

ECONOMIC IMPACT

CHAPTER- VTHE ECONOMIC IMPACT

V.1 : The establishment of the factory has brought about an economic transformation in the area of operation of the factory.

The economic impact of co-operative Sugar factory under study is defined as development efforts in respect of -

- 1) Agricultural development in the command area which includes
 - A) Cane Production
 - B) Cane Development
 - C) Seed Production
 - D) Gobar Gas Plant
 - E) ^{Dairy} Milk Development Programme etc.
- 2) Irrigation Development Programme
- 3) Employment Generation
- 4) Development of infrastructure.

It is important to know that the majority of the farmers who are benefitted by the sugar factory are small farm holders. Out of the total membership of 10,435 farm holders, nearly 8,900 members have the average - Sugar cane area of 3 acres which forms nearly 85% of the total members.

Moreover, membership of average sugar cane area between 3 to 5 acres, 1056 at end of 1979-80 and nearly 496 members have the average cane holding of more than five acres.

I. AGRICULTURAL DEVELOPMENT :

A) Production of Sugar Cane :

The following table shows the statement about the total area under sugar cane crop, average production per hectors, total crushing of sugar cane, total sugar production and recovery etc.

Area under Cane, Cane crushed, Sugar production and Sugar recovery

TABLE : 5.5

Year	Area under Sugar cane .00 hectrs	Yield per Hector (MT)	Cane crushed .00 MT	Sugar Pro- duction .00 (Bags)	Recovery
1	2	3	4	5	6
1977-78	208	36.5	7623	8746	11.05
1978-79	230	37.65	8396	9340	11.14
1979-80	203	31.67	6259	7234	11.56
1980-81	245	30.97	7559	8907	11.86
1981-82	300	32.60	9647	11,185	11.75

Source: Annual Reports 1977 to 1982.

The area under sugar cane has increased except year 1979-80. For example in the year of 1977-78 the total area under sugar cane production was 208000 hectares it increased upto 3,00,000 hectares in 1981-82. Ultimately the production of sugar has also increased, for example in the year 1977-78 the total production of sugar was 87,46000 M.T. and in the year 1981-82 it raised upto 11,18,500 MT. In this way recovery of sugar and crushing capacity of sugar cane has also increased.

Shri Panchaganga Sugar factory has undertaken the following schemes for maximum sugarcane production.

B. MOLLESSES :

Mollasses are used as complementary fertilisers for the production of sugar cane. The factory provides the mollasses to the members at cheap rate. And also factory has paid special attention to the growth and development of sugar cane by giving mollasses to the members. The following table shows that the factory has provided mollasses to their members.

TABLE : 5.2

Year	Total production of mollasses M.T.	Total Mollasses distributed M.T.	Balance M.T.
1977-78	33,372	9,827	13,545
1978-79	33,376	5,804	27,572
1979-80	24,907	7,195	17,712
1980-81	36,170	16,969	19,210
1981-82	42,489	26,831	15,658

Source: Annual Reports 1977-78 to 1981-82.

With help of this table we can understand that the factory has achieved its goal of maximum sugar cane production by providing mollasses to members. During 1977-78 the mollasses was 33,372 M.T. while during 1981-82 it was 42,489. By creating so other process sugar factory made fertiliser of mollasses and it distributed to their members at cheap rate.

C. SUGAR CANE DEVELOPMENT :

A) To supply the pure and healthy seeds :

The factory pays special attention to the development of healthy, pure and evergrowings seeds just to distribute the same to the members.

From the nursery of the factory attempt have been made for the growth of seeds and distributed the same to the needy. The factory has distributed 17,00,000 seeds from own nursery and also from the nursery of the members II, III grade nearly 4 crores seeds were distributed for the pure seeds development the factory supplied at the cheap rate to the members.

For this purpose the grant of Rs.27,352.50 has been allotted. Each year seeds worth 2500 hectors are supplied to the members.

D. PILOT PROJECT FOR CANE DEVELOPMENT :

The factory has implemented the pilot scheme sponsored by State Government. With the object of

improving the yield of sugar cane as well as its recovery percentage which can contributed to increase earnings of the farmers. So the factory appointed agricultural assistance to help and guide farmers in villages covered under this scheme.

E. SPECIAL AND HEALTHY SEEDS SCHEME :
(Only for 2500 hectors of land)

This factory has spent per acre rs.200/- for this scheme. It comes to rs.5,00,000/- only. Members of the factory are benefitted by this scheme.

F. EXPERIMENT FOR NEW TYPE OF SUGAR CANE :

In our Western Maharashtra CA-740 type of sugar cane is cultivated with help of agricultural university. The factory is in search of new type of sugar cane which will be useful for maximum production for the experiment purpose the factory is comparing with CA-740. Following types of sugar cane which is as under-

CA 6406, 6217, 62175, 791, 6415, HS 6847, CA 1340, 1295, 7219. In this way Sugar factory has started various schemes for sugar cane development e.g. sugar cane cultivation competition Agricultural instrument and machinery/crop security scheme, Soil conservation, Blasting and Boaring of wells.

G. GOBAR GAS PLANT SCHEME :

Shri Panchaganga sugar factory has started gobar gas plants scheme for its members. For their economic development ^{of members} this factory is trying to help its members by making available finance with the help of Nationalised Banks.

Table
TABLE : 5.3

Year	Total available finance N.B. (Loans) ₹.	Subsidy ₹.	No. of Gobar Gas Plants
1977-78	8,23,785	1,640	238
1978-79	9,22,229	2,564	264
1979-80	11,24,149	25,636	920
1980-81	12,37,452	49,250	943
1981-82	13,33,162	71,740	962

Source: Annual Reports 1977 to 1982.

The above mentioned table shows that finance is made available from the Nationalised Banks for gobar gas plants. And also Sugar factory is providing 40% subsidy for gobar gas plants. So number of gobar gas plants are increasing day by day.

H. DAIRY DEVELOPMENT PROGRAMME :

Sugar factory is providing maximum facilities for dairy farming as a side bussiness to the farmers e.g. animal husbandary scheme and cross breeding centre schemes are implemented by the factory. This scheme is implemented with the co-operation of the Indian Agro Industries Urali Kanchan.

According to this scheme following work is done by factory.

Table 5.4
TABLE: 5.4

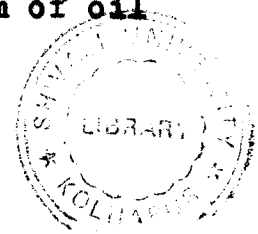
Particulars	1977-78	1978-79	1979-80	1980-81	1981-82
<i>in continuation</i> 1. No. of artificial conception of Cow.	664	785	821	859	546
2. Artificial conception.	542	527	538	583	362
3. Embryo Examination.	355	407	466	500	336
4. Littered Cows.	219	292	370	435	295
5. No. of Young once (She)	114	149	202	225	158
6. No. of Young once (Be)	105	143	168	21	137

V.2 : IRRIGATION DEVELOPMENT PROGRAMME :

Irrigation becomes an important basic input in adoption of modern farm practices. It provides insurance against inadequate irregular or total failure of rainfall. The use of other inputs like chemical fertilisers, seeds, pesticides etc. and also credit depends upon availability of assured water supply. Consequently irrigation envisages change in cropping pattern, land use efficiency and productivity of other farm resources.

It also induces farmers to use the land more intensively for increasing agricultural output and thus we can say that irrigation can provide fillip to produce more and thereby it can transform the traditional agriculture into modern one.

The change in the cropping pattern was made possible by the development of irrigation facilities in which factory played an important role in the development of small farm economy. The factory has undertaken 59 irrigation schemes as given in the appendix A. which is attached to this chapter. For tiny land holders the factory has initiated a programme of sinking of wells such small agriculturists are given assistance in the form of oil engines, pumps, pipes etc.



Irrigation development scheme of Shri Panchaganga Co-operative Sugar factory has played an important role in the development of small farm economy. The factory has undertaken 59 irrigation scheme as given in the appendix A which is given as under -

LIFT IRRIGATION SCHEME :

(With kind co-operation of Sugar factory).

1) Lift irrigation scheme is promoted by Shri Panchaganga sugar factory. Following are the executed schemes

Number of executed schemes - 39

A) On Panchaganga River - 15 schemes.

- 1) Vasagade 2) Pathankaddi 3) Sayani 4) Rui
- 5) Kabnur 6) Hupari 7) Ingali 8) Chandur
- 9) Abadullat 10) Yadrao 11) Dharangutti 12) Terwad
- 13) Nandani I, II 14) Kurundwad.

B) On Krishna River - Total 19 schemes.

- 1) Umalwad 2) Jayshingpur 3) Uadgon 4) Ghalwad II
- 5) Chinchwad II 6) Kurundwad Hasur 7) Shirati I
- 8) Kawathe guland 9) Shedsal 10) Gourwad 11) Aourwad
- 12) Majarewadi 13) Atiwat - Bastwad 14) Rajapur
- 15) Khidrapur 16) Alas 17) Danwad 18) Khotali
- 19) Kurundwad.

C) On Waran River - Number of Schemes - 3

- 1) Kawathesar 2) Danoli 3) Rangoli.

D) On Doodhganga River - Number of schemes - 2

- 1) Datwad I, II.

2) SCHEME IN PROGRESS : 6

A) On Panchaganga River - 3

1)Herale 2)Atigre Chokak Rukadi 3)Sangawade.

B) On Krishna River - 3

1)Nimshirgon 2)Shrati II 3)Chinchawad II.

3) Following schemes, plan estimate survey are completed - 3

A) On Panchaganga River - 1
AbadullatB) On Krishna River - 1
TakalwadiC) On Warana River - 1
Kumbhoj

4) Schemes under the primary stage and under the supervision of survey plan estimate - 11.

A) On Panchaganga River -

1)Haroli 2)Tilawani 3)Talandge 4)Shirol
5)Kurundwad 6)Dathar 7)Tardal.

B) On Krishna River -

1)Hhothali II 2)Kutwad 3)Ganesh Wadi
4)Arjunwad.

C) On Doodhganga River

1)Songon.

Nearly 22,937 hectares of land came under the command area of 43 schemes. The Govt. of Maharashtra had given the loan of Rs.1,65,49,747 as capital expenditure for executing these schemes. The land development bank advanced the loan of Rs.2,24,40,901. The Government of India also granted loan of Rs.63 lakhs. Maharashtra State Co-operative Bank advanced loan Rs.5,58,000 for the pipe lines. This was the position at the end of 1981.

That 39 lift irrigation schemes are being constructed on the river panchaganga in 18 villages and on Krishna river 20 villages and on Warana 9 in villages and on Doodhganga in four villages.

Before the establishment of the factory all these villages were having cropping pattern of Jawar, Groundnut, tobacco, chillies. Almost all villages were caught under drought conditions. But it was the sincere efforts of the Panchganga sugar factory which has invested nearly six lakhs of rupees at end of 1981.

All these 39 irrigation schemes provided irrigation water to nearly 21,100 acres in which 6,200 acres were under sugar cane cultivation. The construction work of the following six irrigation schemes were progressing during the period of 1981 with total commanding area 12,620 acres.

- 1) Sangwade - 1600 acres
- 2) Herale - 800 acres
- 3) Atigre - Chokak -Rukadi - 1500 acres
- 4) Nimshiragon - 8000 acres
- 5) Shirati - II - 600 acres
- 6) Chinchwad II - 120 acres.

It can be thus said that economic impact of Panchaganga sugar factory has brought about transformation of rural community in to the path of modernisation of agriculture. The Sugar cane development scheme and the irrigation development made small farmers as progressive, efficient farm managers. This change mobilises the financial resources and human resources from unproductive channels to the productive one. This also enhanced the consumption standard of the farming community. It can be said that the Panchaganga sugar factory is playing as a growth centre for regional development, and of the villages in command area of the factory.

V.3 : EMPLOYMENT GENERATION :

The Shri Panchaganga Sahakari Sakhar Karkhana Ltd. Ganganagar Ichalkaranji has been successful in creating employment opportunities in the area directly and indirectly on a large scale.

There are 3,000 employees (daily-wages, temporary, seasonal and permanent) including lift irrigation scheme. Employees out of which about 74% of employees are from the area in which factory has been established.

Besides, about 1,050 bullock carts, 100 trucks and 50 tractor trollies are engaged in the work of transporting sugar cane to the factory.

This transport sector alone, creates employment opportunities for about 3,000 people. Further employment is also created in harvesting the sugar cane. Moreover the very process of modernisation of agriculture which involves intensive agriculture creates additional employment opportunities. If we add to these employment opportunities created by sugar factory the employment opportunities created in the services sector, it may be possible to say that there does

not exist any unemployment problem in the area operation. Out of the 18 sample villages, 15 villages had hotels, 16 villages had cycle shops and 6 villages had auto repair workshops. They also provided employment opportunities what is more significant is the development of the co-operative industrial complex which has resulted in the creation of employment opportunities. Large numbers both in Ganganagar as well as in the villages within the area of operation. The vast majority of the producer members were small farmers who needed to supplement their agricultural income by undertaking some other spare time occupations.

In order to make available to such farmers supplementary sources of income, the factory provided finance for the Kukut palan, Dairy farm, Animal breeding farm etc. This factory also started the consumers co-operative society for workers. It provides employment to many people.

DEVELOPMENT OF INFRASTRUCTURE FACILITIES

The infrastructural base for agro-based industries in rural set up primarily consists of irrigation facilities, road development electric power supply with support from communications like post and telegraph office, telephone facilities, banking facilities and ordinary amenities of city life.

So far as irrigation facilities are concerned, subject to the limitation of overall availability of water the irrigation potential may be said to have been satisfactorily developed in the form of storage built with help of wells and in the forms of well irrigation as well as lift irrigation schemes.

The transport facilities constitute an indispensable element in the development of any area. Isolated villages handicapped by inadequate transport facilities can never achieve a prosperity which depends upon movement of people as well as goods. Railway station is near the factory. But railway development is difficulty, the only means for linking the isolated villages into wider market and areas of activity, is a network of good roads. This is particularly true where bulky material has to be transported over long distances and the finished product of sugar has to be sent to distant markets. The

recovery percentage of sugar cane other things being equal, depends upon the time lag between the cutting of the cane and its crushing. This time lag can be considerably reduced by improving the quality of roads. Moreover the poor conditions of roads involves substantial losses on account of additional fuel consumption as well as repairs to vehicles. It may be stated here that the factory has scheme for enabling the farmers to purchase bullock carts with pneumatic tyres; such a cart will causeless damage to the roads. While doubling the haulage capacity of the cart.

Although the construction of roads is responsibility of Zilla Parishads the factory has played its own part in the development of roads. Over 100 of approach roads have been constructed by the factory. At the end of 1982, the factory spent an amount of rs.20,51,330 for the construction of roads. The factory constructed the road 104.56 Km. So many villages enjoyed electric supply, S.T. services, post offices, telephone offices, veterinary health centres, medical facilities, co-operative banks and societies and also commercial banks.

THE APPROACH ROAD AND STREET :

The factory has undertaken the construction of the approach road and street leading to the sugar cane field with help and co-operation of Government. The factory has spent rs.20,51,330 for the construction of the

approach road and the factory has actually completed the construction of the approach road, that is 104.56 km. The contribution collected from the villagers that is Rs.180508 is spent on the construction of the approach road - Rs.23,54,400 is spent on the construction of pucca street for which Government sanction Rs.15,64,500/-

CHANGES IN CROPPING PATTERN :

This amount of income generation was made possible by change in the crop pattern which accrued as a result of the establishment of the sugar factory. So long as the sugarcane growers had to convert their cane into gur, they put only a small part of their land under sugar cane as the prices of gur were not only low but also suffered from fluctuation. Prior to the establishment of the factory, the main crops in the area were jawar, puddy, groundnut chillies and wheat. Only the big farmers having adequate well irrigation put part of their land under sugar cane. As the vast majority of the farmers cultivated small farms the main emphasis was on food crops rather than on cash crops. Since the establishment of the factory the land use pattern has changed with greater emphasis on Sugar cane. The switch over from the old crops to sugar cane was due to the better prospects of sugar cane cultivation as a result of assured market.

provided by the factory for sugar cane. Moreover the prices available for sugar cane were much more favourable than prices available for other crops. Further sugar cane less susceptible to pests and diseases other crops.