

CHAPTER - IV

DEVELOPMENT OF THE UGAR SUGAR WORKS



1 INTRODUCTION :

The organizational structure of Ugar Sugar Works shows perfect combination of persons and positions. Due to this organizational structure the factory has made tremendous progress in and outside the factory. The present chapter is devoted to examine the development of Ugar Sugar Works.

2 MEANING OF THE DEVELOPMENT :

"The word development is taken from the French word 'developper' meaning " to develop" or unfold. Development generally stands for growth. It stands for change and progress".¹ In the rapidly growing present age of science and technology, development has become a symbol of modernity and up-to-dateness in the field of social and economic change. Every organization, today, is in the process of development by expanding its capacities, adopting new methods and techniques. The process of development carries planned economic growth, mobilization and allocation of resources to increase the income both of the individual and of the nation. Development is a programme oriented approach in an organization with the objective of mobilizing existing and new resources, cultivation of skills to achieve the developmental goals of the organization.

Development also guides an organization towards the achievement of progressive economic and social goals.

Development helps to bring in new ideas and types of activities and methods for better performance of the work and achievement of goals.

"Development is, thus, dynamic, progressive not static. Change, towards the better is its objective. It is action oriented rather than structure oriented. It is directed towards the dynamics of an organization. Development is the main agency of socio-economic change - a change that requires not only the preparation and execution of long term plans of industrial and agricultural development but also requires the establishment of modern type of institutions, organizations and skills".²

In biological sciences, the term development connotes growth or maturation. It applies the gradual and sequential phases of change.

"In the realm of sociology, however, the concept of development takes on a teleological tinge. MacIver's reference to this and the related terms is interesting at this point. For him 'change' implies "nothing but a difference through time in the object to which it is applied and when the element of continuity is added to social-change it becomes a 'process'. The term growth implies a direction of change, but merely in quantitative characters. 'Evolution' involves something more intrinsic a change not merely in size but atleast in structure

also. 'Progress' denotes direction toward some ultimate objective that that is determined ideally. MacIver uses the word 'development' to signify an upward course in a process "that is, of increasing differentiation".³

To Rousp "Social development, as distinct from social-change, is the purposive adaptation to altered conditions or the purpose adaptation of the conditions".⁴ Further to him, development denotes a change from a less desirable to a more desirable situation, and also implies the human ability to give a rational direction to this change and to obtain what is sought. Thus, the notion of development is laden with human purpose as moulded by social values.

3 DEVELOPMENT OF UGAR SUGAR WORKS :

We have seen the concept and the factors of development. On this background, it will be appropriate to see the situation of Ugar Sugar Works. The attempt has been made to analyse the development of the factory from two aspects i.e. in the internal aspect, the production, financial situation, and the labour welfare facilities etc. have been included. In the external aspect, the contribution of the factory in the area of operation in the form of irrigation facilities and some facilities like education and medical have been included.

4 EXPANSION OF THE FACTORY :

The smooth and economical running of the factory having been established and the area under sugarcane being on the increase, necessity was felt to expand the existing plant.

The stages of expansion :

- 1) The first 500 T.C.D. plant was established in the year 1939. It was purchased from the Laxmiji Sugar Mills Ltd., Maholi (Uttar Pradesh)
- 2) The permission for first expansion capacity from 500 T.C.D. to 800 T.C.D. was obtained in the year 1954 and expansion work was completed under the efficient supervision of Shri P.L. Chakradeo.
- 3) The second expansion from 800 T.C.D. to 1200 T.C.D. permission from Union Government was obtained in the year 1960. This expansion became urgent due to the increase in the sugarcane area. A new Milling Tandom was erected in time by Shri B.L. Chakardeo. In order to achieve economy in steam consumption all the steam driven units were gradually replaced by electric drive.
- 4) The third expansion from 1200 T.C.D. to 2000 T.C.D. was completed in the year 1967-70. This expansion became urgent due to sudden fall in the recovery of sugar after the month of March, which makes it uneconomical to continue the season longer and to crush all the available sugarcane in a reasonable time.

5) The fourth expansion from 2000 T.C.D. to 3000 T.C.D. permission was obtained in the year 1976-77.

6) The fifth expansion from 3000 T.C.D. to 5000 T.C.D. is achieved in the year 1987-88 which is the maximum sugar-cane crushing capacity compared to neighbouring sugar factories.

As an allied concern, a Distillery unit was established in the year 1963. The objective was to produce industrial and potable alcohol out of molasses which was otherwise destroyed by dumping it into the river. The plant was constructed at a cost of Rupees, 11,71,000 with a capacity of 5000 gallons of industrial alcohol per day.

5 PRODUCTION IN THE FACTORY :

On the background of the expansion of sugarcane crushing capacity of Ugar Sugar Works, the data regarding position of production for the last 25 years has been shown in Table 4.1.

TABLE 4.1

Position of Production for the last 25 years
(1962 to 1986)

Year ending	Cane Crushed		Sugar Bags produced		Recovery %
	Tonnes (in lakhs)	%	Tonnes (in lakhs)	%	
June					
1962	1.35	100.00	1.69	100.00	12.53
1963	1.38	102.22	1.76	104.14	12.68
1964	1.60	118.51	1.92	113.60	11.96
1965	2.15	159.25	2.47	146.15	11.54
1966	2.72	201.48	2.96	175.14	10.89
1967	1.61	119.25	1.91	113.01	11.81
1968	1.44	106.66	1.59	95.08	11.10
1969	2.25	166.66	2.38	140.82	10.41
1970	3.09	228.88	3.20*	189.34	9.93
1971	2.57	190.37	2.95	174.55	11.44
1972	2.91	215.55	3.45	204.14	11.44
1973	2.96	219.25	2.97*	175.73	9.94
1974	2.15	159.25	2.19*	129.58	9.71
1975	3.55	262.96	4.30*	254.43	11.59
1976	3.70	275.07	4.29*	253.84	11.08
1977	4.87	360.75	5.40	319.52	10.60
1978	5.83	531.85	6.52*	385.79	10.66
1979	4.31	319.25	4.86*	287.57	10.80
1980	3.47	257.03	3.78*	223.66	10.75
1981	3.78	280.00	4.28*	253.25	11.04
1982	4.05	300.00	4.46*	363.90	10.60

Year ending	Cane Crushed		Sugar Bags Produced		Recovery %
	Tonnes (in lakhs)	%	Tonnes (in lakhs)	%	
1983	5.55	511.11	5.96*	354.66	10.42
1984	3.37	259.62	3.85*	227.81	11.16
September					
1985	4.87	366.74	4.87	288.16	11.02
1986	4.87	360.74	4.87	288.16	11.28

Note : * Includes sugar produced from jaggery and/or raw sugar and/or cane syrup.

The table reveals that there is fluctuation in the crushing of sugarcane from 1962 to 1986. In 1978 and 1983, we see all of a sudden rise in cane crushed and from there onwards the fall in the cane crushed. Hence we can say that the company is not showing any gradual progress in crushing sugarcane. But in general if we take 1962 as a base, the cane crushed has been more than tripled in 1986.

The table also shows parallel trend of production with sugarcane crushed as these are inter-related. The company has made remarkable progress in increasing production of sugar. However during 1967, 68, 69 and 74 we observe all of a sudden fall in the production of sugar bags and from there onwards the company started slowly recovering it. Thus the company has shown fluctuating trend in producing sugar over 25 years. By taking 1962 as the base, it indicates nearly

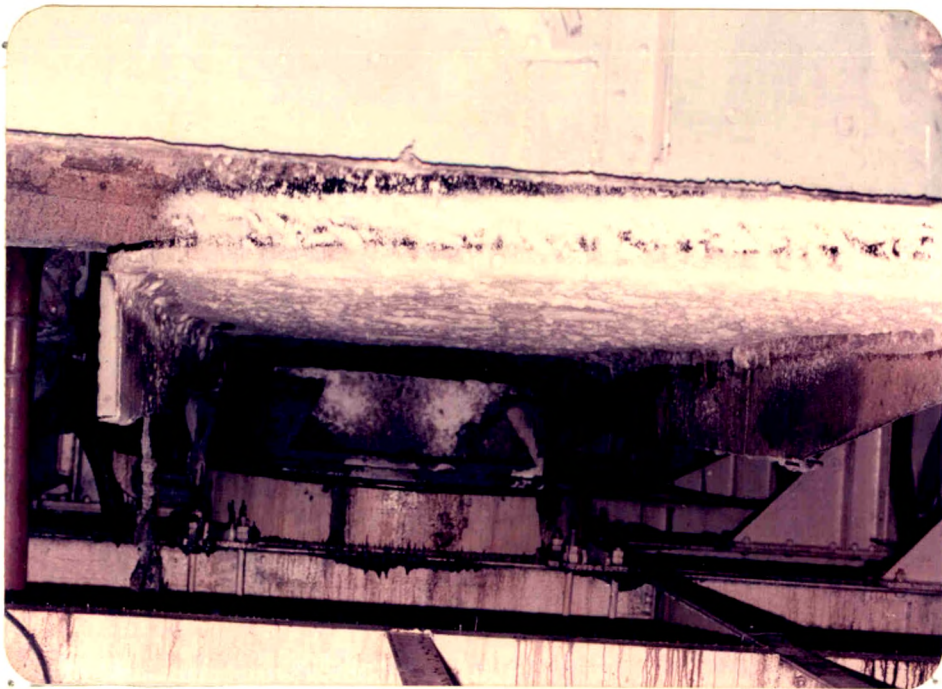
threefold increase in production of Sugar produced in 1986. The photograph of white crystal sugar production is presented on page, 68.

When the data regarding the percentage of recovery of sugar during the 25 years is observed, it reveals that the percentage of recovery is constant in between 9 % to 12 % . The percentage of recovery is below 10 % in 1970, 1973 and 1974.

In 1970, the factory continued crushing of previous season upto 5th July 1969. The crushing of the sugar season 1969-70 started on 2nd November 1969 and stopped on 31st May 1970. The factory had crushed cane cultivated on the banks of river Krishna. The number of wells in surrounding area having dried up and the cane had not received irrigation for considerable period. The length of the season and the draught affected the average recovery. The main reasons for low percentage of recovery during 1973 and 1974 were shortage of rainfall and crushing beyond stipulated period i.e. April, May and June. However the factory made a record of producing 7,33,020 bags of sugar - the highest of the season 1987-88 in Karnataka State.

6 FINANCIAL POSITION OF THE FACTORY :

Apart from the picture of production, one has to analyze the financial position of the factory. The data on this aspect are presented in Table 4.2.



" WHITE CRYSTAL SUGAR PRODUCTION AT UGAR
SUGAR WORKS. "

TABLE 4.2
Financial Position for the last 25 years
 (1962 - 1986)

Year ending	Reserves and Surplus		Fixed Assets		Rate of Dividend on Equity Shares
	Rs. (in lakhs)	%	Rs. (in lakhs)	%	
June					
1962	38.01	100.00	78.44	100.00	12
1963	44.48	117.02	110.58	140.97	6
1964	49.73	130.83	105.00	133.86	15
1965	60.48	159.69	103.00	131.30	15
1966	62.61	165.71	100.71	128.39	15
1967 ⁺ *	35.34	92.97	115.63	147.41	12.5
1968	47.50	125.96	174.25	222.14	12
1969	58.72	154.48	217.64	277.46	10
1970	51.69	135.99	202.80	258.54	-
1971	73.68	193.84	181.06	230.82	14
1972	90.02	236.83	173.90	221.69	20
1973	110.47	290.63	174.21	222.00	15
1974 [*]	70.60	185.74	207.60	264.66	-
1975	89.72	236.04	196.89	251.00	8
1976	97.88	257.51	258.71	329.81	15
1977	109.58	288.29	251.57	320.71	15
1978	113.44	298.44	235.47	300.19	10
1979	109.18	287.24	210.71	268.62	9
1980	40.78	107.28	233.99	298.30	-
1981	46.71	122.88	213.62	272.33	-
1982	44.95	118.25	195-25	248.91	10

Year ending	Reserves and Surplus		Fixed Assets		Rate of Dividend on Equity Shares
	Rs. (in lakhs)	%	Rs. (in lakhs)	%	
1983	54.08	142.27	180.65	230.30	12
1984	72.23	190.02	208.40	265.68	15
September					
1985	86.65	227.96	260.10	331.59	15
1986	112.57	296.15	285.24	363.04	15

Notes : * Bonus shares of the value of Rs.7,47,400/- , Rs 10,65,200/- and Rs.16,81,600/- were issued as fully paid shares in 1950-51, 1966-67 and 1973-74 respectively by capitalisation of reserves.

+ Shares of the face value of Rs.13,26,000/- were issued to the holders of preference 'A' shares out of reserves at the time of conversion of preference into Equity Shares.

The progress of the Ugar Sugar Works Ltd. can be seen above by considering Reserves and Surplus, rate of dividend declared, fixed assets.

The table clearly shows that the company has constantly increased the reserves every year which will ultimately reveal the financial strength so as to face the contingencies arising in future. The table states that in the year 1967, the reserves were capitalized for issuing bonus shares which will also indicate that as far as possible the company has tried to maintain the stability. If 1962 year is taken as a base in reserve and surplus, then it has been nearly trippled in 1986.

With exception of 1967, every year it has shown increase in reserve though it is of fluctuating nature.

As far as possible, the factory has maintained stability in declaring dividend to the shareholders. During the year 1970, 1974, 1980 and 1981, it did not declare the dividend. The main reasons are the company did not earn sufficient profit due to functioning of factory for a short period where the functioning was affected due to shortage of sugarcane in the year 1970. The company capitalized its profit of 1974.

The company did not declare the dividend in 1980 because of stoppage of production due to cane-growers strike which inflicted heavy loss on the factory. Again, the company was not in a position to declare the dividend in 1981 in view of the carried forward loss and non-functioning of the factory for sufficient period. The smooth functioning was affected by shortage of sugarcane.

The company has strengthened its capital position by capitalizing its profit. However the rate of dividend is varying from 6 % to 15 % during the years which is appropriate for getting ready response for the shares in the market.

The fixed assets occupy the predominant place in raising the capacity of the production where huge investment is made permanently. The table indicates that every year as far as possible the company has tried to increase the value of

fixed assets. But there is no constant increase in the total value of fixed assets. Further the table also reveals that there is fluctuating trend in fixed assets. If 1962 year is taken as a base, then it has been more than trippled upto 1986.

From the above we can conclude that the company has kept considerable amount of reserves which went on gradually increasing every year which ultimately speaks about the financial strength which the company has in order to face the contingencies due to unpredictable events. The company has made very fine image in maintaining the stability in the rate of dividend, so that there will be good response from people from whom additional finance is required to be raised. The company has made gradual progress in crushing the sugarcane and production of sugar over 25 years. The company has made remarkable contribution to its financial position by capitalizing the profit. However it would have been better if the company would have increased the rate of dividend, because in the present days we find intensive competition in all fields and people favour to invest their amount in that field which will reward them for the investment.

7 LABOUR WELFARE ACTIVITIES :

The Factory Management believes that "Profit is only one value among others in life". As such the Management, from this angle has been undertaking multifarious welfare activities for the working class. Cordial relations between the

Management and workers is the cardinal principle of good management and the progressive growth of the factory. The management, believes as in this standard, has not lagged behind in adopting measures for the welfare of the employees in various ways so as to enrich their lives in its avenues as far as possible.

The welfare activities of the factory are manifold - educational, medical, social, economic, cultural and recreational etc. The following section deals with these activities in details.

7.1 EDUCATIONAL :

It has been realized by all that "education is the most important single factor in achieving rapid economic development and technological progress and in creating a social order founded on the values of freedom, social justice and equal opportunity". True to its belief in the above ideal, the founding fathers of the factory felt the need for some sort of arrangement for imparting education to the children of the families residing in the factory colonies especially at an outlandish place like Ugar-Khurd. Shri Nanasahab Khadilkar, one of the founder Directors of the Company and a social worker of Ugar-Khurd, took the initiative in this direction and started 'Primary Marathi School' for the colony. This gradually developed into a Middle School by 1948 during which year the school management was taken over by the factory.

Under the management of the factory the school developed into a fullfledged High-School named Shri Hari Vidyalaya, Ugar-Khurd. The prize distribution ceremony of the Shri Hari Vidyalaya is seen in the photograph on page, ^{50.} This High-School is now managed by a Board of Trustees of the Trust named after Dr. Shirgaokar. This High-School has proved to be a boon to the school going children of the factory employees in particular and of the Ugar-Khurd village in general. The High-School has a track history of its dedicated service in the cause of secondary education in this area. The High-School with adequate accommodation, is well-equipped with library, reading room and spacious Gymkhana.

There is also a Balwadi facility for the small children of the factory area. Special Training Officers, to provide upto date training for the workers, have been appointed.

The factory also arranges educational programmes for the workers by way of seminars, lectures by eminent persons and film shows etc.

7.2 MEDICAL :

Maintenance of good health is the primary condition of efficient work by the workers. The workers handling machines of the size making modern sugar factory, are prone to accidental injuries, despite care and caution. To provide for medical help on the spot and without delay, as back as 1947 itself a Hospital in memory of the architect of the factory "Dr. Shirgaokar Smarak Arogya Mandir" was established.



" PRIZE DISTRIBUTION CEREMONY AT SHRI
HARI VIDYALAY, UGAR-KHURD. "



" THE UGAR SUGAR WORKS AND LAGOON PITS "

This Hospital has been of immense help in providing the much needed medical care by the workers. This hospital, now a fullfledged Medical Centre, having 30 beds facility, provides not only medical care to the employees at reasonable rates but also is contributing its might and share in the National Family Welfare Programmes by providing for Maternity and sterilization facilities.

7.3 ECONOMIC MEASURES :

In order to provide for economic security and better standard of living to the employees of the factory, a number of measures have been implemented, apart from payment of regular and due salaries and wages to its employees.

1) Provision of 475 well built R.C.C.houses for workers till November 1987. Of this 345 houses were provided earlier and 130 houses allotted in November, 1987.

2) Power and water supply at concessional rates.

3) Supply of cooking-gas at cheaper rate by way of collection of biogas from the Lagoon-pits - a special experiment made by The Ugar Sugar Works Ltd. This scheme is the first of its kind in India. The Ugar Sugar Works and the area of Lagoon-pits is shown in photograph on page 71. .

4) Workers welfare fund to provide for financial help to the workers during serious illness and other purposes.

5) Making advances to the workers for marriage, purchase of house sites, construction of houses, higher

education of the workers children etc.

6) Supply of uniforms by the factory, for certain category of workers.

7) Working of a Consumer's Co-operative Society for procuring corn and other necessities of life for the workers so as to cut the middle mans margin as far as possible.

7.4 SOCIAL AND CULTURAL :

1) As sort of incentive to the workers, on 2nd October of every year, on the eve of the Karnataka Workers Day, prizes are awarded by the factory to the workers showing extraordinary skill in the performance of their duties during the year.

2) Arrangement of reception ceremony by the factory for the newly married couples.

3) Befitting farewell to the employees with gifts retiring after service.

4) Canteen facility for the workers, inside the factory. Providing tea and snacks at concessional rates.

5) Celebration of National Festivals especially 'Ganesh Utsava' is the highlight of the activities of the factory during which special lectures by eminent men of letters and concerts by noted artists are arranged. The factory staff also arrange to stage a couple of Kannada and Marathi dramas on this holy occasion.

6) A separate Gymkhana building "Vihar" is the most attractive recreational facility that hits the eye of everyone that enters factory site. The building 'Vihar' with stage, an audience hall-cum-badminton court capable of seating 700 people and with a northern wing to serve as a pavilion has been constructed by the factory for the Gymkhana. This building also houses a library and reading room at one end and Green Room at the other. Almost all popular newspapers and magazines in Kannada, English and Marathi are subscribed to by the Gymkhana Library for the benefit of the factory employees to acquaint them with the day-to-day happenings.

The labour welfare facilities mentioned above have been provided to the employees of the factory. But the educational, medical, social and cultural facilities of the Ugar Sugar Works are also being availed by the people of Ugar-Khurd and surrounding villages. Thus though these facilities are available on the campus of Ugar-Sugar Works, the people in general are also being benefited.

8 AREA OF OPERATION OF UGAR SUGAR WORKS

It is rather needless to point out that the purpose of a sugar factory i.e. production of sugar, could be served if there is a guarantee of sugarcane supply to the factory. What is required is land area around the factory location with potentiality of sugarcane cultivation with adequate irrigation facilities. Consistent and adequate sugarcane supply can

ensure both the functioning and development of the factory. In the absence of adequate supply of sugarcane the very purpose of the sugar factory shall be defeated.

Hence it is necessary to ensure regular and adequate sugarcane supply to the factory if necessary even by statutory stipulation. Accordingly Ugar Sugar Works Ltd. is assured of sugarcane supply by demarketing the area for supplying cane to this factory.

The Government of Karnataka, in their order No.HDC. 147 COF.75 dated 22-7-1985 have allotted following sugarcane area to sugar factories in Belgaum district. This has been done on the basis of recommendations of an expert committee appointed by the government itself.

By the above quoted order 89 villages are allotted to this factory. These villages are covered by two talukas of Belgaum district namely Athani and Chikodi. However, majority of the villages covered are from Athani taluka which are shown in figure 4.1. These 89 villages are grouped into 4 zones for transportation purpose.

The following schedule contains the list of villages allotted to M/S Ugar Sugar Works Ltd., Ugar-Khurd, Belgaum district.

TABEE 4.3

VILLAGES UNDER THE OPERATION OF UGAR SUGAR WORKS

Sr.No.	Village
* 1	Anantpur

Sr.No.	Village
*2	Malabad
* 3	Balligeri
4	Gundewadi
5	Parthanhalli
6	Chanakeri
7	Shirur
8	Ajur
*9	Khilegaon
10	Pandegaon
11	Jambagi
12	Kallotti
13	Shivanur
14	Abbihal
15	Ingalgaon (A)
16	Aralinhatti
17	Bommanal
* 18	Madbhavi
19	Hanmapur
20	Karanagi
21	Bevanur
22	Tawashi
23	Nagnur (P.A.)
24	Sambargi
* 25	Athani
* 26	Tangadi
* 27	Shinnal
* 28	Muragundi

Sr.No.	Village
29	Masarguppi
30	Naganur (P.K.)
31	Dodwad
* 32	Saptasagar
* 33	Thirth
* 34	Hulagabali
35	Khavatakoppa
36	Darur
* 37	Ingalagaon (Nadi)
* 38	Halyal
* 39	Awarkhod
* 40	Sankratti
* 41	Kokatnur
* 42	Badagi
* 43	Artal
* 44	Aigali
45	Badachi
46	Yakkanchi
* 47	Kohalli
48	Yalihadalagi
49	Adahalli
* 50	Nandagaon
51	Ghatnatti
* 52	Halalli
* 53	Katageri
54	Kodaganur
* 55	Kakamari

Sr.No.	Village
* 56	Ramathirth
* 57	Bannur
58	Kannal
* 59	Kottalagi
* 60	Telasang
* 61	Ainapur
62	Katral
63	Banajwad
* 64	Shedbal
* 65	Mangasuli
* 66	Shiraguppi
* 67	Kagwad
* 68	Jugul
69	Shahapur
* 70	Kittur
71	Kempawad
72	Navalihal
* 73	Ugar B.K.
74	Kusnal
75	Molwad
* 76	Ugar KH.
* 77	Mole
78	Koulgudda
79	Lokur
* 80	Mangawati
* 81	Savadi
82	Nandeshwar
83	Janawad

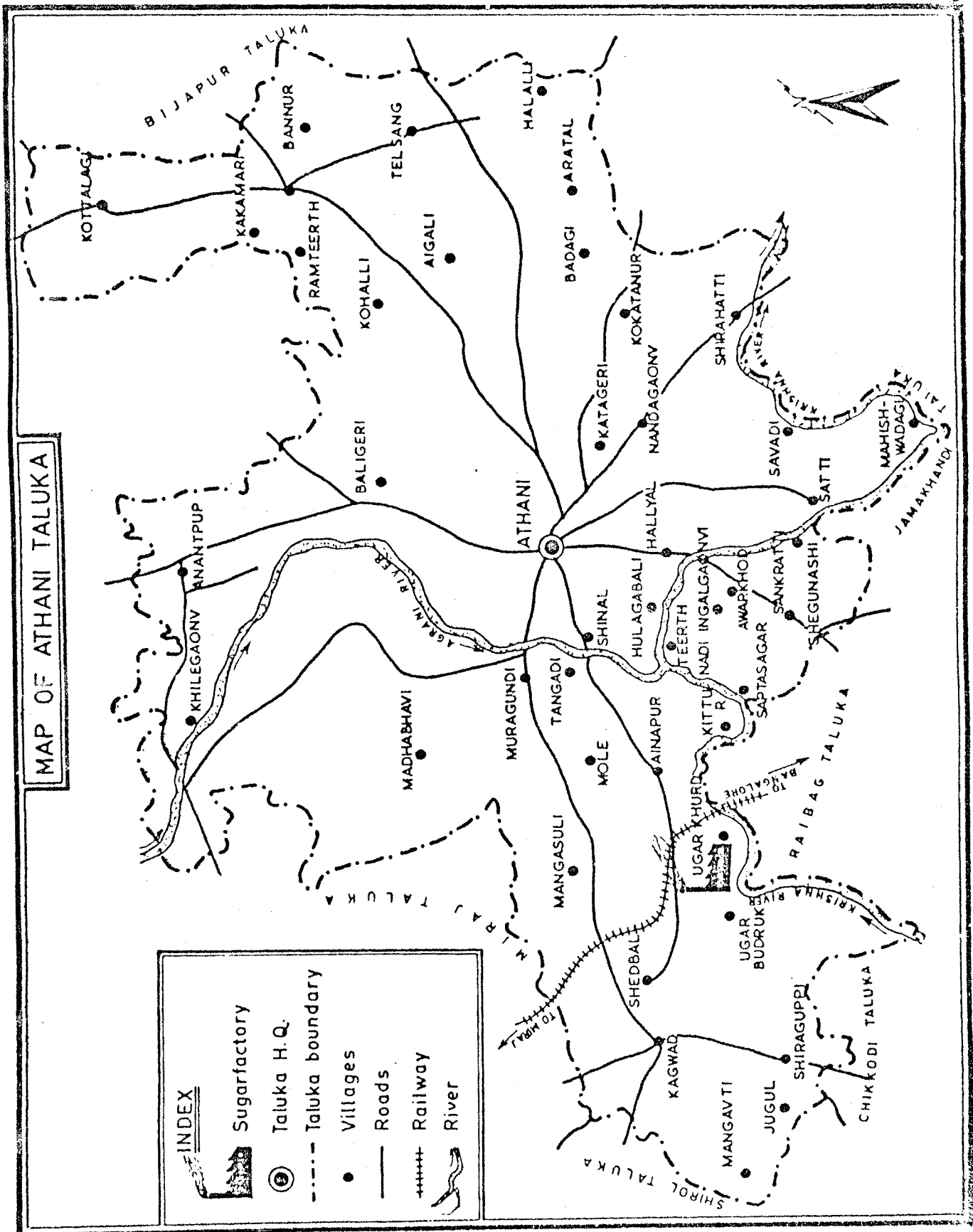


FIG. 2

Sr.No.	Village
* 84	Maheshwadagi
* 85	Shegunshi
* 86	Satti
* 87	Shirahatti
88	Balawad
89	Zunzurwad

* The villages shown in Figure 2.

The table shows that there are 89 villages from Athani and Chikodi talukas being covered under the area of operation of Ugar Sugar Works and due to this wide area, the factory has been successful in getting sugarcane for its expanding crushing capacity.

Apart from the internal aspects of production and finance, it is necessary to see the developmental activities of the factory in the area of operation. Irrigation facilities are the most crucial for sugarcane cultivation and the attempt has been made to analyse the situation in this respect.

9 IRRIGATION FACILITIES BY UGAR SUGAR WORKS :

The stability and prosperity of agriculture in India mainly depends on irrigation facilities. The Ugar Sugar Works has made significant contribution in providing irrigation facilities ever since its inception. The 'King Crop' sugarcane

cultivation cannot be undertaken without irrigation facilities. The Ugar Sugar Works has increased acreage of sugarcane cultivation by way of lift irrigation schemes it has promoted and financed.

The River Krishna is the sole natural source of water for human beings, animals, crops and machines. The water is the natural source but the lifting of it and feeding it to the crops and human-beings is a costly affair. To save the water and to minimize cost of lifting of water, the factory has undertaken many modern Hume Pipe lines. The factory Hume Pipe lines have a total length of about 18 miles.

To bring more land under irrigation in its command are the factory has formed co-operative cane growing societies such as -

- 1) Better Farming Co-operative Society Ltd., Jugal.
- 2) Better Farming Co-operative Society, Gundwad
- 3) Molawad - Kusanal Co-operative Lift Irrigation Society Ltd., Molawad.

The following Table gives a complete picture of the various Lift Irrigation schemes undertaken by the Ugar Sugar Works in and around Ugar to create the much needed permanent water supply facility to the farming community.

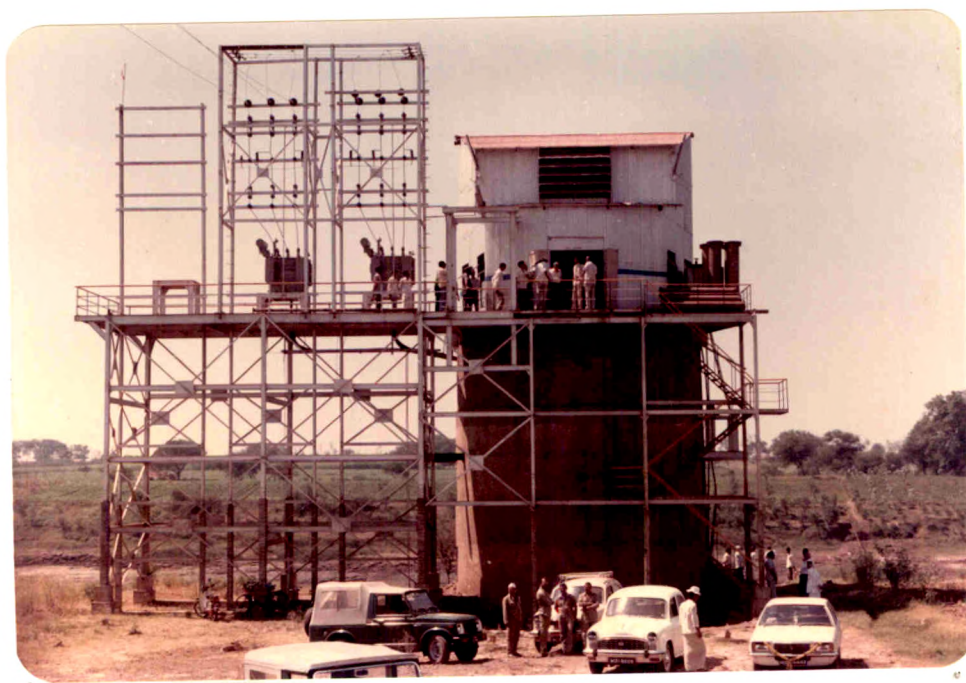
TABLE 4.4

IRRIGATION FACILITIES BY UGAR SUGAR WORKS

Sr. No.	Place of the Pumping Station	Year of Establishment	Installed capacity in H.P.	Area covered in acres
1.	2.	3.	4.	5.
1	<u>Ugar-Khurd</u>			
	Pumping Station No.1	1944	125 H.P.)	153
	-do- No.2	1944	50 H.P.)	
	-do- No.3	1944	125 H.P.)	
	-do- No.4	1944	125 H.P.)	
	-do- No.5	1944	125 H.P.)	
	-do- No.6	1944	100 H.P.)	
2	<u>Ugar-Khurd</u>			
	Pumping Station No.1	1944	100 H.P.)	486
	-do- No.2	1944	50 H.P.)	
3	<u>Kusanal</u>			
	Pumping Station No.1	1953	75 H.P.)	362
	-do- No.2	1953	45 H.P.)	
	-do- No.3	1953	50 H.P.)	
	-do- No.4	1953	124 H.P.)	
	-do- No.5	1953	115 H.P.)	
	-do- No.6	1953	75 H.P.)	
4	<u>Jugul</u>			
	Pumping Station No.1	1964	75 H.P.)	176
	-do- No.2	1964	75 H.P.)	
	-do- No.3	1964	45 H.P.)	
	-do- No.4	1964	115 H.P.)	

1	2	3	4	5
5	<u>Jayantinagar</u>			
	Pumping Station No.1	1970	100 H.P.)	
	-do- No.2	1970	75 H.P.)	95
	-do- No.3	1970	125 H.P.)	
6	<u>Teerth</u>			
	Pumping Station No.1	1972	80 H.P.	92
7	<u>Krishna Kittur</u>			
	Pumping Station No.1	1974	250 H.P.)	
	-do- No.2	1974	250 H.P.)	604
	-do- No.3	1974	250 H.P.)	
8	<u>Krishnakittur</u>			
	Booster Station No.1	1985	50 H.P.	76

The above table reveals the following facts in respect of provision of irrigation facilities created to enhance the growth of sugarcane in Ugar-Khurd and surrounding villages. The Ugar-Khurd Pumping Station under Ugar Sugar works, can be seen in photograph on page, ^{32.} The above table indicates extension of irrigation facilities keeping in view the large potential fertile land available for sugarcane growing in villages located on the bank of river Krishna and the huge natural source of perennial water supply needed for sugarcane growth.



" IRRIGATION PUMPING STATION,
UGAR-KHURD. "

10 IRRIGATION FACILITIES AND EXPANSION IN CANE

CRUSHING CAPACITY :

To begin with, way back in 1944, 8 pumping stations were erected at Ugar-Khurd with an installed capacity of 800 H.P. covering 639 acres of land under irrigation. From these stations water was also supplied to the factory and drinking water facility made available to the factory colonies.

The first phase of extension of irrigation facility started in 1953, during which year 6 pumping stations were erected on the bank of Krishna river at nearby Kusanal village. These 6 stations with an installed capacity of 485 H.P. brought 362 acres of land under irrigation. This extension of irrigation facility was necessitated in view of the expansion of the daily sugarcane crushing capacity of the factory in 1954 from 500 TCD to 800 TCD.

In 1960 the daily cane crushing capacity was further increased to 1200 TCD. With this 4 pumping stations were erected on the bank of Krishna river at Jugul village in 1964 with an installed capacity of 310 H.P. to irrigate 176 acres of land for sugarcane growing.

The crushing capacity of the factory was further increased to 2000 TCD in 1967. And 3 more pumping stations were erected at Jayantinagar in 1970 with an installed capacity of 300 H.P. covering additional 95 acres of land under irrigation and one pumping station at Teerth village

in 1972 with an installed capacity of 80 H.P. irrigating 92 acres of land.

In 1974 an additional 604 acres of land was brought under irrigation at village Krishna-Kittur erecting 3 pumping stations, each with 250 H.P. installed capacity. This additional irrigation facility facilitated increased sugarcane supply leading to further increase in the daily cane crushing capacity of the factory in 1976 from 2000 TCD to 3000 TCD.

The latest phase of addition of irrigation facility has taken place in 1985. During this year one more pumping station, with an installed capacity of 50 H.P. to irrigate 76 acres of land, was added at Krishna-Kittur. With this in all an area of 2044 acres of land has been brought under irrigation facility upto 1985 and this facility is provided to all the cultivators irrespective of whether they are shareholders or not.

In view of the tremendous increase in the supply of sugarcane to the factory, the management of the factory, acting on time, has procured a licence in 1987, for crushing additional 2000 TCD and thus raising the crushing capacity to 5000 TCD.

A close observation of the table, showing extension of irrigation facilities made available, reveals that expansions of irrigation facilities have taken place, at more or

less, regular intervals. Above all the expansion of irrigation facilities also speaks for the fact that farmers of the area covered by the factory, have been very much attracted towards growing this 'King Crop' sugarcane.

Thus the irrigation facilities created from time to time, have certainly benefitted the sugarcane cultivators to increase the production of sugarcane. These irrigation schemes have assured the factory of additional cane-supply which is very essential. The expanding cane crushing capacity from 500 TCD in 1941 to 5000 TCD in 1987-88 speaks about the increasing sugarcane grown by the farmers owing to the aforesaid and timely irrigation schemes undertaken by the factory.

It is observed that the investment in irrigation leads to the increase in per acre yield. Accordingly the factory has also introduced various plans in sugarcane development programme. The factory has carried out different programmes in villages and in its command area. It has played an important role in carrying out agro-economic development of this rural area through its multifarious programmes.

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