the potential to become the world's biggest exporter by removing the missing leads. The cooperative sugar sector in Tamil Nadu is facing various problems than the private sugar sector, and if these are solved in time, then it will be possible for the cooperative sector to

compete with the private sector. Healthy competition leads to the growth of the sugar industry, and thereby the country.

Mohan (2016)^{xi} in his study of Working capital management of the sugar mills examines the working capital management of the sugar mills in Thanjavur district, Tamilnadu. The two crucial determinants of corporate health (liquidity and profitability) are partly influenced by the way working capital is managed. Industry sources said that today sugar cane arrears are set to mount. Though the law requires the mill owners to pay within fifteen days of sugar cane purchased, barring a few mills, none is able to do so because of serious cash flow problems. Industry experts also pointed out that the performance of the existing government and co-operative sugar mills has been unsatisfactory and they continue to be defaulters by huge amounts in financial institutions.

IX. FINDINGS

9.1 Solvency

The current assets of the sugar mills have been decreased regularly, whereas the current liabilities increased. Hence the solvency ratio is decreased gradually during the study period 2008-09 to 2016-2017. The average solvency ratio for the study period is less than the solvency position of these sugar mills. And the fluctuations in the solvency ratio raised due to fluctuations in current assets and current liabilities. Thus the majority of the running Co-operative sugar mills in Tamil Nadu have an unfavorable solvency ratio.

9.2 Debtor Efficiency Ratio,

Co-operative Sugar industries in Tamil Nadu have employed a good credit policy with varying degrees of efficiency. In other words Sundry Debtor collection management is very good in Co-operative sugar Industries in Tamil Nadu.

9.3 Fund flow

Fund flow analysis fully reflects the unimpressive performance of the sugar mills. Stagnant and falling levels of operations and inadequate utilization of investment eroded profitability depriving the mills of the benefits of the plough-back. The mills had to depend on long-term loans. Market constraints caused swelling of stocks sundry debtors and sundry creditors.

9.4 Z Score

Further analysis of Z Score shows that none of the mills could sustain a score of 2.63 or more represents sound financial health. On the other hand continuous decline in the Z score indicated continuous erosion of the financial health of these mills.

X. SUGGESTION

This study has narrated the ways of encouragement to sugar cane growers for maximum supply of sugar cane to the concerned Sugar Mills in order to crush more sugar cane and maximum sugar production, through which the sugar mills can earn an optimum level of profit. In this way following suggestion for the betterment of function of Cooperative sugar industry in Tamil Nadu is given.

- ❖ The Government of India and State Governments should come forward to create a Quality and Performance Monitoring Committee (QPMC) consisting of representatives from both Governments, managements of Co-Operative Sugar Mills, local farmers and employees to take collective decision an efficient performance of Co- Operative Sugar Mills.
- ❖ The authority of Co-operative sugar mills should take necessary step to equip with modern instruments such co-gen plant and high pressure boiler for improving the operation efficiency of these mils.
- ❖ The Government should have a Pro-active Import or Export Policy in order to ensure reasonable sugar prices so that sustainable cane prices are paid to the farmers.
- ❖ Co-operative sugar mills should be allowed to function independently without any intervention of both central and state Governments, especially in purchase and sell either sugar cane or sugar, fixing the price of sugar and its by-products and maintaining mills.

XI. CONCLUSION

It is concluded and definitely hope that change in the methodology in announcing or declaring Sugar Cane price only based on current year recovery, reducing the cost of production of sugar by arriving separate cost of production of by-products likewise Molasses and Bagasse and preparation of periodical “Z-Score Analysis” can contribute remarkable and intellectual prospects of the sugar industry not only in Tamil Nadu and also in the whole nation (India).

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