

**CANE CULTIVATION AND SUGAR
INDUSTRY IN ANDHRA PRADESH (1930-60):
A STUDY OF REGIONAL RESPONSES TO
THE GOVERNMENT POLICY**

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ABBREVIATIONS

A. P. S. A	Andhra Pradesh State Archives
A. A. R. D. A	Annual Administrative Reports for the Department of Agriculture
Co-213	Coimbatore 213 (A Sugarcane Variety), likewise J-247 may be read as Java-247 cane variety
C & I	Commerce and Industries Department of Nizam's Government
CWT	Cubic Weight in tons.
E. P. W.	Economic and Political Weekly
FASLI	The harvest year a mode of computing time in India from July 1st. by adding 590 to Fasli year one may get a rough calculation of the year Anno Doimini
G. O	Government Order
H. E. H	His Excellency His Highness (Heroic prefix to the title of the Nizam of Hyderabad granted by the British in 1918)
I. C. A. R	Indian Council of Agricultural Research
I. G Rs.	Indian Government Rupee
I. T. F	Industrial Trust Fund
J. P. S	Journal of Peasant Studies
K. C. P	Quality-Customer Satisfaction and Princiled Business
Maund or Manugu (Tel)	was a measure of weight which was in general use all over India. South Indian mound was fixed 25lbs or pounds. A mound was same as <i>Tumu</i> and was equal to 40 Seer. 20 mounds was equal to one <i>Khandi</i> (500lbs).
N. A. I	National Archives of India (New Delhi)
N. S. F	Nizam Sugar Factory
O. S Rs.	Osmania Sikka (the currency in vogue in the erstwhile Nizam State)
P. W. D	Public Works Department
T. P. D	Tons per day

CHAPTER I

INTRODUCTION

Indian industry was on par with that of Europe's till the onset of industrialisation in England. It was to get monopoly over the Indian finished goods that the British had established their trade relations in India. But from the beginning of the 19th century England began to export industrial goods into its colonies. The advancement of the textile industry in England had not only destroyed worldwide market for Indian goods but it began to invade even India's home market. As a result Indian industry received a setback and the process of de-industrialisation began. Contemporaneous to the decline of Indian industry, we notice the process of commercialisation of agriculture. This process started in the middle of 19th century and continued till almost the end of British rule in India. The British had modified the revenue and commercial policies to accomplish this process resulting in the conversion of India into a country of producer of raw materials. Crops such as poppy, indigo, jute, cotton, ground-nut and sugarcane have attained commercial dimensions. Cultivation of such crops received stimulus from the external demand. In the case of sugarcane, it was internal demand that was responsible for its getting into commercial lines.

The process of commercialisation of agriculture in normal conditions would have given rise to the growth of agro-industries. This did not happen in India. Many of these crops began to be grown on commercial lines only to be exported as raw material to European industries.

Both the aspects of the process of commercialisation of agriculture and the industrial policies of British in India had received attention of scholars such as Sunil Sen, Girish Mishra, Ashok Rudra, B.B.Chaudhari, Barbara Harris and others.¹ They have brought out through their studies the way the process of commercialisation of agriculture was accomplished, the changes that occurred in the cropping pattern, the relations of production, the way in which this process proved detrimental to the peasantry, the hardships that the peasants faced on account of this process, the way in which certain non-agricultural classes such as money-lenders, traders and absentee-landlords have entered the rural scene. The main focus of their studies was on the aspects of land transfers from agriculturists to non-agriculturists. Further, these studies also brought to light the different effects of commercial agriculture on different rural classes. Even after the advent of commercialisation of agriculture, very little effort was made by the government in improving the agricultural practices and methods of cultivation till the opening of 20th century. It was only from the third decade of the present century that some progress was made in this regard following the passing of the Indian Councils Act of 1919. This Act empowered all the departments connected with rural welfare such as agriculture, veterinary, co-operation, local self-government, medical education and public health to be

¹ Sunil, Sen, *Agrarian relations in India*, P.P.H, New Delhi, 1977; B.B.Choudhary, *commercial agriculture in Bengal 1757-1900*, Vol.1, Calcutta, 1964, G.Mishra, *Agrarian problems of permanent settlement: A case study of Champaran*, P.P.H New Delhi, 1978.

transferred subjects in all the major provinces.² Crop Committees were formed to study problems facing different crops in the country. The Central Cotton Committee in 1921 and Indian Sugar Committee in 1920 were formed. It was only in 1930s that a real beginning in the agricultural development was made by allocating considerable funds to be spent on agricultural research for evolving high-yielding varieties of seed, opening of several agricultural stations in the districts and also undertaking experiment and demonstration of improved varieties of seed before the ryots. On the aspects of the role played by the government in the improvement of agricultural techniques and methods of cultivation, very few studies have been made.

The way in which the spread of American cotton and the improved varieties of indigenous *desi* cotton was accomplished in Punjab during 1910-30 was brought out by a study conducted by Imran Ali.³ The efforts made by the government in Bombay Presidency in introducing improved varieties of cotton and sugar cane in the Bombay Deccan between 1920 and 1940 was brought out by a study made by Sumit Guha.⁴ Both these works bring out efforts made by the government in improving methods of cultivation and development of agricultural conditions in a limited way. They mention about the new varieties of seed

² Royal Commission on Agricultural in India, Abridged Report, Bombay 1928.p.35.

³ Imram Ali, *Punjab under Imperialism 1885-1947*, O.U.P. Delhi, 1989.

⁴ Sumit Guha, *The Agrarian Economy of the Bombay Deccan 1818-1941*,

introduced in the region and the extent of their use.

The industrial development of India under the British was studied by scholars such as D.R.Gadgil, Rajat Kant Ray, Morris de Morris, A.K.Bagchi and Bipan Chandra.⁵ All of them have pointed in their studies that very little progress was made towards industrial development prior to the first World War. On the aspects of this slow process of industrial growth, there were no two opinions. But they differ in their understanding of reasons behind such a slow process. In Morris's view the social ethos of Indians have come in the way of its industrial progress and further argues that Indians were not entrepreneurial in character and the Indian intelligentsia did not take to technical education.⁶ On the other hand, Bipan Chandra in his work *The Rise and Growth of Economic Nationalism* argued that the role of the state would have helped in overcoming this problem by encouraging Indians by providing necessary capital, technical knowledge and commercial information.⁷ Further he argued that the state was guided by Laissez Faire policies and did not

⁵ D.R.Gadgil, *Industrial Evolution of India in Recent times 1860-1939*, O.U.P, Delhi, 1972, Rajat Kant Ray, *Industrialisation in India: Growth & Conflict in Private Corporate Sector 1914-1947*, O.U.P, Delhi, 1982, Morris & Morris, *Growth of large scale industry in India* in Dharma Kumar (ed.) *Cambridge Economic History of India, Vol.II*, Cambridge, 1983; Bipan Chandra, *Rise and growth of Economic Nationalism in India*, Delhi, 1966; A.K.Bagchi, *Private Investment in India, 1900-1938*, Cambridge 1972.

⁶ Morris.D.Morris, *Op.Cit.*, p.205.

⁷ Bipan Chandra, *Op.Cit.*, p.76.

intervene in developing Indian industries. Even the moderate nationalist leaders of the Indian National Congress also pleaded for state intervention for industrial progress. The policy of non-intervention continued till the outbreak of first world war.

From the beginning of 20th century in western Europe and in United States lot of advancement was made in industrial technology in comparison with England. The British technology became archaic and it failed to adopt mass production methods. By 1930s the Japanese efficiency in textiles reached to such an extent that its products began to be sold even in the shops of Manchester. The industrial manufactures of Japan, Germany and U.S.A. began to be dumped into Indian markets. Cotton textiles from Japan, steel from Germany, sugar from Java and Mauritius have flooded Indian market.⁸

British government in India, to cut down the imports of manufactured goods from its rival countries was compelled to develop the native industry in India. With this view in mind the Indian Industrial Commission was formed in 1916, which in its report submitted in 1918 recommended for active state intervention and support towards industrial development, by financially assisting the opening of new industry by native entrepreneurs, to set up industries by government to serve as models, giving commercial and technical advise, opening up of

⁸ Sunil Kumar Ghosh, 'Indian Bourgeoisie and Imperialism' in *E.P.W.*, Vol.XXII, Nos.45 & 46, Special Number 1988 p.2450.

technical schools and granting of protection by imposition of high rates of tariff on imported goods. Iron and Steel industry received protection in 1924. Similarly cotton textile industry in 1927, matches in 1927, chemicals in 1931 and sugar industry in 1932 received protection.⁹

When the India Councils Act of 1919 made industries a provincial transferred subject, it further gave financial autonomy to the provinces. This brought about substantial progress in the development of industries in the inter-war period. The development of industries in India during inter-war period had drawn the attention of scholars such as Nasir Tyabji, Iftikhar-ul-Awwal, Raman Mahadevan, Padmini Swaminadhan, C.V.Subba Rao and quite a few others.¹⁰

Nasir Tyabji's work pertains to the industrial development in Madras Presidency during the inter-war period and that of Iftikhar-ul-Awwal confines to the working of state aid to industries Act in Bengal. They opined that in actual working of the state aid to industries act, the role played by the state was

⁹ Dhiresb Bhattacharya, *A Concise History of Indian Economy*, Calcutta, 1972, p.92.

¹⁰ Nasir Tyabji, *State Aid to Industry in Madras Presidency, 1921-37*, in *E.P.W.*, Vol.23, No.30, 1988, pp.51-62; Iftikhar-ul-Awal, 'State Aid to Industry in Bengal c.1880-1942', *Studies in History*, No.1, Jan-June 1989, pp.73-98; Padmini Swaminadhan, *State Intervention in Industrial Development: A Case Study of Madras Presidency* in S.Bhattacharya (ed.) *South Indian Economy 1914-45: Agricultural Change, Industrial Structure and the State policy*, O.U.P, N.Delhi, 1991.

very limited.¹¹ They have judged the working of the act on computing the financial aid given to the entrepreneurs alone. A detailed study on the role played by the state during the inter-war period in all the aspects concerning the industry such as imparting technical and industrial education, financial assistance, demonstration of the use of new technologies, granting of tariff protection, granting of loans, giving administrative help and starting of model factories etc., is needed to arrive at proper conclusions on the role played by the state. Hence an attempt is made in the present study to bring out the role played by the state in Madras Presidency and that of erstwhile Nizam state towards industrial progress after first world war. The sugar industry is taken as an example to study the state's role towards its development.

Sugar Industry

Sugar is one of the worlds's most widely produced and traded commodities. About 110 countries produce sugar. Nearly 100 countries import sugar and about 60 countries are listed as net exporters. Originally sugar was produced only from sugar cane. But today sugar is also produced from other sources like beet and maize. About 80 per cent of beet sugar is produced in European countries. In the case of cane sugar major producers are Cuba, Brazil, India and Australia which account for 30 per cent of

¹¹ Tyabji, *Op.Cit.*, p.31; Iftikhar-ul-Awal, *Op.Cit.*, p.77.

world sugar from all sources and about 45 per cent of cane sugar.¹²

A systematic study of the features of the sugar Industry has been attracting the attention of many scholars for quite some time. Studies have been made about various aspects of sugar Industry in countries such as Java, Taiwan, Philippines, Dominican Republic etc.

Michael Baud studied the aspects of the labour control mechanism that prevailed in Dominican Republic for the period 1870-1935. Roger Plant brought out the nature of the exploitation met by slaves in Caribbean Islands such as Haiti from the beginning of the sixteenth century.

The sugar Industry started to grow in the Caribbean Island Haiti within ten years after Columbus discovered America. From the very beginning of the emergence of sugar plantations in Haiti, most of the labour force employed in sugar plantations were slaves. It was said that there were about three million slaves in Haiti in 1500. Their number had decreased to 60,000 by 1508 and only 500 of them survived around 1570. It gives an understanding that a veritable genocide must have taken place. Many slaves were brought from other Caribbean Islands into Haiti. These slaves were treated miserably in the plantations. They were hung with head downwards, drowned them in sacks, crucified

¹² T.H.Viswanatha, *Working of Sugar Co-operatives in Karnataka*, unpublished Ph.D thesis, submitted to the University of Mysore, 1989, p.4.

them on planks, crushed them in mortars and were forced to eat shit, flayed them dire with the lash....they were thrown into .. cane syrup.¹³

Formal slavery was abolished in Dominican Republic in 1822 A.D. but with the growth and the technological modernisation of the sugar plantations in 20th century a new system of labour control came into existence. When wage labour was offered by the sugar plantations in Dominican Republic, many peasants came to these plantations spontaneously. Many peasants seem to have appreciated the opportunities of wage labour.

Following the collapse of the world sugar market of 1884, the wages of the labour were cut drastically and in response to this the labour led lot of unsuccessful strikes. When the sugar sector recuperated in 1890s the sugar companies began to directly invoke in the purchase of labour. British west Indian islands became the main suppliers of contract labour. Every year, four to five thousand slaves landed in Dominican Republic at the beginning of the sugar harvest. From 1920 onwards, contract labour from Haiti began to be employed in Dominican Republic. The wages in Haiti were much cheaper and hence the sugar plantations in Dominican Republic readily employed contract labour from Haiti.

The plantations evolved several methods in the control of

¹³ Roger Plant, *Sugar and Modern Slavery*, zed Books, London, 1987, p.7

labour. The payments made were very unfavourable, once in two or three months. The labour had to wait for very long time during which time they became prey to money lenders. Fines were imposed in the cases of protest, unsatisfactory work or breaking of company laws and these fines were deducted from the wages. Dominican republic minted their own money so that it can be used only in the plantation. Labour employed in the plantations were obliged to buy their daily provision in the shops of the company. The prices at these shops were very high upto 100 percent more than the open market prices.¹⁴ The plantations' labour were also subjected to racial discrimination against the native labour force. Thus by a variety of methods they were exploited in the sugar plantations of Dominican Republic.

Alfred W. Mc Coy in his study on the sugar economy of colonial Philippines brought out that the sugarcane was cultivated and controlled by a native planter class during the 19th century.

The sugar barons were widely present in Negros at Luzon Islands. The Luzon planters were merchants descended from Manila who engaged in the handicraft textile industry. They earned from textile trade and petty commerce and put their money in the

¹⁴ Michiel Baud, *Sugar and Unfree Labour: Reflections on labour Control in the Dominican Republic 1870-1935*, J.P.S., Vol.19, No.2, p.313,

purchase of sugar plantations on Negro Islands.¹⁵ This shift of interest from textiles to sugar plantations resulted following the monopoly of the Manchester Textiles from 1850s. Those people who were involved in weaving activity during the days of its flourishing trade became jobless with the collapse of the textile economy. These weavers migrated from impoverishing weaving villages of western Paray Islands and got employed in clearing the forests of Negros in 1850s and 1860s and the merchants acquired these forest lands in 1860s.¹⁶ About 324 merchants among the total provincial population of three lakhs held 80 per cent of the provinces total agricultural land and property.¹⁷

The region's plantation economy was bound together by a system of credit reaching downwards from European banks to the planters and finally the tenants and workers. In 1895, about six houses controlled all the sugar exports; of them 4 were English, one Swiss and one Spanish. The credit relations and their contractual sanctions imposed strict controls upon all sections of the sugar plantations, the planters and peasants alike. Thus it brings to light the system of the control of sugar plantation economy by the colonial countries and how a native planter class acted as a comprador to the Europeans joining with it in

15 Alfred W. Mc Coy, *Sugar Barrons: Formation of a Native Planter Class in the Colonial Philippines*, J.P.S., Vol. 19, No. 3, 4, July 92, P. 109.

16 *Ibid.* p. 113.

17 *Ibid.* p. 115.

exploiting the labour and cane growing peasants by a system of advances.

Between 1830 and 1880 a cultivation system prevailed in sugar industry in Java. It was on the foundation of this cultivation system the Java sugar industry stood second in the production of cane sugar.

Under cultivation system, the peasants were compelled to grow sugarcane in their lands and they were also required to supply the cane to the sugar factories owned by the Europeans. After 1880s, the sugar factories from being supplied with cane from peasants, directly took over the management of cane producing fields. Fields requisitioned for cane cultivation were merged into very large consolidated plantation. Every factory owned 500 hectares of cane fields. In some district, the sugar factories rented almost all agricultural land in the village en block for cane cultivation.¹⁸

A study conducted on the sugar industry of Taiwan for the period 1895-1945, had brought out that sugarcane was cultivated by family farms and all the attempts of the sugar companies to

¹⁸ G.R.Knight, *The Java sugar Industry as a Capitalist Plantation: A reappraisal*, J.P.S. Vol.19, No.3,4, April-July, 1992, p.73.

evolve cane estates have failed.¹⁹ Perhaps Taiwan was the only exception where sugarcane cultivation had not possessed capitalist tendencies and where the prevalence of wage labour or slave labour exploitation or monopoly of the cane cultivation by sugar factories was a feature.

After Taiwan was acquired by Japan in 1895, following the victory of Japan over China, most of the sugar factories in Taiwan were owned by Japanese and these factories procured sugarcane largely through contractual arrangements with small family farms. Peasant in Taiwan growing cane was like a worker with a life style close to that of a wage labourer. For him land is a means of earning a living and not a source of profit or rent. Small scale family farms of less than three chia (unit of land) comprise 88 per cent of the total working cane farms.²⁰ Attempts were made in Taiwan also to develop cane estates to grow cane by the sugar companies. But they could not compete with the family farms, because in capitalist cane estates they have to reckon with high wages and rents. Thus they could not compete with self exploiting family farm, the production costs of the cane grown on family farms were less than those on capitalist farms.

19 Chich-MingKa, *Agrarian Development, Family Farms and Sugar Capital in Colonial Taiwan, 1895-1945*, J.P.S. Vol.18, Nos.2, Jan.1991, pp.206-241.

20 *Ibid.* p. 212.

However, in Taiwan also, the state took steps to alleviate difficulties in obtaining cane for sugar factories by issuing restrictive measures:

- 1) cane growing land was divided into several procurement districts based on the location of modern sugar factories. Each factory held exclusive cane purchasing rights in its own district.
- 2) farmers were prohibited from transporting cane from one district to another.
- 3) Government restricted peasants' freedom to convert their land for the production of subsistence crops.²¹ Farm land was organised into units for purposes of crop rotations, through Government control of water supply, a three year rotation of crops — cane, rice and others.

Development of sugar industry in India

India is said to be an original home of sugar cane and developed the industry at a time when the existence of such a sweet crop was unknown in the west. Sugar cane is produced on factory lines in India mostly in the states of Uttar Pradesh, Bihar, Maharashtra, Punjab, Andhra Pradesh and Karnataka. Though the first sugar mill on modern lines was established as early as 1903 much progress was not made till 1932.

21 *Ibid.*, p. 230.

India used to export large quantities of unrefined sugar up to the middle of 19th century, but even in those days, India used to import some quantities of sugar from China and Egypt. The export trade of India was hampered by higher duties on Indian sugar than the west Indies sugar products. With the abolition of slavery in west Indies and the equalisation of duties between west Indies and Indian sugar in 1840s, the export of sugar from India was revived and reached its zenith by 1845. Then the British Government introduced free trade in sugar and India could no longer compete with countries outside British Empire.²² However, throughout the 19th century imports of sugar into India remained insignificant. India produced and consumed her own varieties of unrefined sugar. But sugar imports into India began to increase at a rapid rate from the close of 19th century.

Compared to India, there was a high rate of technological progress in the major beet-sugar and cane sugar producing countries in the world. In places such as Java and Formosa, the Government had helped their mill owners by compelling or inducing cultivators to produce cane in concentrated blocks so as to make central factories economically viable. In contrast, in India there had been practically no progress in the methods of cultivation of cane or extraction of sucrose from cane.²³

²² A.K.Bagchi, *Private Investment in India 1900-1939*, cambridge,1972, p.359.

²³ *Ibid.*, p. 360.

In spite of the increasing imports of sugar from countries using more efficient methods, the indigenous industry did not die out. The reasons which account for this were refined sugar and gur had different markets; gur was preferred because it was mixed with glucose matter and was supposed to be more nutritious than sugar. It was used for making sweets. Further, sugarcane was grown by peasants on small and scattered plots of land. Although the methods were inefficient, the peasants total earnings might be still greater than the profits he would make by selling the cane to a sugar mill and the peasants continued to grow cane on their land using his family labour.

After the middle of 19th century white sugar continued to be produced in Madras at Nellikuppam factory and in United provinces at Rosa factory. In south India Binny & Co's sugar concerns were transferred to Parry company. Prior to the first world war some development is seen in extension of sugar industry in United provinces and Bihar. Some factories which had been set up by Europeans for the manufacture of sugar were converted into indigo factories when the latter became more profitable crop. By the close of 19th century they once again went back to sugar refining when indigo crop lost its prominence with the invention of synthetic dye. In Bihar and United Provinces, a major pioneer of central sugar factories after 1900 was Begg.Sutherland and Company of Cawnpore. They also set up sugar factories in Barrah in Saran district of Bihar in 1905 and a branch of Cawnpore sugar works was opened at Marhourah in Bihar in 1905. In 1913 another sugar factory was floated by Ryam Sugar company in Durbanga

district in Bihar. All these had crushed cane from their own cane estates.

The total investment in sugar factories before the first world war was small. The Government's efforts in encouraging the industry was limited to the countervailing duties which were imposed in 1899 and lifted in 1903. Dr.Barber had begun his work as sugarcane expert during 1911, but not much had come out of it. It can be said that as a result of the establishment of some central sugar factories in some areas, cane production tended to be concentrated around the factories.²⁴ In the absence of definite improvement in the sugarcane crop, the planters rate of returns on the older varieties tended to diminish and without proper tariff protections for sugarcane, the factory industry could not grow quickly.

The white sugar industry in India was effectively protected during the first world war. As a result, both the output of white sugar and the area under sugarcane went up. The supplies of machinery from abroad restricted and acted as a limiting factor. The war stimulated the interest of Government of India in the industry.

A scheme for establishing a sugar bureau was advised by Agricultural Department. But the Government of India appointed only a secretary to sugar bureau in 1919. The secretary of the

²⁴ A.K.Bagchi, *Op.cit.* p. 365.

sugar bureau did some valuable work in assembling a mass of information on the trade side and on spreading the information about Coimbatore canes in Bihar. In 1919, the committee of the Indian Sugar Producers Association demanded the Government for the appointment of a sugar committee to take up the task of advising on all aspects of development of sugar industry in India.

At the time of the enquiry by the committee there were a total of 22 factories in India working mainly with sugarcane. None of them worked to their full capacities and was found that many of them used inefficient methods of handling cane and also used too much fuel. The sugar produced in India then was found to be just equal to the output of three average factories in Java.

The Indian sugar committee recommended the Government to set up a sugar board, a sugar research institute with three branches of agricultural, chemical and engineering to function and for the establishment of a pioneer model sugar factory in Northern India, and sugar schools to train sugar technologists. It also recommended for the fixing up of sugarcane prices so that the sugarcane producers would be protected against exploitation by the sugar factories. But none of the recommendations of the Indian sugar committee was implemented during the next ten

years²⁵. Hence, the development of sugar industry had very slow growth up to 1931.

Tariff protection and the growth of the sugar industry

The situation radically changed with the coming of the depression. The Government at first increased the rate of duty on imported sugar to Rs.6 per CWT in 1930. On the issue of the granting of protection to sugar industry, the Government of India wrote to the provincial Governments in 1929. In response to it the Government of Punjab, United Provinces, Bihar and Orrissa and Government of Bombay asked for an enquiry by the tariff board. Then the matter was referred to a special qualified committee appointed by I.C.A.R. On the recommendation of this committee the I.C.A.R asked the Government of India to refer on the matter of the import duties on sugar for investigation by tariff board. Thus it resulted in the appointment of the Indian tariff board to examine the question of according statutory protection to the sugar industry. The Indian Tariff board reported in 1931, recommending a tariff protection for the sugar industry.

The tariff board recommended in the year 1931 for a tariff protection for 15 years, the rate of duty to be Rs.7-4-0 per cwt for first 7 years and Rs.6-4-0 per cwt for the next eight years. The Government accepted the tariff board's recommendation and the select committee of the legislative assembly had introduced the bill of Indian Sugar Protection bill of 1932 to the effect that

²⁵ Ibid P.367; Also discussed by Sanjayabaru in *Political Economy of Indian Sugar*, O.U.P. Delhi, 1990 PP.20-21.

protection was to continue until March 1946 and was passed with the proviso that statutory enquiry be conducted in 1938 to determine further protection. In effect the protection was granted for a period of 14 years and was later extended till 1940²⁶.

The effects of high protective duty on imported sugar was immediately felt both in drastic reduction of imports of sugar into India and in a phenomenal increase in imports of sugar machinery into India. The number of sugar mills grew from 31 in 1931 to 139 in 1936 , five years after the granting of the protection.

A systematic study of the sugar industry has been attracting the attention of many scholars for quite some time. Shahid Amin worked on the growth of sugar industry in Uttar Pradesh in 1930s, Keshavananda Das studied the origin and the performance of Aska sugar factory in Orissa, Baviskar and Ignetiuous Chitheleu have studied the working of sugar co-operatives in Maharashtra. T.H.Viswanadha studied the working of co-operative sugar factories in Karnataka. Jan Breman had brought out a study on the sugar cane cultivation and sugar industry of Gujarat.

Shahid Amin's work brings out the way the peasantry in U.P were forced to cultivate this commercial crop. It brings out various interests involved in the production of this crop from

²⁶ Sanjaya Baru, Opcit P.22.

the factory level down to the peasant cultivators. He points out that the hypothetication of peasant's produce was an essential feature characterising the production process and exchange relationships between the peasant producers and an integrated set of surplus appropriators—landlords, money lenders, manufacturers and the state.²⁷ This work mainly focuses on the nature of exploitation to which the cane growers were subjected to in 1930s in Gorakhpur when the region witnessed mushrooming of sugar factories.

Jan Breman in his work has brought out how Kanbi peasant migrants from Maharashtra settled in Gujarat got hold of cane fields and progressed on taking to cane cultivation. The process of rise in their social status against *Pattadars*, the native land lords is studied. The work also deals in detail the miserable conditions of living of the seasonal migrant labourers who did most of the hard agricultural operations.²⁸

The study made by Keshabananda Das is confined to the Aska region in Orissa. He has shown that the price for the cane supplied by the small growers was very marginal when compared to the cost incurred by them.²⁹ The Aska co-operative sugar factory

²⁷ Shahid Amin, *peasants and capitalists in northern India: Kisans in the cane commodity circuit in Gorakhpur in 1930s*, in J.P.S, Vol.8, No.2, 1981, p.313.

²⁸ Jan Breman, *Of peasants migrants and paupers: rural labour circulation and capitalism sugar production in west India*, O.U.P.1985,

²⁹ Keshabananda Das, *sugarcane cultivation and co-operative sugar factory: A case study of the Aska region in Orrissa*, unpublished Ph.D thesis, C.D.S,

supplied the improved varieties of seed, pump sets and tractors through the big land holders who have better access to the factory, hoping that these big land owners would arrange for these benefits from the factory the small cane growers obey them. Most of the grower members of the board were rich peasants and none of them really were growing cane. It was through the good relations maintained with these members that the cane growers got benefits. The distressed peasants say that it was their fate and that they cannot leave their profession whether it was sugar cane or cotton as they had to grow something. They thought that the factory would help improve their situation and that was why they took to sugar cane cultivation.

Baviskar in his detailed analysis emphasised on aspects of how the sugar co-operatives in Maharashtra played an important role in rural development in terms of increasing the standard of living of all section of the population in creating employment, in developing education, medical and health care and other benefits like transportation facilities. His work also throws light on how the sugar co-operatives became political base of state and how different parties which commanded influence over rural Maharashtra tried to get hold over these co-operatives.³⁰ Ignatiev Chitheleu, on the other hand argues that these sugar co-operatives have become a close preserve of a limited number of

Trivandrum, 1981.

³⁰ B.S.Baviskar, *Politics of Development: sugar co-operatives in rural Maharashtra*, O.U.P, Delhi, 1980.

share holders and their families.³¹ He established that sugar cane produced by rich peasants alone had received good prices, as the crop of rich peasants was cut at the appropriate time and that of the small peasants very late after several months of maturity time. This, he says, create trouble to small grower by both blocking the land from being used for growing other crops and also reducing the juice content in it which resulted in the reduction of cane price. He argued that the highly paid lucrative jobs in the factory were cornered by the kith and kin of rich landlords, while the low wage jobs were given to the sections of the small peasants.

Sanjaya Baru, in his work, *The political economy of Indian sugar* (Delhi, 1990) had brought out the conflicting interests that existed between the private and co-operative sugar factories between Northern and Southern Indian sugar factories; between the syndicate and non-syndicate mills and showed how at certain stages the big sugar factory owners formed into cartels and tried to get the monopoly. These aspects were dealt under the larger frame work of how the state played a predominant role in adjusting its support from one to another lobby. He further brought out the role played by the state in fixing minimum price of the cane, price of sugar and regulating the sale of sugar through controls. It was said that except for a short period of decontrol, from 1939 onwards, sugar was one of fully or partial

³¹ Ignatius Chitheleu, 'sugar co-operatives in Maharashtra' in *Social Scientist*, Vol.9, Nos.5 & 6 Dec.1980-Jan 1981, p.57.

controlled item. This regulation became necessary as the government policy had to reconcile conflicting interests— that of consumers, cane growers, mill owners and the land-lord cum industrialists who controlled co-operative sector. This study deals with the working of the government's policies and the growth of sugar industry in India at macro level for the period from 1930 to 1980.³²

Need for the Present Study

The above studies on the sugar industry in India mainly focus on the issues of the peasantry and their exploitation by several intermediary classes and throw light on the aspects of the role played by sugar co-operatives in the rural transformation and explain as to how they are linked with state politics. Even though there seems to be difference of opinion on the role played by the sugar co-operatives, these works have, no doubt, brought out several details about the sugar economy. But among these details one important feature seems to be missing which needs the attention of the scholars. That is the history and the growth of sugar industry. The way the government policies had affected the industry and the cane cultivation at a micro level has remained as an unexplored subject so far. In this study, it is attempted to analyse among other aspects the internal dynamics involved in the aspects of cane cultivation and the growth of sugar industry.

³² Sanjay Baru, *Political economy of indian Sugar*, O.U.P., Delhi, 1990.

Region and the Period of Study

For the present study, Andhra Pradesh is taken as the frame of reference. The coastal Andhra and Rayalaseema were directly administered by the British under Madras presidency until independence when both the regions were united to form Andhra. The Telangana region which was a part of erstwhile Nizam State was separated and was formed into separate Hyderabad state. On account of this uneven political history of Andhra Pradesh we will be studying the region's policies being influenced by three governments: Madras Presidency under the British, Nizam's administration and the government in the post independence period. There are certain similarities as well as differences in both the cultivation conditions of the sugar cane crop and also the policy matters in these two regions. To bring out these differences, a detailed study is made on two individual sugar factories namely Vuyyuru Sugar Factory (K.C.P) in Krishna district of coastal Andhra and the Nizam Sugar Factory (N.S.F) in Telangana.

The period chosen for this study is between 1930 and 1960. The rationale in selecting this period is that in 1930s we see the origins of the growth of sugar industry from the stimulus of granting of the discriminatory protection to the sugar industry. The study extends up to 1960 when the development of the sugar industry on co-operative lines begins at a rapid rate following the changes in the government's licensing policy.

Objectives of the Study

The main objectives of the present study are:

- 1) to present a total history of the origin and the growth of sugar industry in Andhra Pradesh between 1930 and 1960.
- 2) to study various stages of the development of sugar industry and the numerous problems that the cane growers had faced.
- 3) to assess the governmental efforts in helping the peasants to overcome the initial hurdles in the extension of cane cultivation.
- 4) to study the nature of entrepreneurship and the support given by the state to the entrepreneurs in floating the sugar factories and also the state support for their expansion.
- 5) to probe into the regional variations in the growth of cane cultivation and the growth of sugar industry in the state of Andhra Pradesh in two different regions namely coastal Andhra and Telangana.
- 6) to analyse the linkages between the factory and the cane growers and also between factory and the workers in the factory.
- 7) to highlight the over-all performance of the ryots on taking to cane cultivation, and the transformation that was brought about with the coming of sugar factories in different regions in Andhra Pradesh.

Working Hypothesis:

This study tries to seek answers to the following hypothetical questions:

- 1) what were the main factors which necessitated the establishment of sugar factories?

- 2) what were the cultivation methods of cane in the pre-factory days?. what were the factors affecting the cane crop ?
- 3) what was the nature and extent of the role of the state towards development of sugarcane crop and the nature of the protection granted to the sugar industry in Andhra Pradesh ?.
- 4) what was the response of the ryots in Andhra Pradesh towards modern methods of agriculture ?
- 5) what was the entrepreneurial background to the establishment of the sugar factories in the region ?
- 6) what were the sugar factories which came into existence in Andhra Pradesh during the period under review and whether any regional variations are observed between the coastal Andhra and Telangana with regard to the peasant responses to cane cultivation and the entrepreneurship and the policies of the Governments ?
- 7) what was the technological base with regards to the sugar industry whether the necessary technology and technical manpower was available within the country or whether it was imported ?
- 8) who benefited from the development of this modern sugar industry ? How did the sugar industry benefit the ryots. Whether any improvement is seen in the economic and social life of the ryots and the agricultural labourers ?
- 9) what were the complex interest groups that operated in the sugar industry ? What was the role of the political economy of the state in serving such interest groups ?
- 10) what were the linkages between the factory and ryots towards cane procurement and whether the factory rendered any support

to the ryots to grow a high capital intensive crop like sugarcane ?

- 11) what are the various stages in the development of sugar industry Andhra Pradesh? Whether any shifts in the entrepreneurial background and the ownership of sugar factories is noticed ?.
- 12) what were the living conditions of workers and the farm labour?. To what extent the factory helped in the welfare of the farm labour and factory workers ?
- 13) what was the contribution made by the sugar factories in economic and social transformation of the people and the region in the respective localities ?

Organisation of the Study:

The present work is divided into eight chapters. The first chapter introduces the subject and deals with the review of literature on the subject. It also brings out the rationale behind taking up the present study.

In the second chapter, agricultural policies both at the Madras Presidency and the Nizam state are discussed. It brings out the problems affecting the sugar cane crop in these regions. The various methods adopted by the government to popularize the sugar cane cultivation is also discussed. In the Madras Presidency it was noticed that the local varieties of cane were affected by red rot which kept the peasants from taking to cane cultivation to such an extent that the crop became extinct by 1900. The government opened an agricultural research station at

Coimbatore, where laboratories were set up with specialists. Work relating to evolving improved varieties of sugar cane was carried out at Coimbatore. These new and improved varieties were tested at the experimental stations located at places like Anakapally (1914), Samarlakota (1920) etc., to suit to the local conditions. From 1933-34 the Indian Council of Agricultural Research directly funded the research and experimental work. The government also undertook to distribute the new and high-yielding varieties to the cultivators. The work of familiarising the use of artificial manures, issues such as the use of new mechanised agricultural implements, the demonstration of the new methods of cultivation such as the Java method of planting in trenches, were all taken up by the government. All these aspects are dealt in detail in this chapter with statistical information.

However, in the Telangana region, the local cane varieties were affected with the problem such as lodging, alkinity etc. The various methods adopted by the Government to overcome these problems are discussed in this chapter. The Nizam government started agricultural research stations to work on sugar cane as early as in 1914. At these agricultural stations the new and high-yielding varieties were tested and were popularised among the local ryots. The work carried on by the government in this region such as starting of experimental farms, demonstration plots, the supplying of seed to the ryots, use of new manures and popularising improved cultivation methods are discussed in this chapter.

The role played by the state in both Madras Presidency and Nizam state towards the establishment of sugar factories is studied in the third chapter. Modern methods of cane crushing through improved appliances such as centrifugals were demonstrated to educate the cane growers of the profitability of cane crushing with the use of power driven centrifugals in the place of bullock drawn wooden crushers. A demonstration on the use of power drawn centrifugals was first conducted by the government at Munagapaka village in Vizagapatnam district in the presence of ryots and the ryots have learnt the economics of the use of centrifugals through which more juice from the cane was extracted. Having learnt the profitability on the use of modern machines the ryots sent representations to the government to provide them centrifugals on hire. The government had hired them to the ryots in the districts of Vizagapatnam, Godavari, Krishna and Guntur. It was from among those who hired these centrifugals only we see the efforts being made in 1930s to float sugar factories in these districts.

Under State Aid to Industries Act passed in 1922 in Madras Presidency, we notice the entrepreneurs like Ramakrishna ranga Rao, and C.V.S.Narasimha Raju were granted a loan to start a sugar factory at Kiralampudi. The Vuyyuru co-operative industrial credit society was granted a loan from the Madras provincial co-operative Bank.

With regard to creating the necessary technical man-power from among the natives, the Government took steps to introduce

sugar technology as a subject of study at the University level. A course in sugar technology at Andhra University was started in 1934. Students undergoing training in this course were awarded scholarships by the government. The government further helped the growth of the sugar factories by granting of tariff protection, protection of native sugar factories in the region against the import of sugar from North Indian sugar factories, by the imposition of ban on the manufacture gur and ensuring the regular supply of water. All these aspects were studied in this chapter.

In the case of Nizam state, the support given by the government was marked. The establishment of sugar factory in the Nizam State was a government financed and sponsored project. It was only the government which personally took up the preliminary surveys on the possibility of cane cultivation in the region and the development of a cane estate, getting support from the sugar technologist to make a report on the prospects of starting a sugar factory. It had virtually financed the Nizam sugar factory by subscribing up 40 % of the initial share capital. The various efforts made by the state in the establishment of Nizam Sugar Factory is dealt in a separate section of this chapter.

In the chapter four, the issues such as the entrepreneurial background, the location and the establishment of the factories, their performance and expansion and diversification of these factories are analysed. The leadership was provided by the local zamindars in the establishment of the sugar factories. The

Etikoppaka, Thummapala and Vuyyuru sugar factories were started on co-operative lines. The Bobbili and Kirlampudi sugar factories were started by local zamindars. The Kirlampudi was the joint venture of C.V.S.Narismha Raju, and Ramakrishna Rangarao, the zamindar of Kirlampudi. The Bobbili sugar factory was initiated by the raja of Bobbili. The Etikoppaka co-operative sugar factory was also initiated by the local zamindar. Most of the share-holders of Vuyyuru co-operative sugar factory were the local zamindars and many of the sugar factories were floated in 1932-35. The initial crushing capacity of these factories was only between 50 to 100 tones per day. By 1944-45 these sugar factories started making profits which encouraged them to go for expansion. In 1946 the Etikoppaka sugar factory went for expansion of increasing its crushing capacity to 600 tones per day and that of Kirlampudi sugar factory was expanded to 750 tons per day. The details concerning the conditions under which the modifications in the co-operative rules were made are dealt in this chapter. From 1945 we notice the individual factories developing cane estates. Some of the sugar factories have also started diversifying for the manufacture of industrial alcohol spirit and yeast.

The fifth chapter examines the differences in the working of the governmental policies and the variations in the methods of cultivation and the performance of the individual sugar factories. A detailed study on two individual sugar factories; one, the K.C.P, in Krishna district of coastal Andhra and another N.S.F located in Telangana region is undertaken. Vuyyuru sugar

factory was set up on co-operative lines in 1934 by the initiative taken by Adusumalli Gopala Krishnaiah. Majority of its shares were controlled by the local zamindars. The factory was provided with loans from the provincial co-operative bank. Issues relating to the methods adopted by the factory to make the peasants to grow sugar cane on large scale, the initial problems faced regarding the supply of sufficient raw material, the help rendered by the government towards providing irrigational facilities, the interest taken by some of the prominent members of the co-operative in financing the construction of minor irrigation works etc., are all discussed in this chapter. The Vuyyuru sugar co-operative was liquidated in the year 1943 and its management was transferred to K.C.P, a joint stock company. This liquidation was carried out following the disqualification of some of the prominent members of the co-operative. The reason for their disqualification and the position of the ryots under the new management, the changes that occurred on this transfer, the factory's progress under the new management etc. are also brought out in this chapter. The profits that the ryots have been making on taking to cane cultivation and the role played by the sugar factory in developing the educational, transport, and health conditions in this region also is discussed.

In chapter six, the origin and the development of the Nizam sugar factory is brought out. When the Nizam sagar canal scheme was taken up, the extension of cane cultivation formed an important factor for the financial success of the scheme. The cane cultivation did not progress even ten years after the

completion of the works of the Nizam Sagar Canal. It was to provide regular and secured market to cane grown by the ryots and thus to induce them to take to cane cultivation, that the Nizam sugar factory was thought of. The Nizam state on its own had to make land surveys on the possibilities of cane cultivation on a large scale sufficient for a sugar factory. Further it had to take initiative in inviting experts from Indian Council of Agricultural Research (I.C.A.R.) and other prominent sugar factories to make plans and advise them on the possibilities of starting a sugar factory.

This chapter also discusses the way in which the cane estates were developed for the factory. The efforts of the Government in getting the necessary lands on rent from the ryots and also the methods adopted by the government to induce the ryots to cultivate cane on a large scale were noteworthy. When the services of a sugar technologist were needed, the Nizam's government had to approach I.C.A.R for help. Efforts were made in this regard to get the services of a retired sugar technologist from England. There seems to be interest shown by the firms manufacturing machines which were needed for the establishment of the sugar factories. Initially, enthusiasm was shown by some of the native business firms and moneyed sections from outside the state in the establishment of the sugar factory. The entrepreneurial background of these promoters was different from Andhra region. The Industrial Trust Fund (I.T.F) had advanced about forty per cent of the total initial capital. The promoters who were granted permission to start the sugar factory

were lukewarm in the later stages. It was again the I.T.F which paid for the machinery and released from the ports. Later the factory was established with the co-operation of the Hyderabad construction company and the management was placed in the hands of the Hyderabad construction company. The issues relating to management, the performance of the factory, increase of area under cane both at the factory estate and that produced by ryots, over years, the inducement provided by the factory in making cultivators to take to cane cultivation etc. are discussed in this chapter. The factory functioned successfully increasing its crushing capacity to 3,500 tones per day by 1960. But from the beginning of 1970s due to the heavy silting of Nizam Sagar reservoir, there was decline in the water levels and as such the cane cultivation began to decline. By 1974-75 the situation reached to such a condition that the standing crop dried up due to the scarcity of water. Even the seed for the next year's plantation was not able to be grown. At this stage the expansion of the N.S.F was made by shifting its crushing operations to other districts. It is further explained here how the new units under the management of N.S.F were started in the districts of Nalgonda, Karimnagar, Medak and Anantapur.

The chapter seven deals with the issues relating to the relationship between the factory and the peasants; and between factory and workers. The peasants in Andhra seem to have been very alert and cautious of the profitability of supplying cane to the factory. Peasants at times diverted their cane for the preparation of jaggery when the prices they received for the cane

supplied to the factory, were found to be unremunerative. To overcome this and to secure regular supply of cane, the government had evolved a system of imposing ban on the manufacture of gur. The working of this ban order on gur manufacture is discussed in detail. Further, the role played by the middle men employed by the factories to make contracts of cane supplies from the ryots is also studied in this chapter. The working conditions of the factory labour and the facilities provided by the factory managements to the workers' welfare is also brought out. Details of some of the strikes that the sugar factory workers launched and the causes for the disputes, the part played by the government in redressing their grievances and the benefits conceded by the factories to the workers are also studied in this chapter.

The conclusions arrived through this study are presented in the last chapter.

Nature of the Sources for this Study

This study is based on mostly primary sources gathered at various archival repositories as well as in the factory offices, the kind of which were not so far utilised. A major thrust is given for consulting the sources such as the Annual administrative reports of the department of Agriculture, Industries and the Government orders (G.O) of the Development Department of the Madras Presidency for the period between 1920-1950. Annual administrative reports of the Department of Agriculture, Industry of the H.E.H the Nizam state and the files of the transferred list of the industries department of the Nizam

state for the period 1920-40 were made use of. The annual and quinquennial statistical reports of the Nizam state are also consulted. Certain primary printed reports of the government such as Report of the Royal Commission on Agriculture, Indian Industrial Commission Report, Indian Sugar Committee Report, R.C.Srivatsava's Report on the prospects of development of sugar factory in Nizam Sagar Canal area, Report of the Indian Tariff Board on sugar industry containing the written evidence recorded during the 1932 inquiry, papers pertaining to the Report on sugar trade in India of 1793 etc., were consulted for this study.

Several non-conventional sources such as the Annual Reports of the individual sugar factories of K.C.P and N.S.F contain valuable information concerning the details of area under cultivation of cane, the statistical information of the classification of peasants and villages supplying cane to the factory, the inducements provided by factories to the peasants, and their role in the welfare and developmental activities in their localities. Some of the factory files, charts, pamphlets and books printed at various stages by the factory, resolutions of the proceedings of the general body meetings of the factory etc., were also utilised. Useful information was gathered through the interviews and consultations with the progressive farmers of the locality. However care was taken to check the veracity of the information through documentary evidence. A number of secondary sources such as books and articles in journals which have a bearing on the subject have been read for a theoretical background.

CHAPTER II

GOVERNMENT'S POLICIES TOWARDS AGRICULTURAL RESEARCH AND IMPROVEMENTS IN CANE CULTIVATION

This chapter traces the government's policy towards agricultural research in India in general and more particularly with the sugar cane crop. The methods and problems concerning cultivation of the crop during the opening of the 20th century, the problems affecting this crop in two different regions; in Telangana of the erstwhile Nizam's state and the Andhra region of the then Madras Presidency are studied. It also brings to light the various efforts made by the Government of Madras as well as the Nizam's government towards developing the sugarcane crop in the respective regions.

State of Agricultural Research Prior to I.C.A.R

It may be mentioned that the world's first Agricultural Research station was established in the year 1843 at Rothamstead in England.¹ In India, till the famine of 1880, very little attention was made either by central or provincial governments in the development of Agricultural Research.

The Famine Commission of 1880 recommended for the revival of the Department of Agriculture and the formation of agricultural departments in the provinces.² This did not materialise until Dr.Volekar J.A was sent to India in 1889 by the secretary of state. India. Dr.Volekar was a consulting chemist to the Royal

¹ S.Y.Krishnaswami, *Rural development in Madras*, monograph, Government press, Madras 1947, p.109

² Royal Commission on agriculture in India, Abridged Report, Bombay, 1928, p.16.

Agricultural Society in England. He was sent to advise upon the best course to be adopted in order to apply the principles of agricultural chemistry in Indian agriculture and to effect improvements in it.³

In the Madras Presidency an attempt was made in the direction of agricultural development as early as 1863 by Sir William Denison, the then governor. He drew attention to the practice of continuous cropping, the deficiency of manures and its consumption as fuel, the defective implements, poor cattle etc. An order was placed in England for a steam plough, seed drill, threshing machines and winnowers, chaff-cutters, and water lifts to be sent to India for popularising their use here. In 1864 about 350 acres of land at Saidapet near Madras was sanctioned to conduct experimental farming to carry out exhibition of agricultural implements brought from England, to experiment the use of artificial manures and exhibition to the people of the improved system of agriculture.⁴ The work was entrusted to a separate committee. The committee carried on the work for seven years, after which the farm passed into official control in 1871 and not much success was achieved with it.

Later the Madras Government concentrated on agricultural education and an agricultural college was established in 1876

³ Ibid., p.18.

⁴ Ibid., p.23

which continued till 1905 when the department of agriculture was reorganised. Towards the close of 19th century several developments led to the investigation of various problems connected with crop production. It was during this period that in Madras presidency several crops were affected by diseases.⁵ Around 1895, sugar cane crop was affected by red rot, and similar diseases were noticed in the case of other crops such as groundnut, pepper etc. An economic botanist was appointed to investigate into the sugarcane crop that was affected with red rot disease.

A land mark in agricultural research was made with the establishment of the Pusa Agricultural Research Institute in 1905. There was also the establishment of the Agricultural College and Research Institute at Coimbatore in the Madras Presidency in pursuance of the policy laid down by Lord Curzon for the agricultural development. The Government of India Act of 1919, placed agriculture in the provinces under popular minister as a transferred subject. In 1921, the central cotton committee was formed to stimulate and assist the production, marketing and utilisation of Indian cotton. Similar committees were formed for the development of other crops such as sugar cane.

Following the recommendations made in the Royal Commission on Indian Agriculture of 1927, the Indian Council of Agricultural Research (I.C.A.R) was set up to give lead in the

⁵ Ibid., p.23

application of science to the problems of agriculture and coordinate agricultural research. Several schemes were undertaken in the province under I.C.A.R.'s auspices. They were mostly Research programmes on fruits, potatoes, rice, sugar cane, oil seeds, dry farming, animal nutrition, marketing, cost of production of crops etc.

In the field of agricultural education the college at Coimbatore was affiliated in 1920 to the Madras University and a separate faculty in agriculture was created and the course in agricultural science was instituted. In Guntur district another agricultural college was opened at Bapatla.

The cultivation of sugar cane crop in the Northern Circars of Andhra during the pre-factory days, the problems affecting the crop, the role played by the state in overcoming these problems in Madras Presidency are significant. Similarly the problems associated with cane crop in the Nizam's dominion prior to 20th century and the steps taken by the Nizam's state to develop the sugar cane crop into commercial dimension are also equally interesting.

Sugarcane Crop

Sugar cane belongs to the *Genus Saccharum* of the family *Gramineae*. It is essentially a plant of the tropics, but is grown successfully over large areas in the world in the subtropics. The important sugar cane growing countries are India, Brazil, Cuba, China, Pakistan, the U.S.A (Louisiana, Florida Hawaii) Australia, Indonesia, South Africa and

Mauritius.⁶ In India, sugar cane is an important cash crop and is grown over about 2.6 million hectares, with a production of 156.9 million tones. India is the largest producer of sugar in the world, followed by Brazil and Cuba. There are two distinct sugar cane growing areas in India; the tropical and the subtropical. In the tropical belt lie Maharashtra, Andhra Pradesh, Karnataka and Tamilnadu. In these states, the yield of sugar is highest and the growing period is almost a year. The subtropical belt comprises of Uttar Pradesh, Bihar, Punjab, Haryana and Rajasthan. About 70 per cent of the total cane area in the country lies in the subtropical northern India.

India is the home of the *Katha* or the *Saccharum barberi* canes. A wild cane found in India is *Kans* or *Kahi*, a troublesome weed found all over India on waste lands and on the banks of rivers. The forms of this species have thick stalks, high tillering, high fibre and an extremely low sugar content. Different forms of this species can withstand drought, disease and frost to a high degree.⁷

The indigenous thin North Indian cane belonging to *Saccharum barberi* are believed to have originated in Northern India through natural hybridisation of *Saccharum officinarum* and *Saccharum spontaneum*. *Kans* proved to be a great use in breeding

⁶ M.S.Randhawa, *A History of Agriculture in India*, Vol.3, I.C.A.R, New Delhi, 1983, p.327.

⁷ Ibid., p.328.

programmes of sugar cane. In 1827, Captain Sleeman brought the noble Mauritius cane to India and gave them to botanical gardens of Calcutta.⁸

In 1902, Syed Muhammad Haldi's working of sugar industry of the United Provinces, described the different varieties of cane on the basis of mainly general appearance, colour, and organic characters of the different varieties. Two of them were 'Ganna' and 'Paunda' falling under *Saccharum sinense* and *Saccharum officinarum* respectively, other four varieties namely the *Dhau*, *Matne*, *Kuswar* and *Chin* group come under *Saccharum barberi*.⁹ Haldi was also interested in the manufacturing of the sugar by the Khandasari method and also by a method of open pan boiling which he developed on his own.

In the last decades of the 19th century revolutionary changes took place in the methods of cane improvement. The discovery of fertile seed in sugar cane was made by Soltwedel in Java in 1888 and another barbados by Bovell and Harrison in 1889. For more than thirty years after Java had advanced, India continued to rely on low-yielding indigenous cane, yielding not more than 15 tones per hectare. The breakthrough came with the work of Dr.Barber and Venkataraman in 1912 with the founding of the cane breeding station at Coimbatore.

⁸ It was this Captain Sleeman who helped Lord Bentink to put down the Thugs in Central India. He earned the name 'Thuggee Sleeman' for this act.

⁹ M.S.Randhawa, *op.cit.* p.329.

Dr.Barber came to India in 1898 and was appointed as government botanist at Madras.¹⁰ In the same year, the government decided to establish a separate department for the study of sugar cane and Dr.Barber was appointed as its first expert. He joined the staff of Agricultural college at Coimbatore in 1908 and he opened the sugar cane Research Station there. Dr.Barber started his study on sugar cane from 1912, and his energies were devoted to the various aspects of cane production in India till the end of his service in 1919. In Madras, the spread of red rot was causing alarm. He combated this specific problem by introducing new cane, from which he selected those showing resistance to disease. Recognising the need of a close personal study of the cane plant, he took up a piece of land at Samalkota and grew the plant under his direct supervision.

¹⁰ Dr.Charles Alfred Barber (1860-1932) was the son of a South African missionary. He came to England for education in 1871, and got his early education at Kingswood School, Manchester. He worked in Liverpool Bank for five years and developed love for nature and studies in chemistry, Botany, Geology and took B.Sc from London University. Later he studied in Heidelberg, Germany and at Bonn University. He returned to England at the age of 24 and joined Cambridge as a scholar. He took his appointment as superintendent of agriculture in West Indies and it was here that he started his work on sugar cane. Due to depression in the economy, his post was abolished and he returned to England and joined the Staff of Royal Engineering college and came to India in 1898. For more details of C.A.Barber, please see M.S.Randhawa, *op.cit.*,

The chief regions of cane cultivation lay in Northern India in Bihar, United Provinces of Agra and Oudh and the Punjab in the subtropical zone where the climatic conditions allowed only a period of active growth of some four months and the cultivation of thick canes was consequently precluded. In Northern India many of the canes commonly grown rarely flower and those that flower fail to set seed due to unfavourable climate. These reasons compelled the establishment of the sugar cane Research Station out side the sugar tract.

Among important characteristics needed in cane cultivation for Northern India were hardiness and a capacity to thrive under equally trying conditions of a cold winter and an intensely hot and dry summer. To secure these characteristics, Barber turned to crossing between thin indigenous canes and the thick noble cane. Barber had developed a hybrid 'Co' cane variety. Other varieties developed by Barber were Co 210, Co213, Co214, Co 205.¹¹ Barber's work on cane at Coimbatore has won him international acclaim.

After the retirement of Dr.Barber in 1919, T.S.Venkataraman continued his work at Coimbatore. While Barber was the first breeder in the world to employ *Saccharum spontaneum* to raise an interspecific hybrid, Venkataraman was the first to be able to bring about intergeneric hybridisation between sugar cane and Jowar and also between sugar cane and Bamboo. These varieties

¹¹ M.S.Randhava, Op.cit., p.

were made to meet the demand for early and late cane which would not lodge and would resist disease pests.

The improved sugar canes bred by Venkataraman at Coimbatore were estimated to occupy 75 per cent of the total acreage under cane crop in India. Those varieties developed by Venkataraman were Co281, Co290, Co299, Co312, Co313, Co331, Co352, Co356, Co419 and Co421.¹² Venkataraman served up to 1942. He was succeeded by Nanda Lal Dutta who served up to 1958.

The beginning of a full-fledged cane development work date from 1935, when the Government of India placed some funds from the sugar excise fund at the disposal of provincial governments with the specific object of improvement of this crop. In 1937-38, a separate cane development department was formed in united provinces under the charge of a cane commissioner. With the opening up of the Indian Central Sugar Cane Committee in 1944 with a fund of Rs.12.5 million for sugar cane development, a great progress was achieved.

Very useful work was carried at the various sugar cane Research Stations which were established in different states with the help and funds from Imperial Council of Agricultural Research. Work of great utility on the varietal, cultural, manurial, cane growth and sucrose development, entomological and mycological aspects of cane crop has been done at Shahjahanpur

¹² Ibid., p.338.

sugar cane station in U.P. Two substations were also located at Muzaffarnagar and Gorakhpur. Work on sugar cane was also undertaken at Pusa sugar cane station. Its feature was the live contact it had maintained with the sugar factories in Bihar. Pusa station conducted soil surveys and also disease and pest survey. Work on sugar cane soils was carried on at Padegoan sugar station. Useful information had been obtained on varietal, manurial and cultural aspects at Anakapally sugar cane station of Andhra Pradesh.

Cane Cultivation During Pre-factory Days in Coastal Andhra

The earliest recorded account of cultivation of sugar cane in the Madras Presidency goes back to as early as 1797. It has been mentioned that sugar cane has long been cultivated in the Peddapore and Pettapore zamindaries till the close of 18th century. About 110 vissum of land was cultivated in the Peddapore and about 300 vissum in Pettapore.¹³ But the cane was small, the juice poor and always was converted into gur, unless when particular orders were given and advances made for sugar, but that sugar was of a inferior quality.

In Peddapore zamindary in the Kimmore paragana sugar cane used to be cultivated in about 26 villages in 1797. This area is served with Elyseram river. This river in its course to the sea gives considerable fertility to this region which was very

¹³ First Appendix to Report on the Sugar Trade, 2nd May, 1793, p.251, National Archives of India, here after N.A.I.

essential requisite for sugar cane cultivation. In the Masulipatnam district, cane was cultivated in the Paraganas of Kimmore with 253 acres, in Polanand with 40 acres, in Tattapaunk with 84 acres and Achunta with 76 acres thus a total of 447 acres in the year 1793.¹⁴

About 445 tons of sugar used to be produced and all the sugar thus produced was consumed locally and nothing was available for its export. The reality was, that indifferent quality of the jaggery rendered it fit only for consumption of the natives and the want of skill to convert it into tolerable sugar precludes it from any probability of becoming an article of import into Europe.¹⁵

It was estimated that the cane produced in Masulipatnam and Ganjam districts used to yield more than double the produce of the yield of the west Indian Islands. Due to the lack of improvements in the manufacturing process, the sugar production could not accelerate.

The Board of Revenue of Madras Presidency was authorised to take all steps to encourage the manufacture of sugar in the Presidency and particularly in the Northern circars.¹⁶

¹⁴ Ibid., p.255.

¹⁵ First Appendix to Report on Sugar Trade, 1793, p.255, N.A.I.

¹⁶ Dr. Rox Burgh's account, in the second appendix to Report on sugar Trade, 1793, p.45, N.A.I.

At Vizagapatnam, it is on record that a person was appointed with a salary of 50 pagodas per mensem for encouraging the manufacture of sugar. There were instances of government encouraging the entrepreneurial private individuals who were willing to take up projects of starting sugar plantations. Money was advanced by the government to start sugar plantations.

The Board of Trade had directed the Board of Revenue in 1800 A.D for an advance of Rs.15,000 to be made to Mr.Colley, the sugar contractor at Ganjam, to enable him to make necessary advances to the cultivators of sugar cane to ensure the produce of the gardens for the investment of ensuing year. Another British cultivator, Mr.Campbell was extended assistance granting to him the land which he had pointed out on lease for a term of ten years at a rent of 2062-3-25 star pagodas per annum. Campbell proposed to start sugar plantation in Dindigal.¹⁷

There appears to have been a demand for external trade of the sugar. The government used to employ contractors to procure the manufactured sugar products in 1796. It was reported that the district collector, Mackenzie, started a new mode of procurement by making direct agreements with the manufacturers. They also executed to receive the land rent in kind, instead of cash.

¹⁷ Second Appendix to Report on sugar trade, 1793, p.48, N.A.I.

The Presidency authorities directed the collectors of Ganjam and Vizagapatnam to take all necessary steps to extend the cane cultivation. The East India Company took keen interest in extending West Indian methods of sugar cane cultivation. Edward Campbell, an Irish enterprising cultivator devoted to sugar cane cultivation was persuaded by the British East India Company in the late 18th century to come to Madras and try his experiments in Madras. He made attempts first in Coimbatore and Tanjore, but the peasants did not show any interest. In 1803, he was given on lease by the government, 19 villages in Chidambaram area of the south Arcot district.¹⁸ He was to pay all the dues and allow half the produce of the cane to such ryots as were willing to try the experiment and nobody was to be compelled. He struggled hard to make it a success, but he had subsequently applied to the government to be allowed to surrender his firm. The main reason described for his failure was the attitude of the local ryots, who at first were tolerably attentive, but lapsed gradually into negligence.

Early Attempts at Introducing Sugar Industry:

In the mid 19th century, when the attempts at extending cane cultivation was being pursued by the government of Madras, a business firm run by Thomas Parry, was investing money in trade and moneylending. Edward Campbell was lent some money by the

¹⁸ Hilton Brown, *Parry's of Madras: A story of a British Enterprise in India*, Parry & Co Ltd., Madras 1954, p.39, N.A.I.

Parry Financing Company for his investments at Chidambaram in sugar cane. It is through Campbell that the Parry got interested in sugar.

In 1840, Thomas Parry entered into sugar industry. During this time the West Indian sugar interests had succeeded in keeping down a restrictive tariff against East Indian sugar. The difference between West Indian and East Indian sugar was 30 shillings per a unit of cwt and this discouraged all the enthusiasts of Indian sugar. This dead weight could not be overcome either by rational argument or by the East Indian Company's propaganda. The Indian sugar exported was labelled in gold letters by the company as *East Indian sugar not made by the slaves*.¹⁹

Up to 1819, the free merchants of Madras exported sugar only to a negligible value. The situation changed in 1836, when the duties on the two sugar, East and West, had been equalled. Again in 1845, there was a shift over to the policy of free trade. This practically slaughtered the new born sugar industry in India. Only two firms continued in spite of the free trade policy. They were of Parry's in south Arcot district and Binny's at Aska in the Ganjam district.

¹⁹ Ibid., p.49

Parry's first concern was located at Bandepollum, which got license for distilling in 1843. A second factory was started at Kallakurichi in 1844, the third factory that proved to be the permanent one was established at Nellikuppam in the year 1845-46. Its distillery was licensed in 1848.²⁰

The raw material for Parry sugar concerns was not sugar cane alone. A great deal of palmyrah jaggery was employed and was brought by Parry's special buying agents in Palghat and Tinnevely districts. Jaggery is a solid substance procured by boiling the juice tapped from palmyrah spathes, which when refined can be turned into white sugar.

The Binny's concern had established a sugar distillery at Samalakota in the Godavari district of Andhra Pradesh. Its activities centered round the sugar factory at Samalakota with the name Deccan sugars and Abkari company. In the company only palmyrah jaggery was used as raw material. The factory used to get this palmyrah jaggery from the Krishna and Godavari districts which was available in plenty in these districts.

Due to the heavy losses incurred under the Binny's management, unable to manage the factory, it was given to the Parry & Co., in the year 1902.²¹ It continued to run in losses

²⁰ Ibid., p.88

²¹ Ibid., p.163.

for a long time and no dividend was paid to its share holders till 1921. It was only after 1943 that the Samalkota sugar concern started crushing cane instead of palmyrah jaggery.

In the early years of 18th century all the three Parry's ventures of Bandepallum, Kallakurichi and Nellikuppam showed profits. Parry's was not the only venture in the field. Besides Binny's considerable undertakings at Aska, the Kallakurichi management had another enterprise at Venkatagiri and Palamner in Chittoor district. There was another independent and languishing concern at Razole in Godavari district. Majority of these early concerns were financed and managed by Europeans and the main source of raw material worked in these early sugar concerns was palmyrah and not sugar cane.

The Parry's concern at Samalakota in the Godavari district used to get its supplies of jaggery from the neighbouring villages of Krishna and Godavari districts. An account of the jaggery trade carried on in the early decades of 20th century in Krishna district is presented below.

From Vunagatla village of the Krishna district, a very considerable quantity of jaggery trade activity was reported to be carried on in the early decades of the present century. Vunagatla is in the Yernagudem taluka of the Krishna district, four miles from Nidadavolu, an important railway and river traffic centre. On one side it is bounded by the high road from Nidadavolu to Godavari agency and on the other, by a great sandy

tract filled with palmyrah trees. The crops were more dependent on rains. Half the field area of the village consisted of dry sand, filled with palmyrah trees.

It is understood from the statistics presented by Gilbert Slater that out of a total of 764 adult members of the village participating in different occupations as many as 283 were involved in toddy tapping during the year 1918.²²

Sandy tracts with palmyrah trees in the village fetch a rent of Rs.10 per acre. The cultivators owning bullock carts earn in summer 90 to 100 rupees by letting out their carts to transport jaggery. Almost all sections of the village directly or indirectly benefit from this jaggery trade. One man can draw toddy from about 60 trees. Some 1,000 to 1,200 of these tappers come from different taluks of Krishna and Godavari districts to this village in summer, while 200 to 250 were drawn from this village alone. The tappers climb the trees and suspend pots, lined with lime, beneath the cut ends of the stalks of the fronds of the palm from which the juice (toddy) flows. The women at home boil the toddy till it is condensed into jaggery.

Part of the jaggery used to be sold to the direct agents of the Parry's company, who opened an extensive business in these parts and invested a large capital. These agents of the company purchased jaggery with the company's money and got a commission

²² Gilbert Slater, *Some South Indian Villages*, O.U.P., P.112.

at a rate of 2-6 annas per bag. They sent it to Samalkota, where the company converted it into sugar.²³

During the year 1918 the total export of palmyrah jaggery from the village was 18,000 bags amounting to 6,000 candies. Many of the villagers invested in the jaggery trade. It is said that many of the people who started poor in this business, have improved a lot and within three years they started investing few hundreds of rupees in this trade. There were few people who invested Rs.30,000 each during the year 1918.²⁴ It is felt that many a poor family would have long ago left the village but for the jaggery trade.

At several stages, the British East India company tried to develop the cane cultivation to get some quantities of sugar exported from this country. In this connection only Mr. Edward Campbell was entrusted with the job of advocating in India the methods of sugar cane cultivation those that were successful in West India, but their attempts did not bear fruit. Even the independent initiatives taken up by the Binny's and Parry's did not succeed in making sugar cane crop to be taken up on commercial lines. Parry's and Binny's sugar concerns were using palmyrah jaggery as their chief raw material. By the close of

23 Ibid., p.117.

24 Ibid., p.118.

19th century it can be said that in the Madras Presidency the sugar cultivation and sugar industry did not make much progress.

Arthur Cotton, the architect of the Godavari irrigation system, visualised the post-anicut Godavari delta raising paddy and sugar plantations on a large scale. But till 1890, the area under sugar cane never crossed eleven thousand acres. A high cost of cultivation appeared to have acted as one of the important deterrents for the spread of sugar cane cultivation in the district. According to C.Benson, the then Assistant superintendent of the government farms, the per acre cost of cultivation of sugar cane in Godavari district in the early 1880's was as high as Rs.140, with the additional expenses of rupees 60 for the manufacture of jaggery, the total cost of cultivation of cane came to about Rs.200 per acre.²⁵ As against this, the per acre cost of cultivation of paddy was below Rs.5.75. An investment of Rs.200 per acre was well beyond the reach of an average farmer in the district.

It is true that the high investments that were needed, came in the way of the sugar cane crop getting into commercial dimension, and during 1890's there were no institutional finances available to the farmers. Apart from this observation few other aspects also can be kept in mind to have come in the way against

²⁵ C.Benson's Report to the director of Revenue Settlement and Agriculture in Proceeding of Board of Revenue 2 november 1883 pp.1-15, quoted by G.N.Rao 'Canal irrigation and agrarian change in Colonial Andhra: A Case study of Godavari district c.1850-1890', in *I.E.S.H.R* Vol.25, No.1 Jan-March, 1988, p.47.

sugar cane becoming a commercial crop. They were, the crop itself was facing some problem and there was no proper governmental or private institutions to take up agricultural and crop research at that period.

Towards the close of 19th century, Namalu and Keli, the two varieties then mostly grown in the Godavari delta were severely attacked by red rot.²⁶ The diminution in the area under cane which resulted was so serious as to threaten the sugar industry of that part of the province with extinction.

It was opined by the Indian sugar committee of 1920, that the climatic conditions were more favourable in the irrigated lands of Madras in the entire country. In spite of the favourable conditions for its growth, the area under this crop in the province was scattered. Its total area was less than that of Gorakhpur or Meerut districts of the United Provinces.²⁷ Despite the fact that cane is grown in every district, the only districts which normally return an area of 10,000 acres were Vizagapatnam and Godavari in the North and Chittoor in the centre of the Madras Presidency. It was noticed that even in these districts, the crop was affected by red rot and threatened so seriously as to result in the extinction of the sugar industry in the Madras Presidency. To deal with this problem, in 1901, Dr.Barber an

²⁶ Report of the Indian sugar committee, (Simla), 1920, p.114.

²⁷ Ibid., p.113.

economic botanist was leased some land in Godavari district for experiments directed to discover the disease resistant varieties of cane.²⁸

In 1912-13, government opened an agricultural station at Anakapalle to improve the local cane conditions, but these early efforts did not make much progress. Serious attention to this problem of cane was made in the agricultural and trade conference of the Madras Presidency held in 1914, in which several committees were formed to discuss the details of the problems of each crop. The committee on sugar was one among them. This committee met separately on 16th December 1914 and was attended by 17 members consisting of two members from Parry's company who were dealing in sugar production then. The committee discussed at its meeting the following questions regarding cultivation of sugar cane and sugar manufacturing. They were:

1. In what respects is the jaggery which was prepared either from palm or cane defective? and how far it was done to the method of extraction of juice, to the process of crude method of manufacture.
2. By what means can the trade and the agricultural department best assist each other in maintaining and extending the then existing cane areas in the Madras Presidency.
- 3 Are the quantities of cane or palm in any particular locality deteriorating.

²⁸ Royal Commission on Agriculture in India, Report, Government central press, Bombay, 1928, p.23.

4. Can the advances on crops for manure be given or conditions of sale of cane attended to facilitate the manufacture.

5. Are the conditions in Madras such as to render manufacture of refined sugar profitable and if not what factors militate against it.²⁹

Research Work on Sugarcane in Madras Presidency

The Research Work was carried on by the agricultural department in the Madras Presidency at two levels. One was carried on by the specialists at Coimbatore, where they were equipped with laboratories and special stations and another one was done at the agricultural experimental stations. The experimental stations were located in Anakapally, Samalakota, Marutur, Guntur, Chintaladevi, Nandyala and Naidupeta.³⁰ At Coimbatore Research Station research on sugar cane was carried out. The fundamental problems underlying the practice of agriculture in the country, crop pests and diseases, and the improvements of existing crops by plant breeding methods were studied at Coimbatore by a number of experts. Their discoveries were tested under local conditions on the experimental stations in the districts.³¹

²⁹ Agriculture and Trade Conference, Report, Dec.16th 1914, Madras, A.P.State Archives, here after A.P.S.A.

³⁰ Annual Administrative Report of the Department of agriculture for the year 1927-28, Madras Presidency, p.13.

³¹ Ibid., p.21.

At the district level agricultural stations of Anakapally, Samalkota and Palur experimental work was carried on sugar cane crop, concerning the varietal test and manurial experiments. Certain demonstrations were also conducted in regard to the propagation of the use of better varieties of seeds, the practice of line planting, trenching, propping and wrapping, manuring, improved furnaces and improved mills.

In the year 1933-34, the Imperial Council of Agricultural Research had started a scheme on sugar cane research at Anakapally Research Station which covered the Vizagapatnam district with 35,000 acres under cane cultivation.

A number of demonstration plots were laid down in Vizagapatnam district to show the ryots the effects of planting immature sets for seed. It has been shown at the Anakapally experimental station that germination is improved by 5 to 10 per cent. The results of these demonstrations have in almost all cases, confirmed the experiments and the ryots have been shown on their own land that they can get 10 to 15 per cent of more jaggery by planting good sets obtained by the short cropping system.

It was noticed that J 247, the Java variety has rapidly become very popular cane on account of its resistance to disease and drought. Its colour was also very light and hence the sugar produced from it is also of a light colour. It grows to a height

of 6 to 8 feet yielding 25 to 30 tons per acre.³² In the districts of Ganjam, Vizagapatnam, East and West Godavari about 2,77,445 sets of J 247 variety were distributed from the Anakapally experimental station and the ryots themselves produced 44,515 sets for sale. At Etikoppka in Vizagapatnam district 94,000 sets of J 247 were produced on a seed farm conducted by the local zamindar Narasimha Raju also member of the Madras Legislative Council and were distributed in the neighbouring villages.³³

Samalkota Research Station

The Samalkota Research Station was started in the year 1920. The whole area of the farm at this station was wet land with 40 acres under paddy, 4 acres under sugar cane and about half an acre under plantation.

On sugarcane crop, extensive varietal trials of about 52 varieties were conducted. Tilling, growth yield and chemical analysis were carried on. Experiments on the preparation of cream jaggery and centrifugal sugar were conducted.³⁴

³² It becoming a popular variety among the ryots in coastal Andhra on account of the above qualities was documented in an article by Pudipeddi Venkata Ramanayya, Telugu Cherukulu, in *Bharati*, (Telugu monthly), Vol.12, No.2, Feb.1935, pp.321-322.

³³ Annual Administrative Report Department of Agriculture for the year 1927-28, Madras Government.

³⁴ Letter from the director of Agriculture to the secretary to the development department, Madras Government in G.O.No.496 dated 27-3-1936, Development dept. Government of Madras.

At Samalkot agricultural farm, the Poj 2878 and the Java variety of canes was understood to have shown promising results. The Co213 and some sorghum sugar cane hybrid developed deep root system and were able to stand and thus over came the habit of lodging. Improved cultivation methods such as line planting, trenching, ploughing with improved implements and wider spacing were introduced.

With the fall in the prices of paddy, extension of cane cultivation has become an important alternative crop and the area under cane showed a slight increase especially in the vicinity of sugar factories. With this, the demand for the sets of improved variety was felt. During the year 1935-36, about 1,241,296 sets were distributed by the government at various agricultural stations. The sugar cane growers co-operative society at Bobbili started a farm with 4.5 acres for the multiplication of sugar cane varieties. Another sugarcane growers co-operative society was formed during the year 1935-36 at Kirlampudi with a similar objective.³⁵

It was also recognised that the problems of different tracts should be taken up for solution so that an impetus may be given for the extension of area under cane. The Anakapalle Research Station represented Vizagapatnam district alone growing cane in about 35,000 acres. The central district of the Madras

³⁵ Annual Administrative Report on the operation of Department of Agriculture, Government of Madras, 1935-36, p.34

Presidency raised sugar cane in about 30,000 acres largely with the help of lift irrigation. Hence it was proposed that an additional station should be opened for the benefit of the ryots cultivating cane under tank irrigation and lift irrigation. A scheme was formulated to expand the work at Anakapally and to start a new station at Chittoor. The whole scheme has involved an expenditure of Rs.2,36,900 for a period of five years. The scheme was sent for its consideration at I.C.A.R. The amount included the already existing expenditure at Anakapally agricultural station amounting to Rs.1,06,800 which was offered by the council as a contribution by Madras Government. The grant asked from the I.C.A.R was about Rs.1,50,000 and the same was sanctioned. This amount was spread over a period of five years.³⁶

About 30 acres of land was acquired in Kattamanchi village of Chittoor district for conducting the sugar cane research. An amount of Rs.24,100 was required to purchase the land for the new station. The proposals were differed when placed before the Madras Legislative Council on the ground that the site selected for the purpose was not a suitable one. Another request was made in the house if in Guntur also sugar cane research scheme could be started by the government. Though the Government did consider these proposals, it can be understood that the peasants were

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From the note circulated by the government in the Madras legislative Assembly, to the reply to a question raised by Mr.V.M.Ramaswami Mudiliyar (M.L.C) on 22-3-33 in the Madras Legislative Council in G.O. No.400 dated 1--4-1933, development Dept., Government of Madras.

anxious to get benefited on account of the sugar cane research scheme and that they had made their members in the council to ask for starting sugar cane research schemes in their respective districts and localities.

A sugar cane Research Scheme was proposed with the staff as mentioned in table given below at the three sugar cane research stations of Madras, Anakapally and Chittoor.

Table 11.1

Research plan proposed to be taken up at Madras, Anakapally and Gudiyattam Research Stations in 1933

Staff	Scale of pay per month(Rs)	Madras	Anakapally	Gudiyattam
Superintendent	250-75-750	1	—	—
Farm Manager	120-10-170	—	1	1
Farm Manager	85-5-120	2	—	1
Assistant Farm Manager	45-3-75	1	—	—
Chemistry Assistant	85-5-120	1	—	—
Botany Assistant	85-5-120	—	1	1
Field man	35-50	1	1	1
Clerk	60-4-80	—	—	1
Laboratory attendant	25-1-35	1	—	—
Peons	12-18	1	—	1

Source: G.O.No.400, Development Department, Government of Madras dated 1-4-1933

This scheme was accepted by I.C.A.R and it also agreed to pay for the salaries of a farm manager, botany assistant and a fieldman from April, 1933.

Though the research work on sugar cane was started as early as 1902 in Madras Presidency at Samalkota, due to lack of proper financial aid, much work was not carried on. The Indian Council of Agricultural Research started financing the sugar cane research work at Anakapally from the year 1933-44 and at Gudiyattam in North Arcot district. Gudiyattam was about 20 kilometers away from Chittoor, where agricultural work on sugar cane was proposed to be undertaken for the benefit of centrally located districts of Madras Presidency. The amount spent at Gudiyattam Research Station on sugar cane research for the years 1935-36 to 1946-47 is given in the table below.

Table 11.2

Particulars of organisations funding the research schemes and the amount spent at Gudiyattam research station between 1935-36 and 1946-47.

Year	Amount spent in Rs.	Financing Organisation
1935-36	27,857	totally financed by I.C.A.R
1936-37	13,618	
1937-38	20,970	
1938-39	19,414	
1939-40	14,248	
1940-41	14,487	
1941-42	14,943	only pay and allow- ances of the staff by I.C.A.R
1942-43	6,957	
1943-44	5,957	
1944-45	5,635	only allowances by I.C.A.R
1945-46	6,818	
1946-47	6,878	

Source: G.O.No.3606, dated 7th July, 1948, Dev.Dept.Madras, Govt.

The sugar cane seedling types were received every year from the Indian sugar cane breeding station of Coimbatore by sugarcane research stations of Anakapally and Gudiyattam. In the first year of the receipt of these seedlings at these stations, they were studied thoroughly for all the economic characteristics and in the next three years they were put for varietal study. On the basis of their juice analysis and vigour, these varieties were classified as late, early and middle maturing. Among these the promising varieties were tested for yields and those with good yields were taken to the main yield trials and were tried for their successive seasons, and best ones from this trial were selected and released for cultivation in the district. Thus it takes six to seven years before a variety received from Coimbatore breeding station was released to the peasants.³⁷

Apart from undertaking the research work on sugarcane crop at the governmental research stations and experimental farms, it is also interesting to note that the government had extended help to the cane farms of the factories such as the K.C.P at Vuyyuru. The Agricultural Department had posted three probationary agricultural demonstrators on special duty, from the end of December 1937 to the end of March 1938 to assist the factory farm

³⁷ G.O.No.3606 dated 7th July 1948, Development Department, Government of Madras

at Vuyyuru.³⁸ The government also sanctioned the payment of a subsidy of Rs.150 per month from sugar excise fund to the co-operative industrial credit society Vuyyuru to meet the cost of agricultural officer to be appointed by the society.³⁹ It was noticed that around 1935, the cane cultivation in the vicinity of Vuyyuru sugar factory was found to be unremunerative. Hence, it was pointed out that a cane superintendent be posted by the Government to help the cane growers to examine and advise them as to when to cut the cane. The use of Refractometer was suggested to study the juice content of the cane.⁴⁰

A scheme has been approved by the Government of India concerning developmental work on sugar cane in the Vuyyuru sugar factory area ancillary to the imperial council of agricultural research in progress at Anakapally. The scheme has been subsidised from the Government's excise fund for 1940-41. An amount of Rs.13,900 towards the cost of the scheme spread over a period of four years was approved. One field-man, one maistry and one watchman were appointed as staff members.⁴¹

38 Letter from the Director of Agriculture to the secretary Development Dept. dated 22nd May 1938, in the G.O No.33 dated 5th Jan 1939, Development Dept., Government of Madras.

39 Letter from Registrar of co-operative Dept. to the secretary of the Development Department, dated 2nd June 1939 in the G.O.No.1540 dated 16-6-1939, Development Dept. Madras Government

40 Gudur Venkatachalem, 'Panchadara Parisrama: Nadu-Neidu', in *Bharati*, (Telugu), April, 1937, pp.859-873.

41 G.O.No.967, dated 12th May 1947, Development Dept. Government of Madras

During the year 1940, the Indian Council of Agricultural Research had sanctioned a programme to extend the work on insects and pest resistance of sugar cane at several agricultural stations in the country and an amount of Rs. 4,000 per year was sanctioned to every station. A total of Rs. 18,000 was sanctioned to carry on the work in Madras Presidency out of a total grant of Rs.1,07,640 for the entire country extended over a period of two and a half years.⁴²

The Central Sugarcane Committee of India sanctioned six posts of fieldmen and four laboratory attendants for Anakapally, and one storekeeper for Gudiyattam research stations.

On account of the keen interest taken by the Government in Madras Presidency in encouraging cane cultivation in the way of crop research, development of better varieties of seed, experimental farms, demonstration units and supply of the high yielding varieties of cane to the ryots; the ryots understood the profitability of growing the sugar cane crop with the aid of the application of scientific advancements made through the research stations. This resulted in the increase of acreage under the sugar cane crop. Details of the district-wise increase of acreage under the sugar cane crop in the Madras Presidency for a period of thirty two years from 1914 to 1946 is given under table II.3 below.

⁴² Letter from the secretary I.C.A.R to secretary of Development Dept. Govt. of Madras, dated 16 Dec.1939, in G.O, No.115, dated 12-1-1940.

It can be noticed from the table presented below that the total acreage under cane in the Presidency had increased from 86,964 in 1914 to 1,49,010 by the year 1946. This amounts to an increase of 62,046 acres. Most of this increase can be attributed only for the increasing use of the high yielding varieties propagated by the Government for their use by the peasants. It is also noticed that the total acreage under cane of all varieties including local varieties during 1946 was 1,49,010 and of which only 30,715 were with local varieties and the remaining 1,18,295 acres were covered with improved varieties propagated by the Government.

Table II.3

Districtwise increase of acreage under cane crop in Madras presidency between 1914 and 1946

District	Area under cane in 1914 in (acres)	Area under cane in 1946 in (acres)	Increase of area in (acres)
Vizagapatnam	24168	30500	6332
E. Godavari	6214	7960	3766
W. Godavari		2120	
Krishna		7960	
Guntur		3130	
Kurnool	9014	280	1046
Ballari		10060	
Anantapur		3330	
Cuddapah		600	
Nellore	4092	30	13788
Chengulput		400	
South Arcot		17880	
Chittoor		11650	
North Arcot	10020	13000	1630
Salem		9800	
Coimbatore		12200	
Tiruchi		13000	
Tanjore	7699	1270	5301
Madurai		4200	
Ramnad		710	
Tinneveli		120	
Malabar	1920	120	62046
South Canara		5300	
Others		N. A	
Total		149010	

Source: Figures taken from the report of the agricultural and trade conference of Madras 1914 and from G.O.No.1424, dated 5th April 1946, Development Department, Government of Madras.

Cane cultivation methods and Government policy towards cane development in Nizam State

In the early decades of the twentieth century sugar cane crop was of very small importance in Telangana. In the districts of Nizamabad and Raichur only we see acreage under cane being some thing more than 1000 acres, with 1118 and 1367 acres under cane cultivation respectively for the year 1918-19.

In the Maratwada region, three districts were popular for cane cultivation. 3350 acres in Aurangabad, 11687 in Bidar and 3127 in Parbhani were under cane cultivation. The average area under cane cultivation for five years ending with October 1918 in Nizam's State was 29,763 acres.⁴³ This amounts to a mere 1.1 per cent of the total area under cane for the whole of India.

Two main factors hindered the extension of cane cultivation. They were: 1) The heavy cost that was to be spent for providing props for the cane plants and 2) the high irrigation rates levied by the Government.⁴⁴ Sugar cane crop occupies the ground for 11 months during which not more than two crops could be taken up. Its water requirements are equivalent to those of one *Abi* and two *Tabi* crops of rice. This inequality of incidence upon the cane

⁴³ Report of the Indian Sugar Committee (Simla), Government Central Press, 1921, p.149.

⁴⁴ ... "The existing system of assessment has something to do with very limited extent of cane cultivation in Telangana. It tends particularly discourage cane cultivation in the two district Medak and Nizamabad, soil of which appears to be eminently suited for it." Indian Sugar Committee Report, Op.cit., p.153.

cultivation in Medak and Nizamabad districts was intensified by the fact that the scale of assessment on rice in these districts was much higher than it was in other districts. The charges of the two successive crops would be nearly Rs.25 in Medak district, but if the same plot were to be cultivated with cane, the charge would be Rs.50 per acre.

The local varieties of sugar cane commonly grown by the cultivators belong to the thick Paundia type. They were not found in pure condition. Local cultivators recognised them under three categories:

- 1.Red and grey striped-locally known as *Da'seri* and *Gi'telia*. A thick and soft cane.
2. green and grey-locally known as *pachcha Jangam* or *Tella Cheruku*. It contained more juice but less sugar, used widely for chewing.
3. dark purple-locally known as *Nella Cheruku* which is harder and thinner in comparison to the above two but softer and thicker than Coimbatore variety, co. 213. This variety yields less juice in quantity but sweeter in quality.

All these varieties of cane have a habit of lodging and can not be grown without supporting with a large number of wooden

props, which is a very costly item. They were also very liable to the attack of borer and red rot diseases.⁴⁵ They require watering for upto 50 times to mature the crop. Water was applied twice a week on the average. The juice from these varieties is rather watery, requiring a large quantity of fuel for the manufacture of gur. About 15,000 to 20,000 sets of cane seed used to be planted in beds on flat ground. Planting used to be done during the months of January and February. The estimated cost of cultivation of cane per acre is presented below.

⁴⁵ In the letter from Director of Agriculture, Govt. of Nizam State, to sugar technologist (I.C.A.R) dated 23-10-33 in the installment No.74, list No.16, File No.7/1343 fasli, Hyderabad State, Industries Department Transferred lists.

Table.II.4

Details of cost of cultivation of cane in one acre in Telangana during the year 1934.

Cost incurred for raising cane

Nature of Agricultural operation	cost incurred in (Rs)
Preparatory tillage (ploughing, making beds, and channeling etc.)	15
Manuring	30
Fencing	05
Sowing with cost of seed (11,500 sets at Rs.4 per thousand)	80
Irrigation (Labour Charges alone)	20
Weeding and Hoeing	20
cost of wooden props 8,000 at Rs.30 per thousand replaced every third year	80
Fixing the props and tying and wrapping	50
Harvesting (cane cutting, stripping, transporting)	25
Land assessment (revenue and water tax)	45
MANUFACTURING OPERATION	COST IN (Rs.)
Crushing (3 men and 2 pairs of bullocks for 40 days)	105
Boiling	40
Fuel	10
Preparation of furnace and shed	10
rent for machine and pans for one third season at the cost of Rs.30 per season	10
Total	545

Source: From the details given in the letter from Director of agriculture department of Nizam's state to the sugar technologist of I.C.A.R dated 23-10-1933 in the Industries Dept. files of Nizam's state, Installment No.74, list No.16, File no.7/1343 Fasli.

It can be seen from the above table that for providing wooden props and fixing them up alone costed about Rs.130 which amounts to nearly more than one third of the total cost of cultivation of cane. Hence, this lodging habit of cane became a heavy burden and it came in the way of cultivation of sugar cane in the region. The cost of cultivation of cane in one acre around 1934 was about Rs.370. Added to this a further amount of Rs.175 was also incurred for the manufacture of gur, putting the total expenditure at Rs.545.

Research Work on Sugar Cane Crop by the Agricultural Department

The Nizam State had taken keen interest from the very beginning of the present century. The department of Agriculture in the state was established in the year 1913 A.D. The principal motive behind starting this department was the improvement of indigenous species of cotton and experimenting species brought from outside. Experiments on the improvement of conditions of the cultivation of crops such as sugar cane, rice and sericulture was also conducted.⁴⁶

In 1913, the very year of the establishment of the Agricultural Department, an agricultural farm was established at Nizamabad where the experiments on sugar cane crop were undertaken.⁴⁷ This agricultural farm experimenting on cane was

⁴⁶ Annual Administrative Report of the Department of Agriculture (here after A.A.R.D.A)

⁴⁷ A.A.R.D.A, H.E.H.Nizam State, 1913-14, p.1

shifted to Kamareddy in 1916, where it functioned till 1931, then it was transferred to Rudrur in 1931, where it continues to function till date. By the year 1918-19 about 6 agricultural farms were functioning in the Nizam State. They were located in Kamareddy, where experimental work on sugar cane and paddy was undertaken; at Alir, work on castor, tobacco Indigo and sugar cane was taken up; In Mahaboobnagar farm, work connected with castor, sericulture was carried; Uppal farm concentrated on paddy, ground-nut, potato and tobacco; Parbani, had specialised in studying cotton and rotational crops and at Sangareddy, work on garden crops vegetables, silk and paddy was conducted.⁴⁸

The experimental work on sugarcane was conducted at Kamareddy and Nizamabad agricultural stations. During the period 1913-14 to 1915-16, experiments were conducted at Nizamabad agricultural station to study the effects of the use of artificial manures such as Nitrate and Potash. These experiments were made to overcome the lodging habit of cane. The experimentation of the use of artificial manures resulted in strengthening the roots of cane. The ryots were convinced by these experiments and they had applied to the department for supplying them artificial manures of worth Rs. 1500 in the year 1915-16.⁴⁹

⁴⁸ A.A.R.D.A, H.E.H, Nizam State, 1918-19, p.4.

⁴⁹ A.A.R.D, H.E.H. Nizam State, 1915-16.

During the years 1916-17 and 1917-18 at Kamareddy agricultural station, experiments on the use of artificial manures were continued. It was noticed in the fields where artificial manures were used that in one acre of cane crop, about 130 to 340 props were needed as against 2000 props used by the ryots who had heavily manured their fields with natural manures.⁵⁰

In Telangana, ploughing is shallow due to the diminutive livestock and inadequate implements. Hence in Kamareddy, during the year 1918-19, *Java* system of planting was tried. At Kamareddy, during the year 1919-20, varietal experiments were conducted on all local varieties to find out whether it had the resistance of the red rot disease. Certain new varieties of cane from Coimbatore were also tested with a bearing on suitability of locality, outturn and percentage of sugar. Thus it can be seen that the beginning was made in the direction of the use of science to soil in second decade of 20th century in Telangana.

Visit of the Indian Sugar Committee

During the year 1920, the Indian Sugar Committee was appointed by the government of India to study the conditions of cane cultivation in various parts of India and recommend for necessary steps for developing the industry. The members of this committee visited Nizam's dominions during the year 1920. The President Mr. Mackenna did not attend but the rest of the members

⁵⁰

A.A.R.D.A. 1916-17 & 1917-18.

of the committee, Mr.Noyce, the vice president, Mr. Gilliot, the secretary and Mr.Crabe, Mr.Mac Donals, Mr. Padshah and Sir C.Caters visited Hyderabad State.⁵¹ These members visited the Kamareddy agricultural farm, where the experimental work on sugar cane was carried on. They also visited the private farms of the ryots, about ten miles away from Kamareddy and they had studied the process of cane cultivation, harvesting methods, and gur making that was in progress then.

The committee in its recommendations submitted in 1920, outlined some necessary steps to be taken for the improvement and extension of sugar cane cultivation in Hyderabad. The most important recommendations were:

1. Providing new and improved irrigation facilities
2. Extension of cane cultivation under tanks in Nizamabad and Medak districts.
3. Reduction of water cess assessment on cane cultivation.
4. Strengthening expert staff of the agricultural department
5. Continuation of Experiments on elimination of the use of props and to take up work on varietal and cultural improvements.

In spite of the efforts made by the agricultural department in developing and extending the sugar cane crop, there was no steady increase of acreage of cane in the Nizam State. Table-11.5, presented below gives the acreage under cane for the

⁵¹ A.A.R.D.A, 1919-20, p.17.

period of 10 years between 1925-26 to 1934-35 in Nizam State.

Table.II.5

Acreage under cane in different regions of Nizam's state for the period 1925-26 to 1934-35

Year	Telangana (in acres)	Maratwada (in acres)	Govt. Lands (in acres)	Non-Govt. (in acres)	Total acres
1925-26	1193	38,224	39417	15207	54624
1926-27	3547	27782	31329	15927	47256
1927-28	982	10992	11974	9576	21550
1928-29	609	4282	4891	1204	6095
1929-30	1247	21345	22592	14279	36871
1930-31	1532	32946	N. A	N. A	34478
1931-32	1377	35016	N. A	N. A	36393
1932-33	2144	38068	N. A	N. A	41212
1933-34	3088	43392	N. A	N. A	46480
1934-35	7996	42584	N. A	N. A	50580

Source: Tabulated from the agricultural statistics (decennial) 1925-26 to 1934-35, notes and estimates of area and yield of principal crops in Hyderabad State.

From the above table, a decline in the acreage under cane can be noticed, during the year 1926-27. The acreage came down to 47256 acres from 54624 acres in the previous year. In the next year 1927-28 it fell down to 21,550 acres. During the year 1928-29, it further came down to a mere 6095 acres. This drastic fall in the acreage under cane in the Nizam State was to some extent on account of the general worldwide slump in the price of sugar. The decline of acreage on account of the general slump

reflected most in the areas where sugar cane growing was expensive such as those under wells in Deccan.⁵²

The recommendations of the Indian Sugar Committee of 1920, were not implemented for nearly next ten years after it had submitted its report.⁵³ The improved varieties spread very slowly during the twenties.

The agricultural department started systematic work only from 1928-29.⁵⁴ From that year the work of agricultural department was systematised under four wings, namely Research, Experimentation, Demonstration and Propaganda.

Research Wing

The research wing included the investigations purely of technical nature, where attempts were made accommodating scientific theories into agricultural practice, such as plant breeding on scientific lines to evolve new strains of plants which will give more and better outturn to the grower. Research work was carried on rice, castor, wheat, jowar and cotton. Research work on sugar cane was not however carried on in the Nizam's state.

52 Herald H.Mann, "Sugar cane cultivation in the Nizam's dominions", Bulletin No.2 of the Agricultural Department, Hyderabad Deccan, Govt. Central Press 1928, in list No.10511, File No.190 of 1435 fasli of the transferred list, Industries list, H.E.H.Nizam's Government.

53 A.K.Bagchi, *Private Investment in India*, Cambridge, p.367.

54 A.A.R.D.A Nizam's State, 1930-31, Hyderabad Deccan, Govt.Central Press, 1993, p.1.

Experimentation

The promising results obtained were put to experimentation to study their practicability and economic viability on field scale. Improved varieties of crops, improved methods of cultivation, rotation and manuring which have proved profitable elsewhere were also tested at the experimental farms with regard to their suitability to the local conditions.

During the year 1930-31, seven experimental farms were reported to be functioning in the Nizam's State at places like Hyderabad, Sangareddy, Nizamsagar, Mahabubnagar and Alir. Cattle breeding and poultry farm were established at Hyderabad.⁵⁵ The experiments that were undertaken at these farms were, manurial experiments with rotation of crops, planting experiments, comparison of varieties of seeds etc.

Demonstration and Propaganda

The cultivator in Hyderabad State was as conservative as his counterparts in the rest of India and he was far behind them in progress. He would not listen to any suggestions for improvement, and would suspect the motives of the Government. Therefore from the very beginning, verbal and written evidence and preaching were put in secondary position giving practical demonstration, the leading position.

⁵⁵ A.A.R.D.A 1930-31, H.E.H, Nizam State, Govt. Central Press, p.5

The successful results obtained at the experimental farms were introduced to ryots in the villages by advising, persuasion and practical demonstration. If it was the question of introduction of improved seeds, the seed was supplied free of cost to the cultivator and was grown in his own field under the supervision of the department. The produce of the field was given away to the ryot. It was found in 1930-31, that the farmer was anxious to get advise and the department was unable to meet the demand as there was a shortage of expert staff. During the year 1930-31, there were altogether 652 demonstration plots in Telangana region. These demonstration plots in cultivators' fields in the entire Nizam's State increased from 245 in 1929-30 to 673 during the year 1930-31.⁵⁶

Assistance to the Public

Assistance to the public was given in the form of conducting training classes, extension of services with regard to water supply, contract ploughing with better ploughing implements and by supplying agricultural stores. New and improved seeds were supplied, artificial manures, insecticides and better implements were sold by the departmental stores.

The detailed account of the work undertaken by the agricultural department under each of the aspects mentioned above are discussed below separately.

56

A.A.R.D.A, H.E.H Nizam's State, Hyderabad Deccan
1930-31, Govt. Central Press, p.11.

Experimental Work

During the year 1930-31, experiments on comparison of various varieties of cane such as Co 210, Co 213, Co223, Co243, Co 281, Co 290, B 247, Poj2725 was undertaken by the department. The object of the experiment was to find the most suitable and profitable varieties of cane. The result proved that Co213 variety gave the highest out turn and Co290, Poj 2725 were also found to be promising. Besides, the varietal tests the period of plantation of each variety to study the yields were also undertaken.

During the year 1931-32, varietal experiments on Co290, Co281, Co223, Co213, D109, POJ 2714, POJ 2879, POJ2725, H.M544, H.M.320 E.K.28, varieties were conducted.

During the year 1933-34 experimentation of periodical analysis of juice was carried out. The study was conducted to find out the most suitable time for harvesting and crushing of Co213 variety. It was found through this experiment that the period from second week of December to the fourth week of March to be the most suitable time for harvesting of crop and for the manufacture of sugar.

During the year 1933-34, manurial experiments with sugar cane was also carried on. By applying 2,400 lbs of castor cake plus 150 lbs of Ammonium Sulphate per one acre of cane, highest out turn was obtained. The java method of planting cane was also started to be experimented.

Thus, year after year, the government conducted experiments on various aspects and the results of these experiments were demonstrated to the ryots to encourage them to adopt to the improved methods of cultivation and plantation of new varieties of seeds and application of manures.

In the matter of introduction of the cultivation of Co213 variety, a single season's practical demonstration had popularised the Co213 variety. Those ryots who used to grow local variety of sugar cane in their fields took up voluntarily to try the Co213 variety. Those who had abandoned cultivation of sugar cane for the difficulties in their way had also taken up cane cultivation again with Co213 and those who never grew sugar cane adopted it learning from the agricultural department. Demonstrations of Co213 variety were conducted in some villages of Nizamabad and Medak districts. The very first year's demonstration itself satisfied the cultivator so much that there sprang up a great demand for the new varieties of seed which could not be met by the agricultural department in full.

It was also felt that there was no need for a free demonstration in these localities. It was noticed by the agricultural department in the year 1929, that the cultivators did not even know that there was any variety of cane which could stand without the support of wooden planks. The Government's demonstration was witnessed by the peasants in the year 1930, in their own lands and following which the peasants took up cane

cultivation. In 1930, there were 30 acres of cane with new varieties in Nizamabad district, 15 acres in Medak and six acres in Bijjor, all grown voluntarily by the cultivators from the seed supplied by the department. It was also felt that the area under improved varieties of seed would have been three times in 1930, if the department had enough seed to supply.⁵⁷

In 1931-32. there were about 27 demonstration plots and their number increased to 190 by 1938-39. Apart from the demonstration of the use of new varieties of seeds, the improved methods of ploughing and planting were also demonstrated. High yielding varieties of cane such as Co213, POJ 2878, Co290, were demonstrated. New agricultural implements like tillage implements, water lifts, chaff cutters new cane crushers were also demonstrated. These demonstrations and lectures were given at fairs and gatherings apart from doing it at the peasant's farms periodically.⁵⁸ In the Telangana region these agricultural demonstration and lectures were conducted at the following local *Jataras* where agriculturists gathered in large numbers. They were: Yedopal, kochanpalli, Andol and Kandi jataras in Medak district, Rajanagar and Kirmathi jataras in Mahabubnagar

⁵⁷ A.A.R.D.A, 1930-31. H.E.H.Nizam State, p.10

⁵⁸ Ibid., p.12.

district, Kulpak in Nalgonda district, Bhongir and Kazipet Urs in Nalgonda and Warangal districts respectively.⁵⁹

The peasants responded to the Governments initiatives of introducing the improved varieties of cane positively and some peasants also took to large scale cane cultivation. The Government assisted such peasants in installing power crushing sugar mills.

Details of the increase in the area under new and improved varieties of sugar cane crop from the year 1933-34 to 1938-39 is given under table II.6 below:.

59 F.Pratap Reddy, "Growth of Commercial Agriculture in erstwhile Hyderabad State: With special reference to Telangana 1925-45 ", Dissertation submitted to the Dept. of History, University of Hyderabad, Hyderabad, 1994, p.37. This work also discusses the Research, Demonstration and Propaganda that was undertaken by the Nizam state for the improvement of other crops such as ground-nut, castor, cotton and tobacco.

Table.II.6

Statistics of increased area under improved varieties of cane in different regions of Telangana between 1933-34 and 1938-39.

Year	West Telangana			East Telangana			Godavari			Karnataka			Total		
	D. H.		Total	Dept. H.		Total	Dept. H.		Total	Dept. H.		Total	Dept. H.		Total
	spread	spread		spread	spread		spread	spread		spread	spread		spread	spread	
1933-34	13	6107	6120	40	243	283	8	-	8	104	52	156	165	6402	6567
1934-35	10	13484	13494	77	235	312	31	5	36	13	504	517	131	14228	14359
1935-36	3	16088	16091	393	194	587	232	75	307	42	526	568	670	16883	17553
1936-37	2	6896	6898	11	224	235	510	156	666	8	1344	1352	531	8620	9151
1937-38	6	1738	1744	7	287	294	401	812	1213	5	2180	2185	419	5017	5436
1938-39	5	9039	9044	13	237	250	833	1553	2386	10	3563	3573	861	14392	15253

Note: Dept.Spread = departmental spread, H.Spread = Natural spread

Source: Tabulated from the statistics given in the annual administrative reports of the department of agriculture of the H.K.H Nizam's Govt. for the years 1933-34 to 1938-39.

New and Improved Implements and Machinery

More efficient methods of tilling of soil and planting sugar cane were undertaken for which new improved agricultural implements were introduced into the region.

Victor Plough

Victor plough was recommended for deep ploughing, necessary for crops such as sugar cane. Some cultivators who have taken to cane cultivation on a large scale had purchased this and used in their cultivation of sugar cane.

In the irrigation appliances, power pumping plant had become more and more popular. Persian wheel had also become popular in East Telangana. The 'Hyder trencher' was another ploughing implement which had also become popular. This was manufactured by the local carpenters.

Java method of planting sugar cane was introduced by the department in which the cane was planted in trenches. This method was found suitable and necessary on account of looseness of the sandy soil, otherwise the cane used to bend over and artificial supports were needed to keep it erect. The method of planting in trenches had become very popular in Telangana.

Apart from the introduction of new improved agricultural implements, the department had also introduced new mechanised tools for most economical crushing of cane and the manufacture of gur.

Bullock powered iron sugarcane-crushing mill was introduced and had become very popular. It replaced the time honoured wooden mill. The cultivators who grew sugar cane on a large scale had installed power cane crushing. Improved types of furnace like meglashan's furnace were made popular and replaced the ordinary furnace. Improved gur boiling pans and other appliances also spread rapidly.

A statistical list of improved implements distributed and sold by the agricultural department pertaining to the sugar cane

crushing and gur making in Hyderabad State is presented under table-II.7 below.

Table II.7

List of improved implements distributed and sold by the agricultural department pertaining to cane cultivation, crushing and gur making in different parts of Nizam State between 1931-32 and 1938-39.

Year	Implements distributed	West Telangana	East Telangana	Godavari division	Karnataka division	Total
1931-32	Sultan sugar cane mill	4	-	-	-	4
1932-33	Sultan sugar cane mill	2	-	-	-	2
	Bullock power cane mill	29	13	2	1	45
	Gur making pan	9	8	2	-	19
	Hyder trencher	2	-	-	-	2
1933-34	power canecrushing plant	5	2	-	-	7
	bullock power cane mill	9	9	1	1	20
	gur making pan	12	14	-	-	26
	Hyder trencher	1	-	-	-	1
	Gur moulds	800	-	-	-	800
	sugar centrifugals	2	-	-	-	2
1934-35	power crushing cane mill	-	4	-	-	4
	bullock power cane mill	5	16	18	15	44
	gur making sets	4	20	-	3	27
1935-36	power crushing cane mill	-	-	-	1	1
	bullock power cane mill	8	11	10	17	46
	gur making sets	6	9	-	2	17
	gur moulds	28	2	-	1	31
1936-37	power crushing cane mill	-	-	-	1	1
	bullock power cane mill	6	34	10	42	92
	gur making sets	5	34	-	2	41
1937-38	gur making sets	-	-	-	3	3
1938-39	bullock power cane mill	-	-	1	6	7
	sugarcane ridger	-	-	2	-	2

Source: Data collected from the annual reports of the Department of Agriculture for the years 1933-34 to 1938-39 of H.E.H. the Nizam's Government.

Introduction of Artificial Manures

Experiments focussing on the use of artificial manures was undertaken from the very beginning of the establishment of agricultural department in the Nizam's dominion. It was found with the effective use of artificial manures such as potash and nitrate, the lodging habit of cane would be overcome. The use of artificial manures strengthened the roots of cane.

From the year 1930-31 the agricultural department started supplying the manures to the ryots. In the year 1930-31, about 247 pounds of castor cake was supplied to the cultivators for manuring sugar cane. Ammonium sulphate was recommended for sugar cane for top dressing. Some ryots were using sodium nitrate. During the year 1935-36, the Imperial Chemical Industries opened agencies in Nizamabad, Medak and Bidar districts and about 264 tons of ammonium sulphate was sold in these districts in the very year of its establishment.

Chemical work:

Periodical analysis of juice of sugar cane was carried out with the object of finding out the most suitable time for harvesting and crushing the crop. The analysis was made with Co213 variety. It was noticed that the period from the second week of December to the fourth week of March was the most suitable time for harvesting and for sugar manufacturing.

During the year 1935-36, analysis of gur was made both from

fresh and ratoon crops, with a view to investigate the cause for the alleged alkalinity in it. It was found that the saltiness of gur was due to the alkalinity of the soil and not due to cane itself. The gur made from the ratoon crop was found to contain less saltiness than that made from fresh crop. The chemical analysis was continued during the year 1935-36. The gur produced at different farms and soils and irrigation waters were analysed. It was found that the saltiness of the gur was due to salts absorbed by the cane from the soil and from irrigation water. By continued growing of cane in the same plot, it was observed that the salt content in the gur decreased.

The constant research and propaganda work carried on by the agricultural department of the Nizam's State in the various ways described above resulted in the increase of area under sugarcane. The increase of the area under cane crop in various districts of Telangana and that of Nizam State is given below under table II.8.

Table-II.8

Districtwise area under sugarcane in acres from 1925-26 to 1944-45 in Telangana region of the Nizam's State.

District	1925-26	1930-31	1935-36	1940-41	1944-45
Atraf-I-Balda	-	133	728	716	744
Warangal	50	3	83	124	88
Karimnagar	-	3	33	99	109
Adilabad	119	65	195	544	239
Medak	141	156	3907	978	2793
Nizamabad	861	1082	10074	16102	26738
Mahaboobnagar	22	89	127	149	314
Nalgonda	-	-	82	76	11
Telangana					
Total	1193	1532	15231	19807	31331
Marathwada	38224	32946	43274	28344	3917
Government	39417	39417	N. A	N. A	N. A
Non-Govt.	15207	15207	N. A	N. A	N. A
Nizam's					
State Total	54624	54624	58505	48151	62248

Source: 1. Agricultural statistics of H.E.H Nizam's State (quinquennial), 1925-26, 1935-36. Govt. central press, Hyderabad, Deccan 1938, pp.68-69.

2. Agricultural statistics (quinquennial), Notes and Estimates of area and yield of principal crops in Hyderabad State 1935-36 to 1939-40, Govt. Central press, 1942.

3. Agricultural statistics (quinquennial), Notes and Estimates of area and yield of principal crops in Hyderabad State 1940-41 to 1944-45, Govt. Central press, 1949.

It can be seen from the table above that in the year 1925-26, sugarcane was grown in about 1193 acres only in the entire Telangana region. The area did not progress much till 1930-31, during which year the area under cane was only 1532 acres. But the area under cane increased remarkably by 1935-36 to over ten times recording a total area of 15,231 acres in Telangana. Between 1935-36 and 1944-45, the area under cane doubled reaching 31,331 acres of which 26,378 acres was cultivated in the Nizamabad district alone.

It can be seen from the details presented in this chapter that sugarcane, the chief raw material for the sugar industries, was not readily available in the initial stages of the establishment of the sugar factories. Several inherent problems of the local varieties of cane hindered the extension of cane cultivation. In the early decades of 20th century the local varieties of cane were severely affected by red rot in coastal Andhra and the lodging habit of cane hampered its extension in Telangana region. The high cost of cultivation of sugarcane also came in the way of sugarcane entering into commercial dimensions.

To combat these problems a research station at Coimbatore was established where specialists equipped with laboratories were made available. Problems connected with methods of cultivation, crop pests and diseases and the improvements of existing varieties of crop by plant breeding methods were studied at this station. New varieties such as J 247 were evolved, which overcame the red rot disease. The new varieties evolved at the

Coimbatore agricultural station were tested at district level agricultural stations. On account of the sustained efforts made by the Government, the ryots in coastal Andhra began to appreciate cane cultivation on understanding the usefulness of the cultivation of the crop with improved varieties and new methods of cultivation. The Government distributed considerable quantities of improved seeds developed at the Governmental Research Stations to the ryots in the districts of Ganjam, Vizagapatnam, East Godavari and West Godavari. New agricultural practices such as line planting, trenching and the use of artificial manure were also taken up.

Further it can be seen that in the case of Telangana region an agricultural farm on cane development was started by the Government in 1913, the very year of the establishment of the Department of Agriculture. The work on the sugarcane crop was focussed on evolving solutions to the lodging habit of the cane. The experimentation of the use of artificial manures resulted in strengthening the root system and began to grow deep into soil which made possible for cane to stand erect without lodging. Java system of planting the cane in trenches was adopted on account of the looseness of the sandy soil of Telangana. This also helped in enabling cane to stand erect. More rigorous and concentrated efforts were made from 1927-28 towards the agricultural development in Telangana through its separate wings of research, experimentation, demonstration and propaganda.

Several experimental farms started functioning from 1930-31. Successful results obtained at the experimental farms were demonstrated in the peasants' fields. Between 1931-32 and 1938-39 nearly 200 demonstration plots financed by the Government were found to be functioning in Telangana. Government also took up the distribution of the new variety of seeds to the ryots. Within few years of the work taken up by the Government, the area under new cane varieties spread over 15,000 acres. Several agricultural instruments such as Hyder trencher, gur making sets, power crushers etc. were also introduced in the region. Thus it can be concluded that in both the regions of coastal Andhra and Telangana the respective Governments had taken interest towards the development of cane crop and extension of cane cultivation from 1920 onwards, which were readily taken up by the ryots.

On the industrial front, in order to educate the ryots about the economic profitability of raising cane crop, modern methods of cane crushing were introduced by the industries department in the Madras presidency. Efforts were made to float sugar factories on co-operative lines during 1930s. The Government granted loans to the entrepreneurs who came forward to float sugar factories. Apart from these, several other protectionist measures were granted by the Government and got implemented through the industries department to encourage the entrepreneurs coming forward to float sugar factories in both coastal Andhra and Telangana regions. These aspects form the theme of the succeeding chapter.

CHAPTER III

INDUSTRIAL POLICIES OF THE GOVERNMENT TOWARDS THE PROMOTION OF THE SUGAR INDUSTRY

In the preceding chapter the efforts made by the government through the agricultural department for examining the conditions of the cane cultivation and the improvements made for the extension of cane cultivation are studied. Another method adopted by the Government to increase the area under cane was towards the development of sugar industry by creating the requisite conditions and atmosphere for the origin and growth of sugar factories. In this chapter, various facilities provided by the government relating to the development of sugar industry are discussed.

Industrial Policies of the Madras Provincial Government

The area under sugar cane in the Madras Presidency was estimated at 1,16,530 acres during the year 1932. Though Madras Presidency was among the most suitable parts of India for sugar cane cultivation with an average yield of 28 tons per acre, about 88.296 tons of sugar valued at Rs.129.44 lakhs was imported in 1930-31, similarly sugar valued at Rs.124.03 lakhs was imported in 1931-32.¹ It was felt that the sugar requirements of this Presidency can be met by bringing an additional extent of 35,000 acres under sugar cane cultivation and converting produce of 70,000 acres into sugar and jaggery.

Although the tariff Board had come to the conclusion that the indigenous method of manufacturing white sugar in India was

¹ Annual Report of the Department of Industries for the years 1930-31, 1931-32, Madras Presidency, p.16.

uneconomical and should ultimately be replaced by central factories, they recognised that it was out of question to erect large sugar factories when there was no certainty of obtaining the cane requirements within a reasonable distance and that small sugar factories and refineries should come into existence in the transition period before central factories could be established. It was also felt that in the Madras Presidency the scope for the setting up of large sugar factories was limited and it was very necessary that the alternative methods of manufacturing sugar on a small scale on more or less small factory lines should be tried.

Various methods of financing of the sugar industry were considered. In the case of smaller cane growers, they were encouraged to join together and form themselves into co-operative sugar manufacturing societies. There appeared to be considerable scope for the development of sugar industry in the Madras Presidency on co-operative lines. Loans for floating sugar factories were being raised from the Central Banks on the security of the land on which sugar cane would be raised and also the plant and buildings.

The Governmental help in developing the sugar factories in the Madras Presidency can be seen in: a) providing loans to the new entrepreneurs to start new industries and also giving financial aid to the already existing industries to improve, b) purchase of shares of the industries by the Government c) supply of raw material with concessional rates of transport, d)

undertaking demonstration units to educate the people of the application of new technology and also to help the peasants to know the profitability and economics involved in the use of new and better methods such as those pertaining to the use of power crushers of cane and application of centrifugals, e) starting industrial schools and granting of scholarships to attract the students to know the technical skills necessary for the running of the modern industry and f) granting tariff protection and thereby restricting the import of sugar from outside. All these aspects are discussed below in detail.

Demonstration of Modern Methods of Cane Crushing

The Government had laid down in their policy towards industrial development of the province, a provision for conducting experiments for few industries, having for their objective, to start the factory either by private owners or by Government or of new industries or new branches of the existing ones. From 1922 onwards the Government commenced conducting experiments.

During the year 1931, in the month of May, the Government undertook a demonstration of crushing sugar cane by the departmental sugar cane crushing plant. The demonstration was conducted in Munagapaka village in the Vizagapatnam district in which there was 400 acres of sugar cane in that year. Towards the cost of expenditure, an amount of Rs.1,000 was sanctioned.

In this demonstration about 392 tons of cane was crushed.² The ryots also took keen interest and brought their cane to the site of demonstration.

It is also to be noted that a petition signed by P.Sriramulu Naidu, president of the village of Munagapaka along with twenty four other ryots of the same village, stated that the departmental mill was beneficial to them and that the period for which it worked was not sufficient and that they required for one more year of demonstration to be conducted and that it should be started much earlier.

The success of the above demonstration considerably impressed the ryots of neighbouring districts and from a village, Rayavaram of East Godavari district, the ryots sent petition for a similar demonstration to be conducted free of hire and transport. The same was undertaken by the Government during the sugar cane season 1933-34.³ On account of these demonstrations the ryots of the Munagapaka village and surrounding villages were impressed with improved methods of sugar cane crushing and had showed interest to set up not only sugar cane crushing mills but also sugar centrifugals on a cottage industry basis.

² G.O No.1079, dated 26-5-1930, and G.O No.965 dated 2-7-1931, sugar cane crushing, Demonstration with a Departmental sugar cane mill in Munagapaka village, Vizagapatnam, Development Dept. Government of Madras.

³ G.O No,1078, Development Department, Madras Government, dated 6th Sept. 1933.

The Government installed one centrifugal mill at the Anakapalle agricultural station. From the year 1932, there was a great enthusiasm shown by the natives of Northern Circars to start sugar mills applying modern methods of crushing. The department had about six sets of power-driven sugar cane crushing mills which were hired to the public and from 1932 onwards, a great demand was seen for the hire of this machinery. In the year 1933 about six mills were hired. The details of the persons who hired these mills and the work done by them are given below.

One mill was hired to Thota Ramaswami of Veeravaram in East Godavari district with which about 350 pans of juice and 3,500 lbs of sugar was extracted. Another was hired to Thota Subba Rao of Kirlampudi. He had extracted 10,250 lbs of jaggery, and 690 pans of sugar. Another demonstration was undertaken by the Government at Vedurupaka in the Ramachandrapuram taluka of East Godavari district. The Government sanctioned an amount of Rs.250 and about 90,123 lbs of cane was crushed and 51,596 lbs of jaggery and 3850 lbs of sugar and 4780 lbs of molasses was obtained.⁴

In the year 1935, one mill was hired to the ryots of Anakapalle village which crushed 150 tons of cane. Sajjupalli Sriramalingam of Pegidi village in Palkonda taluka of Vizagapatnam district hired one centrifugal set and crushed about 41 tons of cane with it. Another was hired to Eletipalem

⁴ Annual Report of Department of Industries, Madras Government for the year ending with 31st March, 1934.

of Repalle in Guntur district, where 440 tons of cane was crushed. Kakani Venkataratnam of Akumuru village in Gannavaram taluka of Krishna district also hired one set. He had crushed 300 tons of cane with it. The Chineraparupudi co-operative society of Gudivada taluka in Krishna district also hired a centrifugal and with it 350 tons of cane was crushed. Another was hired to Paddemaddula co-operative society in the same taluk which crushed 400 tons of cane. Another was hired to Chellapalli co-operative society which crushed 1400 tons of cane. In the Guntur district one set was hired to the zamindar of Ullipalem where 575 tons of cane was crushed. Yet another was hired to the zamindar of Raichur in the Guntur district and it had crushed 400 tons of cane.⁵

In the year 1936, some of the crushing sets were retained for hire by the people who had used in the year 1935, in which an increasing amount of cane was crushed at Regidi, 600 tons of cane in Chineraparapudi co-operative society, 1210 tons in Peddamaddula co-operative society and 1590 tons in Chellapalli co-operative society. The crushing sets were also hired to Elamallu of Gudivada taluka of Krishna district, Gopalagudem of Tiruvur, Gurupada of Gannavaram and Jakkulankapalem all in Krishna district.⁶

⁵ Annual Report of Department of Industries, Government of Madras, for the year ending with 31st March 1936.

⁶ Annual Report of Department of Industries for the year ending with 31st March 1937, Government of Madras.

In the year 1937, about 2557 tons of cane was crushed with the help of these sets and in the year 1938 another 1816 tons of cane was crushed from which 14175 mounds of jaggery and 157 mounds of white sugar was obtained. In the year 1939 about 3990 tons of cane was crushed from which 34654 mounds of jaggery and 8 mounds of sugar was obtained.

Tariff Protection

The economic depression of 1930s that affected the sugar industry in the world has been brought about by an excess production over consumption and by a large increase in the stock held by producers in the principal sugar manufacturing countries and subsequently the prices of both sugar and jaggery have ruled very low. The question whether and to what extent protection was required for the development of Indian sugar Industry was offered to tariff Board which submitted its report during March 1930. Acting on the recommendations contained therein, the Government raised the import duty on sugar to Rs.7-4-0 per cwt.⁷

Although the tariff Board found reason to erect larger sugar factories as the indigenous method of manufacturing white sugar in India was uneconomical, they however felt that it was out of question to erect large sugar factories when there was no certainty of cane required within a reasonable distance and that small sugar factories should come into existence. In the Madras Presidency as there was no scope for setting up large sugar

⁷ Annual Report of Department of Industries, Madras Presidency, 1931.

factories, it was felt that alternative method of manufacturing sugar on a small scale, on more or less small factory lines should be tried.

Financial Assistance

The Madras Government also passed a 'State Aid to Industries Act in 1922,' which had provisions for granting of loans to the entrepreneurs who came forward to start new industries or to improve already existing ones. At this time we have also seen that the state had conducted demonstrations upon the use of modern techniques of sugar cane crushing and that has brought about an initiative to the people of the localities to start sugar mills on modern lines though on a small scale. The various sugar mills started at this time in the Northern Circars is discussed below. The Vuyyuru co-operative and industrial credit society applied for a loan of Rs.10,00,000 for floating a sugar factory and the same was granted by the Madras Provincial Co-operative Bank Limited during the year 1934.⁸

In the year 1936, Ramakrishna Ranga Rao and C.V.S.Narasimha Raju the partners of the Sri Rama Krishna Sugar mills of Kirlampudi in East Godavari district applied for a loan of Rs.50,000. They applied for the loan because they fell in debts amounting to Rs.40,000 which they incurred in connection with the purchase of additional machinery to improve their crushing

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Annual Report of Department of Industries for the year ending with 31st March 1935, Government of Madras, p.23.

capacity from 80 tons to 120 tons per day. The government had sanctioned them the loan under state aid to Industries Act.⁹

Under this optimistic atmosphere created due to various protectionist policies adopted by the Government, we see six sugar factories being floated. They were namely: 1) the Thummapala sugar factory established in 1933, 2) Sri Rama Sugar Mills started by the Raja of Bobbili in 1934 at Bobbili, 3) the Vuyyuru sugar factory floated in 1934, and 4) the Etikoppaka factory started in 1935, 5) Ramakrishna sugar mills at Kirlampudi started by the Kirlampudi zamindar in 1935, 6) Raja of Bobbili started another sugar factory at Srikakulam in 1940.

Technical Education

As the development of sugar industry created a demand for sugar technology, it was decided that facilities should be provided by the Andhra University, which was established by then in the Vizagapatnam district, for the starting of B.Sc (Hons) Degree with sugar technology as the main subject. Chemical technology including the technology of cane sugar was taken up to serve the demand created by newly floated sugar factories. Scholarships were also installed to grant to those students undergoing training in sugar technology.

In 1934 the very first year of starting of the course of B.Sc in sugar technology, a provision for the award of

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G.O.No.1906. Development Department, Madras Government, dated 3rd August 1938.

fellowships to six students was made. In response to the advertisement for applications, as many as two hundred students had applied for the grant of seat and the award of fellowship.¹⁰ On seeing such an encouraging response and enthusiasm on the part of the public for this course, the Vice-Chancellor of Andhra University had recommended for the increase of fellowships from six to eight.¹¹

Upon such a response for the sugar technology course at Andhra University, the scholarships installed at Victoria Jubilee Technical Institute, Bombay, were diverted and were transferred to Andhra University for granting to the students undergoing B.Sc course in sugar technology during the year 1935.¹² That year there were a total of nine scholarships at Andhra University for B.Sc course in sugar technology each with a value of Rs.40. Details of the number of fellowships made available at Andhra University between 1934-35 to 1944-45 for the grant of students undertaking the course in sugar technology and the number of applicants is given under table III.1 below.

¹⁰ G.O.No.1355, Development Department, Government of Madras, dated 25-9-1934. .

¹¹ Ibid., Originally the value of each fellowship was Rs.-40 each and to be awarded to six, now its value was reduced thirty each and to be awarded to eight students.

¹² G.O.No.872, Development Department, Government of Madras, dated 21-6-1935.

Table.111.1

Number and Value of scholarships available and number of students granted with scholarships for B.Sc sugar technology course at Andhra University from 1934-35 and to 1944-45.

Year	No.of appli- cants	No.of fellow ships availa- ble	Value of fellowship (in Rs.)	No.of scholar ships granted communitywise
1934-35	200	6	40	mostly Brahmins
1935-36	N.A	9	40	mostly Brahmins
1939-40	130	5	30	90 % were Brahmins
1940-41	41	2	30	a move was made
1944-45	90	2	30	for reserving
1945-46	N.A	2	30	scholarships to
				non-brahmins
1948-49	42	2	39	one Brahmin, one non-Brahmin
1949-50	N.A	1	39	one non-Brahmin

N.A:Not available

Source: From the following G.Os of Development department,

Government of Madras, G.O No.	dated
872	21-6-1935
1034	25-6-1939
1656	30-6-1939
1498	27-6-1940
2913	25-7-1945
4034	2-8-1944

It can also be seen from the table that the provision to grant fellowships to sugar technology was continuing year after year and it can be seen through the number of applicants every

year against the number of fellowships available that there was a great demand for this course offered at Andhra University.

It can further be seen that till the year 1913 about 90 per cent of the fellowships awarded were availed only by people belonging to higher castes. From the year 1939-40, the University seems to have taken steps to reserve few scholarships to non-Brahmins including Muslims. This can be understood in the back drop of the strong non-Brahmin movement that was on the political platforms and in the minds of the entire population of the Madras Presidency during the period under consideration.

It is further to be noted that special scholarships were granted to the depressed classes from the year 1936 as a part of the programme of improving their opportunities. The commissioner of labour department arranged for imparting training as apprentices in fitting training programme with Parry & Co company at Samalkota (Deccan Abkaris). Two or three Adi Andhra youth of age below 17 with an educational background up to seventh or eighth standard were selected every year for training for a period of five years with a financial assistance of rupees five per month in the first two years and rupees seven per month for the next three years.¹³

During the year 1947 it was estimated that about 4,50,000 tons of sugar was produced every year and that it was not able to

¹³ G.O.NO.1034, Development Department, Government of Madras, Dated 25-6-1936.

meet the required demand of the province. Hence it was decided by the Government to meet the demand by increasing the production of palmyrah jaggery.¹⁴

It was estimated that about 70,000 acres were covered under the palmyrah trees in the whole of Madras Presidency. Nearly 32,000 acres were in Tinnevely, 10,000 in Malabar and 7,000 acres in Vizagapatnam district and the rest scattered. These palmyrah were used whenever required as a source of jaggery, toddy, timber, fibre and thatching material etc.¹⁵

Research on Palmyrah Jaggery

It was found that the methods adopted for jaggery making were very primitive and resulted in a very dark, and unattractive products which was either fit for consumption by poorer people or to be sold to refineries and distilleries. In either case the manufacturers were making only uneconomic returns for their product. About 56,250 tons of jaggery was produced per year from this source. It was felt that if improved methods of making jaggery were adopted, the whole of that quantity could be made available for direct consumption even by well-to-do class of people. In understanding this, the Indian Council of Agricultural Research, took up the following problems for investigation.

¹⁴ G.O.No.5367, Development Department, Government of Madras, 1 dal9-119-11-1947.947.

¹⁵ Ibid.

1. studies on the yield and sugar contents of juice.
2. keeping the quality of the juice during tapping, storing and transport.
3. Mineral composition of juice with particular reference to potash, chlorine and lime and
4. improvements on the methods of jaggery making and the designing of a more suitable furnace.

To study and work on these problems;

- a) a well equipped central laboratory was proposed to be established at Coimbatore for chemical and biological aspects of investigation.
- b) for field laboratories places like Palamkottah or Tuticorn in Tinnevely, Olvakot in Malabar and Samalkot in East Godavari district were chosen.

The details of the cost of the scheme was estimated at Rs.4,100 non-recurring and Rs.39,200 recurring, spread over three years. The recurring expenditure was to be spent by a ratio of 50:50 by the provincial governments and the Indian Council of Agricultural Research and that of non-recurring was to be spent wholly by the provinces alone.

Research was also undertaken by the Andhra University with a view to see the improvements of the quality of palmyrah jaggery as to eliminate the unpleasant odour and colour, adaptation of the manufacture of jaggery from palm juice as a cottage industry and designing of improvements in the mode of manufacture of

jaggery which could easily be followed by the tappers.¹⁶ Andhra University had been granted a sum of rupees 2,600 for the year 1944-45 and for the year 1945-46 another Rs.3,000 to undertake research on palm jaggery.¹⁷

On reviewing the research on palm jaggery undertaken at Andhra University, the Registrar of the University stated that the improved methods of manufacture with the use of lime and superphosphate was arrived at and the same was demonstrated and was given publicity at several centres. It was further stated that nothing useful was achieved by this programme at Andhra University and he had recommended for discontinuing this research on palm jaggery.

The Madras Government had extended its support in positively helping the growth of the sugar industry in the province in providing continuous irrigation facilities, taking necessary steps ensuring the supply of required quantities of cane to the factories, regulating the sale of sugar produced at the factories through its civil supplies department, constantly supporting the sugar factories by providing administrative help whenever asked for it and providing the required transportation facilities at concessional rates for the procurement of cane and the sale of sugar. Each of these aspects are discussed separately below.

¹⁶ G.O.No.5348, Development Department, Government of Madras, dated 28-10-1948.

¹⁷ G.O.No.1489, Development Dept. Government of Madras, dated 24-3-1948.

Help rendered in irrigation matters

For the proper growth of sugar cane crop, it is essential to have regular supply of water from the day of planting to the day it comes to maturing which is as long as 9 to 10 months period. Sugar cane is grown in some districts with well irrigation and in some districts under canal irrigation.

The Vuyyuru Sugar Factory located in Krishna district got its cane supplies from the villages around the factory. The land in these villages were irrigated by Krishna eastern canal waters. The Government is understood to have followed a favourable policy towards the supply of sufficient water for the cultivation of sugar cane crop. During the year 1939-40 and also in 1941, the Government had collected only single water rate till the cane cultivation reached a satisfactory stage.¹⁸

The Government further permitted the ryots of the villages around the Vuyyuru to draw water directly from the main canal by setting pumping stations. The Government also sanctioned funds for erecting pumping stations. The Government used to listen to the complaints received by the cane growers in regard to any irregular supply of water for the cultivation of the cane crop and the Madras Government directed the local irrigation authorities to study the matter and take necessary steps to make available the required water supplies to the ryots raising cane.

¹⁸ G.O.No.2487, Development Dept., dated 25th Nov,1947,
Government of Madras

During the year 1943, the ryots under East Bank Canal near Valluripallem village did not receive water as it was reported that the water was diverted to Gudivada taluk. Upon this, the ryots sent a memorandum through the Vuyyuru sugar factory authorities and the Government had directed the local irrigation authorities to look into the problem and succeeded in solving the matter. Thus in this way the Government had helped the cane growing ryots of the Vuyyuru sugar factory locality in the proper water management continuously. The Government also directed the Agriculture and irrigation departments to maintain progress report of the water levels in the main canal and its distributories and also report on the progress of cane cultivation through monthly progress reports.¹⁹

Ban on the gur manufacture

In order to enable the sugar factories to get regular and sufficient quantities of cane for the whole of the crushing season to work to their full capacity, the Government from time to time issued ban orders on the preparation of gur from sugar cane in the villages around the sugar factories. During the year 1945, the Government wrote to individual sugar factories on the necessity of imposition of ban on the preparation of jaggery. The individual factories in response to this replied on the lines presented below:

¹⁹ G.O.No.1939, dated 20-8-1943, Development Dept.
Government of Madras

In the case of Etikoppka sugar factory, it was reported that it was getting 2500 tons of cane from its co-operative members and the remaining requirements of 6500 tons from the villages of Etikoppaka, Pandum, Ramachandrapuram and Gotiva villages and they requested the Government that the ban on the preparation of jaggery be imposed in these villages.²⁰

The Thummapala sugar factory has its own cane estate from which about 6000 tons of cane was supplied and it required a further 15000 tons of cane. But the factory authorities reported that they could not crush more than 12,000 tons of cane during the previous year and on account of the ban imposed on the preparation of jaggery the peasants were put to inconvenience. Hence they expressed that they would write in the month of January 1945, in case of any need on the imposition of ban arose.

The Bobbili and Seetanagaram factories also replied that they would not work to their full capacity and hence they expressed that they did not require any ban on the preparation of jaggery by the ryots.

There were instances where the ban orders were promulgated unilaterally to serve the interest of the factory and belittling the interests of the ryots. On 17th October 1943, the Commissioner of civil supplies of Madras issued a Gur control

²⁰ Letter from the joint secretary, Revenue Dept. to Additional Secretary Development Dept. in G.O.No.93, dated 9-1-1945, Development Dept., Government of Madras.

order placing ban on the crushing of sugar cane for the manufacture of jaggery in the villages around Thummapala factory area.²¹ The Government also fixed the price of the cane at Rs.17 per ton as basic minimum price. It is reported that the peasants were affected a lot by this order for two reasons. First, the price offered for cane supplied to the factory was much below the cost of production of cane and secondly, the factory failed to receive all the cane and thus leading to the situation where either the cane could be converted into gur or was taken by the factory. Hence much inconvenience was caused to the peasants. This was done keeping in view the functioning of the factory to is full capacity.

Zonal Scheme for the Distribution and Sale of Sugar

To enable the sugar factories to clear the sugar produced in their factories and also to ensure the financial management properly, the Government by itself took up the responsibility of sale and distribution of sugar.

A zonal scheme of the distribution of sugar in Madras province was formulated by the civil supplies department. It was worked out time to time with due reference to annual production storage capacity of the local factories. The distribution of sugar from the local factories was spread equally over 12 months. In cases where the factories do not have sufficient storage

²¹ Memorandum submitted by the sugar cane growers delegation on behalf of the cane growers of the Thummapala area of Vizagapatnam district, in G.O.No.800, dated 16-12-1944, Development Dept. Government of Madras.

accommodation, quotas were granted to them in excess of 11/12 of their annual production during the crushing season. All local factories clear almost the whole of their production during the following season and whenever requests were made for granting of quotas for the larger quantities owing to the insufficient storage facilities the Government released orders on the merits of the case.

The table III.2 presented below gives a detailed zonal scheme for the distribution of sugar produced by the Bobbili and Seetanagaram sugar factories in different districts of the Madras Presidency.

Table.III.2

Districts	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Total
Nellore	100	100	100	100	100	100	100	100	100	100	100	100	1,200
North													
Arcot	N.A	200	200	200	200	200	N.A	N.A	N.A	N.A	N.A	N.A	1,000
Chingleput	130	130	130	130	130	130	N.A	N.A	N.A	N.A	N.A	N.A	0780
Vizaga													
patnam	240	90	90	90	90	250	250	250	250	250	300	300	2,450
Total	470	520	520	520	520	680	350	350	350	350	400	400	5,430

N. A Not Available

Source: Letter dated 31-12-1944 from Commissioner civil supplies

to the under secretary development department in

G.O.No.800 dated 28-2-1945, Development Dept, Govt. of

Madras.

In the districts, the collectors used to select the
wholesale dealers who would receive the sugar consignments from

the factories in fixed quotas according to the zonal scheme. In cases of delays in taking up the quotas by the wholesale dealers, the collectors concerned were advised to remedy the matter by changing the wholesale dealers. Few instances of Government's intervention in the sale and distribution of the sugar produced are discussed below:

During the year 1944, the Government received a representation from the Bobbili and Seetanagaram sugar factories regarding a grave situation that arose following the piling up of sugar stocks. It was reported that about 2305 tons of sugar was piled up at their factories as on 22nd August 1944.²²

Even after disposing their monthly quotas, they would be left with 730 tons on 1-11-1944. In the previous years they were crushing the cane from the last week of October every year and during the year 1944-45, they feared that due to the piling up of stock they would not have any working capital to start the crushing. On receiving the representation, the Government had taken positive steps for helping the factories to clear off their stocks. The Government had addressed the railway authorities to avoid shortage of sugar in the importing districts and to enable the factories to expedite the supplies. A telegram to this effect was sent to the collectors of Nellore, Chingleput and Vizagapatnam districts.

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Letter dated 22nd September 1944, from Raja Rao Bahadur Ranga Rao, Raja of Bobbili to Mr.G.W.Priestly, adviser to the Governor of Madras in G.O.No.93, dated 9-1-1945, Development Dept., Government of Madras.

The following is the text of the telegram sent:

"It has been represented by the sugar factories at Bobbili and Seetanagram that they have accumulated large stock of sugar allotted to your districts from June to November 1944, due to the delay in wagon supplies. The accumulation of old stock with the factories will hinder the production of sugar in the coming season, facilities have to be afforded to the factories to clear off their stocks to enable them to start²³ crushing by 1st December 1944 at the earliest."

The collectors were further directed to issue necessary instructions to the dealers advising them to accept the railway receipts immediately and to see that consignments were taken delivery by the dealers without any delay.

In December 1944 the authorities of Bobbili and Seetanagram factories further represented that they were not having the necessary capital for working their factories up to maximum capacity for the year 1944-45, and that if they do not receive any financial help from the Government they would be compelled to stop the manufacture of sugar in their factories. They had requested that the Government should:

- 1) either grant them a loan of Rs.1,20,800 monthly free of interest from December 1944 to April 1945 or
- 2) purchase monthly during the crushing season sugar stocks to the value of Rs.1,2,800 from their factories in addition to

23 Ibid.

the monthly quotas allotted to these factories under the zonal scheme of sugar distribution for 1944-45.²⁴

In response to this the civil supplies department had permitted the factories to send the quantity that they were originally allowed to sell each month, a month in advance and instructed the collectors of the concerned districts to arrange with the selected wholesale dealers to receive and store the stocks. The factories were further advised to consign the sugar to the collectors who in turn would issue instructions to the wholesalers to take delivery of stocks on arrival.

Similar situation arose at K.C.P. (Vuyyuru) sugar factory. It is reported that on account of non-receipt of orders allocating quotas in time and failure of Guntur and Chittoor districts to take their quotas.

The total production of sugar by the factory for the year 1944-45 was 4903 tons and only 609 tons was sold by the K.C.P.²⁵ On account of the piling up of sugar stocks, the financial position of the factory came down. To avert this situation, the

²⁴ Representations from Bobbili and Seetanagaram sugar factories to the secretary Development Dept. through a letter dated 14-2-1945 in G.O.No.800, dated 28-2-1945, Development dept, Government of Madras.

²⁵ During the year 1943, the Vuyyuru Industrial and Agricultural Co-operative Credit Society under which title the Vuyyuru Sugar Factory was established was liquidated and was converted into a joint stock company under the title K.C.P.

K.C.P authorities requested the Government to permit them to organise the sales of sugar by themselves under the name of a society called K.C.P sugar marketing company. The Government in response to the factory's request had recommended that the sugar quotas for Krishna district till the end of December 1944 allotted to K.C.P, may be sold to a new company called K.C.P sugar marketing company.²⁶ The K.C.P further requested similar provisions to be granted for them in Guntur district also. In the Guntur district, the wholesale co-operative society limited Guntur, used to act as wholesale dealers for the entire district and the society could not arrange for prompt remittances as the amount involved was often very large. So the K.C.P requested the Government to permit them to sell sugar in Guntur district also on their own. In response to this, the Government readily permitted them to sell their sugar quota in Guntur district through their own agents.²⁷

Transport Facilities at Subsidised Rates

At the instance of the Government special rates for the transport of sugar cane seed from Anakapalle, Pune, Repalle, Tenali and Coimbatore and for sugar cane from Nizam's dominions

²⁶ Letter from G.M. of K.C.P to additional secretary Development Dept, Govt. of Madras dated 11th june 1944, in G.O.No.2693 dated 21-6-1944, Development Dept., Govt. of Madras.

²⁷ Letter from Joint secretary, Development Department to the Commissioner of Civil Supplies in G.O. No.2925, dated 6th July 1944.

to Hospet were introduced by the Madras and Southern Marata (M.S.M) railway company during the year 1935.²⁸

Special freight rates for the transport from Madras of structural materials required for the Vuyyuru co-operative Industrial Credit society limited were also secured. These concessions in freight rates were of real benefit to the factories concerned. Apart from securing special freight rates on transport of sugar cane, several other questions were taken up with the Madras and Marata Railway Company by the Government. In view of the fact that it is necessary to crush cane as soon as possible after it is cut, as otherwise, crushing becomes uneconomical, the Railway authorities were requested to issue special instruction for truck loaded with sugar cane to be despatched by the next available goods train and they agreed to arrange for quick transit to Vijayawada. Attention of the Railway authorities was also drawn to the fact that it was necessary for loading facilities to be provided throughout the day and night at Vijayawada during the months of January, February and March.²⁹

Protection against Dumping of North Indian Sugar

During the mid 1930s, in North India, several new sugar

²⁸ Annual Administrative Report of the Department of Industries for the year ending with 31st March, 1935, p.27, Govt. of Madras.

²⁹ Annual Administrative Report, Department of Industries for the year ending with 31st March 1937, p.34, Govt. of Madras.

factories were established and it resulted in the production of sugar far in excess of the demand in their own market. To overcome this, the transport rates from North India were reduced to facilitate the movements of sugar to ports and to enable North Indian factories to compete with Java sugar. But by 1930s the price of sugar was no longer determined by the price of imported Java sugar, due to the imposition of heavy import duty. Hence, the Government of Madras requested the Government of India to restore the rates of transport to pre-1935 level.

On 15th December 1937, the authorities of Kirlampudi, Etikoppaka and Vishaka Sugar and Refineries Limited represented to the Government that the Bengal-Nagpur railway was contemplating to reduce the rates for transport of sugar bags from North India to Vizagapatnam from Rs 1 per mound to Rs 0-9-6 per mound.³⁰ In such an event of the sugar from North will be dumped into the Vizagapatnam district, it would affect their sugar factories. Hence they requested the Government to take necessary action to stop this unjust and discriminatory reduction. On receiving this representation, the Government of India took up the issue with the Bengal-Nagpur Railways.³¹ And

³⁰ Letter dated 15th December 1937, containing the representation from Etikoppaka, Kirlampudi and Vishaka sugars and Refinery to Secretary to Development Dept. in G.O.No.965, dated 9-4-1938, Development Dept., Government of Madras.

³¹ Letter dated 15-1-1938 from secretary to Development Dept. Madras Government to the secretary to communications department, Govt. of India, New Delhi, in G.O.No.965, dated 9-4--1938 Development, Dept. Govt. of Madras.

the Railway Board made it clear that there was no reduction in the railway transport charges allowed for the North Indian sugar imports into the South.³²

Lending of Administrative Services

The Government had also laid down under its policy towards the development of sugar factories to render administrative service free of cost. During the year 1937-38, when the Vuyyuru sugar factory was not functioning well on account of chaotic state of accounts of the Vuyyuru co-operative Industrial Society was helped by giving the services of the expert staff from the co-operative department and thus helped in rectifying the problem. Further, an assistant director of Agricultural Department was sent on deputation to the K.C.P and was asked to attend to the cultivation by the members different varieties of cane suited to the soil and thus ensure the supply of sufficient cane to the factory so as to give it adequate work.³³

The Etikoppka Co-operative agricultural and Industrial Society functioning from 1933 proposed during the year 1948 to increase its crushing capacity from 75 tons per day to 600 tons per day as the old plant had proved uneconomical.³⁴ For this

³² Secretary of Railway Department, Govt. of India to the secretary to Development Dept, Govt. of Madras, in G.O.No.965, dated 9-4-1938, Development Dept. Govt. of Madras.

³³ G.O.No.1485, Development Dept. Govt. of Madras dated 5-7-1937.

³⁴ G.O.No.6052 dated 8-12-1948.

proposed expansion, a total capital of Rs.20 lakhs was needed to be raised. The co-operative society hoped to enroll about 1000 persons owning sugar cane lands and attempted to get a share capital of Rs.10 lakhs from them at the rate of Rs 1,000 from each.³⁵ For the enlisting of membership and collection of share capital from the cane growing ryots much energy and time was needed to be devoted. In this regard, the Etikoppaka co-operative society requested the Government for the free services of a deputy registrar of the co-operative department to help in its expansion.³⁶

The Government had also made some modifications to the co-operative laws to enable the growth of sugar factories. During the year 1948, when the Etikoppaka Agricultural and Industrial Co-operative Society had gone for expansion of its sugar factory to raise most of its share capital from the ryots, the factory requested the Government for exempting them to issue shares to any individual to the extent of Rs.10,000 in the place of Rs.6,000 as earlier by the modification of the Madras co-operative Act of 1932 and enable bigger sugar cane growers to put in more share capital.³⁷ The Government had exempted the Etikoppaka sugar factory for raising more share capital from its members.

³⁵ Letter from Registrar co-operative societies Madras to secretary to Development Dept., Govt. of Madras.

³⁶ G.O.No.5426, dated 3-11-1948, Development department, Govt. of Madras.

³⁷ G.O.No.4625 dated 10-9-1948, Development Dept., Govt. of Madras.

Industrial Policies in Nizam's State

It is generally accepted that most of the development in sugar industry in India was due to the policy of protection granted in the year 1932. It can further be understood that most of the sugar factories which were started in Northern Circars of Andhra Pradesh also were in several ways established mainly due to the environment created under protection.³⁸ But, on the other hand in the case of the Hyderabad State, even prior to the granting of the protection to sugar industry by Government of India, the state Government has been taking keen interest in developing the sugar cane production which also necessitated the establishment of sugar factory.

When the Nizam sagar canal scheme was thought of, the scheme has been estimated on the basis of the cultivation of 20,000 acres of sugarcane crop for the financial success of the canal scheme.³⁹ But even after ten years of providing water through

³⁸ In the year 1934, the Vuyyuru co-operative and industrial credit society was granted loan of Rs.-10,00,000 by the Madras provincial co-operative Bank for starting a sugar factory, (Annual Administrative Report Dept. of Industries for the year ending with 31st March 1935, p.23), And also in the year 1936, Ramakrishna Ranga Rao, C.V.S.Narasimha Raju, the partners of the Kirlampudi sugar factory applied for a loan of Rs.50,000 for expanding their crushing capacity they were granted loan by the Development Dept. under state Aid to Industries Act (G.O.No.1906, dated 3-8-1938, Development Dept., Govt. of Madras.

³⁹ Harlold H.Mann, sugar cane cultivation in the Nizam's Dominions, p.7, Bulletin No.2 of the agricultural department Hyderabad, Hyd-Deccan, Govt.Central Press,in No.10511, H.E.H File No.190 of 1435 fasli.

Nizam Sagar Canal, very little progress was made in the extension of sugar cane cultivation. The primary factors hindering the growth of cane cultivation were the unfavourable market condition for sugar and also on account of high cost of cultivation that was needed to be invested for growing cane under the the existing cultivating methods in the locality. Further, the lodging habits and also crop diseases hindered the growth of cane cultivation.⁴⁰ These problems were to some extent properly studied and methods were evolved to overcome them by conducting agricultural research and propaganda work undertaken by the Nizam's agricultural department. Another method adopted in regard to bringing more land under cane cultivation was towards the establishment of a centrally located sugar factory so that the produce from the fields can easily be marketed to the factory, which in turn encouraged the peasants in coming forward to take up cane cultivation.

Apart from the financial success of the Nizam Sagar Canal scheme being the primary motive force behind the Government taking keen interest in developing cane cultivation in Telangana, the heavy loss that the state was incurring on account of the import of sugar into the region also necessitated the production of sugar within the state.

The volume and value of sugar imports into Nizam's dominions by Nizam state railway for the period 1925-26 to 1936-37 is presented below.

⁴⁰ Annual Administrative reports of the dept. of agriculture, H.E.H Nizam Govt., year 1913-14, p.3.

Table.III.3

Volume and value of sugar imported into Nizam Dominion between 1925-26 to 1936-37

year	Volume of sugar & Jaggery in tons	Value of sugar in (Rs)	jaggery in (Rs)	Total in (Rs)
1925-26	N.A	N.A	N.A	88,79,480
1926-27	N.A	N.A	N.A	99,86,640
1927-28	N.A	N.A	N.A	93,86,640
1928-29	N.A	N.A	N.A	1,00,52,920
1929-30	N.A	N.A	N.A	1,21,98,929
1930-31	30,803	69,85,000	41,08,000	1,10,93,000
1932-33	29,743	59,89,000	42,41,000	1,02,30,000
1933-34	27,405	97,12,000	N.A	97,12,000
1935-36	N.A	59,79,000	17,65,000	77,44,000
1936-37	14,059+1996	64,39,000	15,34,000	79,73,000

N.A: Not available

Source: H.E.H Nizam's Dominions, statistics abstracts from 1331 fasli and the reports on the administration of H.E.H Nizam's dominions for the years Oct.1930 to Oct.1931 and Oct.1941 to 1942

In the coastal Andhra region, all the sugar factories were either started by the local landed gentry on co-operative lines or under private concern. There was no doubt that constant support was given by the state in their establishment and growth. But in the case of Telangana, only one sugar factory was established and it was Nizam sugar factory. Initially when the

state called for applications for granting of permission from the interested parties to come forward to start the sugar factories, there were few respondents mostly from the landed gentry, Jagirdars, high Government officials of the Nizam's Government and big business men of which one group was promoted by Mr.Dhanarajgiri. But actually, when the machines arrived at Bombay for the erection of the sugar factory, none came forward to spend money and release them.⁴¹ At this point, the Government on its own took up the responsibility and released the machinery from the port. By this, it is clear that in the case of Telangana, it was totally the state's role and support which was responsible for the establishment of the sugar industry. The role played by the state at various stages in the establishment of the Nizam sugar factory is discussed below.

In the establishment of the Nizam sugar factory, the Government had taken steps in finding the suitable location , evolving suitable methods of procurement of necessary cane. The state also made arrangements with government of India to get the services of a sugar technologist to study the conditions in Nizam Sagar area and to report on the nature of the factory that could be established. It further requested the government of India to spare the services of a sugar technologist, who would help in advising the Nizam's government on all technical and managerial

⁴¹ C.V.Subba Rao, 'Trace less track, Discontinuities in the evolution of Industrial Entrepreneurs in Hyderabad, in the A.P. Economic Association Papers, II section, 7th Annual Conference, Srikakulam, 1989, pp.1-12..

aspects till the factory is erected. The Government also took initiative to send few Mulkis with government aid and scholarship to get equipped with the expertise in sugar technology. Finally the government through the revenue department arranged for leasing the necessary lands for developing a cane estate. On the issue of the capital investment also, state had agreed to finance up to 40 per cent of the total investment.

Further attempts were made to construct a railway line between Banswada and Hyderabad to help in carrying cane to the factory and transport sugar from the factory. Each of these aspects are discussed below.

Land Survey suitable for cane cultivation

On the issue of investigating the possibilities of starting a sugar factory in the region served with Nizam Sagar Canal waters, Government employed both the services of its own, revenue and agricultural departments as well as arranged for investigation by the sugar technologists and by agents of established sugar factories.

Mr. Mohammad Beg, the land compensation officer of Nizam Sagar Canal area, was asked to make a preliminary inspection of the suitable land. After investigation, he replied that about 3077 acres of unoccupied land was available scattered in about 30 villages in the Taluks of Yellareddy, Bodhan and Nizamabad which

could be utilised for cane cultivation.⁴² About 1484 acres of land in 22 villages around Bodhan, 1593 acres in eight villages around Yellareddy were found to be suitable for developing a cane estate.⁴³

Another government official, Mr. Harold Mann was asked to investigate on the problems and possibilities of sugar cane cultivation in Nizam's dominions. In the year 1928, Mann, after making study on the region, estimated that there was a lot of demand for sugar and gur in the Nizam's state and that there was scope for the extension of cane cultivation in about another 10,000 acres. He recommended for the necessity of introducing newer and better varieties of cane into the region. He further stressed that there was absolutely no scope for the establishment of a central sugar factory immediately.⁴⁴ Mann, expressed that the matter should be made to be investigated by experts such as Big Sugar Agency firm of Calcutta, Cawnpore or Madras and further opined that there should be a good deal of special inducement in the matters of water rates and supplies of high yielding Coimbatore canes in order to push the cane cultivation on the

⁴² Letter from Director of Agriculture to Director General Agriculture, H.E.H, Nizam's Government dated, 24-7-1928, File No.190 of 1435 fasli.

⁴³ Letter No.1630, dated 4th August 1337 fasli from the land compensation officer to Director of Agriculture Nizam's state in File No.190 of 1335 fasli, Transferred list of Industries Dept. H.E.H. Nizam state.

⁴⁴ Harold Mann, Op.cit., p.9.

Nizam Sagar Canal area. He concluded in his report in the following way,

"In any case the development of sugar cane apart from the possibility of a sugar factory, will be a slow business and does not at present be a very attractive proposition to the cultivators."⁴⁵

As opined by Harold H. Mann, the matter was referred to Parry & Co of Madras. The Parry Sugar agents sent their expert Mr. Francis Barrat. He inspected the land which was selected by the Nizam's agricultural department to be acquired for cane cultivation on estate model. Commenting on this land, he said that the land cited as unoccupied was unoccupied because it was not worth occupying and was not suitable for cane and clearly expressed that the land already under cultivation by the peasants has to be either leased or purchased from present owners and would mean dealing with a very large number of small land holders.⁴⁶ For further clarification, experts from Balapur & Co sugar agents were also invited to inspect the area. On inspection, the representatives of Balapur advised the Government for developing a cane estate.

The Government having decided to develop a cane estate undertook on its own to lease lands on rent from the peasants.

⁴⁵ Ibid., p.9

⁴⁶ Letter from Director of Parry & Co to Director general of Commerce and Industries of H.E.H Nizam's Govt. dated 4th December 1929.

The revenue officials of the Government were appointed on a special duty to investigate and to report on the possibilities of leasing or taking back from the ryots a portion of their holdings.

On interviewing the ryots on the issue of the leasing of the land from them, the peasants of Bodhan were found to be not inclined to give their lands on lease. The reason seems to be their ignorance about such a system and further they were afraid that the lands would be taken away from them permanently.⁴⁷ Special staff were deputed to convince the ryots about the leasing of the lands and to remove the apprehensions in the minds of the ryots.

The Government requested the Indian Council of Agricultural Research (I.C.A.R) to lend the services of Mr.R.C.Srivastava, the sugar technologist, to make an investigation of the Nizam Sagar Canal area and make a report on the prospects of starting a sugar factory.⁴⁸ Further, the Nizam's Government also asked for the services of Mr.R.C.Srivastava for his help and advise on starting a sugar factory. The members of Council, Department of Industries and labour of the Government of India replied to the request of the Nizam's Government that there were very limited

⁴⁷ Letter from the office of the special taluqdar Nizam Sagar to the secretary Commerce & Industries dated 13th August 1931.

⁴⁸ Extracts from the Draft proceedings of the meeting of Industrial Trust Fund, dated 28--2-1933 in the File No.74/16/7/1343 fasli

sugar technologists in India and that Mr.Srivastava's services could not be lent to the Nizam's Government as he was already busy. Further the Government of India suggested few names of experts who were retired and who would be of help. The Industrial Trust Fund wrote to Mr.Coleman, former managing director of Mysore and then residing in England, to get his services for a period of three years.⁴⁹ The Industrial Trust Fund asked the commerce and Industries department to submit proposals regarding the grant of scholarships to mulkis for obtaining training in sugar technology.

Several departments of the Nizam's State were addressed to investigate and report on several matters concerning the sugar cane crop. The Commerce and Industries department asked the Agricultural department on the issues of varieties of cane those that were being commonly grown in the Nizam Sagar region, with their features and cost of cultivation, new varieties introduced by the research stations, irrigation requirements, tonnage, planting and harvesting time and the work done by the experimental farm.⁵⁰

The public works department was asked to furnish the information regarding common rates of wages of daily labour, black smiths, carpenters, fitters and the cost of materials

⁴⁹ letter from Lt.Col.Sir Richards I.T.F. member, Hyderabad to Coleman, London, England.

⁵⁰ Letter from Secretary Commerce & Industries department of H.E.H. Nizam Govt. to agricultural department dated, 18-3-1933.

needed for the construction of sugar factory such as bricks, coal, firewood, crude oil, hydro-electricity and lime stone.⁵¹

To serve the sugar factory that was in the Nizam Sagar Canal region, the Commerce and Industries department wrote to the Railway authorities to look into the possibility of constructing a railway line between Nizamabad and Bodhan. The railway authorities were initially hesitant for taking up such a venture. They were persuaded by the Government to accept for the construction of railway line which would help in the transport of sugar cane to the factory from the villages and also to move the sugar stocks produced by the factory.⁵²

It is interesting to note that in spite of lot of groups coming forward to float sugar industry in the Nizam Sagar Canal area, who were experts and have already running sugar factories, the Nizam's Government insisted on inviting finances only from the mulkis,⁵³ and the Government had addressed in this regard

51 Commerce and Industries to chief engineer public works department dated 18-3-1933.

52 Letter from Commerce and Industries department of Nizam's Govt. to Mr.P.H.Maflin esq. Agent N.S.Railsay dated 9th March 1933, instalement No.74, list no.16, file No.7/1343 fasli.

53 On hearing the Nizam Government's proposal to start sugar factory in the Nizam sagar canal area, several parties had approached the Nizam's Govt. for getting permission to establish the sugar factory few among them were 1) Messrs Seshwant Brothers of U.P along with some leading business men of U.P, 2) wealthy Marwaris from Hyderabad, 3) Raj Bahadur Krishnamachariar, (This account is from extracts from pioneer dated 30th April 1934, Allahabad, File No.7/1343 fasli.

some influential and moneied persons of the Nizam's state.⁵⁴ It was also decided that there should not be any managing agency for the company and that its affairs would be managed by the Board of Directors. I.T.F agreed to finance upto 40 per cent of the total cost involved in the erection of the sugar factory. The very purpose of agreeing for financing the factory by about 40 per cent was to have the controlling voice in the management of the affairs of the company. I.T.F decided to have three members out of the total of seven to be nominated as Board members.

Thus it can be understood from the above account that Nizam State had made all efforts by itself in erecting the sugar factory. Each and every work related to the establishment of sugar industry was undertaken by the state only.

The Industries Department of the Madras Government in order to educate the ryots about the economic profitability of raising cane crop, modern methods of cane crushing were introduced. It can be observed that great enthusiasm was shown by ryots to hire the centrifugals introduced by the Government for their use in their localities. Efforts were made to float sugar factories on co-operative lines during 1930s. The Government granted loans to the entrepreneurs who came forward to float sugar factories. The promoters of the Kirlampudi factory were granted a loan under the State Aid to Industries Act. The Vuyyuru sugar factory was also

⁵⁴ Names such as Sri Bansilal, Raja Dhanarajgir, Pingle Venkataram Reddy, Nawab Saif Nawaz Jung, Maulvi Faizuddin and Mr.Vittal Rao, were suggested in this regard by I.T.F.

helped by providing with a major portion of its initial capital from the Madras provincial co-operative Bank.

In order to ensure the functioning of these sugar factories to their maximum capacities, the irrigation authorities of the Government took keen interest by providing sufficient water facilities. Agricultural staff of the Government Research Station were also posted at the disposal of the sugar factories. Keen interest was evinced in propagating the improved cultivation methods and new varieties of cane in the factory localities. Further, the sugar factories were granted subsidised rates of transport through state railway to enable them to get requisite cane supplies to ensure crushing for maximum days. Ban orders on the manufacture of gur from cane were promulgated whenever required in the villages from where cane was reserved to be supplied to the factories. In order to make available the necessary technical man power, the Government introduced a course in sugar technology and scholarships were also instituted to the students undergoing training in this course. This was continued for a period of ten years from 1933-34. Several students received training in sugar technology getting attracted by these inducements.

To enable the sugar factories to have a smooth financial condition for an efficient functioning, the Government took the responsibility of the sale and distribution of sugar produced at the factories.

It may be said that on account of the various protective measures provided by the Government and implemented through its agriculture and industries departments during the period between 1930 and 1960, several zamindars and well-to-do ryots of coastal Andhra came forward and established sugar factories. In the case of Telangana, it can be seen from this chapter only one sugar factory i.e., N.S.F was established and it may be pointed out that N.S.F was a state sponsored and financed project. Between 1933-37 as many as five sugar factories were started in coastal Andhra at places like Ettikoppaka, Thummapala, Kirlampudi, Bobbli and Vuyyuru. A detailed account of the origin and development of these sugar factories forms the theme of the next chapter.

CHAPTER IV

THE GENESIS AND GROWTH OF THE SUGAR FACTORIES IN COASTAL ANDHRA

On account of the keen interest taken by the Agriculture and Industries Departments of both the Government of Madras and H.E.H, the Nizam Government, we see several entrepreneurs coming forward to float sugar factories in the coastal Andhra as well as in the Hyderabad State particularly after 1930s.

In the present chapter the establishment of the sugar factories in the coastal districts of Andhra Pradesh is studied. The entrepreneurial background of each of these sugar factories namely the Etikoppaka, Thummapala, Kirlampudi, Bobbili and Vuyyuru is analysed. The details of their crushing during the initial stages of their functioning is also given. The expansion schemes of those that were taken up till 1960 are also brought out in this chapter. The diversification activities such as the establishment of alcohol distillery, raising of cane estate in some of these factories is also studied.

Etikoppaka Sugar Factory

During the year 1933, attempts were made to set up a sugar factory in the Vizagapatnam district at Etikoppaka by Rao Bahadur C.V.S Narasimharaju. He was from a zamindari family. He had a family estate in the village of Etikoppaka, that fetched him an annual income of Rs.6,000 for his share.¹ He had invested Rs.20,000 as initial capital to erect the sugar factory at Etikoppaka in 1933. C.V.S Narasimharaju had served in many high

¹ G.O.No.209, Development Department, Govt.of Madras, dated 12th Feb.1936.

public offices. He was elected president of Madras legislative council. He served as Governor to the Imperial Bank of India. He was also appointed as the member of the Industries Board of the Madras Government during the year 1935.² The factory commenced crushing on 19th Jan.1935 with an initial crushing capacity of 50 tons per day. This factory was started on co-operative lines. Details of cane crushed and the sugar produced at this sugar factory for the period 1934-35 to 1939-40 are given under table below.

Table-IV.1

Details pertaining to the crushing of sugarcane, the yield of sugar at the Etikoppaka sugar factory from the year 1934-35 to 1939-40.

Year	No.of days of crushing	Cane crushed (in tons)	Sugar obtained (in tons)	% of sugar recovered
1934-35	74	2,790	228.22	8.18
1935-36	125	5,133	365.00	7.11
1936-37	N.A	5,610	452.00	8.05
1937-38	N.A	4,949	432.00	8.73
1938-39	77	3,248	283.00	8.70
1939-40	111	5,691	464.00	8.26

* N.A: not available

Source: From the annual reports of department of Industries, Madras Government for the years 31st March 1935 to 31st March 1940.

² G.O.No.606, Dev.Dept. Madras Govt. dated 16th April 1935.

Thummapala Sugar Factory

Another 50 ton sugarcane crushing plant was established at Thummapala in the Vizagapatnam district on co-operative lines during the year 1933. This sugar factory was registered under the title Sri Ramakrishna Co-operative Industrial and credit society. The initial crushing capacity of the mill was 50 tons per day.³ This factory started crushing cane from 14th Feb.1935. During the year 1936, the factory was converted into a joint stock company with the title Vishakapatnam Sugar and Refinery Limited. Details of cane crushed and sugar produced at this factory for the period 1935-36 to 1939-40 are given under table below.

Table-IV.2

Details of sugarcane crushed, sugar obtained at the Thummapala sugar factory for the years 1935-36 to 1939-40.

Year	No.of days of crushing	Cane crushed in (tons)	Sugar obtained in (tons)	% of sugar recovered
1935-36	N.A	4705	326	6.9
1938-39	66	3,455	291	8.38
1939-40	145	9,400	700	N.A

N.A: Not available

Source: From the annual reports of the department of Industries, Govt. of Madras for the years 31st March 1936 to 31st March 1940.

³ Annual Report of the Department of Industries, Govt. of Madras, for the year ending with March 1933.

Kirlampudi Sugar mill

At Kirlampudi village in the East Godavari district a sugar factory was established during the year 1935 with the initiative of Rao Bahadur C.V.S.Narasimharaju and Ramakrishna Ranga Rao. The latter was a zamindar of Kirlampudi itself. About 1200 acres of land was supposed to have been cultivated with sugar cane every year within a radius of three miles from this factory. The initial crushing capacity of the mill was 80 tons per day. Initially the sugar factory borrowed Rs.50,000 from Bank of Hindustan and a further amount of Rs.40,000 from the Indian Bank. The Kirlampudi sugars were granted a loan of rupees 50,000 during the year 1936 from the Government of Madras under the provision of state aid to Industries Act of 1922.⁴ During the year 1938, the firm had once again applied for a further loan of Rs.30,000 directly from Govt. of Madras. But the government rejected as they have already been aided and also the promoters themselves were zamindars and were financially very sound. Details of the cane crushed and sugar produced at this factory for the period 1934-35 to 1939-40 are given under table below.

⁴ G.O.No.209, Development Dept. Govt. of Madras, dated 12th Feb.1936.

Table-IV.3

Details of cane crushed, sugar obtained at Kirlampudi Sugar Factory for the period 1934-35 to 1938-39

Year	Days of crushing	Cane crushed in (tons)	Sugar produced (in tons)	% of sugar recovered
1934-35	40	600	N.A	N.A
1935-36	110	6073	404	6.65
1936-37	N.A	9842	758	7.77
1937-38	100	9,259	749.5	8.09
1938-39	72	4,421	370	8.36
1939-40	144	10,225	840	7.90

* N.A:Not available

Source: From the Annual Reports of the Department of Industries of Madras Presidency for the years 1934-35 to 1939-40.

Bobbili Sugar Factory

During the year 1934 on the initiative of Raja of Bobbili a sugar factory was registered with a nominal share capital of rupees 2,00,000 made of 1,000 shares of 200 rupees each.⁵ Details of the cane crushed and sugar obtained at this factory for the period 1934-35 to 1939-40 are given under table below.

⁵ G.O.No.1166, Development Dept., Govt. of Madras, dated 25th Sept.1933.

Table-IV.4

Details of crushing of sugarcane, sugar and molasses obtained at the Bobbili sugar factory for the years 1934-35 to 1939-40.

Year	No. of days of working	Total sugarcane crushed (in tons)	Total sugar obtained (in tons)	% of Sugar recovered	Molasses obtained	% of molasses recovered
1934-35	83	8,108	847	10.44	N.A	N.A
1935-36	129	16,954	1,585	9.36	N.A	N.A
1936-37	126	19,038	2,062	10.82	222	2.74
1937-38	145	21,613	2,135	9.88	500	3.10
1938-39	105	15,441	1,596	10.37	N.A	N.A
1939-40	179	28,623	2,882	10.076	N.A	N.A

* N.A:Not available

Source: From the annual reports of department of Industries Madras Government, for the years 1935 to 1940.

Vuyyuru Sugar Factory

The Vuyyuru sugar factory was registered with the title 'The Vuyyuru co-operative Industrial Credit Society' under the Madras co-operative Societies Act on 16th Feb.1934.⁶ The society had Mr.Kaja Lakshminarayana as its president and Adusumilli Gopalakrishnayya as vice president. The society was granted a loan of Rs.10,00,000 by the Madras provincial co-operative Bank on the security of the unencumbered loans of the members. The initial crushing capacity of this factory was 850/1200 tons of

G.O.No.439, Development Dept. Govt. of Madras, dated 3rd March 1936.

cane per day. The society consisted of 529 members and about 4800 shares were allotted to them and about Rs.1,00,000 has been collected towards share capital from them during the year 1935.⁷ It should be noted that Mr. Adusumilli Gopala Krishnayya, the prime promoter of this sugar mill was the father-in-law of Mr. Velagapudi Ramakrishna who was working at that time as the director of Industries Department. Details of the cane crushed and sugar obtained at this factory for the period 1935-36 to 1939-40 are given under table below.

Table-IV.5

Details of sugarcane crushed, sugar recovered at the Vuyyuru sugar factory for the years 1935-36 to 1939-40

Year	No. of days of crushing	Total sugarcane crushed	Sugar obtained in (tons)	% of sugar recovered	Molasses obtained
1935-36	N.A	33,630	2319	6.90	2319
1936-37	79	30,923	2401	7.70	N.A
1937-38	58	29,127	2320	7.97	N.A
1938-39	107	46,587	3624	7.83	N.A
1939-40	98	55,477	4,685	8.14	N.A

* N.A: Not Available

Source: From the annual reports of Department of Industries for the years 1936 to 1940.

⁷ Annual Administrative Report of the Department of Industries, Government of Madras for the year ending with 30th March 1935, p.27.

There were a total of seven sugar factories including the Deccan Sugars and Abkaris of Samarlakota, producing sugar. Six of them excluding Deccan Sugars and Abkaris were floated between the period 1933 and 1936. During the year 1943-44 the total crushing capacity per day of all the sugar factories put together was around 1990 tons only. A table is presented below giving details of the cane crushed and sugar produced in all these sugar factories in the coastal Andhra during the year 1943-44.

Table IV.6

Details of cane crushed and sugar produced in all sugar factories in Northern Circars for the year 1943-44.

Name & location of the factory	Daily crushing capacity (tons)	Quantity of total cane (tons)	No. of days the factory worked	Total sugar produced
Vishakapatnam Sugar Refinery	125	12,100	129	1,100
Etikoppaka Agricultural & Indus.co-op.	65	10,700	174	1,100
Srirama Sugar Mills(Bobbili)	150	27,800	137	2,000
Srirama Sugars (Seetanagaram)	300	33,800	136	3,600
The Deccan Abkaris (Samarlakota)	250	14,100	N.A	1,300
Vuyyuru sugar factory	1000	52,100	N.A	4,900
Sriramakrishna (Kirlampudi)	100	6,700	N.A	500
Total	1990	1,57,300		14,500

*. N.A: Not Available

Source: G.O.No.1424, Dev.Dept. Government of Madras Dated 5-4-49.

It can be seen from the table above that during the year 1943-44, a total of 1,57,300 tons of sugarcane was crushed in all these factories put together and about 14,500 tons of sugar was produced.

Entrepreneurial Background

Between 1933 and 1936 about five sugar factories were floated in the Northern circars. They were the Etikoppaka in 1933, Thummapala also in 1933, Bobbili in 1934, Kirlampudi in 1935 and that of Vuyyuru in 1935. Etikoppaka, Thummapala and Vuyyuru sugar factories were started on co-operative lines. The Bobbili and Kirlampudi were started by rich zamindars of the locality. Behind the establishment of each of the above sugar factories the initiative of the local zamindars was clearly noticed. In the case of Etikoppaka, it was C.V.S Narasimha Raju, the local zamindar who had invested majority of initial capital. In the case of Kirlampudi, it was a joint venture of C.V.S Narasimha Raju and Ramakrishna Ranga Rao, who was the zamindar of Kirlampudi. The Bobbili sugar factory was initiated by the Raja of Bobbili and the Vuyyuru sugar factory was floated by Mr. Adusumilli Gopalakrishnayya, who was the then proprietor of rents of two villages of Krishna district and majority of shares of this sugar factory were controlled by the local rajas and aristocracy of the Krishna and Guntur districts. It is further interesting to find that in the case of Vuyyuru sugar factory that the Director of the Department of Industries of Madras Presidency Mr. Velagapudi Ramakrishna was himself the motivating force. Adusumilli Gopalakrishnayya, whose family owned majority

of shares was the father-in-law of Ramakrishna, the Director of Industries. Mr.C.V.S Narasimha Raju, the prime initiator of both Etikoppaka and Kirlampudi sugar factories, was a member of the Board of Directors of the Industries Department. Even those sugar factories which were floated on co-operative lines were almost under the control of the local zamindars and big land lords. The Government even modified the co-operative laws which provided the way for the rich land lords and zamindars to control majority of the shares in those sugar factories.

Under co-operative rules of the government, maximum number of shares that any individual member can hold was fixed at a value of Rs.1,000. But by a Government order No.629 dated 27-5-1933 of the Development Department, the Government exempted the Etikoppaka Co-operative Industries Credit Society from this clause and permitted the individual members of the society to hold shares up to the value of Rs.6,000.⁸ Further the same exemption was also granted to the Thumapala sugar factory.⁹

Further the Vuyyuru sugar factory that was started on co-operative lines by obtaining a loan of Rs.10,00,000 from the provincial co-operative Bank on the security of the unencumbered

⁸ G.O.No.978, Development Dept. Govt. of Madras, dated 12th August 1933.

⁹ Ibid.

lands of the share holders, was liquidated and was converted into a joint stock company during the year 1941.¹⁰

Expansion of the Sugar Factories

By the year 1944-45, most of the sugar factories floated in this region began to make profits and this encouraged them to go for expansion schemes. The expansion activities taken up at various factories is discussed below:

Etikoppaka Sugar Factory

The Etikoppaka sugar factory has earned a profit of Rs.43,816 for the year 1944-45. It distributed a bonus of Rs.6 per ton of sugarcane supplied by the members upto a maximum of 10 tons and also a further bonus of Rs.1 for every ton over and above 10 tons.¹¹

During the year 1946, it became difficult for the Etikoppaka sugars to produce sugar economically with a limited crushing capacity of 75 tons per day. Hence, it was proposed to dispose the old-plant and install new one with an increased crushing capacity of 600 tons. It was estimated that about 6000 acres were under sugarcane cultivation in the vicinity of the factory in two taluks of Sarvasidhi and Narsapatanam. The society had corresponded to few firms in England. Messrs.Mirrlees Watson &

¹⁰ G.O.No.1901, Development Dept. Govt. of Madras, dated 19th October, 1941.

¹¹ Letter from the Registrar co-operative Dept. Madras to the secretary to the Development Dept. dated 29-6-1946.

Co Calcutta, who had their works in Glasgow (Scotland) offered a plant with 600 tons crushing capacity at a price of Rs.17 lakhs and the society proposed to import the machinery. The society needed another 3 lakhs of rupees for the construction of buildings and thus the society needed a total of Rs.20 lakhs to install the proposed new sugar plant of 600 tons capacity.

The society proposed to raise an amount of 10 lakhs by way of issuing shares. It was stated that within a radius of about 25 miles from Etikoppaka, there were more than 3,000 acres under sugarcane cultivation and about 1000 peasants owning sugarcane lands can easily be enrolled as share holders at the rate of Rs.1,000 per individual and thus they hoped to raise a share capital of Rs.10 lakh.¹² It was also expressed that even if smaller growers can put only Rs.200 to 300 as share capital they hoped that there were persons who could buy shares worth more than Rs.10,000. Hence, they applied for an exemption from the co-operative law and to permit the members to hold more shares. The Government had earlier modified the co-operative rules and permitted the members to hold shares up to the value of Rs.6000. Now on the request of the Etikoppaka co-operative sugar factory's management the rules were further modified and an exemption was given to the co-operative rules and permitted any individual member of the Etikoppaka sugar co-operative to hold shares to the value up to Rs.10,000.¹³ This exemption helped the co-operative

¹² G.O.No.6052 dated 8-12-1948, Development Dept. Govt. of Madras.

¹³ G.O.No.4625 dated 10-9-1948, Development Dept. Govt. of

to raise sufficient capital from the local ryots. The co-operative society further proposed to borrow an amount of Rs.15,00,000 from the Madras Provincial co-operative Bank. With this, Etikoppaka co-operative sugar factory was helped to go in for an expansion in 1948 from 75 T.P.D crushing capacity to 600 T.P.D.¹⁴

Kubera Sugars at Pithapuram

Another new sugar factory under the title 'The Kubera sugars' was floated at Pithapuram in the East Godavari district during the year 1944. It started its sugar production from 3rd Nov.1944. The factory was started by acquiring a 120 tons sugarcane crushing plant situated at Kirlampudi. About 6000 shares of Rs.100 each were issued and were fully subscribed.¹⁵ The factory worked for two seasons i.e.1944-45 and 1945-46. During the third year of its functioning, the capacity of the factory was increased from 120 T.P.D to 200 T.P.D with the approval of the Government. A further amount of Rs.12 lakhs was issued as additional share capital and was readily subscribed. The old plant was sold out in the year 1949 for a price of Rs.10,60,000. An order was placed for a new plant with Messrs.Duncan Stewart & Co. and with Messrs. Dorr Company for a condenser from United Kingdom. Other sundry equipment such as

Madras.

14 Tons per day

15 G.O.No.3709 dated 12-7-1949, Development Dept. of Govt. of Madras.

centrifugals and tanks were already obtained. Steel was obtained from Tata Iron and Steel Co.Ltd.

The following members were on its board as directors: 1) Sri Ravu Bahadur Ravu Surya Rao, a landlord and Banker of Pithapuram. He was holding shares in Kirlampudi sugarcane firm, Vizag Electric supply Corporation and many other electricity supply corporations like Udipi, Chicacole and Anakapally. 2) Raja Rao Srivenkataraya Krishna Ranga Rao Bahadur Garu, zamindar of Kirlampudi who also had shares in Kirlampudi sugarcane farm. 3) K.V.Subba Rao, was another director of Kirlampudi sugarcane farm and was an engineer by profession. He also had shares in Kubera sugars of Madras, Andhra Insurance Company of Masulipatnam and Tirukoilur oil mills. There were some non-Andhra people also on the board of directors of the Pitapuram sugar factory like Sri Raghavarajan Prasad, who was the promoter of South Bihar sugar mills of Patna, Mr.Naganathan who was also a reputed business man in Madras dealing in Vanaspati and Meclac nutrients, Srichandra Devaprakash Sinha, who owned a sugar factory in Burma, Seth Jivalal who was also a member of Madras Vanaspati and Mr.Rai Bahadur Kedarnath Khandelwal.¹⁶

Diversification of the Kirlampudi Sugars

The Kirlampudi sugar factory had proposed in the year 1946 to install a plant for the manufacture of denatured and rectified spirit to produce:¹⁷

¹⁶ G.O.No.3709, dated 12-7-1949, Development Dept. Govt. of Madras.

¹⁷ G.O.No.395 dated 28th Feb.1948, Development Dept. Govt. of Madras.

- a) power alcohol for the tractors to be used for cultivation of sugarcane in the Kirlampudi sugarcane farm.
- b) rectified spirit to be used for manufacture of tincture by medical nutrients and pharmaceuticals
- c) yeast, which is stated to be the by product of rectified spirit.
- d) and other industrial chemicals.

Similar application for the manufacture of power alcohol was sent by the Parry & Co. as early as 1938, but their application was rejected on the ground that the issue had to be referred to the Government of India, as there was prohibition orders prevailing then. The issue was referred to Govt. of India and finally the Kirlampudi management was permitted to install the proposed plant to produce rectified spirit and absolute alcohol. The Government further issued license to Kirlampudi sugars to import the plant from United Kingdom at a value of Rs.2,50,000 from the firm, Messrs. Blairs Limited, Glasgow.¹⁸

The post war development panel on sugar, alcohol and food yeast Industries recommended for permitting the production of 20 million gallons of power alcohol per year in India and it also recommended for permitting the standard distilleries for producing up to one million gallons capacity. Coming to Madras Presidency, the Government of India has recommended for the

¹⁸ Letter from licensing officer for chief controller for imports Govt. of India to Kirlampudi sugars dated 3-1-48, in G.O.No.395 dated 28th Feb.1948, Development Dept. Govt. of Madras.

allotment of two distilleries both for Orissa and Madras each capable of producing 4 lakhs of gallons of alcohol, one of these to be located in Vizagapatnam and the other at Nellikuppam.¹⁹ The Madras Government felt that this cannot serve the requirements in the province. It was reported through 1947 statistics that the annual crushing capacity of the mills working in the presidency was estimated at 3,050 tons per day and the Government of India allotted to this province, sugar mills quota which would treble the then existing capacity. With the opening of new mills and expanding the existing mills in the province, it was expected to increase the crushing capacity to 9,150 tons per day. During the year 1947 about 30,000 tons of molasses was produced and with the increase of the existing capacity in the sugar mills, the annual production of molasses would rise to 90,000 tons. If all this was to be converted into power alcohol, as much as 5.4 million gallons of power alcohol would be produced. The requirements of the power alcohol in the province was five million gallons. The Government of India permitted two distilleries of four lakh gallon capacity each, which was much below the availability of molasses and this would result in the wastage of a lot of molasses and the required alcohol would have to be imported. On the face of these facts, the Government of Madras sent requisition to the Government of India for its consideration to permit the production of more alcohol. The Madras Government had proposed for permitting five plants with a capacity of producing

¹⁹ G.O.No.3992, dated 29th July 1948, Development Dept.
Govt. of Madras.

20 lakh gallons of alcohol each in the following group of districts, one in each group:²⁰

- 1) Vizag, West & East Godavari, Krishna, Guntur, Nellore
- 2) Anantapur, Cuddapah, Kurnool, Ballary
- 3) Chittoor, North Arcot, South Arcot
- 4) Madras, Chengulput
- 5) Southern Districts

The efforts of local leadership for establishing a sugar factory

In the Chittoor district, considerable interest among the peasants was noticed during the period around 1945 for the establishment of a sugar factory. The peasants of Chittoor district growing cane had formed into an association namely, 'The Chittoor District Sugarcane Growers Association'. About 100 cane growers had signed a memorandum requesting the secretary of the development department to grant permission to start a sugar factory in Chittoor district. The Sugarcane Growers Association comprised of big landlords, middle class land holders and small peasants. The total number of acres cultivated under sugarcane by these members is reported to be roughly 6,000 acres.²¹ The association had as its president Mr.Seshachalapathi Rajulungaru, who was the zamindar of Bangari and Kallur estates of Chittoor district. The others in the board of directors were: 1)B.Venkata

²⁰ Letter from Secretary to Govt. of Madras P & D Public Dept. to sec. Govt. of India, Department of Industries and Supplies dated 9-6-1947 in G.O.No.3992 dated 1948, Development Dept. Govt. of Madras.

²¹ Letter from the sugarcane growers association, Chittoor District to the sec. to the Madras Govt. Development Dept. of dated 12th October 1945.

Rama Reddy who was by then holding the office of Chairman of the Board of Sundaram Oil Mills, Chittoor Electric Supply and the Chittoor conveyance, 2) Mr.P.Venkata Krishnayya Naidu, who was managing director of Chittoor Conveyance, Chittoor automobiles, and was also the vice-president of Chittoor district co-operative central bank and 3) Mr.T.N Venkata Subba Reddy, who was the director of Madanapalle Motors, and Sundaram Oil Mills of Madanapalle.

The sugarcane growers Association further stated that the sugarcane crop was one of the important crops grown in Chittoor district. The extent of land under sugarcane cultivation in the district during 1946-47 is given below.

Table-IV.7

Taluka-wise acreage under cane in Chittoor district during 1946-47

Name of the taluka	Extent in acres under sugarcane
Madanapalle	1,695
Vayalpad	1,095
Punganur	1,567
Palmaner	697
Chittoor	10,806
Kalahasti	025
Puttoor	292
Tiruttani	585
Chandragiri	2,179
Total	18,941

Source: Letter from Registrar of Co-operative societies Madras to Secretary to Dev.Dept.Government of Madras, in G.O.No.5426

Twenty miles in and around Chittoor town itself there were about 12,000 acres of sugarcane plantations having good transport facilities, fertile lands, good water supply and labour. The peasants further stated that the cane acreage was limited by the capacity of the individual grower to crush the cane mostly by bullock drawn crushers and making of jaggery by crude and wasteful methods, but if a ryot could sell his sugarcane without having to undergo the laborious process of crushing it and converting it into jaggery, and stocking and marketing it himself, he would grow more sugarcane.²²

The promoters have decided to establish the proposed sugar factory at one of the places namely (1) Murukambat (11) Patnam (111) Thimmasamudram, all located at a radius of five miles from Chittoor. The promoters have agreed to collect a share capital to the extent of Rs.30 lakhs. Of this a sum of Rs.20 lakhs was expected to be collected from cane growers. The authorised capital would consist of 30,000 shares of Rs.100 each and said that any member can hold shares up to the value of Rs.10,000. Further about 75 % of the members should be cane growers only. In the management also it was hoped to have 15 directors of whom at least 10 should be from cane growers.

Apart from the sugarcane growers Association, two other parties were also interested in starting a sugar factory in

²² Letter from cane growers to Sec.to Govt. of Madras, Development Dept. dated 12th October 1945.

Chittoor district. They were (1) C.R.K.Reddy of Kattamanchi, who was supported by the Chittoor taluka Vyavasayasangam and (11) Rao Bahadur G.Guruvappa Naidu of Chittoor.

In the post-war expansion scheme of sugar industry, in 1946, about 9 sugar factories were allotted by the Government of India in the Madras Presidency and about eight were granted permission in the region of Chittoor. North-western portion of North Arcot district was not served under this expansion scheme in spite of the great appeal by the cane growers of the region. When the issue was raised with the Government, it was reported that the Government was willing to permit a sugar factory to be floated only on private lines and not on co-operative lines.

Further there was a rumour that the Government had granted permission to a private firm from outside the region to start a sugar factory in Chittoor. On hearing this the peasants were very much agitated and the matter was referred to the Andhra provincial congress committee (A.P.C.C.). In the working committee meeting of A.P.C.C that met in Diguamagham of Chittoor district on 20th and 21st of June 1947 under the presidentship of N.G.Ranga, the working committee passed the following resolution which was sent to the Government.

"It is informed that the Government had granted permission to some private firm to erect a sugar factory in Chittoor district. We feel from this all the sugarcane growers may not derive the benefit of the Industry. Therefore, we request you to promote sugarcane growers co-operative societies and permit them to have a sugar factory."²³

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Letter dated 2.7.1947, from general Sec. A.P.C.C to the secretary, Govt. of Madras, in G.O.No.5426 dated 3.11.1948. Development Dept. Govt. of Madras

The Chittoor taluka Vyavasayasangam also met and made resolution to work to promote sugar factory on co-operative lines. The Sangam met under the presidentship of Mr.P.Chinnama Reddy and sent their request to the Government to expedite the work in connection with permitting the grant for starting a sugar factory that was already asked for. In their request it was stated that:

"When the leading ryots toured the villages not only of Chittoor taluka, but also in other villages of the district, it was found that there was great enthusiasm in the people to subscribe the full amount up to about Rs.30 lakhs as required and further noted that there were prospects of bringing into the fold of this society acreage under cane to the extent of 15,000 acres."

A copy of the request was also sent to the then chief minister T.Prakasam. Even after repeated requests when the Government did not grant permission to start the sugar industry, the Chittoor taluka Vyavsayasangam sent a memorandum to the then industries minister of Madras Presidency, V.V.Giri to intervene and work for granting permission to the Chittoor district cane growers for starting a sugar factory.²⁴ But the Government did not give the permission and the issue was dropped.

However, under the post-war expansion scheme, permission to start a sugar factory of 450 T.P.D in Chittoor district was granted to R.Devaraja Reddy of Pallalakuppam. It was noticed

²⁴ It may be mentioned that V.V.Giri later in his life rose to the position of the President of India (1969-74)

that out of the total of nine new sugar factories permitted to be started under post-war expansion scheme, two of the promoters had not made any progress.²⁵ They were (1) S.B.P Pattabi Rama Rao of Kapileswarapuram. He was permitted to establish a factory of 600 T.P.D in Ramachandrapuram taluka of East Godavari district (2) R.Devaraja Reddy of Pallalkuppam of Chittoor district. He was given permission to establish a factory of 450 T.P.D in the area covered by Chittoor and North Western portion of North Arcot district.

Even after five years of the sanctioning of the licenses, the promoters of both the proposed factories had not commenced any work towards the establishment of the sugar factories. Hence it was decided by the inter-departmental committee on planning of Government of Madras which met on 25-12-1950, to cancel the licenses granted to both the parties and further it was decided to permit a new group of promoters in their place to take up the establishment of the sugar factories. To this effect a press note was given on 22-2-1951 by the development department requiring the interested parties to apply to float sugar factories on private enterprise in the districts of East Godavari, West Godavari, Krishna and Chittoor. Following this press note, a great number of applications were sent expressing their willingness to start six sugar factories.

²⁵ G.O.No.803, 29-2-1952, Development Dept. Govt. of Madras.

In the East Godavari district, requests were received from the following interested groups to start sugar factories.

1) Sri Guntur Narasimha Rao M.L.A, had expressed his willingness to start sugar factories in East Godavari and Chittoor districts. He had established earlier a 10 ton Hydrogenisation plant with a paid up capital of Rs.21 lakhs and had started running it from 1950. He had also the experience of successfully running a 12,000 spindle textile mill with a paid up capital of 18 1/2 lakhs.²⁶

2) sugarcane growers association of Peddapuram, Yelluru, Ayacut villages of Peddapura, Kattamuru, J.Timmapuram, Katravulapalli, Jaggampeta, Sirivada, Vulimeswaram, Kandrakota, Ramavaram, Tamarada, Mallava, Gonada, Burugupudi and Yerravaram also applied for similar establishment of sugar factories. This application was signed by about 67 ryots of the above villages and they expressed that the proposed factory would be financed by the sugarcane growers only.²⁷

3) The Samarlakota sugarcane growers had also sent in similar application for starting a sugar factory for the West Godavari District. The Andhra sugars limited company had sent their application to start a sugar factory at Tanuku.

²⁶ Letter from Guntur Narasimha Rao to Sec. to Development Dept. Govt. of Madras dated 5th Feb.1951, in G.O.No.803, dated 29-2-1952, Development Dept. Govt. of Madras.

²⁷ Letter from sugarcane growers of Peddapuram and Yelluru anicut, dated 12-3-1951 to Sec. Development Dept.

In the case of Arcot-Chittoor area, applications for starting sugar factories were received from 1) P.S.Govindaswami Naidu. 2) P.S.Gopalakrishna, 3) North Arcot district co-operative central stores, 4) K.C.P Vuyyuru and 5) sugarcane growers of Peddanapally, Goddanapalli, Chillangi, Jagapathinagaram, B.Kothur, Ramakrishapuram, Mukkollu, Veeravaram, Rajupalem, Tirupati, Mangiturti, Polimeru and Mallam of Chittoor district. The application was signed by about 40 ryots from the above villages.

The K.C.P management mentioned in their application that several cane growers and prominent leaders of Chittoor district have approached Velagapudi Ramakrishna, the Managing director of K.C.P to put a sugar factory in Chittoor district under K.C.P's management.²⁸ There was a great enthusiasm shown by the public towards the establishment of sugar factories from 1950 onwards. Details of some of the applicants who came forward with proposals for starting sugar factories is discussed below.

In Vizagapatnam district, B.Satyanarayana of Bhiminipattanam applied for permission to start a sugar factory at Bhiminipattanam. He was then the M.L.A of Bhiminipattanam. He pointed out that about 12,000 acres of land was under cane cultivation in the Chodavaram taluka.²⁹

²⁸ Letter from V.Ramakrishna, Managing director K.C.P to sec. Development Dept. dated 4th Dec.1950 in the G.O.No.803 dated 29-2-1952, Development Dept. Govt. of Madras.

²⁹ Letter from B.Satyanaryana, M.L.A Bhiminipattanam to

Another applicant was M.R Appa Rao of Vuyyuru Village. He was the then M.L.A and also the zamindar of Nuzividu. He had also applied for permission to be granted for starting a sugar factory of 600 T.P.D at Gudivada of Krishna district. He expressed that for the proposed sugar factory, directors and shareholders of other sugar factories and industrial concerns would form into a joint stock and manage the factory through this joint stock. He proposed to raise a share capital of Rs.30 lakhs. The other members who supported the proposed factory were Ramakrishna Kondala Rao, zamindar of Narasaraopet and K.Pardha Saradhi Rao, zamindar of Gampalagudem.³⁰

Another M.L.A from Guntur district Auvtu Rami Reddy of Kollipara village also applied for permission to start a sugar factory. He expressed that Rs.5,00,000 was made available from the promoters for this purpose and he further proposed to raise Rs.15,00,000 from the public.³¹

Another applicant who offered his willingness to start sugar factory in 1950 was S.R.Y Sivarama Prasad, the Raja of

the Industries Minister dated 17th March 1951 in G.O.No.803 dated 29-2-1952, Development Dept. Govt. of Madras.

³⁰ Letter from M.R.Appa Rao, to Sec.to Development Dept.dated 15-3-1951, in G.O.No.803 dated 29-2-1952 Development Dept. Govt. of Madras.

³¹ Letter dated 15-3-1951 from Auvtu Rami Reddy, Ex-M.L.A, vice-president, district board, Guntur to sec. Dev. Dept.in G.No. 803 dated 23-2-1952, Development Dept. Govt. of Madras.

Challapally. He expressed his willingness to start sugar factory at Challapally with a crushing capacity of 450-600 T.P.D. He mentioned in his application that he had gained enough experience in the production and planning of sugar as he served for a long time as chairman of Vuyyuru sugar factory that he himself had large land holdings and he was also the chairman of Andhra Bank and served as a director for several other industrial concerns. He had earlier in 1945 applied for license to start sugar factory but it was kept pending. He expressed that if he was given permission to start sugar factory, he would complete the erection of the factory and commenced production by 1953 itself.³²

The planning sub committee of the cabinet met on 16th June 1951 and selected two of the fresh applicants of the two regions of Chittoor and Godavari where the promoters who were earlier permitted had failed to float sugar factories. They were Raja of Challapally who was selected to start a sugar factory in Godavari and K.C.P to take up a sugar factory in Chittoor district and were asked to submit applications for the import licenses.³³

By the close of the period under study , there were eleven sugar factories working in Andhra Pradesh; two in Vizianagaram district, two in Vizagapatnam three in East Godavari, two in

³² Letter dated 7-12-1950 from S.R.Y.Sivaram Prasad Raja of Chellapalli to Sec. to Development Dept. of Govt. of Madras, in G.O.No. 803 dated 29-2-1952 Development Dept. Govt. of Madras.

³³ Decisions taken at the planning sub-committee of the cabinet of Madras Govt. on 16-6-1951 in G.O.No.803 dated 29-2-1952 Development Dept. Govt. of Madras.

Krishna and two in Nizamabad district. Details of the performance of these sugar factories is given under the table below.

Table-IV.8

Details of the sugar factories which were working up to 1960 with details of location, crushing capacity, management etc.

District & place	Year of establishment	Crushing capacity (T.P.D)	No.of workers employed	Nature of Management
Vizianagaram				co-operative
Bobbili	1934	850	524	turned public
Seetanagaram	1941	600	430	public
Vishakapatnam				
Ettikoppaka	1933	1600	630	co-operative
Thunnapala	1959	N.A	578	co-operative
East Godavari				
Samarlakota	1890	2500	915	private
Chellore	1959	4000	609	private
Pitapuram	1945	2500	529	private
Krishna				
Vuyyuru, K.C.P	1936	6000	1571	private
Challapally	1957	1252	462	private
Nizamabad				
Bodhan, N.S.F	1938	4250	667	public
Shakarnagar	1941	N.A	85	public

* N.A: Not available

Source: Andhra Pradesh Industries Handbook, A.P.I.D.C, 1984.

Many more sugar factories were floated in the later period.

Details of all the other sugar factories floated between 1960 and 1990 in Andhra Pradesh is given in the table below:

Table IV.9

location, year of establishment, crushing capacity and management
of the sugar factories floated between 1960 and 1990.

District	Place of location	Year	Crushing capacity (T.P.D)	No.of workers	Capital investment (Lakhs)	Management
Srikakulam	Amadalavalasa	1962	1000	400	226	co-operative
Viznagaram	Bheemasingi	1977	1250	316	413	public
Vizaga - patnam	Payakaraopet	1961	350	600	N.A	N.A
	Chodavaram	1962	1600	727	485	co-operative
West- Godavari	Tanuku	1961	3000	1504	6752	private
	Surupugudem	1974	1280	1280	519	
	Chagallu	1976	3800	N.A	76	co-operative
	Palkol	1962	1000	170	236	co-operative
	Bhimadolu	1974	1250	303	424	co-operative
Guntur	Jampani	1983	1250	753	905	co-operative
	Gurajala					
Nellore	Kovur	1978	1250	494	640	private
Nizamabad	Sarangapur	1964	1250	120	720	co-operative
Medak	Zaheerabad	1973	1250	667	N.A	co-operative
Nalgonda	Miryalaguda	1977	1250	350	500	public
Karimnagar	Mutyampet	1981	1250	528	1500	public
Chittoor	Chittoor	1962	1600	674	674	co-operative
	Gajulamandyan	1978	1250	763	N.A	co-operative
Kurnool	Nandyal	1981	1250	600	N.A	co-operative
Cuddapah	Daulatapuram	1977	1250	608	497	co-operative
Anantapur	Hindupur	1980	1250	300	N.A	public

*.N.A: Not Available

Source: Dr.J.V.Subramanyam (edited), Directory of Large
scale and Medium industries in Andhra Pradesh, 1990.

Thus there were about 22 sugar factories which were floated during the thirty years between 1960 and 1990 and presently there are a total of 33 sugar factories functioning in Andhra Pradesh.

It can be thus seen that between 1933 and 1937 as many as five sugar factories were started in coastal Andhra, Etikoppka, Thummapala in Vizagapatnam district, at Bobbili in Vizianagaram district, at Kirlampudi in East Godavari and at Vuyyuru in Krishna district. The Etikoppaka, Thummapala and Vuyyuru sugar factories were started on co-operative lines. The Bobbili and Kirlampudi factories were floated by private entrepreneurs.

In the initial stages, the factories in the co-operative sector consisted of some well-to-do ryots. But the majority of the shares were owned by the local Rajas or zamindars.

The sugar factories received financial support in the form of loans under State Aid to Industries Act. Within a few years of the functioning of these sugar co-operatives, it is noticed that the Vuyyuru sugar co-operative was liquidated and was transferred to the management of K.C.P a private company. In the case of other sugar factories such as Etikoppaka, Thummapalla, the co-operative rules were modified to enable the local zamindars and moneyed classes to hold most of the shares. The Government also permitted the factories to allot shares to any individual first up to a value of Rs.6,000 then to Rs.10,000, the initial limit being only upto Rs.1,000.

The initial crushing capacities of most of these sugar factories were only between 100 to 300 T.P.D but from 1944 onwards, these sugar factories began to make profits and on their successful functioning some of them went for expansion and diversification. There was lot of enthusiasm shown by the public in floating new sugar factories around 1950s. It can be seen that in every district of coastal Andhra and Rayalaseema, the ryots under some local leadership had expressed their willingness to float new sugar factories even without expecting any financial support from the Government.

Around 1945 a situation of scarcity of raw material for the sugar factories arose on account of which some of the factory managements went for the development of cane estates. The ryots also were understood to be very conscious of the prices being paid for the cane supplied to the factories. At several places in every district cane growers had formed into sugarcane growers societies. Government also helped these societies by appointing agricultural staff and assisted the propagation of the improved seed varieties, new agricultural implements and practices. Loans were also granted to the members of these societies as working capital for cane cultivation. It can be said that the sugar factories were mainly controlled and managed by zamindari and rich landed classes. Attempts were also noticed to have been made by the local leadership in some places to float sugar factories mainly financed by local ryots.

Among the sugar factories started during the period under review, the Vuyyuru Sugar factory in private sector under the management of K.C.P, and the Nizam Sugar Factory at Bodhan in public sector have developed into major sugar producing concerns. In the foregoing chapters an in depth study of these two individual sugar factories is taken up. In the following chapter the various factors that were responsible for the growth of Vuyyuru Sugar factory over years is studied. The developments at macro level in regard to cane cultivation on commercial lines and the impact that the Vuyyuru Sugar factory made in its command area, is also brought out.

CHAPTER V

CASE STUDY OF VUYYURU SUGAR FACTORY

The establishment of sugar factories in Andhra Pradesh and the expansion schemes that were undertaken up to 1960 have been discussed in the previous chapter. The protective measures provided by the government in the growth of the sugar factories were also brought out.

A detailed analysis of the individual sugar factories is necessary to make an assessment of the working of the Government policies towards the development of sugar cane cultivation and sugar industry for the reason that sugar factories exist and function primarily under the precondition of the huge cane supplies being possible from its surrounding villages. A close nexus between the factory and the cane growers is an essential feature of sugar industry. Most of the activities of sugar cane cultivation and sugar industry confine to certain localities surrounding the factories only. Most of the efforts made by the Government towards cane development and industry will best be understood by studying the history and development of any one particular sugar factory. Apart from just the Governmental efforts, several other individuals were also involved in the development of this industry. By studying the history and growth of a single factory we can assess the response of the people both towards the extension of the cultivation and development of the industry. Further by taking up study on individual factories, the impact that these sugar factories have made in the rural areas, can best be studied. For this purpose, a study on two individual sugar factories, the K.C.P at Vuyyuru in Krishna

district of coastal Andhra and the Nizam Sugar Factory (N.S.F) at Bodhan in Nizamabad district of Telangana is taken up.

The rationale behind taking up these two sugar factories is that these two factories are located in two different regions and were administered by two different Governments. Again there are diversities between the two regions in terms of soil conditions, water resources, agricultural practices, the conditions of the cultivators and the entrepreneurial background. Apart from these the Nizam Sugar Factory represents the public sector and that of K.C.P the private sector. Hence, to have a comparative study and understanding these diverse conditions, a study on these two individual sugar factories is attempted.

In this chapter, the origin and the growth of Vuyyuru sugar factory is analysed. It will be seen the way how at various stages the government had rendered its support in the matters of providing proper and regular irrigational facilities, financial help, administrative support to further the progress of the Vuyyuru Sugar factory. The way how the peasants were encouraged to take to cane cultivation, the performance of the peasants in taking to cane cultivation is discussed. The growth of the sugar factory, the role played by the factory management in developing education, transport and employment in the locality is also discussed. The linkages between the cane growers and the factory, the peasants owning land and the condition of farm labour is also studied.

Formation of the Vuyyuru Co-operative Industrial and Credit Society

The Vuyyuru co-operative Industrial and Credit Society was registered under Madras co-operative societies Act 16-2-1934¹ to erect a sugar factory. Its president was Mr.Kaza Lakshminarayana and Mr.Adsumilli Gopala Krishnayya was its vice-president. Adusumilli Gopalakrishnayya was the father-in-law of Mr.Velagapudi Ramakrishna, who was then holding the office of the secretary to commerce and industries department in the Madras presidency. It was mainly on account of Velagapudi Ramakrishna's encouragement that the Vuyyuru sugar factory had come into existence. Adusumilli Gopalakrishnayya was the proprietor of Rangapuram and Reddigudem estate of Gudivada getting a total peshcash of Rs.435 for Rangapuram and Rs.683 for Reddigudem per annum.²

Membership and Share Holders

The society consisted of 529 members with 4,800 shares allotted to them. About Rs.1,00,000/- was collected from them as paid up capital. The society was granted a loan of Rs.10,00,000 by the Madras provincial co-operative bank on the securities of the unencumbered lands of the members.³ The names of the share

¹ G.O.No. 439 dated 3-3-1936, Development Department, Government of Madras.

² Names of the zamindars in Madras Presidency corrected up to 30th December 1936, (A.P.S.A)

³ Annual Administrative report department of Industries, Madras Presidency for the year ending with 31st March,

holders holding more than 50 shares each is presented under Table-V.1 given below. It can be seen from the table that as many as 2464 shares out of 4800 shares were controlled by just 16 members, most of whom were either the local Rajas or those related to them and the remaining 2336 shares were owned by 513 members. Thus it can be seen that majority of the shares were owned either by the local Rajas or by high officials at the provincial government.

Every member peasant of the Vuyyuru co-operative Industrial Credit society was made to subscribe a share capital of Rs.250/- and was also required to put one acre each as security for the loan advanced by the Madras provincial co-operative Bank.⁴ Every member was required to supply sugarcane from at least one acre of his lands to the factory.

1935.

⁴ Information gathered through interviews conducted in Dec.1992 with Shri Paladugu Venkaiah of Chena Ogirala Village, about 5 k.m from the K.C.P.

Table-1.

Table showing the names of the share holders (holding more than 50 shares) of the Vuyyuru sugar factory:

Sl. No.	Gl. No.	Name of the share holder	No.of shares owned
1	3	Adusumilli Gopalakrishnayya	250
2	271	Raja of Challapalli	250
3	541	Rani of Pedavani	250
4	321	Rani of Challapalli	250
5	386	Ayyadurai Ayyaraval	250
6	29	A.V.Subramanyeswar Rao	250
7	5	B.Lakshmanaswami	220
8	6	K.Lakshminarayana	220
9	430	T.Sreeramamurthy	100
10	2	Raja of Vullipalem	100
11	1	Raja of Vuyyuru	60
12	8	K.Sreeramulu	62
13	10	B.Venkateswara Rao	51
14	37	V.Sobanadri Garu	51
15	443	N.Ramaseshaiah	50
16	328	Kaza Umamaheswar Rao	50

Source: G.O.No.2398, dated 6th Nov.1942, Development department, Government of Madras.

Prior to the establishment of the sugar factory at Vuyyuru, sugar cane was to be grown in a very limited area in the locality. In Nandamuru village for example it is reported that cane crop was grown in about only two to four acres. It was

grown only for raw eating which used to be sold at the annual Jataras.⁵

The region was familiar with imported sugar namely *cheena panchadara*. Thus it should be noted that absolutely there was very little cane cultivation in the region prior to 1930.

The aged farmers in the locality recollected that the Government sent agricultural demonstrators into villages to propagate cane cultivation. Services were rendered by Mr. I. Kurma Rao, agricultural demonstrator of Anakapally research station who toured extensively propagating the cane cultivation in the region between 1940 and 1952. The improved and better seed was supplied from Coimbatore by the Government and an incentive of Rs. 40 was given as loan in addition to giving 2 bags of ground-nut cake for manuring purpose for every acre of cane cultivated by the ryots. In this way the peasants were induced to take to cane cultivation.

In the initial stages both the manufacturing of gur from cane as well as the returns for supplying the cane to the factory were not profitable. But one important reason for the ryots in taking to cane cultivation was, the price of paddy which was

⁵ Information collected from interview with Shri Meruga Peda Kotaiah (aged 75 years) of Mantada village in December 1992.

selling at Rs.8 per bag in 1927 fell as low as Rs.3 in 1936. Probably this must have resulted in steady shift towards cane cultivation in the region.

Working of the Factory in Early stages

The initial crushing capacity of the factory was 850-1200 tons per day. In the initial stages the factory did not work satisfactorily due to the following reasons.⁶

- 1) There was a delay in getting the necessary finances from the Madras provincial co-operative Bank which delayed the completion of the erection of the sugar factory as targeted. The cane grown by the peasants was destroyed as there were no adequate facilities to convert it into jaggery.
- 2) There was a group of people in the district who gave false propaganda that the factory would never be completed and this kept the peasants away from taking to cane cultivation. This resulted in the scarcity of raw material when the factory was established.
- 3) The irrigation department was reported to have followed a conservative policy which also gave a set back to the cane cultivation.

⁶ G.O.No.2487, dated 25th Nov.1942, Development Dept. Govt. of Madras.

The factory started crushing cane first in January 1936.⁷ The table presented below gives the details of the number of days of working of the factory, the cane crushed, and the performance of the factory for the period 1935-36 to 1938-39.

Table V.2

Quantity Of Cane Crushed and Sugar Produced, profit or loss incurred at Vuyyuru Sugar Factory For the Period 1935-36 to 1938-39

Year	cane crushed (in tons)	sugar produced (in tons)	% of sugar recovered	Loss incurred (Rs.)
1935-36	33,630	2133	6.9	1,46,488
1936-37	30,923	2401	7.7	4,11,061
1937-38	29,127	2307	7.9	4,02,429
1938-39	46,587	3624	7.8	N.A

Source: Letter from Registrar of co-operative societies Madras, to secretary to development department dated 16-12-1938.

It can be seen from the table above that during the first four years, the sugar factory had incurred losses. The cause for the loss was due to the following:

- 1) inadequate supply of cane
- ii) absence of control over manufacturing expenses
- iii) the payment of heavy salary to the sugar technologist
- and iv) the abnormality of the price of sugar in 1937.

7

Letter from Registrar co-operative societies to secretary to development dept. in G.O.No.2496 dated, 10-11-1937, Development Dept. Govt. of Madras.

The factory management had requested the government for help by granting the services of expert staff from the co-operative department to help in rectifying the chaotic state of accounts. The government sanctioned the services of a senior inspector of co-operative societies for conducting the audit of the Vuyyuru co-operative and Industrial Credit Society during the year 1937-38 and 1938-39. The experts after studying the financial conditions of the sugar factory had made the following recommendations for the improvement of financial conditions of the factory;

- 1) ensuring the supply of sufficient cane to enable the factory to work to its maximum capacity
- 2) recovery of the amounts due to the society from the members and the directors
- 3) increase of membership and increase of immovable property as securities to Madras provincial co-operative Bank⁸
- 4) The government sanctioned the loan of services of Mr.S.Sitaramapatrudu, assistant director of agriculture to Vuyyuru sugar factory for a period of three years from 1938 to attend to the cultivation of cane by the members with different varieties of cane suited to soil and to the supply of sufficient cane to the factory to increase its sugar output.⁹

⁸ G.O.No.1485 dated 5-7-1934 in the Registrar's report on the working of the Vuyyuru Co-operative Industrial Credit Society, Development Dept., Govt. of Madras.

⁹ Letter from Director of Agriculture to the secretary Development Dept. dated 15th Feb.1938, in G.O.No.679 dated 16-3-1938 Development dept. Govt. of Madras.

Irrigation

For a sugar factory to function successfully, there should be a prompt and regular supply of cane. The Vuyyuru sugar factory is located in the region which is irrigated by the Krishna river waters. Vuyyuru sugar factory draws its cane from the taluks of Vuyyuru, Kankipadu, Gudivada and Gannavaram of Krishna district. In the initial stages there seems to have been little difficulty faced in getting regular supply of water to a required quantity in a balanced way into all these taluks.

Certain minor irrigation channels and pumping stations were needed to be constructed from the main canal to get sufficient water for the cane crop. Some local land-lords who were also active members of the sugar co-operative took initiative in installing the pumping stations at their own cost. The government also intervened to ensure regular supply of water.

It was estimated that the factory could work to its full capacity if it received the supplies of cane from about 6000 acres. During the years 1937, it was reported that the factory was able to command cane from about 2,000 acres only. It was found difficult to supply water from the then existing irrigation channels for raising sufficient cane and when the same was represented by the factory's management, the Government had permitted the society to pump water directly from the Krishna river below the anicut near the Patamata village of the Bezawada

taluka for irrigation of about 9000 acres of dry land in 12 villages near Vuyyuru.¹⁰

With regards to cultivation of sugar cane on dry lands from the existing canals, the society requested the Government to permit its cultivating members to take water by lift irrigation. In response to this, a special permission was given as early as 1933. The arrangement was for a pipe to be taken from the main canal which empties into a small pond or tank about 8 feet deep from which water is to be drawn by a pump driven by an oil engine and then distributed through the usual channels. The government also directed the society to make the cultivating members to apply for a loan to carry on this project under the agriculturists loan Act, in order to set up the necessary pumping installations. The government also agreed to collect the water charges at concessional rates only. For the years between 1939 and 1942, only single water rates were collected. This relief was given till the cultivation of sugar cane reached a satisfactory stage.¹¹

During the year 1937, the Government sanctioned the pumping of water by the society from Pulleru for an area of 927 acres. The society approached the Madras provincial co-operative bank

¹⁰ Letter from the Director of Industries to the secretary to Govt. Development Dept. dated 24-9-1937 in G.O.No.33 dated 5-1-1939, Development Dept. Govt. of Madras.

¹¹ G.O.No.2487 dated 25th Nov.1942, Development Dept. Govt. of Madras.

for funds. There was a delay in getting the loan from the bank. Upon this, the directors were permitted to put up the pumping installations at their personal cost. Some of the pumping installations which were erected by some of the prominent directors of the co-operative society are given below.

Gandigunta Project

Prominent directors of the factories, like Adusumilli Gopalakrishnayya, Vadde Venkatakrishnayya and Kaza Lakshminarayana have invested their money and erected the Gandigunta project during the year 1937. This was the first ever pumping station erected. This was located at about three miles from Vuyyuru sugar factory. This was intended to irrigate about 700 acres with cane. A second pumping station was also erected by Adusumilli Gopalakrishnayya at Gopuravipalem, to irrigate about 373 acres of land with sugar cane. A third was erected by the Raja of Challapally at Challapally.¹²

There were five more pumping stations erected by the private individuals on the Pulleru canal. This can be considered as a very important role played by the individuals mentioned above who took initiative in developing the irrigation facilities at the initial stages of the growth of the sugar factory.

¹² G.O.No.2398, dated 6th Nov.1942, Development Dept. Govt. of Madras.

It is understood that the factory was keeping touch with peasants engaged in growing cane by constantly looking into the irrigation facilities whenever required. The factory management had taken necessary steps to alert the irrigation authorities at the district level and at times represented the matters on irrigation to the provincial head quarters in ensuring quick and immediate attention in regard to the maintenance of water levels of the Krishna river and its channels for its proper regulation.

During the year 1942, it was reported that there was a change in the irrigation policy adopted by a new chief engineer who was reported to have adopted a very conservative policy and declined to allow irrigation facilities for sugar cane for wet lands outside the radius of about five miles from Vuyyuru. A memorandum was submitted by the co-operative agricultural and Industrial Credit Society of Vuyyuru to the adviser to the Governor of Madras to look into the matter.¹³

In response to the memorandum submitted by the factory management, the irrigation authorities at the provincial level directed the district irrigation authorities to investigate and report the matter back.¹⁴ Investigation was made in regard to water supply in the upper Pulleru canal. It is said that

¹³ G.O.No.2487 dated 25th Nov.1942, Development Dept. Govt. of Madras.

¹⁴ Letter from chief engineer Madras Provincial Irrigation Dept. to secretary to Development Dept. Govt. of Madras, in G.O.No,1939 dated 20-8-1943.

although water supply for irrigating over 21,000 acres of wet land under eastern bank and Bandar canal had been permitted by the Government not more than 60 acres could be irrigated under the east bank canal near Vullipalem during the year 1942 and the promised supply of water under Pulleru could not be had due to the diversion of water to Gudivada taluka for meeting fresh water requirements there. Further, the water that is let into Pulleru was held up at Vuyyuru weir, pumped by several pumps located along the canal to the cane fields. Further, it was reported that the local ryots do not get in touch with irrigation authorities directly. It was only the management of sugar factory which makes all representations. Hence the local irrigation authorities have requested the Government to entrust the work of meeting the local cane growing peasants by the agricultural department to report on water requirements.¹⁵ Upon this, they said that it would be possible for them to rectify the water deficiency problems. The same was carried out after contacting the ryots. Thus from the above account it can be understood that the Government had promptly responded to the representations made in regard to the proper regulation and supply of water facilities.

In 1945, the Government sanctioned an amount of Rs.3,500 to start a scheme of work at Vuyyuru sugar factory locality for

¹⁵ Copy of the letter from executive engineer Krishna division, to Superintendent engineer, Bezawada circle, in G.O.No.1939, dated 20-8-1943., Development Dept. Govt. of Madras.

testing the sugar cane varieties and manurial experiment. An agricultural farm was also started by the Government at Vuyyuru to link up the laboratory and research by the association of the sugar factory.¹⁶

At the insistence of the department of Industries, reduced rates for the transport of sugar cane seed from Anakapally, Poona, Repalle, Tenali and Coimbatore and sugar cane from the Nizam's dominions to Hospet were offered by the Madras and Southern Martwada Railway Company during the year 1935-36. Special freight rates for transport from Madras of structural materials required for the Vuyyuru sugar factory were also secured.¹⁷

In view of the fact that it is necessary to crush sugar cane as soon as possible after it is cut, the railway authorities were also drawn to the fact that it was very necessary for loading facilities to be provided throughout the day and night at Vijayawada the nearest railway junction during the months of

¹⁶ Letter from additional secretary to Development Dept. of Madras Govt. to the secretary I.C.A.R dated 3-7-1945, in G.O.No.1424, dated 5-4-1946. Development dept. Govt. of Madras.

¹⁷ Annual administrative report Dept. of Industries, Govt. of Madras, for the year 1934-35, p.27.

January , February and part of March and they undertook to do the best of what was possible.¹⁸

Factors Leading to Change in the Factory Management

The Vuyyuru Sugar co-operative used to dispose off its sugar stocks with Volkart Bros., till 1940. The buildings of Volkart Bros. were used by the Vuyyuru sugar factory as godowns for storing sugar at Bezawada, where they were delivered to Volcart Bros. In 1940, the factory changed their agency for disposing sugar stocks from Volcart Bros. to Parry & Co.

Parry & Co could not provide any go-down accommodation but insisted on the delivery of sugar at Bezawada itself. Hence, the necessity of a go down at Bezawada near to Railway station arose. At this point the management considered one of its directors Gopalakrishnayya's godowns to be suitable for this purpose and they leased the buildings from Gopalakrishnayya.¹⁹ Similarly, the purchase of the water pumping stations by the factory was also considered to be desirable and hence some of the pumping stations were purchased by the factory from the owners. They were: The Gandigunta project, jointly owned by A.Gopalakrishnayya, V.Venkatakrishnayya and Kaza Lakshminarayana. It was purchased at a cost of Rs.10,000/-. The project at Gopuvanipalem owned by Gopalakrishnayya was purchased for Rs.2,500. Another pumping

¹⁸ Annual Administrative Report of the Dept. of Industries for the year 1936-37, p.34.

¹⁹ G.O.No.2398, dated 6-11-1942, Development Dept. Govt. of Madras.

station owned by the raja of Challapally was purchased at a cost of Rs.600.²⁰

Following these transactions, the co-operative department had disqualified Mr.Adusumilli Gopalakrishnayya, Messrs Kaza Lakshminarayana, Vadde Venkata Krishnayya and the Raja of Challapally to hold the offices of directorship as they were indirectly interested in the contract made by the society, being the members of the Board of Directors.²¹ Following the disqualification of the above mentioned members to hold offices as the directors, the problem arose of not finding any other member of the co-operative firm, who can be made as director. According to the rules formulated at the time of formation of sugar co-operative, the members of the society, including the directors were entitled to sell sugar cane to the society. At least six members of the Board of Directors were to possess shares in the society to the value not less than Rs.2,000 each.²²

It can be seen from the table given below that many of the members fulfilling the above conditions to be the members of the Board of Directors of the company were either disqualified by the co-operative department following the purchase of pumping stations from them or were unwilling to hold the office of Directorship.

²⁰ Ibid.

²¹ From the letter written by the deputy Registrar of Co-operatives, Bezawada to the General Manager of Vuyyuru Sugar Factory, in G.O.No.2398 dated 6-11-1942.

²² G.O.NO.2398, dated 6-11-1942, Development Dept. Govt. of Madras.

At this juncture when crisis arose in the management, a general body meeting was convened where it was decided to authorise the sale of the company for a price not less than Rs.18,50,000/-.²³

Table-V.3

List of Members owning more than 50 shares and qualified/or not-qualified to be the directors of the Vuyyuru Sugar Factory

Sl No	Gl. No.	Name of the share holder	shares owned	status for directorship
1	3	Adusumilli Gopalakrishnayya	250	disqualified
2	271	Raja of Challapalli	250	disqualified
3	541	Rani of Pedavani	250	{ not qualified being women
4	321	Rani of Challapalli	250	
5	1386	Ayyadurai Ayyaraal	250	Govt. employee
6	29	A.V.Subramanyeswar Rao	250	disqualified
7	5	B.Lakshmanaswami	220	now director
8	6	K.Lakshminarayana	220	disqualified
9	430	T.Sreeramamurthy	100	died
10	2	Raja of Vullipalem	100	now director
11	1	Raja of Vuyyuru	60	unwilling
12	8	K.Sreeramulu	62	now director
13	10	B.Venkateswara Rao	51	died
14	37	V.Sobanadri Garu	51	opposition
15	443	N.Ramaseshaiah	50	not available
16	328	Kaza Umamaheswar Rao	50	disqualified

Source: G.O.No.2398, dated 6-11-1942, Development Dept. Madras Government.

²³ G.O.No.1901 dated 19-10-1941, Development Dept. Govt.of Madras.

By February 1943, it was understood that the Vuyyuru sugar factory was liquidated and the management was transferred to K.C.P.²⁴ The question of liquidation of the Vuyyuru co-operative sugar factory seems to have arisen firstly out of the heavy loss that the factory was incurring then and secondly following, the Registrar of co-operative department's disqualifying Adusumilli Gopalakrishnayya, Kaza Lakshminarayana and V.Venkata Krishnayya to hold the office of directorship in the Vuyyuru sugar factory for having indirectly interesting themselves in the sale of their water pumping stations to the factory.

It was at this juncture that the very people who were primarily responsible for the formation of sugar factory on co-operative lines were finding it difficult to hold the directorship. They thought it better to convert it into a joint stock company in which the co-operative authorities will not play any role. When the issue of disqualification of the above members was referred to the Government for appeal, the deputy registrar of the co-operatives investigated into the matter and approved after investigation, the financial transaction in which the three above mentioned directors were involved to be in the best interest of the company and cancelled the orders issued

²⁴ K.C.P was registered into a joint-stock company on 3rd July 1941; K.C.P stands for quality-customer satisfaction and principled business.

earlier and allowed them to hold offices.²⁵ However, it is understood that the management went for liquidation.

Two of the Directors filed a civil suit challenging the liquidation of the Vuyyuru co-operative sugar factory in the court of subordinate judge of Bezawada.²⁶ They appealed for the injunction orders to be issued restraining the directors from liquidating the Vuyyuru co-operative sugar factory.²⁷ The case was heard on 23rd October 1940 in the court and the judgment was given favouring the liquidation of the Vuyyuru co-operative.

Sugar Factory Under the New Management

The transfer of the management of the Vuyyuru sugar factory from co-operative to a joint stock (K.C.P) can be considered as an important land mark in the history and development of the sugar factory under the new management under which the factory had made rapid strides. The role played by K.C.P in the progress of the sugar factory in particular and the region in general is discussed in detail in the foregoing analysis.

The initiative for the purchase of the Vuyyuru sugar factory was taken by Velagapudi Ramakrishna and was supported and carried out by S.R.Y.Sivaram Prasad, the Raja of Challapally.

²⁵ G.O.No.2398, dated 6-11-1942, Development Dept. Govt. of Madras.

²⁶ Kakani Venkataratnam and Vallabhaneni Venkata Rao have filed the suit in the court.

²⁷ G.O.No.1901, dated 19-10-1941, Development Dept. Govt. of Madras.

Velagapudi Ramakrishna's role in K.C.P's Development

Velagapudi Ramakrishna (1896-1968) belonged to a peasant family of Bellamvaripalem in the Repalle taluka of Guntur district. In 1913 he went to Edinburgh for his higher studies and took masters degree in Mathematics and returned home in 1916. In 1920 he was selected by the Government for training into I.C.S. Having qualified in I.C.S., returned to India in 1922. On his return to home country, he was offered the Diwanship by the then Maharaja of the Jayapore estate. As soon as he took charge as the Diwan of Jayapore estate, he pioneered many schemes of developing land reclaimed from forests, marshes and mosquitoes and offered lands at favourable rates of tenure and attracted many of Krishna and Guntur district ryots to migrate to Jayapore estate.²⁸ This gives an understanding as to how much Velagapudi Ramakrishna was interested in the development of agriculture in general and the development of agrarian classes in particular. He started his I.C.S career as assistant collector in Chengalput district when he was 26 and served in several capacities till 1947. He served as under secretary, assistant collector, collector, district magistrate, industries director, deputy secretary to Government of India, chairman for labour tribunal to Government of India, Industrial advisor, ex-officio secretary to Government of Madras.

²⁸ N.G.Ranga, *Economic Organization of Indian Villages*, Vol.1. Deltaic Villages, Vani Press, Bezawada, 1926, p.,41.

In his capacity as the director for Industries, he took lot of interest in the industrial development of the country. It was at this time that he initiated the ryots of the Krishna district to start a sugar factory on co-operative lines, and with his encouragement and support, the Vuyyuru sugar factory had come into existence in 1934. He had resigned from his highly lucrative I.C.S position in 1947 at the age of 51 and personally took over the management of the Vuyyuru Sugar Factory. From 1947 he served as director to K.C.P till 1956 and from 1956 to 1968, he served as its chairman.

Even after he rose to great heights, Velagapudi Ramakrishna did not forget the locality, where he was born and spent his childhood. He tried to develop his birth place into an Industrial centre. He established a Sugar Factory at Nagaram in mid 1950's in the Repalle taluka of Guntur District. Nagaram locality had fertile lands, good waters facilities, and this prompted him to start the sugar factory there. But the local conditions did not prove fruitful. The yield of cane could not be raised to an economic level. The peasants there initially took interest in cane cultivation but they lacked requisite knowledge of raising cane on commercial lines. There were not many technical experts, there were also not many agricultural science graduates. Even the improved varieties of cane-seed was not available to the cultivators. Thus on account of these deficiencies, the yield of cane crop could not be increased and

the cane growers of Nagaram locality accrued losses; the factory incurred heavy loss and Velagapudi Ramakrishna waited long to see its success. When it became inevitable, he closed the factory. However he did not get discouraged with the failure of this project. The machinery and the sugar plant of Nagaram were shifted to Chagallu in East Godavari district and was reestablished there in the year 1961.²⁹ It was named after Ramakrishna's father Velagapudi Venkata Subbaiah as V.V.S Sugars. It was started with a initial crushing capacity of 800 tons per day. It proved to be a great success and reached a crushing capacity of 5000 tons per day by the year 1991.³⁰

After his death in 1968, his elder son Mr.V.Maruti Rao served as chairman of K.C.P for a short period and after him Ramakrishna's second son V.L.Dutt, took over its management as its managing director and is serving in this capacity till date.³¹

29 Dasari Alwar Swamy, *Pratibhasali Ramakrishna*, (a biographical sketch), Ramakrishna Publications, Vuyyuru, 1994, Passim, pp.72-79.

30 Velagapudi Ramakrishna's daughter Smt.Rajeswari Ramakrishnan is presently managing the affairs of this V.V.S Sugars.

31 S.T.P.Ramachandracharyulu; *The K.C.P.Ltd. Swarnotsavam* (1941-1991), 3-7-1991, A souvenir released on K.C.P's Golden Jubilee Celebrations, V.L.Dutt received the award of Yajemanya Ratna from Government of Andhra Pradesh for his best managerial skills and received Doctor of Letters, *Chekkara Kalaprapurna* by the Agricultural University and was also elected unanimously as the vice president of Federation of Indian Chambers of Commerce and Industries (FICCI) in 1990 and was elevated to the position of its president in 1991.

Challapally Raja

Another prominent person who contributed his might to the development of this sugar factory was Challapally Raja. 'Shri S.R.Y.Siva Rama Prasad was the last zamindar of Devarakota Samasthanam. He belongs to the Yarlagadda family of Krishna district. When Vuyyuru sugar factory was started on co-operative lines, he was holding 250 shares and was one of the members of the board of directors. The Vuyyuru sugar factory in its initial stages received financial assistance from Madras provincial co-operative bank on the personal security and guarantee of the Challapally Raja. When the factory was liquidated due to the financial losses it incurred, he had put lot of his personal money and rescued it by the transfer of its management to K.C.P. He served as the chairman and managing director of K.C.P till 1946. From 1946 to 1955, he served as its chairman.³²

At the time of the transfer of the Management to K.C.P, all the members of the Vuyyuru co-operative sugar factory became the members of K.C.P also. As soon as the K.C.P had taken over the management of the sugar factory, the problem of uneconomical price for cane crop arose. During the planting season from January to March 1943, the prices for pulses and paddy were found to be higher compared to that of sugar cane. The price of pulses was Rs.10 per bag, paddy in the market was selling at Rs.25 per

³² B.Anjaneyulu, 'Vuyyuru Panchadara Factory Saiseva Dasalo Challapalli Raja Gari Patra', The K.C.P Ltd. Swarnotsavamulu, 1941-1991, Andhra Jyoti, Hyderabad, 3-7-1991.p.8.

bag and that of sugar cane per ton was only Rs.14.³³ Unable to get remunerative prices for cane crop the peasants preferred to go for pulses instead of sugar cane. K.C.P as soon as it took over the management, announced in Feb.1943, the price for cane as Rs.15/- per ton for the season 1942-43 and Rs.15 plus bonus from 1943-44. Further it was raised to Rs.16-8-0 per ton during 1943. Apart from this, K.C.P also helped at this stage by constantly keeping watch on the water levels of the canal supplying water to the cane growing villages. It had directly corresponded with irrigation authorities at the provincial level to pressurise the local irrigation authorities in ensuring regular and continuous supplies of water. The way the K.C.P had taken up the matter in this regard in getting the required water supplied to cane fields, whenever it faced problem has been discussed in detail in the opening pages of this chapter.

During the year 1943, to facilitate the ryots to carry out planting of canes in their wet lands, the factory authorities went to the extent of stopping the crushing of cane for three weeks from 14th March 1943 in order that seed material may become available.³⁴

³³ Letter from director of Agriculture to secretary to Govt. of Madras in G.O.No.1939, dated 20-8-1943, Development Dept. Govt. of Madras.

³⁴ G.O.No.1939, dated 20-8-1943, Development Dept. Govt. of Madras.

Special mention has to be made to the importance given by K.C.P. to cane cultivation in high level wet lands where irrigation was not possible. This handicap was overcome by installing over a dozen oil engine pumpsets along irrigation canals for lifting water to irrigate about 2,000 acres. The whole scheme was fully funded by the sugar factory.

Development of irrigation facilities for summer season (during which the canal closure takes place in April & May) has received special attention by encouraging the ryots in sinking 7,000 bore wells with the bore sets supplied by the factory at subsidised rates. Water logging in over 5,000 acres was avoided by deepening the drainage channels at factory's cost. To relieve water logging in a low-laying trough, where over 800 acres is given to sugar cane, a lift drainage scheme has been permanently installed with pumpsets of the capacity of 100 H.P bailing out water in heavy rainy season (July to October).³⁵

As early as 1945, the K.C.P management took interest in the construction of locks, bridges and roads. It is reported that the K.C.P had requested the Government for the construction of a lock at Boddapadu above Pulleru water channel by which sugarcane from several villages surrounding the lock would be easily conveyed to the factory.

³⁵ *The Hindu*, Madras, English daily dated, 3rd July 1991.

For the above purpose the factory management had agreed to contribute Rs.25,000 amounting to half of the total expenditure.³⁶ K.C.P had developed link roads, culverts and bridges at a cost of Rs.24 lakhs between 1980-1990.³⁷

Artificial fertilizer required for the crop was given free to all cane growing peasants by the K.C.P management to encourage the growing of cane. For the planting of quality seed, a subsidy of Rs.1400 was given per acre. Treatment of seed cane in hot water at 39° C for 30 minutes is arranged in over 1000 acres each season to cover 10,000 acres of commercial planting. The subsidies for all the agricultural improvements during the year 1991 sums upto Rs.4 crores.

As early as 1957, a sugar cane liaison farm was started by the agricultural department of Government of Andhra Pradesh with the co-operation of the factory. For the next 20 years several recommendations were made through experimental farm and were

³⁶ G.O.No.2482, dated 20-7-1945, Development Department, Government of Madras.

³⁷ *The Hindu*, Madras, English daily, dated, 3rd July, 1991.

widely popularised.³⁸ In 1978 a research station well equipped to serve the cause of cane culture was thought of and in this regard the factory sought the co-operation of the A.P.Agricultural University. An area of 40 acres with irrigation and infrastructural facilities costing over 75 lakhs was provided by the factory for this purpose. The research station commenced its work from 1978 itself, with five disciplines namely, Plant breeding, Agronomy, Chemistry, Entomology and Pathology and about 4 promising varieties of cane have been selected for the region.

Increase of Area under Cane Cultivation

The incentives given by the factory such as free supply of artificial fertilizers, subsidy and other safeguards towards irrigation and drainage resulted in the increase of cane area in the Vuyyuru sugar factory region. The table-V.4 presented below gives the particulars of the increase of cane area.

³⁸ Engeti Jagannatha Rao, 'K.C.P. sugar bowl turns golden' Advertiser's Announcement, THE Hindu English daily, 3rd July 1991, p.II.
(E.Jaganatha Rao has been serving as the plant manager of the Vuyyuru Sugar Factory from 1978. He is reputed for his knowledge in sugar cane breeding and sugar technology. It is with his fatherly benevolence towards the cane growers the factory is making rapid strides.) This researcher had the benefit of having discussions with him a number of times.

Table-V.4

Details of increase in the number of cane growers and area under cane cultivation in K.C.P's command area and the working of the sugar factory between 1937-38 to 1990-91

Year	No. of cane growers	Acreage under cane (acres)	Yield of cane (tons) per acre	Total cane crushed (tons)	No. of days of crushing
1937-38	N.A	1446	20.6	29789	58
1938-39	N.A	2596	17.8	46567	72
1939-40	N.A	3034	18.5	55476	77
1940-41	N.A	4055	24.5	114062	129
1941-42	753	1882	21.4	34000	85
1942-43	552	1381	30.0	36133	83
1943-44	821	2054	29.3	52109	74
1944-45	1242	3104	24.4	67470	93
1945-46	1535	3837	22.3	82520	105
1946-47	1386	3466	29.1	9453	115
1947-48	1728	4320	23.0	94475	120
1949-50	1612	4032	25.3	97123	133
1950-51	2366	5916	30.0	170810	148
1955-56	3304	8260	28.0	215607	167
1960-61	3405	10900	30.9	332829	159
1965-66	4576	17721	27.6	452767	174
1970-71	5628	15854	30.56	444429	133
1975-76	7656	26990	28.49	663836	144
1980-81	6657	19553	31.8	555034	114
1985-86	7984	21095	30.8	619474	132
1990-91	12081	29083	29.5	769052	133

Source: prepared from the data charts available at the factory office, Vuyyuru, 'details of performance', LO/A/S/S10. dated 14th December 1991.

It can be noticed from the above Table that during the year 1937-38 cane crop was cultivated only in about 1446 acres and

about 29,789 tons of cane was crushed by the factory working for 58 days. The factory had made little progress by the year 1940-41, by commanding cane from about 4055 acres and crushed 1,14,062 tons of cane working for 129 days. But during the following years the situation deteriorated with a fall in the acreage under cane. In 1942-43, during the year of the transfer of management to K.C.P only about 552 ryots were growing cane in about 1381 acres and the factory worked for 83 days crushing about 36,133 tons. With the transfer of management the position started improving by 1945-46, with about 1535 ryots growing cane for the factory and about 3837 acres were under cane crop. By 1950-51 the number of the cane growing peasants increased to 2366 growing cane in about 5916 acres. The factory worked for 148 days crushing 1,70,810 tons. By 1960-61, more than 10,000 acres were under cane cultivation and from 1960 onwards, the acreage under cane cultivation increased constantly and it reached 29,083 acres during the year 1990-91 and about 12,081 peasants were growing cane. The crushing capacity also improved simultaneously. The Vuyyuru sugar factory in the year of its establishment had a crushing capacity of 800 to 1200 tons. In 1956 it was raised to 2500 tons; in 1969 to 3750 tons and further in 1972 it has been raised to 6000 tons and at present it is crushing more than 6000 tons per day.

Description of Villages supplying cane

The Vuyyuru sugar factory draws its cane supplies from about 12000 ryots spread over 218 villages in six different taluks; 65

in Vijayawada, 52 in Vuyyuru, 39 in Pamarru, 20 in Gannavaram, 11 in Mandigama, 15 in Mylavaram taluk of Krishna district.

A table giving the details of the density of cane growing area in the reserved villages of Vuyyuru sugar factory command area is given below.

Table-V.5

Density of cane area in the reserved villages of Vuyyuru sugar factory command area:

1970-71				1980-81			1990-91		
Range of area under cane (acres)	No. of villages	Total cane area in acres	% to total area	No. of villages	Total cane area in acres	% to total area	No. of total villages	Total cane area (in acres)	% to total area
above 500	3	1675	10.56	5	2999	15.34	6	3859	13.26
200 to 500	25	7429	46.41	30	9007	46.06	47	14874	51.15
below 200	117	6790	43.83	14	7547	48.60	123	10352	36.59
total	145	15884	100	149	19553	100	176	29085	100

Source: From the data charts available at factory office, Vuyyuru, density of cane area in reserved villages 1970-71 to 1990-91. L.O/A/S/S20/14-12-91

It can be seen from the table V.5 that out of the total cane supplies in 1970-71, 10 per cent of it was supplied from just three villages. And another 46 per cent was supplied by 25 villages. The remaining 44 per cent was supplied by the remaining 117 villages. This situation did not alter much even

after two decades. In 1990-91, 13 percent of the cane was supplied by just six villages and 51 per cent was supplied from 47 villages and the remaining 36 per cent of cane was supplied by the remaining 123 villages.

Distribution of the cultivation of cane area

In the early years of the working of the factory, the cane was supplied from the villages very near to the factory. But over years the villages located far away at a distance of 45 k.m also started growing cane. A table giving the distribution of cane area with different distances from the factory is presented below.

Table-V.6

Distribution of cane area with different distances from the factory

Distance from the factory (Kms)	1970-71			1980-81			1990-91		
	No. of villages	Total cane area in acres	% to total area	No. of villages	Total cane area in acres	% to total area	No. of village	area under cane (acres)	% to total area
within 15	66	10555	65.68	40	8226	42.07	46	10477	36.02
within 25	46	3397	21.14	45	7304	37.35	65	11931	40.02
25 to 45	27	1640	10.21	40	3153	26.13	39	4201	14.45
Beyond 45	6	479	2.98	16	870	4.45	26	2475	8.51
Total	145	16071	100	149	19553	100	176	29084	100

Source: From the data charts available at K.C.P office,
Vuyyuru cane area with different distances from the
factory L.O/A/S/S18/13-12-1991.

It can be seen from the table V.6 that in 1970-71 about 66 villages located within 15 K.m around the factory supplied 65.68 per cent of total cane. In 1990-91 the same 10,447 acres of cane was supplied by 46 villages situated within a radius of 15 k.m from the factory. But the villages located at a greater distance from the factory also started cultivating cane. About 19000,acres against a total of 29,084 acres was under cane crop in the villages located at far away distances from the factory. This gives an understanding that the villages far away from the factory also started appreciating the cane cultivation.

Classification of Cane Growers

At the time of the establishment of the sugar factory on co-operative lines the ryots were made to enter into an agreement that for every Rs.250 share capital invested by them one acre of their total land should be shown earmarked for cane cultivation. But it is learnt that by 1944 when the factory ran into losses, the ryots sold their shares sometimes giving up without any returns as they had doubts of the factory's success.³⁹ Resulting which, the factory had faced the problem of supplies of cane. At this stage Challapally Raja had taken to extensive cane cultivation. Rich land lords having more land holdings have also taken to extensive cane cultivation. Some of them were 1) Yarlagadda Venkata Krishnayya of Kapileswarapuram, Yarlagadda Prakasarao, Madapati Venkateswara Rao, Koganti Venkatramanayya of Indupally etc. Raja of Challapally had purchased about 1200 acres in Koravagantipalem to grow cane. In Vuyyuru also about 500 acres of cane estate was developed. Thus it can be said that in the initial stages cane crop was grown of necessity to make the factory a success by the big land lords and zamindars, but slowly as the factory passed towards stability and profits, the local ryots also took to cane cultivation.

It can be glanced from the table below that in the period until around 1960, the percentage of the small peasants growing

³⁹ This information is obtained through interviews with a senior farmer Paladugu Venkaiah (70 years) of Chena Ogirala village in December 1992, 4 k.m from K.C.P.

cane was very less compared to the big peasants. This trend over years declined and more and more small peasants took to cane cultivation.

In the year 1960-61, there were 5 ryots supplying cane more than 2000 each, which means according to the then yields they must be growing cane in about 60 acres in each. Further in 1960-61 about 14 ryots were supplying between 1001 to 2000 tons each and 71 ryots between 501 to 1000 tons each and another 760 ryots were supplying between 101 to 500 tons each and the rest numbering about 2553 ryots supplied only below 100 tons.

Table-V.7

Classification of the cane growers on the basis of the quantity of cane supplied by them for the period 1960-61 to 1990-91

Year	quantity of cane supplies (in tons)							No. of growers
	1 to 20	21 to 50	51 to 100	101 to 500	501 to 1000	10001 to 2000	above 2000	
1960-61	784	10002	767	760	71	14	5	3405
1965-66	1144	1417	961	931	57	21	2	3885
1970-71	1810	1529	1136	1064	78	10	1	5628
1975-76	1625	2384	1755	1780	99	13	Nil	7656
1980-81	1424	1923	1523	1729	53	5	-	6657
1985-86	1675	2451	1918	1905	32	3	-	7984
1990-91	1386	3686	2956	2359	12	-	-	12081

Source: from the data charts available at factory office, Vuyyuru, 'number of cane growers supplying cane in different tonnage groups.'
LO/A/S/S11, p.1 dated 14th Dec.1991.

By 1970, the number of ryots supplying more than 2000 tons came down to one and by 1975, there were none in this category. In 1970, the category supplying 1000 tons and more were 10 and it came down to 5 by 1980 and by 1990 there were none in this category too. Under the category of cane growers supplying cane between 501 to 1000 tons there were 71 of them during the year 1960-61, this category of cane growers came down to just 12. The number of cane growers of the large scale category decreased over years and almost ceased to exist by 1990-91. But, the categories supplying upto 500 tons increased over years. A total number of 3086 ryots were supplying just 1 to 20 tons during the year 1990-91 and another 3668 were supplying up to 50 tons. It gives us an understanding that 6654 ryots were growing cane in not more than one acre each and 2956 ryots were supplying between 51 to 100 tons each; the next category supplying between 101 to 500 consisted of 2359.

It can further be deduced that only about 1200 ryots were growing cane in 10 acres each and this consists of about 10 per cent of the total cane growers as on 1991. About 80 per cent of the peasants were growing cane in less than two acres each. It can be concluded that sugar cane had over years came to be grown by the small peasants. Further, due to the high investment needed for this crop, it is no longer grown in large number of acres by a single ryot.

Owner cultivators Vs. Lease cultivators

An increasing trend of the cane cultivation taken up by small peasants and land-less peasants in the leased lands is noticed in the region. A table is given below furnishing the figures with per centage of cane cultivation in the owned lands and leased lands.

It can be seen from table V.8 that in 1970 more than 70 per cent of the cane growers were growing cane in owned land and only 30 per cent were growing on leased lands. Cane cultivation on leased lands increased at the cost of owner cultivation over years and by 1990-91 nearly 48 % of the land under cane was in leased lands.

Table-V.8

Percentage of Cane cultivation in leased land and owned land to total cane cultivation in K.C.P command area

Category	1971-72		1975-76		1981-82		1985-86		1991-92	
	acres	%	acres	%	acres	%	acres	%	acres	%
own land	10700	70.2	17550	65	20118	67.6	12505	59.3	17140	52.2
leased land	4526	29.8	9440	35	9635	32.4	8589	40.7	15809	47.8

Source: From the data charts available at the factory office at Vuyyuru, 'certain statistics about cane growing areas' L.O/A/S/S19 dated 13-12-1991.

performance of Cane Growing Ryots Over Years

Several peasant families in the villages surrounding Vuyyuru sugar factory were growing cane since the time of the establishment of the sugar factory. Some peasant families, over years, after the success of the sugar factory have taken to cane cultivation on seeing the economic betterment accrued to those growing cane. The table V.9 presented below gives the description of some the ryots growing cane, the acreage under cane taken up by each ryot, the period since they were investing on cane cultivation and the economic progress that they made on taking to cane cultivation.⁴⁰

⁴⁰ Oral history method is evolved in this regard. The table is prepared with the help of the information collected from ryots in the villages surrounding Vuyyuru sugar factory. The samples consist of aged farmers who were growing cane from the early days of the factory's establishment. It also contains rich and well-to-do farmers, middle peasants with small holdings and also landless lease cultivators growing cane. Interviews were conducted in the month of Dec.1993.

Table-V.9

Increase of area under cane cultivation by some of the cane growers in the Vuyyuru sugar factory command area with details of the performance over years

Sample Ryot's No.	Name	Age Yrs.	Village Name	Distance from factory	Own land	Lease land	Total land acres	cane crop acres	Other crops acres	From when cane grown	Performance of Ryots
1	Sarasa Veeraswamy	33	Iynampudi	8 K.m	4	0	4	2	Paddy	father's period	benefited
2	Tota Durga Rao	23	Totlavallur	8 K.m	0	2.5	2.5	2.5	--	2 years	no profit & loss
3	M.Venkateswara Rao	39	Garikaparru	4 K.m	4	6	10	6	4 Bg.Pad	Beginning	bought 3 acres
4	G.Manikyala Rao	36	Marrivada	6 K.m	3	7	10	2	8	father's period	bought 1.5 acre
5	G.Koteswara Rao	55	Tottavalluru	8 K.m	4	6	10	4	6	his period	bought 4 acres
6	S.Veknateswara Rao	24	Pamidimokkala	9 K.m	0.5	2	2.5	0	2.5	now and then	difficult to grow
7	Mareddy Poti Reddy	40	Yakamuru	3 K.m	4	2	6	4	2	30 years	bought 4 acres
8	Katta Raja Rao	35	Penamakuru	6 K.m	0	2	2	2	0	3 years	prefers to give up
9	Kontam Bhaskararao	35	Koramaddala	12 K.m	0	2	2	2	0	3 years	debts, 20,000
10	Kolli Sambasivarao	49	Iynapur	23 k.m	1.75	2.75	4.5	1.75	2.75	2 years	feels profitable
11	B.Venkateswara Rao	45	Kuramaddala	10 K.m	1	2	3	3	0	6 years	in debts
12	V.Subba Rao	45	Garikaparru	5 K.m	0.60	5	6	2	Paddy, Bgr	7 years	feels profitable
13	Koya Srihari Rao	50	Penamaluru	20 K.m	0.40	40	22	22	Turmeric, Paddy	6 years	earned good profits
14	Gujjula Balaiah	57	Katur	12 K.m	5	45	50	20-3	Paddy, vegetable	30 years	earned good profits
15	S.Krishna Mohan Rao	53	Pydikondapalem	12 K.m	30	15	45	10	Paddy	Beginning	bought 10 acres
16	K.C.Veera Ragavaiah	68	Garikaparru	3 K.m	40	0	40	10	Paddy	father's time	bought 20 acres
17	Vanga Linga Reddy	42	Bollapadu	10 K.m	10	10	20	10	Paddy	grand father's	bought 10 acres
18	A.Krishna Murthy	75	Penamaluru	10 K.m	16	5	21	10	Turmeric, Paddy	1936	built cinema-hall
19	K.Satyanarayana	42	Chodavaram	20 K.m	20	0	20	10	Turmeric, Kanda	1972	invested in shares
20	Kallam Nagi Reddy	36	Kallampalem	10 K.m	10	0	10	5	Turmeric	35 years	bought 4 acres
21	M.Sundara Rao	67	Chodavaram	20 K.m	15	0	15	7	Paddy	15 years	bought 6 acres

Beginning: From the times the factory began its first crushing.

Source: table prepared from the information collected through oral interviews with the cane growers during a field study conducted in December 1993.

The figures in the table further prove that almost all the ryots confined to cane cultivation only up to 10 acres. Out of 21 ryots whose performance is presented in the table-V.9 ,about 10 ryots have benefited much. They have purchased additional land from the profits gained by cane cultivation. Some of the land less agriculturists, who have taken to cane cultivation on leased lands have expressed that they find it difficult to grow cane as it involves an investment of Rs.12,000/- on an average for raising cane in one acre apart from paying for the rent. Most of the cane growers of this category have purchased bullock carts and bullocks on loan and they find it a useful employment to go for hire during the harvest season in transporting cane to the factory and as such they also got interested themselves in cane cultivation in one or two acres each. Most of the ryots of this category find it difficult to repay the debts. All the owner cultivators have made profits. Those ryots having 4 to 5 acres of own land by taking to cane cultivation succeeded in buying 2 to 4 acres of additional land (ryots under Sl.No.3,,4,5,7,20 in the table). Some big peasants who had lands up to 10 acres and more have bought additional land of another 10 acres. Those ryots already owning 20 acres touching the ceiling, invested in share market, cinema halls and building good houses (ryots under Sl.No.19, 18, 21 in table-5.9).

It is interesting to note that three ryots out of 21 samples presented in the table (ryots under Sl.Nos.12,13,14) have made much profits on taking to cane cultivation on lease lands. Two

of them were growing cane on commercial lines up to 20 to 30 acres each. They earned a lot, built pucca houses with 2 lakh rupees worth. They also invested in non-agricultural fields and they have expressed that they were able to improve only on account of taking to cane cultivation. These three being the only ryots benefiting out of cane cultivation from the land-less group of ryots, rest of the land less ryots taking to cane cultivation in leased lands did not make any substantial improvements, though none of them have expressed to have accrued any loss on taking to cane cultivation.

In addition to cane cultivation, the ryots of the region also grow paddy in equal area. The other commercial crops grown in the region were, turnip, chilly, turmeric and plantain and all of them expressed sugar cane to be more remunerative crop as it gives standard returns.

Loan Facilities

In the initial stages of the factory's establishment the ryots growing cane were provided a loan of Rs.40/-, and two bags of ground-nut cake was provided free by the factory. The factory used to purchase about 6000 tons of ground-nut cake every year for the purpose of distributing it free for manuring sugar cane crop by the ryots.⁴¹ At present the K.C.P management generously provides to all cane growing ryots a subsidy of Rs.1400/- for

⁴¹ G.O.No.1201, dated 17th March 1953, Development Dept. Govt. of Madras.

each acre of cane crop undertaken by them. It also supplies freely 5 bags of Uria for manuring the crop. Further, the Banks advance to the ryots an amount of Rs.4500/- for each acre on loan towards the investment for raising cane.

Farm Labour

Sugar cane crop requires large labour force during the season of harvest for cutting the cane. For this purpose the ryot depends on the migrant labour. For all other agricultural operations from planting time till the time of harvest, for the purpose of planting, weeding, intercultivation, earthing up, propping, etc., local labour is employed. The local labour demand more wages and to employ large number of local labour during the harvest season the cane growers find it difficult to pay them high rate of wages and apart from this, the cane cutting is a bit difficult job because the leaves of the cane rub against the skin and it gives lot of inconvenience and hence the local labour do not readily come for this work. It also requires longer hours of work and at times they will also be required to work over night. However this situation is overcome by the cane growers by the prevalence of migrant labour, who migrate from far of districts such as Srikakulam and even from Telangana districts during the months of December, January, February and March.⁴²

⁴² Information collected from interviews with Kakarla Satyanarayana (42 years) and other ryots of Chodavaram village, 8 k.m from K.C.P. Interviews conducted in Dec.1993.

Several thousands of them migrate to the Vuyyuru factory region during these months.

Two months before the harvest season few *mastries* representing the cane cutters would approach the cane growers and take an advance of Rs.1,000/- for every person promised to be brought. In this way every *mastry* is advanced by the cane growers up to an amount of Rs.50,000 for the supply of labour during harvest season. Every couple working for about 4 months will earn about Rs.6,000 after subsisting themselves for the period of their stay. Food grain is given to the migrant labour by their employers (ryots) at ration-shop prices. They were helped with providing necessary bamboos and palm leaves to make small huts for them to live and were also paid to and fro travelling charges. This practice of the prevalence of the migrant labour is noticed to be in operation in Gujarat cane fields also.⁴³

Diversification

K.C.P had established a distillery plant in 1946, which produce 10 million bulk litres of Industrial Alcohol per annum. In sugar cane crop everything of the plant is useful. After the manufacturing of the sugar, from the residues of the juice Industrial Alcohol can be obtained by processing the molasses.

⁴³ Jan Breman, 'seasonal migration and co-operative capitalism: crushing of cane and of labour by sugar factories of Bardoli' *Economic and Political Weekly*, Vol.13, Jan-Sept.1978, pp.

During the year 1951, a heavy engineering complex was established by K.C.P at Tirurottiyur, Madras for the fabrication of complete plants sugar, cement, fertilizers and chemicals. It may be noted here that before the establishment of this workshop by K.C.P, all the machinery needed for the erection of sugar and cement factories in India were all imported from other countries. The situation changed after K.C.P's establishment of a central workshop. More than 50 sugar factories and equal number of cement factories functioning today in the country were, equipped entirely with the machinery fabricated by K.C.P.

The K.C.P's machinery manufacturing firm of Tiruvottiyur near Madras entered into an international consortium with Pullers firm of Germany and were jointly supplying complete machinery to several countries in the world for establishing cement factories. K.C.P also received contracts recently from the Government of Vietnam for the supply of machinery to two sugar factories in that country.

K.C.P had entered into cement manufacture in the year 1958 by establishing a cement factory of the capacity of 2.5 lakh tons production at Macherla in Guntur district. A 100 metric ton capacity paper plant is also contemplated to be set up at Vuyyuru to utilise the saved bagasse with the stabilization of cane crushed around a million tons per year.⁴⁴

⁴⁴ Information taken from the handbook prepared by the sugar factory on the completion of 50 years of

K.C.P's Contribution to Social and Educational Institutions

A comprehensive rural development programme has been implemented over the period which not only brought about an increase in the productivity but also a change in the economic and cultural levels of the rural public in the villages surrounding the Vuyyuru sugar factory. The aspects of rural development in which the K.C.P had played its role is discussed below.

The company donated Rs.18 lakhs to help in the establishment of a college (A.G & S.G college) in Vuyyuru. It also helped in renovation of 15 elementary and high schools effected by the cyclone of 1977. An amount of 12 lakhs was contributed by the company for building a library for Degree College in Nagaram and further an amount 5 lakhs was granted for the same college for the construction of additional class rooms. The company had alienated an area of 11.5 acres in the Kanuru village, valued at Rs.50 lakhs for the establishment of educational institutions by Sidhartha Academy of General and Technical Education. The Velagapudi Memorial Trust donated a further amount of Rs.10 lakhs to the Sidhartha Medical College. For imparting education to the children of the cane growers and factory workers, a well equipped High School was established with Rs.50 lakhs in which every year 1100 students get educated.

establishment in 1990-91.p.2.

The company has donated Rs.30 lakhs in the year 1992 for the construction of a well equipped 30 bed hospital at Vuyyuru.' An amount of Rs.5 lakhs was contributed for the construction of a polio rehabilitation centre at Vuyyuru. In the same hospital, family planning programme, eye-camps etc. are being conducted periodically.

Development of Communication Facilities

The factory spent Rs.10 lakhs for the development of link roads, culverts and bridges. A matching grant of Rs.2.41 lakhs was granted for the development of B.T road from Vuyyuru to Gurajada. An amount of Rs.15.76 lakhs was also committed by K.C.P as its share for link roads under the Government sponsored programme. For laying a metal road to Velpur village, an amount of Rs.1.4 lakhs was spent. About 1.5 lakhs was spent to construct a metal road between Mantada and Lankapalli. An amount of Rs.5 lakhs was donated in the year 1981-82 to construct link roads to the main road connecting the villages on the left flood bank along Krishna river covering 5,000 acres. The factory further agreed to contribute Rs.35 lakhs to construct a bypass road to ease the congestion of traffic on Vijayawada-Machilipatnam high way. Bus shelters have been constructed in about 50 villages in and around Vuyyuru. Tree plantation was undertaken on both sides of the high-way from Vijayawada towards Vuyyuru. The factory has been contributing funds towards improving drinking water facilities. A veterinary

dispensary at Pedayadra village was established by the management at a cost of Rs.25,000 in Divi taluk towards improvement of animal husbandry. It also liberally donated huge sums of money towards flood relief and cyclone relief in 1977 for the people in the surrounding villages of Vuyyuru. This way the factory has been extending help for the development of the region.

Employees Social Welfare

The factory had established a well equipped dispensary within the factory premises providing free treatment and medicines to all workers with an annual expenditure of Rs.6.6 lakhs. The company constructed 400 pucca houses to accommodate the employees of the factory at Lakshmananagar Colony costing about Rs.51,00,000. An officer's colony was developed at Kanuru village and 50 houses have been constructed for this purpose. Recreation halls, library, Kalayana, Mandapas (marriage halls) were also constructed by the factory.

The basic needs of the employee's are taken care of by the company. There is a well-run co-operative stores catering to the needs of all the employees. The annual turnover of the co-operative stores at present is Rs.150 lakhs. There is also a co-operative credit society sanctioning loans at reasonable rates of interest amounting to 1,00,000 each. Employees are benefited by taking loan to purchase buffaloes, sewing machines etc., with the help of which they improve their earnings.

The Vuyyuru sugar factory was established in co-operative sector for which a major portion of the initial capital was provided by the Madras Provincial Co-operative Bank. The factory received this loan under the security of the unencumbered lands of the member peasants. However, the majority of the shares of the co-operative were controlled by just a handful of local zamindars.

In the initial stages of the establishment of the Vuyyuru sugar factory, the local zamindars and some prominent members of the co-operative took initiative towards development of irrigation facilities. They had also put in lot of their personal money to overcome financial problems when the factory sustained losses. Some of the rich ryots developed cane estates when a situation of scarcity of raw material arose on account of the peasants keeping away from cane cultivation.

When the interests of some of these prominent members of the co-operative were hindered by the co-operative authorities, the Vuyyuru Co-operative Sugar Factory was liquidated and the management was transferred to K.C.P under the leadership of Challapally Raja and Velagapudi Ramakrishna, the then Director of Industries for Madras Presidency.

At the time of the change of the management of the factory, the interests of the members of the earlier co-operative were protected. Under the management of K.C.P, keen interest was

taken for inducing the ryots to grow cane extensively by supplying fertilizers free of cost, giving subsidy etc. It had also worked for the development of irrigation facilities. Free technical services were provided by K.C.P to dig wells enabling the ryots to draw ground water. Several drainage works to overcome water-logging were taken up. For the easy transport of cane, link roads from the cane growing villages to the main road were laid. It may be said that on account of constant support given by K.C.P and the rapport it maintained with the ryots, the ryots over years have taken to cane cultivation on large scale. The Vuyyuru Sugar Factory contributed its mite towards the development of the region surrounding it. Several educational institutions in Krishna and Guntur districts received financial assistance from K.C.P. It had also helped in developing the health and transportation facilities in the region. K.C.P had constantly kept in mind the welfare of its workers. Several welfare measures were undertaken by its management from time to time for improving the living standards of its workers.

In the following chapter a similar account on the Nizam Sugar Factory on the aspects of its genesis, growth and the impact it had made on the region surrounding is discussed.

CHAPTER VI

THE NIZAM SUGAR FACTORY

A number of industries were found to be flourishing during the 17th and 18th centuries in Telangana. Warangal was a famous centre for cotton products and carpets. Steel was made¹ at Kunasamudram near Nirmal which was in great demand for the manufacture of arms. Leather industry was also flourishing in Narayanapet. Other places like Nizamabad, Medak and Hyderabad manufactured paper. Warangal and Narayanapet were producing silk sarees, scarfs etc. Sugarcane was cultivated in Telangana in 17th and 18th centuries and jaggery and coarse sugar were manufactured from it. Juice used to be extracted from pounding cane in huge motors.¹ But like other regions of India, Telangana also suffered the industrial decay during the last quarter of the 19th century. Many of the indigenous industries ceased to exist and those that survived were not in prosperous condition.

With the initiative taken towards the restructuring of the economy and polity under the prime minister ship of Salar Jung-I, in the second half of the 19th century, a beginning towards industrial development was made. We see that the development of the infrastructural facilities especially transport, improvements in trade mechanism and restructuring of the agrarian economy, paved the way for commercialisation of agriculture. Especially cotton in Marathwada and oil seeds in Telangana, entered commercial dimension. The efforts made by the public works department to reorganise the irrigation works helped in this

¹ B.K.Narayana, *A Survey of Industries in Telangana*, Keshav Prakashan, Secunderabad, 1962, pp.11 to 13.

process. The first textile mill was started on modern lines in 1874. Cotton ginning and pressing mills developed in large numbers. In 1901, there were 68 large industrial establishments and their number increased to 330 by 1920.

During the inter-war period of 1919-39, state took initiative in providing institutional support to industry. The inspectorate of factories and boilers was set up in 1910. The Hyderabad company Act was promulgated in 1910. An Industrial Laboratory was set up in 1917 and a separate department of commerce and industries was established in 1918. During the year 1929, the Hyderabad Industrial Trust Fund (I.T.F) was formed. I.T.F served as a financing and managing institution. It provided technological and institutional support to a wide range of industries. It covered large scale industries and started with a corpus fund of rupees ten million.² It was only with the formation of I.T.F that the state's finance to corporate sector the development of Industries began on a systematic basis. Finance was given in the form of shares, debentures and loans. In the period 1929-50 as many as 43 out of a total of 85 companies in the mining and manufacturing sectors received financial aid. Oil, rice, flour mills, small scale motor and engineering work shops, button factories, matches etc. received aid. Three textile mills, two cigarette factories two glass factories, and a

² C.V.Subba rao, "Role of State in Industrialisation: The Case of Hyderabad", in S.Bhattacharya (ed.) *Society and Economy in South India During 1914-39*, O.U.P. N.Delhi, 1991p.210

sugar factory came up on account of I.T.F's support. During the period from 1939-48, the process initiated by the state in the second phase, continued with an effect on the structural change in the industry from agro-based to manufacturing industry.

Regarding the domestic sources of industrial finance, regular commercial banks did not seem to have played any major role in industrial finance. Finance came from traditional markets in advancing loan. Some traders after persuasion both by the government and leading promoters, invested in the form of shares. The traditional landed gentry also participated in providing financial support by the purchase of shares. Moin Nawaz Jung, Ahscam Yar Jung Bahadur and Pingali Venkata Rami Reddy, belonged to this category. Money lenders such as Pannalal Pitti, Nasher Chenoy, Dhanarajgiri also entered the industry. Traders such as Ahamad Alladin, Karim Abdul Babukahan and Laik Ali also entered industrial sector.

Genesis of Nizam Sugar Factory(N.S.F)

The Nizam Sugar Factory, the only sugar factory in Nizam state for quite a long time was registered under private sector on 17th April, 1937. It started its first crushing from the year 1939. The very process of the establishment of the Nizam Sugar Factory has a history of more than a decade. Lot of preparatory work was made before it was finally established. The Nizam's Government had shown interest in the extension of cane cultivation in the Nizam Sagar canal area under its plan to

realise the expected revenue by levying double water cess on cane crop, thereby to make the Nizam Sagar Canal scheme a financially viable one.³ The establishment of a sugar factory was thought of to find an easy and secured market for the cane grown by the peasants and thus induce the peasants to extend the area under sugarcane cultivation.

There were few inherent problems in cane cultivation such as the lodging habit of cane, propping and the problem of the root system not going deep into the soil among the local varieties of cane traditionally grown in Telangana. These difficulties have become a setback in the extension of cane cultivation. The methods adopted by the Government such as the Agricultural Research, introduction of new varieties of cane, introduction of artificial fertilizers and the demonstrations and direct assistance given to the ryots were studied in detail in the chapter II. In this chapter, the history of the sugar factory is brought out giving the account of the preparatory work undertaken by the Government on the aspects of:

- 1) making of the preliminary survey over the possibility of starting a sugar factory in the Nizam Sagar Canal area
- 2) identifying the suitable land for developing a cane estate to

³ The Nizam Sagar Canal scheme has been estimated on the basis of 20,000 acres of sugarcane in the irrigated area. The securing of this area under sugarcane crop formed a very important factor in the financial success of the Nizam Sagar Canal Scheme. The single water cess being at Rs.16 per acre and the double water cess on sugarcane being Rs.64 per acre.

- help in the supply of necessary raw material for the factory
- 3) obtaining technical advise from the sugar technologists and getting the expert for undertaking the establishment of the sugar plant and help at various stages of its erection
 - 4) encouraging the monied people of the Nizam state and the Industrial Trust Fund by the Government. 5) the aspects of the enthusiasm shown by the entrepreneurs from outside and within the state to float sugar industry in the Nizam state
 - 6) the enthusiasm shown by the cane growers and the public in expediting the completion of the sugar factory
 - 7) the import of technical personnel and technology needed for the sugar factory
 - 8) the working of the sugar factory after its establishment, the increase in the crushing capacity, its diversification, shift in the location, the issues relating to water supply, factory management, the ratio of cane supplies between factory, estate and the peasants are studied in this chapter.

Preliminary surveys on Land in Nizam Sagar Canal Area

The Nizam's Government had directed for undertaking preliminary survey to find out the possibility of establishing a sugar factory in the Nizam Sagar Canal area as early as 1928. In this regard experts from its own agricultural department such as Mr. Mohammad Beg, Mr. Harold H. Mann and expert opinion from Parry & Co and Balapur sugar factories were also sought to make a survey of the localities in Nizam Sagar Canal area and to make a report on the possibilities of starting a sugar factory. Mohammad Beg,

the land compensation officer after surveying the lands in the locality in 1928, expressed that it would not be possible to get the minimum land in one continuation in any of the taluks 'like Yellareddy, Bodhan and Nizamabad. He further expressed that a total of 3077 acres of unoccupied land were available within a radius of 20 miles in 30 villages i.e about 1484 acres in 22 villages of Bodhan taluk, 1593 acres in 8 villages of Yellareddy taluk and further recommended for inducing the cultivators with excess lands to sell their surplus lands and by which it was said another 1286 acres would be available making it a total of 4363 acres and even then he felt that it would not be sufficient enough for the requirements of a sugar factory.⁴

The issue was also referred to Harold H. Mann. He made a survey of the land in certain blocks in the Nizam Sagar Canal area and agreed that there was an opening for the extension of sugarcane crop to the extent of 10 to 11 thousand acres and he further suggested that certain problems such as poor varieties of cane, bad drainage facilities etc., were hindering the extension of cane cultivation. Over the issue of the possibilities of starting a sugar factory, he opined that the proposition made by the land compensation officer of getting 3077 acres within a radius of 20 miles in 30 villages to be a worthy proposition and further suggested for consulting any of the big firms experienced

⁴ Letter No.1030 dated 4th Shahrewar 1928, from land compensation officer Mr.Mohammad Beg to director of Agriculture Nizam Government in File No.190 of 1335 fasli bundle No.10511.

in sugar manufacture to conduct investigations and ascertain the conditions under which a company could be floated. He further concluded that the development of sugarcane cultivation and 'sugar factory would be a slow business.⁵

In the year 1929, the request was made for getting the opinion of the Parry & Co. sugar concern. After studying the information supplied by the Nizam's Government, Parry & Co's experts recommended for the installation of a gur producing plant at Borlum or at some suitable centre, large enough in the first instance to deal with the cane produced from 500 acres but built on a unit system capable of expansion when required. The possibilities of growing cane on the unoccupied land could then be explored. They further felt that the possibilities of a centrally located factory could be thought of after seeing the success of the gur producing unit. Repeated requests were made by the authorities of Nizam's Government for getting an expert from Parry & Co who would personally visit the Nizam Sagar Canal area and then get his opinion regarding the establishment of a sugar factory. Parry & Co then sent Mr. Barrat Francis, a sugarcane expert.

After inspecting the unoccupied land cited by the Government officials to be utilised for the purpose of growing cane on

⁵ Harold H. Mann, DSc, sugar cultivation in Nizams dominions, p.t Bulletin No.2 of the agricultural dept. Hyderabad Deccan, Govt. Central Press, Hyderabad 1928 in Bundle No.6, List No.10511, File No.190 of 1335 Fasli.

estate basis, Baratt Francis expressed that the land cited was unoccupied because it was not worthy of occupying. He ruled out its suitability for raising cane crop. He further suggested for the land to be leased or purchased from the present owners. The other option entertained by the Government was to convert large area of dry land to wet and for this the ryots would be unable to do on account of lack of capital to work even the whole of their present holdings and further felt that these peasants would be anxious to part with some of their wet lands on terms advantageous to the factory. Based on these factors, Francis recommended for taking the lands already under irrigation even at a high rental rather than to take dry land and convert it into wet. He estimated the cost of cultivation of cane per acre to be Rs.500 in 1926 and would yield about 12 candies of gur. The price of jaggery during crushing season would be about Rs.50, the return per acre would be about Rs.600. On account of high cost of cultivation and low price of sugar he opined that the scheme does not offer any possibility for the profitable manufacture of the white sugar. Hence Francis strongly expressed that it would not be possible to proceed with the scheme to establish a large sugar factory and recommended for the establishment of a small gur factory to deal with cane from 500 acres but capable of expansion.⁶ Experts from another sugar concern, the Belapur

⁶ Letter from Parry & Co. to Director General of commerce and industries department, Nizam's State, dated 4th December 1929 containing the Francis' report in Bundle No.10511, File No.190 of 1335 Fasli (1929 A.D).

sugar company of Maharastra were also invited to study and advise the Nizam's Government on the issue of developing a cane estate.⁷

The manager of Belapur sugar company visited the Nizam Sagar area in the year 1932. He inspected all the unoccupied land in the villages of Komlancha, Golipore, Makhdumpoor, Tirumalapoor, Ibrahimpet, Pocharam, Rampoor, Kamsatpally, Namli, Nasurullabad, Mylaram, Posatpally and Bapasally covering about 2708 acres. After surveying these lands he expressed that some of the land cited was rocky in the villages of Komlancha, Golipoor, Makhdumpoor as well as Nasurlabad. Bapasally and Borlum lands also suffer from the same defect of being interspersed with boulders which would make cultivation on a large scale impossible. Only about 1000 acres of land was said to be suitable in the villages of Rampoor, Khurd, Namli and Mylaram and Posatpally in blocks of 200 acres or more within a small radius. In addition to this land, he expressed the possibility of obtaining more land in some of the Jagir and Paigh villages.⁸

In the year 1930, Harold Mann also visited the Nizam Sagar canal area and toured some of the villages around the canal area. He had expressed that the sugarcane cultivation in the area was

⁷ Belapur Sugar Firm had its own cane estate supplying cane for its manufacturing plant. They were invited to help Nizam's Government to have similar estate for them also.

⁸ Letter from Belapur company to the secretary commerce and industries department. Installment No.10511, File No.190 of 1335 Fasli.

becoming popular. He had given as an example the account of the village of Timmareddipalle where there was an increase of cane cultivation from 3 acres in 1929 to 19 acres during the following year 1930. He had interviewed the cane growing ryots of that village. One of the ryots who had taken to cane crop in a considerable area when asked about the reasons that prompted him to increase his area under cane crop, replied that he had earned good profits for his paddy crop and having found no immediate use of this money, he decided to use it for the purpose of sugarcane growing on a large scale than he had undertaken earlier. He further mentioned that it was his habit to use the returns from paddy crop for sugarcane cultivation for increasing the area of paddy and did not count the crop as a means of profit for use, but as an investment of profits. In this way he had increased the area under cane crop to about 1.5 acres. He estimated that it would yield 30 candies of gur. At the then price of Rs.50 per candy of gur, he would get Rs.1500, which means a return of Rs.1000 per acre. The profits would come to Rs.400 per acre. Commenting on this Mann expressed this case to be a special one and opined that:

under special circumstances the sugarcane crop shows itself as a very valuable method of employing surplus funds, yet it does not furnish nearly such a satisfactory investment to any ordinary cultivator, who has to⁹ borrow the funds necessary for growing cane crop.

9

Letter from Harold Mann to secretary to commerce and Industries department dated 25th January 1930
Installment No.10511, File No.190 of 1335 Fasli.

Yet, Mann expressed that the area under cane crop will increase considerably as 'crops of such men' as the one described above were many in the region. He expressed that just as in Bombay Deccan it was a crop which used to be the very general ambition of a good and prosperous cultivator to grow cane.

Development of Cane Estate

The Nizam Government decided to get lands from the peasants on lease and lands under government control were also considered to be taken on lease. Jahangir B.Mehta, controlling officer of the project surveys was asked to get the agreements from the peasants to this effect. He visited some of the villages in the Nizam Sagar Canal area and after negotiation with them succeeded in getting some of their land on lease. The details of the lands obtained on lease in various villages are given as a table.

Table VI.1.a

The villages and the lands under government control obtained for developing cane estate by the Nizam Government

Name of the village	land obtained(in acres)
Aukol	114
Namli	320
Nasurullabad	104
Bomendevipally	7
Kamsatpally	204
Nachpally	287
Total	1039

Source:Report submitted by Jahangir B.Mehta, controlling officer, project surveys

In the same seven villages the following land was obtained on long lease; details of land lease with the rates of rental paid is given below.

Table-V1.1.b

Villages and details of land leased from the Ryots

Name of the village	No. of pattadars	Land(in acres)	Amount of rental	Average rental
Basavipally	26	314	2810	8-14
Ankol	17	154	1350	8-13
Namli	38	237	2980	9-6
Nasurullabad	5	62	470	7-10
Bomendevipally	29	227	2054	90
Kamsatpally	17	82	614	7-7
Nachapally	14	114	114	8-15
Total	146	1271	11,316	8-14

Source: Report submitted by Mr. Jahangir B. Mehta, controlling officer, project surveys.

In all about 1036 acres of Government waste land and 1271 acres of patta lands together to a total of 2310 acres have been obtained at an average rental of Rs. 8-14-0 per acre.¹⁰

Srivastava's Report

After having completed the preliminary surveys of the suitability of lands for cane cultivation and possibilities of erecting a sugar factory and getting the lands on lease, the Nizam state had approached the Indian Council of Agricultural

¹⁰ Report submitted by Mr. Jahangir Mehta, the controlling officer, project surveys to Commerce and Industries Department.

Research for getting the services of a sugar technologist for making a report giving a detailed plan on the nature of sugar factory that could be erected and also help them in getting to know the necessary prerequisites in this regard. R.C.Srivastava's services were lent for this purpose by the Indian Council of Agricultural Research.¹¹ Srivastava visited Hyderabad state on 26th Feb.1933. He surveyed the locality of Banswada and at an interview with the Industrial Trust Fund, he expressed his views on the aspects of possibilities of starting a sugar factory in the Nizam Sagar Canal area. Industrial Trust Fund had requested Srivastava to make a report on the prospects of erection of a sugar factory.¹² Srivastava agreed to this and he was supplied with all the details of the availability of the necessary building material and other components required for the manufacture of the white sugar. After going through all the details he submitted a detailed report in the year 1934.¹³ A brief summary of his recommendations is given below:

- 1) to meet the requirements of sugar in the Nizam's dominion, he expressed that four factories of 400 to 500 tons of cane

11 R.C.Srivastava's was a sugar technologist serving at Indian Council of Agricultural Research, Cownpore.

12 Draft proceedings of the meeting of I.T.E dated 28-2-1933, Installment No.74, list no.16 File No.7/1343 Fasli.

13 Services of the sugar technologists were rendered free of charges to the local governments and to the constituent states by the Indian council of Agricultural Research. Letter from Secretary I.C.A.R to C & I of Hyderabad Govt. dated 9th March 1933, in Inst.No.74, List 16, F.No.7/1343 F.

crushing capacity per day will be required and to begin with one factory must be erected and as the cane cultivation increased more factories could be built.

- 2) most suitable place for locating the first 400 ton sugar factory was suggested to be near Durki.
- 3) he recommended for the development of a cane estate by the factory for growing part of the cane required by it and for the rest, it was suggested to enter into contract with the neighbouring growers. He insisted for the price of cane being fixed at the time of planting and advances being made subsequently to the cane growers.
- 4) land for the cane estate was suggested to be taken on lease for 30 years in the first instance, subject to a renewal at the company's option for a further period of 30 years. Government's unoccupied lands may be given to the factory at favourable rates to assist the industry.¹⁴

Srivastava has given a detailed scheme for 400 tons factory with its own cane estate of 2500 acres with an estimated cost of Rs.17 lakhs. He recommended that a joint stock company may be registered with an authorised capital of Rs.20 lakhs. The share capital to consist of preferential shares of worth Rs.5 lakhs all of which were to be taken up by I.T.F and ordinary shares to be

¹⁴ R.C.Srivastava's Report on the prospects of a sugar factory in the Nizam Sagar Canal area H.E.H the Nizam's Govt. C & I dept. Bulletin No.7 (new series) Hyd-Deccan, Govt.Central Press, 1934, p.81-82.

offered to the public, preference in allotment being given to the mulkis of the Nizam's dominion, specially to the cane growers.

Srivastava indicated that the management of the affairs of the factory to be given to a board of directors which might contain majority of Government nominees. He made clear that the Government's assistance for the industry is required in several directions on the agricultural side to introduce early and late maturing varieties of cane. The appointment of a Government sugar expert with staff and equipment for a permanent office along with a laboratory was recommended. It was also suggested to award scholarships to mulkies of the state for obtaining training in sugar technology. Apart from giving a report on the establishment of a large sugar factory on modern lines, Srivastava also suggested for putting up small factories by cane growers themselves on co-operative lines for producing white sugar, organisation of sugarcane cultivation and gur manufacture as a cottage industry.

After receiving the detailed report from the experts on the issues of the leasing of the lands for the development of a cane estate, and the report on the prospects of starting a sugar factory from R.C.Srivastava, a meeting was convened by the Director of Commerce and Industries Department in September 1934

to expedite the work of erecting of the sugar factory.¹⁵ The meeting was held on 26th Sept.1934 at the Council hall and had reviewed the report submitted by Srivastava. The members of Finance, Revenue and Public works Departments attended the meeting.¹⁶ It was agreed at that meeting that the revenue department should be asked to expedite the work of transfer of the land cited under certain blocks in the Nizam Sagar Canal area to the Industrial Trust Fund for subsequent transfer to the company at a rental of Rs.8 for 30 year period firstly and subject to the renewal for a further period of 30 years.¹⁷ It was also agreed that the company should be charged only the ordinary assessment rates on all lands held on patta or lands leased by it.

Much discussion took place regarding the organisation required for starting and managing the factory and it was agreed that a company with an authorised capital of Rs.17.5 lakhs and an issued capital of Rs.10,00,000 lakhs financed as far as possible

15 Letter from director of commerce and industries department to Secretary to Govt. Revenue Dept. executive engineer, P.W.D and to director of Agriculture of Nizam's State dated 24th Sept.1934, in File No.7/1343 Fasli.

16 Others who also attended the meeting were the Subedar of Warangal, Taluqdar of Nizamabad, Taluqdar of Borlam, Director of Agriculture, Director of C & I dept., settlement commissioner and S.E of Nizam Sagar Canal.

17 Taken from the minutes of the discussion on Srivastava's report on the possibilities of erection of a sugar factory in the Nizam's state, held at the council hall on 26th September 1934 in File No.7/1343 Fasli. of Industries files on the H.E.H. Nizam's State.

by the people of Hyderabad be floated, and that the shares were all to be ordinary shares O.S. of Rs.10 each and that first consideration was to be given to the small investors in the allotment of shares and more particularly the local cane growers to be given at most priority. The Industrial Trust Fund expressed its willingness to subscribe up to 40 per cent of the issued capital.¹⁸ It was also brought out at the meeting that the maximum limit of any individual holding shares only up to 100 should be waived in favour of those capitalists to whom the trustees think it desirable, to make it possible to associate with the enterprise the larger financial interests in the state.

It was agreed to have only seven original promoters out of which three would be from I.T.F as Government nominees and the other four promoters should be local men of business experience. In this regard some names were suggested. They were: Bansilal, Raja Dhanarajgiri, Venkata Ram Reddy, Nawab Saif Nawabjung, and Maulvi Faizuddin. It was agreed to look for the services of an

¹⁸ The Industrial Trust Fund (I.T.F) was constituted in 1928-29 with a capital of Rs.55.12 lakhs to ensure the industrial progress of the state. The fund was invested in the form of debentures and if necessary shares, for improvement and development of small and cottage Industries. For assisting industrial and technical research, for granting scholarships to make the natives to obtain training in industrial process within or outside the dominions. As a result of this policy of the Government, with the help and support of I.T.F several modern industries such as cotton, Iron & Steel, Electroplating, cement, sugar, power alcohol, paper and cigarette and rice mills came into existence. (B.K.Narayana, *A Survey of Industries in Telangana*, Kesavprakash publishers, Secunderabad, 1962, pp.97-98).

expert outside the dominion to advise on all matters relating to the formation of the company and to assist at various stages in the erection of the sugar factory. It was also decided to direct the Commerce and Industries department to make proposals regarding the grant of scholarships to mulkis for sending them for training in sugar technology. Further it was agreed to consider the establishment of the sugar factory as an industrial trust fund case.

Entrepreneur ship

Even while the preliminary surveys were made on the possibilities of erecting a sugar factory in the Nizam Sagar Canal area, interest was shown by some entrepreneurs to start sugar factory in Nizam State both from outside the dominion and within the state.

The Nizam Government had announced several inducements to those coming forward to start sugar industry in Hyderabad State. Attracted by the inducements such as the state putting some of its finances in the enterprise and also reducing assessment rates, we notice several groups of entrepreneurs sending applications expressing their willingness to float sugar factories in the Hyderabad State.

An application was sent in this regard from Mr. Patel, once a leading sugar merchant of India, who was then serving as the

Director of Eastern Federation Union Insurance Company.¹⁹ Another proposal was made by one firm, Danjee Dadabhoy & Co. of Rangoon for starting a sugar factory in Hyderabad State.²⁰

Messrs Sheswant brothers of U.P and some leading businessmen of Secunderabad under the guidance of Mr.Arifuddin, superintendent engineer in the Public Works Department of Nizam's state, had also made efforts for floating companies with a view to establish sugar factories.²¹ Another group consisting of wealthy Marwaris of Hyderabad under the advise of Mr.M.Gopalan, another superintendent Engineer of Public Works Department also was reported to be with similar plans.

Another group consisting of Messrs:1) Jahangir Hormuji, joint proprietor of Secunderabad, Commercial banking company, 2) G.K.Nambiar, proprietor of international trading company, 3) G.Raghunathamul proprietor of Raghunathamul bank, 4) Jorawarmul Motilal, managing director of the Mahavir photoplays and theater

19 A.R.Siddiqui Esq. Bombay c/o Mohammad Valvipatel and Co. to Director of C & I Hyd. dated 31st Dec.1932, Installment No.74, list No.16, File No.7/1343 Fasli.

20 Letter from D.D.Bay & Co. Rangoon to Director of C & I Hyderabad State dated 20-3-1933.

21 Extract from the daily Pioneer, Allahabad, dated 30th April 1934, Hyderabad Sugar Scheme, efforts to form companies Secunderabad, 25th April 1934, File No.7/1343

also came forward with a proposal to start a sugar factory.²² They enlisted the support of some 21 noblemen and jagirdars, 22 bankers and businessmen, and 30 influential Government officials of Hyderabad State. These supporters submitted an application for asking various facilities in the formation of a sugar manufacturing company. Another group under the leadership of Raja Dhanarajgiri Narsingiriji also sent their application for starting a sugar factory with the support of 25 noblemen and jagirdars, 27 bankers and businessmen and 22 landlords.²³ Finally the permission to start the Sugar factory was granted to Raja Dhanarajgiri Narasingiriji, who had himself invested some of his personal money in this enterprise.²⁴

²² Letter from the Noblemen, Jagirdars, officers, Bankers and Businessmen supporting the application of the international trading Company of Secunderabad to the political secretary of the Nizam's State dated 7th July 1934, Inst.No.36, List No.7, Sl.No.104.

²³ Details taken from the applications to H.E.H Nizam's Govt. for facilities in the formation of sugar manufacturing company in Nizam Sagar Canal area presented by the citizens of the Nizam's dominion to Nawab Jung Bahadur, chief engineer and secretary to the Nizam Govt. Hyderabad, dated 8th May 1934. Also referred by C.V.Subbarao, *Traceless Track: Discontinuities in the Evolution of Industrial Entrepreneurs in Hyderabad State*, in A.P.Economics Association Conference Papers, VII Annual Conference, Srikakulam 1989, p.6.

²⁴ Raja Dhanarajgiri Narasingiriji belonged to the Gosnami sect which came and settled in Hyderabad as money lenders to the British troops in the 19th century. His father Raja Dhanarajgiri became a regimental banker for the troops at Secunderabad. It is of interest to know that the famous English poetess Indira Dhanarajgiri is a scion of this family.

Import of Technology and Technocrats

From the very early stages of Government entertaining the idea of starting a sugar factory, we notice several firms manufacturing sugar plants and other agricultural and industrial machinery have made correspondence in regards to getting the favour of the Nizam's Government for establishing a sugar factory in the Hyderabad State.

In the year 1932, Curimjee Jeewanjee & Co, a firm established in 1907 in Bombay, with their branches operating in Burma and Mauritius having a sugar factory of their own at Mauritius addressing to Nizam's Government expressed its willingness to take up the scheme of supply and erection of the machinery needed for sugar plant.²⁵ The Nizam's Commerce and Industries department was also making enquiries about the quality of machinery available with various firms pertaining to sugar industry. In response to these enquiries, a London based engineering firm namely John Fowler & Co. with a branch located in Bombay expressed their willingness to sell as well as to lease their machine, Diesel Gyro Tiller, useful for ploughing, cross ploughing, making harows, subsoiling and furrowing. They have also sent the details of work undertaken by Gyro Tiller which with the passage over land, leaves the land ready for planting by pulverising to the depth of 20 inches at a speed of one acre per

²⁵ Letter from Currimjee Jeewanjee & Co. to the Director of C & I, Nizam's State dated 9-11-1932, Inst.No.74, list No.16, F.No.7/11343 Fasli.

hour. The cost of this machine was about Rs.8700, and they also offered to lease the machines at a cost of Rs.30 per acre's tilling.²⁶

Another engineering firm, Babcock and Wilcox expressed their willingness to supply their water tube steam boilers to the proposed sugar factory by the Nizam State and expressed that more than fifty modern sugar factories which were established in India during the 1930s were equipped with machinery from their firm.²⁷

There were at that time not many Indians who could provide necessary technical help for the establishment and smooth operation of a sugar factory. In this regard the Nizam's Government wrote to Government of India to spare the services of Mr.R.C.Srivastava, the sugar technologist of I.C.A.R.²⁸ The Commerce and Industries department of Government of India replied in response to the request that there was a great demand for sugar technologist and that only recently one or two Indian technologists were coming in, but felt that they were not very well experienced to take up the work assigned by the Nizam's Government and made it clear that they cannot spare the services

26 John Flower & Co. to director to C & I dept. Nizam's Govt. dated 1st Feb.1933.

27 Babcock & Wilcox Limited Engineers & Contractors Calcutta, to the financial Secretary to the Finance Dept. dated 9th Feb.1933.

28 Letter from Finance member Mr.Hydari to Frawl Noyce, member of Council, Dept. of Industries and Labour, India dated 3rd October 1934.

of Mr.R.C.Srivastava. But they suggested that the Nizam's State may try for getting the services of a retired sugar technologist Mr.Fenton Millor who had served the Belapur sugar factory earlier and was then residing in England. It became a very difficult task to get the services of a sugar technologist. The Nizam's Government made correspondence with Dr.Coleman who served as the managing director of Mysore company, who after retirement went back to England and settled there. They even requested the Diwan of Mysore, to write to Dr.Coleman to lend his services for a period of three years.²⁹ It was only after a lot of persuasion that they succeeded in getting the services of a sugar technologist, Dr.Coleman.

Increase of area under cane cultivation

Seeing and hearing the progress of the work in the establishment of the sugar factory, the peasants in Nizamabad district increased the area under cane cultivation. By 1934, the acreage under cane in Nizamabad district was noticed to be covering more than 50000 acres with the variety Co 213 and that the cultivators were proposing to increase further land under cane. When a party of cane growers were interviewed by a Government official, they were found to be very anxious to the establishment of the sugar factory.³⁰ From the close of the year 1934, lot of pressure was exerted on all the Government

29 Letter from Lt.Col.Sir Richard (I.T.F member) to Coleman London, England.

30 Letter from Secretary to Govt. to Dept. of C & I dated 24-10-1934.

departments to expedite the work of the establishment of Nizam Sugar Factory.

Building of the Railway Line

Initiative was taken in regard to the building of a railway line to serve the sugar factory to be established north of Banswada. For this purpose the agents of the Nizam State railways were approached.³¹ The work of construction of the railway line was taken up after some initial hesitation. This railway line was expected not only to carry cane to the factory from the cane supplying villages but also to clear the sugar from the factory. During the year 1939, the railway line was completed and was opened between Nizamabad and Bodhan.

The prices fixed by the Government of India was for cane delivered at the factory gate and the grower has to cart his cane over a distance of 5 to 10 or even 20 miles, and in the cases where the cane was carried by rail, there used to be a deduction made from the price of cane towards transport costs. But in Bodhan, the cultivator drops his cane at a convenient depot nearest to his village and the factory transports the cane by

³¹ Letter from C & I Dept. to P.H.Mafin Esq. agent N.S.Railway dated 9th March 1933.

state railway, light railway or factory vehicles upto the factory gate.³²

Establishment of the Sugar Factory

Even though a party under the leadership of Raja Dhanarajgiri were granted the permission to erect a sugar factory, it is interesting to note that in spite of their initiative in the beginning, when the machines for the erection of the sugar factory arrived at Bombay port, none of the promoters including Raja DhanArajgiri were willing to expend money and release them.³³ The reason for their impromptness was not due to the lack of financial resources but an unwillingness to take up the required risk at the last moment. Then the Industrial Trust Fund invested the necessary money and released all the machinery from Bombay port. At this point, the Hyderabad construction company, managed by Babukhan, approached the Industrial Trust Fund with a proposal expressing its willingness to run the factory provided the Industrial Trust Fund invested in

32 Wadiar M.Lakshmi, *The Impact of Nizam Sugar Factory on Bodhan Taluk*, (M.A Thesis), Osmania University, 1963, p.7.

33 C.V.Subba Rao, *Traceless Track*, (A.P.E.A.C.P), Andhra Pradesh Economic Association Conference papers.

major shares.³⁴ The permission was granted to the Hyderabad construction company. Which undertook the construction of the sugar factory. The erection of the factory was completed in the year 1939 and during the first year of the completion of construction, the factory worked for three months and produced 86,260 cwts of sugar.³⁵

During the year 1939-40 about 10,451 tons of sugar and about 203,015 cwts of sugar in the year 1940-41 was produced at the Nizam sugar factory.³⁶ Gradually, the sugar produced at the Nizam Sugar Factory was able to replace the imported sugar from outside. The table presented below gives the details of the volume and value of sugar and jaggery imported into Hyderabad State for the period 1930-31 to 1944-45. During the year 1930-31, about 30,803 tons of sugar and jaggery was imported into

³⁴ Karim Abdul Babukhan comes from a Mehadi family which came and settled in Hyderabad during 18th century. His father Sheik Babukhan was a leading civil contractor during the times of Mehabub Ali Pasha. Important Government works such as the building of Osmania Arts College were undertaken by him. Of his two sons, one became an excise contractor and the other became a civil contractor. And later Karim Abdul Babu Khan formed the Hyderabad construction company with the support of Laik Ali who was then serving in the public works department in Nizam State. For details see C.V.Subba Rao, Op.cit, p.7. A descendent of this family, Basheruddin Babu Khan is a member of the present Telugu Desam cabinet in A.P.

³⁵ Report of the Administration of the H.E.H, the Nizam's State for the year October 1938 to October 1939. Hyderabad Deccan, Govt. Central Press, 1941, p.115.

³⁶ Ibid., for the years October 1939 to October 1940 and October 1940 to October 1941.

the state to the value of Rs.1,10,93,000. The volume and value of the sugar imports came down to 17,193 tons of the value of Rs.77,41,00 during the year 1938-39, one year just before the establishment of the sugar factory and the imports further came to a very nominal volume of 10,680 tons worth Rs.40,44,400. During the year 1944-45 only about Rs.32,65,192 worth of sugar was imported into the state. Thus it can be clearly understood that the sugar manufactured by the Nizam sugar factory was able to replace the imported sugar.

Table VI.2

Statistics showing the volume and value of sugar imported into Nizam's State between the years 1930-31 1944-45

Year	Volume of sugar and jaggery imported (in tons)	Value of sugar and jaggery imported (in rupees)
1930-31	30,803	1,10,93,000
1931-32	29743	1,02,30,000
1933-34	27405	97,12,000
1934-35	21841	86,08,000
1935-36	N.A	77,44,000
1936-37	15,945	79,73,000
1937-38	22,526	1,01,91,654
1938-39	17,193	77,41,000
1939-40	16,634	58,31,000
1940-41	10,680	40,44,400
1941-42	8,110	51,36,151
1942-43	N.A	53,91,544
1943-44	N.A	28,48,260
1944-45	N.A	32,65,192

N.A : not available

Source: Annual administrative reports of H.E.H Nizam's Government 1941-42, and the statistical year books for the period 1934 to 38, 1941-42 to 1944-45 for volume.

Prices of Sugar and Gur

One way of making the ryots growing cane to induce them to supply the cane to the sugar factory instead of utilising it in the manufacture of gur, was to check the prices of gur and to increase the sugar price. A table is given below giving the

wholesale price of gur and sugar in the Hyderabad market for the period from 1914 to 1941.

Table-VI.3

Whole sale prices of sugar and gur (240 lbs each) in Hyderabad between 1914 to 1941.

Years	Price of sugar(in Rs) of 240 lbs quantity			price of gur (in Rs.) of 240 lbs quantity		
	January	April	September	January	April	Sept.
1914	N.A	N.A	30-0-0	N.A	20-8-0	N.A
1933	43-2-0	46-2	42-1-2	16-0-0	16-0-0	12-0
1934	41-1-0	40-1-4	40-8-0	21-0	19-0-0	20-8
1935	39-0-0	39-12	39-12	21-0	19-8	19-8
1936	42-6-0	40-8-0	43-5-0	19-14	10-5	9-12
1937	31-8-0	31-8-0	31-2-0	9-12	11-8	10-8
1938	36-0	38-8	40-8	22-8	21-8	21-8
1939	40-10	45-0	46-8	29-8	28-0	28-6
1940	44-9	41-4	41-4	16-0	15-0	14-0
1941	48-8	40-8	39-6	20	17-8	14-0

N.A.:Not Available

Source: H.E.H Nizam's Government, retail and wholesale prices of sugar in H.E.H Nizam's state for 1931-32 to 1940-41.

During the year 1942, the Government of India had enquired their resident in Hyderabad about the possibility of getting

sugar from the Nizam State to be exported to England.³⁷ The Nizam's Government replied back saying that the Nizam sugar factory was not in a position to produce the necessary quantities of sugar to meet the requirements of the Nizam's state itself and that some quantities of sugar was being imported into the Nizam's state and hence they expressed their inability to co-operate in the matter of the export of the sugar to England. This reply was given in spite of the British offering duty free entry of sugar if exported. We can thus understand that the sugar production was made only to meet the requirements of the local people first.³⁸

First Expansion of the Nizam Sugar Factory

During the year 1946, the area under sugarcane cultivation surrounding the Nizam Sugar Factory was nearly 55,000 acres while approximately further land of another 75,000 acres with irrigation facility was also estimated to be brought under cane cultivation. It was felt that due to the limited crushing capacity of the Nizam Sugar Factory, the area suitable for cane was not properly exploited. Hence it was proposed for an

37 Letter from Secretary to department of Commerce and Industries Dept., Govt. of India to Secretary to political department, Govt. of India dated 13-4-1942, Inst. No.36, List No.7, Serial No.172, H.E.H Nizam's Govt.

38 *Ibid.*

expansion of the crushing capacity of the existing sugar factory from 10,000 tons to 30,000 tons per year.

Apart from the above considerations, other factors which also required the expansion to be undertaken was that the Hyderabad State requirements of sugar on the basis of population and in accordance with the recommendation of the industrial panel of the Government of India at the rate of 24 lbs per capita for towns with a population of over 5,000 and 6 lbs for rural population, would work upto 70,000 tons of sugar. Thus there was a shortage of sugar requirements in the Hyderabad State.³⁹

The Hyderabad construction company sent Mr. Basis as their representative to look into the progress of the permission to be granted by the Government of India to import the necessary machinery for the erection of the second sugar plant as a part of proposed expansion scheme. The process of getting the clearance from the Government of India for the import of machinery seems to be little hard and as such it was delayed as several objections were put by Government of India and finally it was only during the year following India's independence, we notice the factory getting its licence and the erection of the second plant was completed in the year 1951. The second plant started crushing

³⁹ Letter to Adeshir Dalal, Member, planning and development to Government of India from Hyderabad Construction company, Hyderabad, 26th January 1945, Installment No.7, File No.6, Fasil 1946, Bundle No.136/12, H.E.H Nizam's Government.

cane from 14th March 1951. This resulted in the increase of the crushing capacity of the factory from 1250-1500 tons per day to 3250-3500 tons per day.⁴⁰

Granting of Shares to the Cane Growers

The initial capital of Nizam Sugar factory at the time of its establishment was Rs.35,00,000 divided into 48,000 preference shares of Rs.25 each and 92,000 of ordinary shares of Rs.25 each.⁴¹ Raja Dhanarajgiri Narasingiriji, the first managing director was himself holding 18,000 ordinary shares, D.D.Italia another businessman, was holding about 500 shares and another influential businessman Ahamad Alladin, was also holding 500 shares.⁴² These were some of the big share holders of the Nizam Sugar factory at the time of its establishment. It was also intended at the time of the floating of the sugar factory to allocate ordinary shares to the value of O.S Rs.5 lakhs to local cane growers, but this intention was not fulfilled.

During the year 1946, the cane growers of Morsa and Bodhan taluk had sent a petition for the allotment of shares of the

⁴⁰ Annual Report of the Nizam Sugar factory for the year 1950-51.

⁴¹ The preference shares were those which confer the right to a fixed cumulative preferential dividend at the rate of 5 per annum free of income tax on the capital.

⁴² Memorandum of Articles of Association of the Nizam Sugar factory with managing agency, Agreement and Transfer Indenture, Annexed, Hyderabad-Deccan, Govt. Central Press, 1945.

Nizam Sugar factory to them.⁴³ In response to the cane growers' petition the management of the Nizam Sugar factory under the directorship of Mir Laik Ali had considered the cane growers petition and passed a resolution favouring the allotment of shares to the cane growers. The following conditions were laid down on these allotments.

The cane growers were allotted shares by taking into consideration the quantity of cane supplied to the factory during the three previous years on 4 per cent preference shares. Shares to be allotted for every 4 tons of cane supplied each year on an average if decided to issue ordinary shares. One ordinary share for every two 4 per cent preference shares i.e. one ordinary share for a supply of 8 tons of cane. In this way about 25,000 of the four per cent preference shares and 12,500 ordinary shares were proposed to be issued to the cane growers at the then existing par value of Rs.95 each. It was further suggested that the encouragement must be given to cane growers by way of allowing the payments for the shares allotted to the cane growers by convenient installments so that they may not feel any hardship in making an investment and further it was laid down that the transfer of shares allotted to the cane growers should only be permitted between local cane growers only.⁴⁴

43 Petition of local cane growers to the Nizam sugar factory management dated 14-4-1946, Inst.No.20, File No.29, of 1355 Fasli.

44 Resolution No.6, passed in the board meeting held on 6th January 1946, N.S.F Installment No.20, File No.29 of 1355 Fasli.

Second Expansion

The average cane supplies by the ryots to the Nizam sugar factory by 1956 was to the extent of 2,25,000 tons per year. In 1956 there was a general fall in the prices of food grains and other agricultural commodities and more particularly there was a slump in the jaggery market. The Government of India's price fixation policy and the additional amount paid by the factories to the cane encouraged the peasants to plant in more of their lands with sugarcane and therefore the area under sugarcane increased from 15,000 acres to 22,000 acres during the year 1956.⁴⁵ It was expected that the peasants would increase the cane supply between 3,50,000 tons to 4,50,000 tons for the year 1956-57, and it was expected to remain so for some more period. Hence to meet this increasing cane supplies, the Management of the Nizam sugar factory proposed during the year 1956 for a further expansion of its crushing capacity from 3,250 to 4,500 tons per day and the proposals were sent to Government of India for clearance. It was sanctioned during the year 1959 and the expansion was carried out with an additional investment of Rs.28 lakhs.⁴⁶

Functioning of the Sugar Factory Up to 1960

Three varieties of cane were supplied to the factory both by the ryots and by the cane estate. They were Eksali, Adsali and

⁴⁵ Annual Report of the Nizam Sugar factory for the year 1955-56.

⁴⁶ Ibid., p.1959-60.

Ratoon. The Eksali crop was of 12 months to 14 months duration, the planting for which start between October and January and the crop was harvested during the period between October to March of the following year. Under Eksali, the yield per acre was 20 tons and the capital expenditure on this crop per acre was Rs.1000 to Rs.1200.

Under the Adsali type the duration of the crop was from 15 to 18 months. The plantation of this start from June to September and would be harvested from October to December of the following year. This way of the cultivation yields maximum at the rate of 30 tons per acre. The third type of sugarcane cultivation was Ratoon. This crop is of the duration of 12 months, the matured crop is harvested and sent for sugar manufacture. Under this system the replanting follows i.e., the stems are allowed to grow once again and are harvested. After having replanted once it can not be planted again. The yield of this type of cane was about 15 tons at an expenditure of Rs.700 to 900. The factory farms usually take up Adsali and the ryots grow Eksali and Ratoon. It is estimated that there were over 10,550 individual ryots growing cane on nearly 20,000 acres in 139 villages of Nizamabad district around the year 1960. During the year 1955-56, they supplied 4,10,000 tons of cane to the factory, the yield of the cane was about 20 to 21 tons per acre (Adsali 30 tons, Eksali 20 tons, Ratoon 12 tons).⁴⁷

⁴⁷ Wadiar, M.Lakshmi, Op.cit., p.22.

A table giving the details of cane supplied from the factory farms, from the ryots, the cane crushed, the sugar produced and the profits made by the factory for the period 1938-39 to 1959-60 is presented below.

table VI.4

Details of cane supplied from the factory lands and from the ryots, total cane crushed by the factory, the sugar produced and profits earned for the period 1939-40 to 1959-60 by the Nizam Sugar Factory

Year	factory lands (acres)	cane crop in factory lands(acres)	cane from factory land (tons)	cane supply by ryots (tons)	total cane crushed (tons)	sugar produced (tons)	profits made (rupees)
1939-40	N.A	2506	N.A	Rs.12,60,000	N.A	10,451	N.A
1941-42	N.A	N.A	N.A	N.A	N.A	16,851	14,39,400
1945-46	N.A	N.A	N.A	N.A	N.A	17,705	10,26,112
1948-49	N.A	3606	1,14,145	1,34,197	2,48,342	N.A	N.A
1949-50	N.A	N.A	N.A	N.A	2,36,251	2,14,56	54,19,967
1950-51	12949	4462	1,29,458	1,26,269	2,55,727	24,230	N.A
1951-52	13,076	4,511	1,42,470	2,70,131	3,96,554	38,635	36,26,739
1953-54	N.A	5,570	1,99,072	1,57,805	3,54,357	38,618	52,59,829
1954-55	N.A	N.A	N.A	N.A	N.A	45,056	42,15,325
1956-57	15,997	5,378	2,29,809	3,42,981	5,68,043	54,047	22,38,481
1957-58	16,082	5,605	2,44,803	2,84,617	5,25,046	55,987	40,43,444
1958-59	16,082	5,622	1,87,513	2,58,683	4,43,219	44,336	24,67,062
1959-60	16,706	5,991	2,24,407	2,71,998	4,91,777	51,199	63,10,962

N.A.:Not Available

source: from the annual reports of the Nizam sugar factory
for the years from 1939-40 to 1959-60, available at
Nizam Sugar Factory office, Basheer Bagh, Hyderabad.

Cane Crushed

It can be seen from the table VI.4 that the Nizam sugar factory has been functioning successfully and increasing its crushing capacity year after year. In the year 1939-40 cane crop from about 2506 acres was supplied from the factory estate and cane supplied by the ryots in that year was worth Rs.12,60,000. After ten years of the functioning of the factory, in the year 1948-49 about 1,14,145 tons of cane from about 3606 acres of the factory estate and about 1,34,197 tons of cane from the ryots was crushed by the factory. In the year 1951, the crushing capacity of the factory was increased and this led to an increase in the total cane crushed by the factory. During the year 1951-52 about 3,96,554 tons of cane was crushed as against 2,36,251 tons in the year before the expansion. On account of depression that set in the fall of the prices of all other agricultural commodities in the years from 1956, and due to the remunerative prices fixed for cane by the Central Government, more and more area was brought under cane cultivation and this effect was also felt on the Nizam Sugar factory, where we see an increase in the cane supplies from the ryots to the factory. The peasants supplied 3,42,981 tons of cane during the year 1956-57 as against 1,57,805 tons in the previous years. The total cane crushed by the factory in 1956-57 was to the tune of 5,68,043 as against 3,54,357 tons in 1954-55. This boom for this sugar factory continued till 1960. In 1960, about 4,91,777 tons of cane was crushed by the factory.

Sugar Produced

In the second year of the establishment of the factory in 1939-40 about 10,451 tons of sugar was produced. This increased to 20,456 tons by the year 1949-50 and further by 1959-60, the production of sugar by the Nizam sugar factory was to the tune of 51,199 tons, amounting to a five fold increase within a span of twenty years from 1939 to 1960.

Profits Earned

The Nizam Sugar Factory entered into profits from 1941-42. During the third year of its establishment, it has earned a profit of Rs.14,39,400 and the profits increased year after year. In 1951-52, it had made Rs.36,26,739 as profit and in 1959-60, the profits increased to Rs.63,10,962.

Financial Assistance to Cane Growers

To encourage the local ryots to bring more and more land under cane cultivation, the factory provided a number of facilities in the shape of financial assistance, expert advise and supply of improved varieties of seeds. For the years 1957-58 and 1958-59, the company paid Rs.14,54,775 and Rs.20,17,251 respectively as contract advance to the ryots. Extra price over and above the price fixed by the Government was also paid by the company to the ryots to the tune of Rs.28,60,364 during the year 1957-58. The rate of interest charged on the advances made to the ryots by the factory was 7 per cent on the loan period

whereas the indigenous banks take an interest of 12 to 15 per cent.⁴⁸ The ryots were mainly benefited by getting the loan at low levels of interests from the factory which provided for their investments for raising the crop.

Silting of Nizam Sagar Canal

From the middle of 1960s, the Nizam Sagar Canal began to face the silting problem due to which the capacity of the reservoir has decreased considerably. As per the surveys conducted in 1966, the capacity of the project was only 0.34 tm cubic meters as against the original capacity of 0.60tm cubic meters and consequently the main canal was unable to carry the proposed quantity of water.⁴⁹ During the year 1972-73, the water problem became acute and the Nizam Sagar Canal completely dried up and this led to the drying up of all the crop in the factory farm. Due to this problem there was a fall in the supply of the raw material. Only 3,95,631 tons of cane crop was crushed as against 4,90,010 tons in 1971-72, bringing down the crushing over one lakh tons of cane. Therefore, the management of the Nizam sugar factory decided to make locational shift of their crushing. During the year 1972-73, a new unit was commissioned at Zaheerabad in Medak district. Efforts were also made to start more units at Miryalagauda, Alampur and Pochampad. The

⁴⁸ Ibid., p.24.

⁴⁹ M.V.Rajagopal (ed.), *Andhra Pradesh District Gazetteers, Nizamabad District*, Govt. Text Book Press, 1973, Hyderabad, p.52.

Zaheerabad unit went into production on 24th January 1973. About 6,240 tons of cane was crushed on trail in the months of January February and March 1973.⁵⁰ During the year 1973-74, the silting of the Nizam Sagar Canal became so acute a problem that even for the planting of the cane in the factory lands for the year 1974-75, a substantial portion of the seed cane had to be procured from the coastal districts.⁵¹

The Nizam sugar factory management and the ryots of Nizamabad district made repeated appeals to the Government to take up the work of improvement to the Nizam Sagar Canal. During the year 1974 the Government had positively responded and started the work of raising the height of the sluice gates by 4 1/2 feet and increased the height of the canal bunds.

The expansion scheme of the Nizam sugar factory continued to be taken up in other districts. It had established one sugar plant with a crushing capacity of 1250 tons per day (T.P.D) at Amrutanagar in Miryalaguda of Nalgonda district in 1976-77 and another plant was put up at Sudhanagar in Hindupur of Anantapur district with a crushing capacity of 1250 T.P.D in 1978-79, and next one was established at Muthyampet in 1980-81 in Metpally of Karimnagar district with capacity of 1250 T.P.D. The last one was erected in 1988 at Mombajipeta in Medak district with a

⁵⁰ Proceedings of 35th annual general body meeting of N.S.F held on 31st March 1973, p.8.

⁵¹ proceedings of the 36th annual general body meeting of N.S.F held on 30th May 1947, p.9.

crushing capacity of 1250 T.P.D. During the year 1986, the Government of Andhra Pradesh had brought the sugar factories of Bobbili and Seetanagar of coastal districts under the management and control of the Nizam sugar factory. In all, at present there are eight sugar producing plants under the Nizam sugar factory management spread over the three regions of Andhra Pradesh. A table is presented below with details of the location and their crushing capacity.

Table-VI.5

The Sugar Factories under the management of N.S.F with the details of their location, year of establishment and crushing capacity

Place of location	District located	Year of establishment	Capacity of crushing	workers employed
Sahkarnagar	Nizamabad	1937	3,500	2600
Madhunagar	Medak	1972-73	2,000	725
Amrutanagar	Nalgonda	1976-77	1,250	530
Sudhanagar	Anantapur	1978-79	1,250	430
Mutyampeta	Karimnagar	1980-81	1,250	400
Bobbili	Vizia	1934-35	850	400
Seetanagar }	nagaram	1939-40	600	400
Mombojipally	Medak	1988	1,250	525

Source: Annual reports of Nizam Sugar Factory for the relevant years and from Syed Ali, An analysis of the functioning of Nizam sugar factory: case study of Amrutanagar unit (unpublished Ph.D) thesis, Osmania University, Dept. of Economics, 1990.

The Nizam sugar factory apart from establishing sugar producing plants under its management, it also established a Machinery fabrication plant at Nagarjuna Sagar in Nalgonda district during the year 1978. In the year 1987, the A.P. Government had transferred the management of two distillery units one located at Shakarnagar in Nizamabad and another at Chagallu in West Godavari district. The Nizam sugar factory also has a carbondioxide plant in Nizamabad district.

Welfare and Protective measures provided to the ryots and factory workers by N.S.F

The factory used to advance considerable amount of money to the ryots for helping them towards the cost of cultivation of cane that was supplied to the factory.

Every year, the management of N.S.F paid O.S three Annas per mound over and above the minimum price for cane fixed by the Government of India. Following the Government of India's policy evolving the formula of profit sharing to cane growers, an additional payment of 3 Annas (OS) per mound of cane over and above the minimum price was paid.⁵²

⁵² Reported in the chairman's speech in the proceedings of the annual general body meeting of the N.S.F, held on 12th March 1955, p.2.

Workers Welfare

The N.S.F management has constantly and progressively been making efforts to improve the living condition of workers. A sum of I.G Rs.3,40,688 was spent by the factory towards additional D.A to the workers. Medical aid to the workers costed Rs.1,26,135 and the maintenance of residential quarters, recreation facilities and other amenities provided for the workers free of charges, amount to Rs.46,014 for the year 1954-55. Electricity and water facilities and other amenities were provided for the workers free of charges. An amount of Rs.24,52,389 was spent by the factory for the construction of workers' quarters till 1954-55. Towards the construction of temporary huts for the labourers about Rs.33,700 was spent in 1945-46.⁵³ During the year 1959-60, construction of a 260 two-room tenements for housing the workers was undertaken by N.S.F under the Government of India Industrial Housing Scheme.⁵⁴

On the representation of the labour union for higher wages and bonus, an industrial award was made on 3rd July 1950, which increased the wages of the workers up to 10.3 per cent and an additional dearness allowance of 20 per cent.

⁵³ Annual Report of the N.S.F for the year 1945-46.

⁵⁴ *Ibid.*

The factory had been paying bonus and dearness allowances (D.A) every year. In the year 1958-59 alone, employees of N.S.F received a bonus up to Rs.5,84,087 and D.A up to Rs.10,74,483.⁵⁵

Labour Organisation

The workers of the N.S.F were well organised. Two unions were functioning at N.S.F. They were 1) Mazdoor Sabha and 2) the Employees Union. The workers had organised a protracted strike for 32 days from 8th Nov. to 10th December 1955. They demanded for the grant of increments to seasonal workers, increase in the daily wages for the workers engaged in the factory plantation, revision of leave facilities, supply of dress to the workers, payment of strain allowance for the night shift workers etc.⁵⁶ The factory had yielded to their demands and majority of their demands were conceded by them.

Aid to Educational and Cultural Bodies

Factory had also contributed large sums of money every year towards educational and cultural development in the state. Most of the reputed and outstanding educational and cultural institutions of Hyderabad city had received financial aid from time to time from the Nizam Sugar factory. Some of the

⁵⁵ Annual Report of N.S.F for the year 1948-49.

⁵⁶ Annual Report of the N.S.F for the year 1955.p.41.

institutions which received the aid from N.S.F were: Badruka college of commerce, Venkata Rama Reddy Womens' college, Anwar-ul-uloom college, Reddy hostel, Urdu hall trust, Vivekavardhani educational society, New Science College, Hyderabad Polytechnic, Srikrishna Devaraya Basha Nilayam, Mahila Navajeevan Samithi of Hyderabad etc. During the year 1957-58

alone, an amount of Rs.60,500 was contributed to various educational institutions.

It can be thus seen that unlike in the coastal region the lands were not plain in Telangana and particularly the lands under the command area of the Nizam Sugar Canal have received water just a decade prior to the establishment of the Nizam Sugar factory. On account of this, required acreage of land suitable for cane cultivation was not readily available at a single continuum. Ryots in this region were not sufficiently rich enough to take to high capital intensive crop like sugarcane. Hence it became inevitable for the state to develop a cane estate on account of the absence of well-to-do peasants to a required number who would take up cane cultivation on a large scale.

Much initiative was not noticed from the entrepreneurs to take up the establishment of the sugar factory for which it became necessary for the state to announce several inducements and financial support to encourage the moneyed and business groups to come forward to take up the project. Industrial Trust

Fund had announced its support to an extent of subscribing up to 40 per cent of the initial capital even when a party which showed initial enthusiasm were granted permission to start a sugar factory under the management of Raja Dhanarajgiri, kept themselves away at the time when the machinery for the erection of the sugar factory were received at the port. The industrial trust fund had released the machinery by paying for it from its funds. Thus it can be said that N.S.F was a state sponsored and managed project.

From 1939-40 till 1953-54, Nizam Sugar Factory's cane estate supplied more than half of the total sugarcane requirements of the factory. It was only after 1960 that cane supplies from the ryots exceeded that of the factory cane. However, it can be said that the response from the ryots was slow in Telangana in comparison with coastal Andhra. N.S.F had taken care of workers welfare by providing housing, medical facilities and other amenities. It had also contributed considerable portion of its profits towards the improvement of educational and cultural institutions in the Telangana region.

In the political economy of the sugar industry, the interests of cane growers form an important component. The aspects concerning the relation between cane growers and factory, the role of the state in fixing the price of the cane grown by the peasants, the regulation of the ban on gur making by the ryots are discussed in the next chapter.

CHAPTER VII

CANE GROWERS, FACTORY AND FACTORY WORKERS

The peasants in Andhra Pradesh are generally said to be very alert and conscious of the economic profitability of their cane being supplied to the factory vis-a-vis utilisation of the same for gur making. At times when gur prices were high in the market, the peasants diverted their cane for gur making thus affecting the crushing capacities of the factories. To overcome this danger, the government at various stages imposed ban on gur making in some villages by which cane was reserved for the factory. The difficulties faced by the ryots due to this imposition of ban on gur making and their response in such situations is studied in this chapter. The prevalence of middlemen between the ryots and the factory, who operated for the procurement of cane to the factories, the hardships given by such middlemen to the ryots and the way these middlemen were overcome by the ryots by the abolition of such system is also presented in this chapter. The living conditions of the workers of the sugar factory, the strikes that the workers led in some of the factories and the reasons causing the disputes between the workers and the factory management are studied here. The role of the state and the methods of its intervention to settle the matters between the management and the workers also form a part of this chapter.

Cane Prices

The regulation of the cane prices play a very important role in the development of the sugar industry. The Government had kept in mind at the time of the fixing of minimum prices for their cane supplied to the factory. The Rayagada sugar factory located in Orissa state was supplied with sugar cane from Vizagapatnam district. It is learnt that the Rayagada factory paid Rs.18 per ton to the cane growers, but the Madras Government fixed the rate at R.20 per ton. When the Government of Orissa was informed of this, it directed the Rayagada sugar factory authorities to pay the balance of Rs.2 per ton of the cane supplied to them.¹ Following this, the Rayagada sugar factory had immediately disbursed Rs.10,626 to the sugar cane growers of Parvatipuram in the Vizagapatnam district of Andhra Pradesh.

The Government had raised the prices of sugarcane whenever the ryots represented to the Government about the unremunerative prices. In the year 1948-49 the minimum price of sugarcane was fixed at Rs.60 per ton, inclusive of the cess and transport charges of Rs.6 per ton, for the purchase in any area by the factory in Madras Presidency.² During that year, the Government of India had also evolved a formula of the sharing of the profits by the factories to the cane growers.

¹ The letter dated 14th Oct.1947 from Assistant Controller of the Govt. of the dept. of supply and transport of the Govt. of Orissa to the Jayapore sugars Rayada, in G.O.No.93 dated 9-1-1945.

² G.O.No.5277, dated 25-10-48, Development Dept. Govt. of Madras.

At times the cultivation of sugarcane became unremunerative on account of very little margin between the cost of cultivation and the returns from it. A situation of this kind arose in the year 1944. A table is given below giving the cost of production of cane per acre of land during the year 1944 in Munagapaka village of Anakapally Taluka in Vizagapatnam district.

Table VII.1

Cost of production of sugarcane per acre calculated for the year 1944 in Munagapaka village of Anakapally Taluka in Vizagapatnam district.

Name of the agricultural operation	cost incurred (in Rs.)
ploughing (15 times)	30.00
Manuring sheep compost	20.00
6 bags of ground-nut cake	48.00
seedlings	60.00
intercultivation	10.00
weeding	10.00
Goppu (intercultivation)	20.00
leaf tying	50.00
propping (cost of bamboos)	100.00
watering	42.00
cutting	80.00
channeling	10.00
carting the cane to the mill	60.00
lease rent	150.00
Total expenditure	720.00

Source: From the letter sent by Andhra Pradesh Provincial Ryots Association, Bezawada to the adviser to Government of Madras, dated 30th July 1944 in G.O No.5324 dated 16-12-1944, Development Department, Govt. of Madras.

It can be seen from the figures given in the above table that the cost of cultivation of per acre of sugarcane was about Rs.720 and the price of cane received by the ryots around '1944 was found to be unremunerative. The yield of cane in one acre used to be 30 tons and the price of cane used to be around Rs.17 or Rs.18 per ton. At this rate of returns, cane growing by the peasant was uneconomical. The factory managements used to pay around Rs.22 per ton. Even this was found to be not remunerative. The Andhra Provincial Ryots Association sent their memorandum requesting the Government to rise the minimum price of cane in the year 1944.

The cane growers were very alert about the issue of getting the maximum profit out of their crop. The peasant, depending upon the price of the jaggery in the markets and that of the price offered by the sugar factory for cane, used to decide what to do with his crop. Whenever the manufacture of gur offered more returns than supplying cane to the factory, the peasants diverted the cane for gur manufacturing. To overcome this, the Government used to impose ban on the manufacture of gur in certain villages around the sugar factory to facilitate the sugar factory to ensure the supply of cane to its full capacity.³

³ Letter from Andhra provincial Ryots Association to the advisor to Govt. of Madras dated 30-7-1944, in G.O.No.5324 dated 16-12-44.

Imposition of Ban on Gur Making in the Reserved Areas

The Government used to write to the individual sugar factories over the necessity of the imposition of ban on gur making and reserving the cane in few villages exclusively for its supply to the factories alone. Few examples of the imposition of ban on gur making are given below.

In 1943, the civil supplies department of the Government of Madras issued orders imposing ban on crushing of cane for the manufacture of jaggery in about 16 villages around the Thummapala Sugar factory area.⁴ Similar ban is said to have been imposed around Etikoppaka sugar factory, in the villages of Etikoppaka, Panduri and Gotivanda villages.

The Bobbili sugar factory authorities requested the ban to be imposed for the crushing season of 1944-45 in the villages around the factory.⁵ The system of imposition of ban on gur making, created a lot of inconvenience and loss to the peasants. Several representations were sent by the peasants pleading for the repeal of ban orders on gur making.

In 1943, the cane growers of Thummapala sugar factory sent a memorandum for the cancellation of ban orders. They stated that

⁴ Ibid., G.O.No.5324.

⁵ G.O.No.93 dated 9-1-1945.

the ban was imposed on 1425 acres producing 50,000 tons of cane where the requirements of the factory was only 20,000 tons and that in the season preceding, the factory crushed only 10,000 tons. They reported that this created troubles to the cane growers. The factory did not accept the cane reserved for it and the ryots were not permitted to manufacture gur. The agitation for lifting the ban was launched by the taluka Ryots Association of Anakapally. An agreement in this regard was arrived at with the intervention of the then sub-collector and the ban orders were cancelled and the ryots were permitted to proceed with gur manufacture. But by then, it was too late and the required equipment for the manufacture of gur was not readily available. In the process, about 6,000 tons of cane got completely dried up.⁶

The issue was also raised by the Andhra Provincial Ryots Association. They demanded the government to appoint a joint committee consisting of representatives from the Government, factory and the ryots to fix the quantity of cane required by the factory every year. They further demanded that there should not be any ban on the remaining cane. They also demanded for a fair price for cane supplied by them to the factory. The price of Rs.17 per ton offered was too low. They demanded for a price of

⁶ G.O.No.5324, dated 16-12-1944, Development Dept. Govt. of Madras.

Rs.25 per ton.⁷ It was further demanded that the factory should pay compensation to the ryots whose cane got dried up during 1943 season but this demand was not yielded to by the Government.

Contrary to this commenting upon the working of ban on preparation of jaggery orders issued by the Government, the joint secretary to the Revenue Department reported that during the year 1943-44, the scheme of prohibiting the manufacture of jaggery in certain villages did not at all work and only 45 out of 84 villages reserved for Bobbili factory supplied cane to the factory and jaggery was manufactured in some of the prohibited villages. Even out of these 45 villages some supplied only a portion of their cane and manufactured jaggery with the rest of the cane. Some of the growers stopped manufacture of jaggery and diverted their cane to the factory only when the market prices of jaggery came down.⁸

Development of Cane Estates

From the year 1945, the problem of scarcity of cane supplies arose, both on account of the increase in the number of sugar factories and increase in the crushing capacity of the already

⁷ G.O.No.5324 dated 16th Dec.1944. Development Dept. Govt. of Madras.

⁸ Letter from the joint secretary revenue to the additional secretary to Development Department in G.O.No.93 dated 9-1-1945, Development Dept. Govt.of Madras.

existing factories following the expansion schemes taken up by them. At this point of time it is interesting to note that some of the sugar factories started developing cane estates to secure the regular and smooth functioning of the factories to their full capacity during the crushing season.

The Kirlampudi sugar factory started a sugarcane farm with a share capital of Rs.10,00,000 during the year 1946 for the purpose of growing early and late varieties of cane and to supply the same to the Kirlampudi sugar factory. It was expected to raise a total of 60,000 tons of cane per year at the sugarcane farm and supply the same to the factory.⁹

The Thummapala sugar factory also developed its own cane estate capable of raising 6000 tons of cane per year which amounted to a quarter of the total requirements of the sugar factory. The Etikoppaka sugar factory also developed a cane farm and about 2500 tons of cane was expected to be supplied per year to the factory.

The Pithapuram sugar factory also felt the scarcity of cane supplies and it undertook to bring about 2000 acres under cane cultivation. For this purpose a sugarcane growers' society was formed.¹⁰ A meeting was convened with the local farmers at

⁹ G.O.No.5637 dated 15-11-1948, Development Dept. Govt. of Madras.

¹⁰ G.O.No.226 dated 17-1-1948, Development Department, Govt. of Madras.

Pithapuram on 8th November 1947. The details of the scheme and the benefits that the ryots would also get through the formation of cane growers' society was explained to them. The ryots after hearing to the proposals expressed their willingness to register a sugarcane growers' society.

The Pithapuram sugarcane growers' society purchased a tractor at a cost of Rs.30,000 meant for the use by the members for getting their fields ploughed better for raising cane. It also proposed to develop irrigation facilities by helping the ryots to sink wells and to put up pump sets. As there was no electric supply, the society also proposed to purchase four mobile units with Rs.25,000 each. The society needed Rs.6,00,000 for granting short term loans to the members to meet their cultivation expences. Further it needed about Rs.2,00,000 for capital expenditure. The society proposed to get these funds on loan from the Kakinada Co-operative Central Bank.¹¹

The Kirlampudi sugarcane farm and Kirlampudi sugar factory have also applied for membership in the Pithapuram sugarcane farm. At this point of time the Pithapuram Sugar Factory was in need of the Kirlampudi cane farmers' help for they promised to raise the cane in their lands for the supply of the cane to the Pithapuram factory. The peasants around Pithapuram sugar factory opposed the granting of membership to the Kirlampudi sugar

¹¹ G.O.No.228 dated 17-1-1948, Development Department, Government of Madras.

factory in the proposed sugarcane farm estate by the Pithapuram sugar factory. These peasants feared that by allowing the above companies to have membership at the co-operative, the whole purpose of the co-operative movement would be lost. But in spite of the protest from the peasants, the Government permitted for allowing the Kirlampudi sugar company to become members of the Pithapuram cane farm. The co-operative rules were also exempted in this case.

Sugarcane Growers' Societies

From the year 1945 at several places the sugarcane growers have formed into grower societies. There were as many as four sugarcane growers' societies functioning in Vizagapatnam district alone. They were located at Anakapally, Chodavaram, Etikoppaka, and Bobbili. The sugarcane growers societies were formed at places where sugarcane was cultivated in large number of acres. A special inspector was appointed by the government from the co-operative department to inspect the villages in the area of operation of those societies and conduct propaganda work regarding high yielding cane varieties. These inspectors used to organise village congregations of all and impress them in the facilities afforded by the societies on credit as well as marketing side with a view to increase their membership. Besides these, the supply of new and high yielding seed material, manures and improved implements to the cane growers was also undertaken. Details of financial position of the sugarcane growers societies,

their membership and the loans granted to its members are given under the table below.

Table VII.2

Membership and loans granted at various cane growers societies as on 30-6-1948 in Vizagapatnam district

particulars	Anakapally society	Chodavaram society	Etikoppaka society	Bobbili society
membership	796	40	350	2,350
share capital(Rs)	1869	218	3063	50027
loans issued (Rs)	4870	N.A	11010	1,25,620
loans outstanding	312	N.A	9903	1,45,736
loans due to				
central bank (Rs)	N.A	N.A	11,673	1,27,503
reserved fund(Rs)	187	14	255	4639

N.A.: Not Available

Source: G.O.No.544 dated 4-2-1949, Development
Department, Government of Madras,

Middle Men between Factory and Ryots

The sugar factory managements have resorted to a practice of appointing middle men between the factory and the ryots. The middle men were required to contract the cane raised by the cane growers on behalf of the factories who appointed them. For example the Thummapala sugar factory depended upon these brokers. They were regular customers and close associates of the factory.

These people were creating lot of inconvenience to the cane growers and were exploiting them.¹²

This practice seems to be working for several years. These brokers were favoured and got enriched over years to the great detriment of the actual cane growers. There were lot of complaints made to the factory management over the issue of giving up the practice of employing these middlemen. In 1947-48 season, it was reported that the public opinion was strong against the middle men. During the crushing season of 1947-48, the prices of jaggery were low due to a slump in the market and much cane was available for the use by the factory. The Government at this point announced the minimum price of cane at Rs.54 per ton. But this did not benefit the cane growers. Actually the middle men appointed by the factory purchased cane from very distant villages at very low prices. The cane growers around Thummapala have gone begging the middle men and only managed to get the price of cane fixed at Rs.42 per ton, when the Government had announced the minimum price at Rs.54.

The cane growers of the villages around Thummapala sugar factory completely depended on the factory and supplied all their cane to the factory. As such, they have given up the manufacture of jaggery completely and they did not even have the necessary

¹² G.O.No.1476 dated 12-4-1950, Development Dept. Govt. of Madras.

equipment for gur making. But after experiencing the trouble created by the factory and the brokers, the cane growers realised their insecurity and helplessness in depending on the factory and commenced for the first time, after many years, the manufacture of jaggery during the year 1949.¹³

It is reported that the peasants were also cheated by the factory by making wrong weighments. When the peasants represented the matter to the factory authorities, a local political leader, who posed as a representative of the sugar growers of Anakapally was allowed by the factory management to be present at the weigh bridge, just to satisfy the ryots. It was said that this person who was considered to be the leader, was collecting a mamool at the rate of one anna on every cart load of sugarcane supplied by the ryots. This practice was not allowed to continue in the year 1945. After a compromise arrived between the factory management and the peasants, in the presence of the sub-collector of Anakapally, the factory authorities agreed to permit the representatives of the cane growers to be present at the weigh bridge to ensue proper weighment of the cane.

Workers' Strikes and Labour Problems

The sugar industry in Madras Presidency has come into existence in the middle of 1930-s and the industry grew to some strength only in the 1940s. Hence, the workers' problems in the

¹³ G.O.No.1476, dated 12-4-1950, Development Dept. Govt. of Madras.

sugar factories did not surface for quite sometime as the factories themselves were in the formative stage. However, the workers' problems seems to have arisen in the Deccan Sugar Abkaris which was the oldest sugar unit of Parry & Co., located in Samarlakota. The workers of this Samarlakota sugar factory were reported to be on strike during the year 1938.¹⁴ It was not the Deccan Abkaris of Samarlakota alone that was on strike. The workers of all the units of the Parry's concern were on strike. For a better understanding of the Samarlakota Sugar factory workers strike, some information about the general strike that was launched by the Parry's workers is presented below.

The Nellikuppam sugar factory of the Parry's concern had about 1500 workers under its employment. They formed into a workers' union in 1922. They assisted the Railwaymen during the south Indian Railway strike, and were successful in winning a series of important concessions from their own management. In Madras Presidency, the working class movement maintained a low profile after 1928. The Nellikuppam workers hence differed in common with the general trend. But a revival is noticed in the working class movement in the entire presidency during the year 1936-37. The Nellikuppam workers union was revived with the efforts of Mr.P.Jeevanandam a congress socialist. The workers of the sugar factory served a list of grievances to the Nellikuppam sugar factory management. The grievances were that the workers

¹⁴ G.O.No.2115 dated 29-8-1938, Development Dept. Govt. of Madras.

were not given retirement gratuities, the skilled labourers and artisans were paid low. The workers were dissatisfied with leave facilities and service conditions and served strike notice. In response to this, the Parry's management at Nellikuppam sacked nearly a hundred workers who were involved in the union activities and further threatened to dismiss any others who joined in the strike.¹⁵ The workers union had approached V.V.Giri, the then minister for labour who intervened and ordered for a conciliation board of enquiry. The Parry fearing that the profits would be exposed and they would have to loose more, compromised and the demands of the workers were agreed upon. But in actual working, the Parry's management had shown an element of duplicity and once again the workers' demands were not agreed upon and the management said that the negotiating union was not a registered and recognised one. Hence, the factory workers went on strike. At this stage, towards the close of 1938, the separate workers union of all the Parry's sugar and distillery workers decided to form into a federation. The federation met on Christmas day, 1938. The federation formed a nine member central committee consisting of representatives from each of its units located at Nellikuppam, Ranipet and Samarlakota.

As a part of this strategy to give united fight by the workers, we see that the workers of Deccan Sugar and Abkaris of

¹⁵ David Arnold, Labour relations in a south Indian sugar factory, 1937-39, in *Social Scientist*, Vol.6, No.5, Dec.1977, p.23.

Samarlakota went on strike. About 800 permanent workmen of this factory decided to go on strike and had kept away from the work on 25th July 1938.¹⁶ In spite of the workers going on strike, the work in the factory was carried on with the help of the persons employed on monthly wages and with some coolies on daily wages brought by the contractors. Further, the management in contravention of the provisions of the factory Act detained few workers in the factory extracting from them overtime work. Unskilled labour had been employed to turn out work which can only be done by skilled hands. The workers union demanded for the closure of the factory fearing that the situation would go worst, due to the fact that the ignorant unskilled labour who entirely do not know the working of machinery may loose their lives due to mishandling of the machinery.¹⁷

At this stage, the Government intervened and the minister for industries and labour sent his parliamentary secretary to negotiate with the workers. The strike was called off conditionally and the workers have resumed work on 2nd April 1938.

¹⁶ G.O.No.2115 dated 29-8-1938, Development Dept. Govt. of Madras.

¹⁷ Letter from workers union Samarlakota to the inspector of factories Rajhamundry dated 26th July 1938, in G.O.No.2115 dated 29-8-1938, Development Dept. Govt. of Madras. It is said that about 40 workers were detained in the factory from whom overtime work was extracted.

From the workers side, M.Rangaiah Naidu had made negotiation. He held office as secretary to district congress committee. The Parry company seems to have paid all its workers, who were on strike, two days wages in advance. They were given increments. Gratuity allowances were announced by the management. The recruiting of workers on contract system was agreed to be abolished.

The problems of the sugar factory workers clearly become visible by the close of the 1940s. Especially in 1947, the workers of several sugar factories in the province were reported to be on strike. The prominent among them were the workers strikes of the Vizagapatnam sugars limited, Srirama Sugars of Bobbili and the Deccan sugar and Abkaris of Samarlakota.

The workers struggles around 1947, seems to have arisen on account of their being very much hit by the rising prices of essential commodities and their salaries having not been increased over years by the managements of the sugar factories. The workers union of Srirama sugar mills of Bobbili expressed that, since 14 years of establishment of Bobbili factory and seven years of the Seetanagaram factory, the workers have been working all along bringing enormous profits to the owners. And during and after the war, the cost of living has abnormally increased and that many a worker families were finding it difficult to make both ends meet. So the workers requested the

factory management to help in improving their condition.¹⁸ The following demands were made by the union to be considered by the management. 1) recognition of the union, 2) fixation of salaries of the workers, 3) granting them enhanced D.A, 4) granting the bonus, 5) opening of a ration shop and canteen to the workers, 6) providing housing accommodation to the workers, 7) considering the seasonal workers demands to take them into work without fresh approval every year, 8) introduction of provident fund scheme 9) sanction of 12 earn leaves, 15 privilege leaves, 15 sick leaves etc.

The issue was referred by the workers union to the Government and the Government appointed an adjudicator who held joint meeting and an agreement was reached between the workers union and the factory management.¹⁹

The workers of the Deccan sugars & Abkaris of Samarlakota had undertaken a strike during the year 1947. The main issue for the strike was regarding the bonus that was to be given by the authorities. For the year 1947, the Deccan sugar & Abkaris had declared a bonus of about 1/12 th of the basic pay of the worker. This dissatisfied the workers because the same management of Parry had declared a bonus of 1/5 th of the basic pay for the

18 Letter from Secretary to the workers union to the factory management in G.No.5699, dated 9-12-1947, Development Dept. Govt. of Madras.

19 Letter from Secretary to Srirama sugar mills to the commissioner of labour in G.O.NO.5699, dated 9-12-1947, Development Dept., Govt. of Madras.

workers employed at Ranipet and Nellikuppam units. The workers further pointed out that "the profits for the factory were steadily increasing year after year, but the management declared a bonus for the year 1947 much less than what they declared as bonus for the previous year. The workers demanded that unless they were paid bonus as were paid at Nellikuppam and Ranipet, they would not take the bonus declared for them in that year."²⁰

The workers further demanded the management to recognise their union, and a bonus of two months of wages of each worker of the factory, demanded for a higher pay and to declare one day as holiday per week with pay. They also demanded increments and promotions to be made on the basis of their service and seniority and to grant them fifteen days of privilege leave, 15 days of casual leave, 15 days of sick leave per year. A canteen with subsidy was also asked to be started. The management in response to the workers demands stated that they were paying more wages than what was paid in other sugar factories; and also that they cannot pay more bonus because they could not make much profit for the year ending with December 1946 compared to the previous year and that they were not in a position to pay more bonus and they repeatedly told the workers to take the bonus that was already announced.

²⁰ Letter from the Secretary workers union Deccan Sugar & Abkaris, Samarlakota to the G.M. of the Deccan Sugars & Abkaris dated 22-9-1947 in G.O.No.846 dated 20-2-48, Development Dept. Govt. of Madras.

During the same year 1947, there was a dispute between the workers and the management of the Vizagapatnam sugars and Refinery. This dispute resulted as a consequence of the management's decision to close the factory along with the retrenchment of some workers from the factory. The factory was initially started by the local entrepreneurs, but had subsequently passed into the hands of an outsider. The new management was run by a person named Kantilal Seth. The workers were found to be unhappy with him and Seth was mostly depending upon some brokers who were acting as middle men between the factory management and the cane growers of the locality. These brokers were reported to be cheating the cane growers. Most of the cane raised by the peasants of Thummapala village used to be supplied to the sugar factory and as such they gave up producing jaggery. During the year 1947-48, the prices of jaggery was in slump, and hence lot of cane was available for the crushing in the factory. The Government had fixed the minimum prices of the cane to be paid to the peasants. When the price of gur was low during the year 1947-48, the brokers instead of taking the cane from the cane growers of the villages reserved for the factory, had purchased cane at low prices from very distant villages. In this way the cane of the peasants of Thummapala factory locality got spoiled. Added to this they could not even convert it into gur as there was ban on the preparation of jaggery. Further the factory had stopped the practice of granting advances to cane growers by making contracts for the supply of cane to the factory. In this way the peasants of

Thummapala were very badly let down and realised their insecurity and helplessness by depending on this factory and commenced for the first time after many years, the manufacture of gur.²¹

The factory was closed down on 24th Feb.1950 on account of the factory not receiving cane from the peasants. The management had given a notice to retrench 68 workers out of the 199 permanent workers. The retrenchment orders were said to have been issued as there was no work for them.

Contrary to this, the management had a different story to tell. They said that the Government had fixed the minimum price of cane to be paid by the factory and also fixed the price of sugar but it had not fixed the price of gur. Hence the jaggery prices were not controlled. The factory management said that it had given a free hand to the cane growers, middle men and merchants who benefited themselves to the detriment of the factory's interests.

Though the Government used to impose the ban on the gur making, the peasants did not properly observe it, as there was no control over the price of jaggery. There seems to be a great attraction for cultivators to violate the provisions of the ban order on gur making and they actually went against the law and they even attempted to obstruct the supplies of cane to the factory. The manufacture of gur was carried out during nights. Every day hundreds of tons of sugarcane was reported to have been

²¹ G.O.No.1476, dated 12-4-1950, Development Dept. Govt. of Madras.

converted into jaggery. In spite of the repeated petitions to the Government by the factory authorities to rescue them they were of no avail. The daily supplies of the cane to the factory dwindled down and the cane shortage was felt towards the end of January. In spite of the factory authorities announcing the increase of cane price from Rs.42 to 50 per ton, the situation could not be helped and at this juncture the Government surprisingly enough, lifted the ban on manufacture of gur on 11th February 1950. This made the factory without any option but to close the factory completely for want of raw material. The factory workers were told that the lockout of the factory was logical and that the factory authorities have no other option. The workers union offered to take over the management for themselves and would run on co-operative lines consisting of workers also. The Government did not yield to this demand. But however it intervened and helped in bringing about an agreement between workers and the factory management.

It can therefore be said that the cane growing peasants were very conscious of their economic profitability of supplying cane to the factory. The peasants have vocally opposed and resisted any move made on the part of the factory or by the Government to their detriment. It can also be observed that workers were organised and fought for their just demands whenever they were denied. The observations and conclusions arrived through this study are presented in the following concluding chapter.

CHAPTER VIII

CONCLUSIONS AND OBSERVATIONS

On account of the demand for sugar and also because of the Government of India's policy of cutting the import of sugar from other countries into India, a protectionist policy was adopted towards the development of sugar industry in India. A phenomenal of sugar factories was noticed in India during the 1930s. Andhra Pradesh is no exception to this phenomenon.

Sugarcane, the chief raw material for the sugar industries, was not readily available in the initial stages of the establishment of the sugar factories. Several inherent problems of the local varieties of cane hindered the extension of cane cultivation. In the early decades of the 20th century, the local varieties of cane were severely affected by red rot in coastal Andhra and the lodging habit of cane hampered its extension in Telangana region. The high cost of cultivation also came in the way of sugarcane entering into commercial dimensions.

To combat these problems, a research station at Coimbatore was established where specialists equipped with laboratories was made available. Problems connected with the methods of cultivation, crop pests and diseases and the improvements of existing varieties of crop by plant breeding methods were studied at this station. New varieties such as J 247 were evolved which overcame the red rot disease. The new varieties evolved at the Coimbatore agricultural station were tested at district level agricultural stations. It can be observed from this study that at the district level stations such as Samarlakota, Anakapally

and Gudiyattam, the varietal tests and manurial experiments were carried out and after testing the improved varieties, they were demonstrated in front of the ryots in their fields. On account of the sustained efforts put by the Government, the ryots in coastal Andhra began to appreciate cane cultivation on understanding the usefulness of the cultivation of the crop with improved varieties and new methods of cultivation. The Government distributed considerable quantities of improved seeds developed at the Governmental Research Stations to the ryots in the districts of Ganjam, Vizagapatnam, East Godavari and West Godavari. New agricultural practices such as line planting, trenching and the use of artificial manures were taken up.

In the case of Telangana region, an agricultural farm on cane development was started by the Government in 1913, the very year of the establishment of the Department of Agriculture. The work on the sugarcane crop was focused on evolving solutions to the lodging habit of the cane. The experimentation of the use of artificial manures resulted in strengthening the root system and it began to grow deep into soil which made possible for cane to stand erect without lodging. Java system of planting the cane in trenches was adopted on account of the looseness of the sandy soil of Telangana. This also helped in enabling cane to stand erect. More rigorous and concentrated efforts were made from 1927-28 towards agricultural development in Telangana through its separate wings of research, experimentation, demonstration and propaganda.

Several experimental farms were functioning from 1930-31. Successful results obtained at the experimental farms were demonstrated in the peasants' fields. Between 1931-32 and 1938-39 nearly about 200 demonstration plots financed by the Government were found to be functioning in Telangana. Government also took up the distribution of the new variety of seeds to the ryots. Within a few years of the work taken up by the Government the area under new cane varieties spread over 15,000 acres. Several agricultural instruments such as hyder trencher, gur making sets, power crushers etc., were also introduced into the region. Thus in both the regions of coastal Andhra and Telangana the respective Governments had taken interest towards the development of cane crop and the extension of cane cultivation from 1920 onwards which were readily taken up by the ryots.

On the industrial front, in order to educate the ryots about the economic profitability of raising cane crop, modern methods of cane crushing were introduced by the industries department in the Madras presidency. Power-driven centrifugals were introduced and the Government conducted demonstrations showing the profitable crushing with increased recovery with their use. It can be observed from the study that great enthusiasm was shown to hire these centrifugals for their use in their localities. Efforts were made to float sugar factories on co-operative lines during 1930s. The Government granted loans to the entrepreneurs who came forward to float sugar factories. The promoters of the Kirlampudi factory were granted a loan under the State Aid to Industries Act. The Vuyyuru sugar factory was also helped by

providing with a major portion of its initial capital from the Madras provincial co-operative Bank.

In order to ensure the functioning of these sugar factories to their maximum capacities, the irrigation authorities of the Government took keen interest by providing sufficient water facilities, which made possible the raising of required quantities of cane. The Government constantly kept an eye on the water levels of the Krishna canal and in the channels which provided water to the areas of cane cultivation around the factory locality. Agricultural staff of the Government Research Station were also posted at the disposal of the sugar factories. Keen interest was evinced in propagating the improved cultivation methods and new varieties of cane in the factory localities. Further, the sugar factories were granted subsidised rates of transport through state railways to enable them to get requisite cane supplies to ensure crushing for maximum days. Ban orders on the manufacture of gur from cane were promulgated whenever required in the villages from where cane was reserved to be supplied to the factories. In order to make available the necessary technical man power, Government introduced a course in sugar technology and scholarships were also installed to the students undergoing training in this course for a period of ten years from 1933-34. Several students received training in sugar technology by getting attracted to these inducements.

To enable the sugar factories to have a sound financial condition for an efficient functioning, the Government took the

responsibility of the sale and distribution of sugar produced at the factories. A zonal distribution and sale of sugar was regulated by the Government. It can be seen from the study that during the year 1944, a situation of piling up of sugar stocks arose following which some of the factories' financial position deteriorated on account of the non-disbursement of the sugar for sale. At this point the Government took expeditory measures by serving demi-official letters to railway authorities and the respective District Collectors to initiate steps towards providing sufficient wagon facilities to clear the stocks piling up at the factories. The collectors were further directed to pressurise the wholesale dealers to procure sugar stocks from the railway stations on their receipt.

It may be surmised that on account of the variety of protective measures provided by the Government and implemented through its agriculture and industries departments during the period 1930 and 1960, several zamindars and well-to-do ryots of coastal Andhra came forward and established sugar factories.

Between 1933-37 as many as five sugar factories were started in coastal Andhra. The Etikoppaka, Thummapala and the Vuyyuru sugar factories were started on co-operative lines. The Bobbili and Kirlampudi factories were floated by private enterprise. In the initial stages the co-operative sugar factories consisted of some well-to-do ryots, but the majority of the shares were owned by the local rajas or zamindars. Within few years of the establishment of these sugar co-operatives it is noticed that the

Vuyyuru sugar co-operative was liquidated and was transferred to the management of the K.C.P, a private company. In the case of other sugar factories such as Etikoppaka and Thummapala, co-operative rules were modified to enable any individual to hold more of the shares. The Government also permitted the factories to allot to any individual, shares up to the value of Rs.6,000 first, then to Rs.10,000 giving deviation to the initial limit of Rs.1000.

By 1945, a situation of scarcity of raw material for the sugar factory arose on account of which some of the factory managements went for the development of cane estates. The ryots also seemed to be very conscious of the prices being paid to the cane supplied to them, and at several places in every district, the cane growers also formed into sugarcane growers' societies. Government helped these societies by appointing agricultural staff to assist in propagating the improved seed varieties and new agricultural implements and practices. Loans were also granted to the members of the sugarcane grower societies to provide working capital for cane cultivation. It can be said that, in most of these sugar factories, majority of shares were mainly controlled by the zamindari class. The attempts also were made by local leadership in some places to float sugar factories mainly financed by the local ryots.

Several regional diversities were observed between coastal Andhra and Telangana with regards to entrepreneur ship, methods of cane cultivation, water management and the levels of local

participation towards the development of sugar factories. In the case of K.C.P, a major sugar producing concern in coastal Andhra, lot of initiative and involvement was noticed to have been made by the local people. Contrary to this in the case of Nizam Sugar factory that was established in Telangana, contemporaneous to that of K.C.P, it can be said that it was thoroughly a state initiated and sponsored project. The participation and the involvement of the local people towards the establishment of this factory was consequently absent.

The sugar factory at Vuyyuru was first established under co-operative sector for which a major portion of the initial capital was provided by the Madras Provincial Co-operative Bank. The unencumbered lands of the member peasants were kept as securities for the loan. However, the majority of the shares were controlled by just a handful of local zamindars.

In spite of the several efforts made by the factory and the Government through its agricultural department, the area under cane cultivation did not expand rapidly and as such in its initial stages of the working, the Vuyyuru Sugar factory did not make much progress. At this stage the local zamindars and some prominent members of the co-operative took initiative towards development of irrigation facilities such as the establishment of water pumping stations to draw water from the main canals to the cane growing areas. These zamindars and rich ryots also helped the factory by putting in a lot of their personal money when the factory sustained losses. Some of the rich ryots developed cane

estates when the scarcity of raw material arose. However, this co-operative sugar factory was liquidated and was transferred to private management, K.C.P. At the time of change of the management of the factory, the interests of the members of the earlier co-operative were protected.

The new management under K.C.P took keen interest in providing necessary inducements to the ryots in the form of supplying fertilizers free of cost, paying for a part of the investments for raising cane to every ryot. Keen interest was taken in developing irrigational facilities by providing free technical services to dig bore wells to facilitate the drawing of the ground water for cane during the dry summer season when Krishna canal dries up. Pump sets were also provided to draw water from the cane fields to overcome water logging during the heavy rainy season. For the easy transport of cane, link roads from the cane growing villages to the main road were laid. It may be said that on account of the constant support given by the K.C.P and the rapport it maintained with the ryots, the ryots have over years took to cane cultivation on large scale. In the initial stages of the functioning of the factory, cane was supplied by just a couple of hundred ryots but this number increased to 3500 by 1960. Today about 12000 ryots grow cane in about 29,000 acres for the supply to the factory.

Unlike in the coastal regions the lands were not plain in Telangana and particularly the lands under the command area of the Nizam Sagar Canal had received water just a decade prior to

the establishment of the Nizam Sugar Factory. On account of this, required acreage of land suitable for cane cultivation was not readily available at a single continuum. Ryots in this region were not sufficiently rich enough to take up a high capital intensive crop like sugarcane. Hence lot of preparatory work was needed to be taken up. Further it became inevitable for the state to take initiative from its side towards surveying the villages around Nizam Sagar Canal to find out suitable land for cane cultivation. In the absence of well-to-do peasants to a required number who would take up cane cultivation on a large scale, a cane estate was needed to be developed by the factory. State had invited experts from other sugar concerns such as Parry & Co, Belapur sugar company and the experts from I.C.A.R to tour the locality and suggest the suitable villages where land could be leased for the development of a cane estate.

Much initiative was not noticed from the entrepreneurs to take up the establishment of the sugar factory for which it became necessary for the Nizam state to announce several inducements and financial support to encourage the monied and business groups to come forward to take up the project. Industrial Trust Fund had announced its support to an extent of subscribing up to 40 per cent of the initial capital. Even when the promoters who were granted permission to start sugar factory under the management of Raja Dhanarajgiri, kept themselves away at the time when the machinery for the erection of the sugar factory were received at the port, the Industrial Fund had released the machinery by paying for it from its funds.

At the time of the establishment of the factory though the shares to a value of Rs.5 lakhs were reserved for subscription by the cane growing ryots, only after ten years in 1946, we notice some interest shown by the ryots in this regard. From 1939-40 till 1953-54 factory's cane estate supplied more than half of the total sugarcane requirements of the factory. It was only after 1960 that cane supplies from the ryots exceeded that of the factory cane.

In the case of Vuyyuru sugar factory, several local prominent members of the sugar co-operative took initiative and interest towards making the factory a success. But in the case of the Nizam Sugar factory this element of local initiative seems to be missing. When the situation arose for the development of irrigation facilities in the Vuyyuru sugar factory locality, some private individuals have come forward and put their personal money. But on the contrary, when the region around N.S.F suffered from similar problem due to heavy silting of the Nizam Sagar Canal, necessary effort was not made by either the State or by the local people to clear the silt and find the alternative remedy. In spite of the problem reaching an acute position of drying up of the standing crop and failing to raise cane even for the seed material for planting, we notice a locational shift of the factory's operation into other districts of Telangana and even Rayalaseema.

Hence, it can be concluded that both on account of the natural deficiencies such as the poor soil conditions, water resources and also on account of poor entrepreneurial spirit, it became warranted for the state in Telangana to put up most of the efforts from its side contrary to the case of the sugar factories in the coastal region.

The peasants in Andhra appear to be very much alert and conscious of the economic profitability of their cane being supplied to the factory. Whenever the cane prices offered by the factory were unremunerative, they diverted the cane for gur manufacture. To overcome this, Government used to impose ban on gur manufacture by ryots. Time to time ban orders were promulgated in the villages in the reserved areas of the factory. Peasants did not keep silent towards these ban orders. In 1943, the cane growers of Thummapala sugar factory launched an agitation under the leadership of the taluka ryots association of Anakapally demanding the reversal of the ban orders imposed on 1425 acres in about 16 villages in the reserved areas of Thummapala sugar factory. The issue was also raised by the Andhra Provincial Ryots Association. The ryots succeeded in getting the approval by the Government for constituting of a joint committee consisting of the representatives from the Government, factory and the ryots to fix the quantities of cane required by the factory. The abolition of the system of ban on gur making and the remunerative prices for the cane supplies were also demanded.

Prevalence of a class of middle men was noticed between the factory and the cane growers. They were appointed by the sugar factories to contract on their behalf with cane growers for the procurement of cane supplies. The practice seems to be working for several years. These brokers were favoured and enriched over years to the great detriment of the actual cane growers. These middle men have created a lot of trouble to the ryots by cheating them on the weightment of the cane and on the price of the cane. The ryots fought for the abolition of such a system.

Before 1947, only in the Deccan Abkaris sugar factory, we notice disputes arising between the factory management and the workers. But from the close of 1940s workers of Vizagapatnam, Srirama Sugars and Bobbili sugar factories went on strike against their managements.

Workers of the Bobbili sugar factory demanded for enhancement of their wages. During and after the second world war, the cost of living has abnormally increased and that many a workers' families faced difficulty to make both ends meet. The workers demanded for the increase of their wages, fixing of their wages, granting enhancement in D.A, sanctioning the bonus, providing ration facilities, housing accommodation and granting of leave privileges. When the demands were not conceded by the factory management, the workers represented the matter to the Government following which an adjudicator was appointed and with his intervention an agreement was reached between workers and the factory management.

The disputes between the workers of the Vizagapatnam sugar factory and its management arose following the closure of the factory and the retrenchment of some of the workers of the factory. During 1947-48, the price of gur was in slump and hence, there was lot of cane available at the disposal of the factories. At this stage, the brokers put the peasants of the factory area to trouble by contracting the cane supplies to the factory from the villages at far off distances. In response to this, during the following year, the peasants stopped their cane supplies to the factory. This resulted in the non availability of cane to the factory and as such the management closed down the factory and few workers were also retrenched. This resulted in the strike by the workers. The workers even went to the extent of appealing to the Government for the take over of the management of the factory by the workers. However, this did not materialise. An agreement was made between the ryots, workers and the management by the intervention of the Government.

It can also be seen that in coastal Andhra behind the extension of the area under cane crop and making the ryots to grow it on commercial lines, the State's encouragement, protection and constant support was very marked.

It can further be inferred that there were several diversities between Telangana and coastal Andhra regions regarding natural conditions such as soil suitability for cane, irrigation facilities and human diversities such as

entrepreneurial background and the involvement of local people towards establishment and successful growth of sugar factories.

It may also be pointed out that the political economy of the state played an important role in the sugar industry in Andhra Pradesh. This is seen in the matters concerning the imposition of ban on gur making by the ryots, fixing of the prices for the cane and gur, distribution and sale of sugar etc.

During the period under review, the technological backwardness is clearly visible. Most of the machinery needed for the erection of the sugar factories and the chemicals used in the sugar manufacture were imported throughout the period. There was an acute problem of technical personnel such as sugar technologists.

It can be further remembered that the cane growing peasants were very conscious of their economic profitability on raising cane and supplying it to the factory. The peasants have vocally opposed and resisted any move made on the part of the factory management or the Government to their detriment.

All categories of cane growers have substantially improved on taking to cane cultivation in Andhra Pradesh. The living conditions of the landless poor were also improved with the availability of better opportunities of employment both at the factory and at the cane fields.

Further it may be observed that the factory workers were well organized and fought for getting their just benefits in the cases wherever they were denied. It may be said in fairness that the workers' interests and welfare were constantly taken care of by the managements of K.C.P and N.S.F right from the days of their establishment.

The sugar factories have contributed substantially a portion of their profits towards the developmental activities in their respective localities. Considerable contributions were made for providing medical facilities, improving roads and communications and starting of educational institutions. The most outstanding educational institutions like Siddhartha Medical and Engineering colleges of Vijayawada were heavily funded by K.C.P. Time to time the N.S.F had donated funds liberally to most of the reputed and flourishing colleges of today in the twin cities of Hyderabad and Secunderabad.

It may be pointed out that the Sugar industry in Andhra recorded rapid strides due to the keen interest shown by the Government on one side and the enthusiasm evinced by the public as well as cane cultivators on the other. The enterprising Andhra ryot always was alert to get remunerative returns for his cane. The sugar factories particularly in the private sector, always were sensitive to the problems of the cane growers while maximising their profits. The role that the factories have played in social, cultural and educational improvement in the locality is laudable. These factories also provided training

ground for many local leaders who entered into politics at the District and even at the State level. In short, the sugar industry in Andhra played a positive and constructive role in improving the economic life of the peasants, in taking care of the workers and in improving the facilities in the vicinity, besides increasing their returns.

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