

Chapter - 3

CHAPTER – 3
MANAGEMENT AND COMPARATIVE STUDY OF SHRI
MAHANKALI CO-OPERATIVE SUGAR FACTORY,
KAVATHE MAHANKAL.

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CHAPTER – 3

MANAGEMENT AND COMPARATIVE STUDY OF SHRI MAHANKALI CO-OPERATIVE SUGAR FACTORY, KAVATHE MAHANKAL.

3.1 MANAGEMENT.

Management of a co-operative sugar factory is a difficult task in the context of the development in the sugar industry and co-operative character of such factory. Growth of sugar factories has been very fast in the recent years. This is particularly true in case of co-operative sugar factories in Maharashtra. The sugar factories that are established in Maharashtra are all in the co-operative sector. For example, 1959-60 there was only one sugar factory in Sangli district in the co-operative sector. In 1999-2000 the number of co-operative sugar factories in Sangli district stood at 9 with the first factory's capacity increased to about five times. This is how the number of sugar co-operatives in Maharashtra has increased to 97 in 1993 -94 from 28 in 1960-61. This has put a pressure on almost all of them in getting sufficient quantity of sugarcane for crushing every year. The co-operative sugar factory had to borrow funds at the interest rates and other terms dictated by the leading institutions. Profits and profitability can not be treated as a viable parameter to measure the performance of a co-operative sugar

factory, as it is concerned more with giving better price to the sugarcane producer.

Management of a co-operative sugar factory may be understood and seen in the context of how efficiently and effectively the factory has run. One way to understand this is to list down the various functions and see how efficiently and effectively these functions are carried out.

3.2 FUNCTIONS OF A CO-OPERATIVE SUGAR FACTORY.

1. Ensuring the continuous flow of sugarcane during the production season.
2. Taking measures to see that sugar recovery is improved.
3. Taking steps to minimize losses e.g. in respect of molasses, press-mud etc.
4. Achieving the objective of paying the maximum price for the sugarcane producer.
5. Building up infrastructure facilities.
6. Exploiting opportunities for the benefit of the factory.

Management of Shri Mahankali Co-operative sugar factory is studied with reference to each of the above functions.

3.2.1 Ensuring a continuous flow of sugarcane :

The factory has a well equipped departments of agriculture, cane development and production to ensure timely and continuous flow of sugarcane during the production season. All these departments have to work in a coordinated manner to achieve the objectives.

As seen earlier, more and more land was brought under sugarcane cultivation in the area of jurisdiction of the factory. In 1985-86 only 3.69% of the total land under sugarcane cultivation was from the area of the factory, jurisdiction which increased to 60.11% in 1999-2000. This has its implications on the sugarcane crushed by the factory. In 1985-86, only 3.65% the total sugarcane crushed was from the area of the factory jurisdiction. This percentage increased to 59.97% in 1999-2000.

Management of the sugar factory has done following things for this purpose :

a) The factory has taken help of Padegaon sugarcane development Institute to test soil in the area of its jurisdiction and developed seed plots. These seed plots are used for supplying seed to the needy cultivator.

b) The factory has tried to create more irrigation facilities and persuade sugarcane growers to use water economically. For this purpose the factory has helped its members to get their old wells repaired and also constructed. The factory has encouraged its members to have drip irrigation schemes. The factory has helped its members in getting fertilizers at subsidized rates.

The factory has arranged from time to time the farmers meet to discuss new developments in the field of agriculture.

3.2.2 Measures For Improving Recovery :

It is difficult for a sugar factory to maintain good recovery record because about 50% of total sugarcane coming from out of its jurisdiction.

In case of Shri Mahankali Co-operative sugar factory, 26.53%, 28.58%, 19.58% and 8.47% of the total sugarcane crushed was from outside the state of Maharashtra in year 1985-86, 1991-92, 1995-96 and in 1999-2000 respectively. This is a high percentage of dependence on the sugarcane coming from outside the state. Maintaining good sugar recovery depends on early crushing of the sugarcane harvested. Shri Mahankali co-operative sugar factory has a consistently good record of sugar recovery (i.e. 10.10% to 12.04%). This has been possible only because of the co-

ordination achieved by agriculture department and the production department of the factory.

3.2.3 Production of Molasses:

The production of molasses as compared to the total sugarcane crushed year wise is given below in table no.3.1. The molasses is sold by the factory on tender basis.

Table No. 3.1
Production of Molasses.

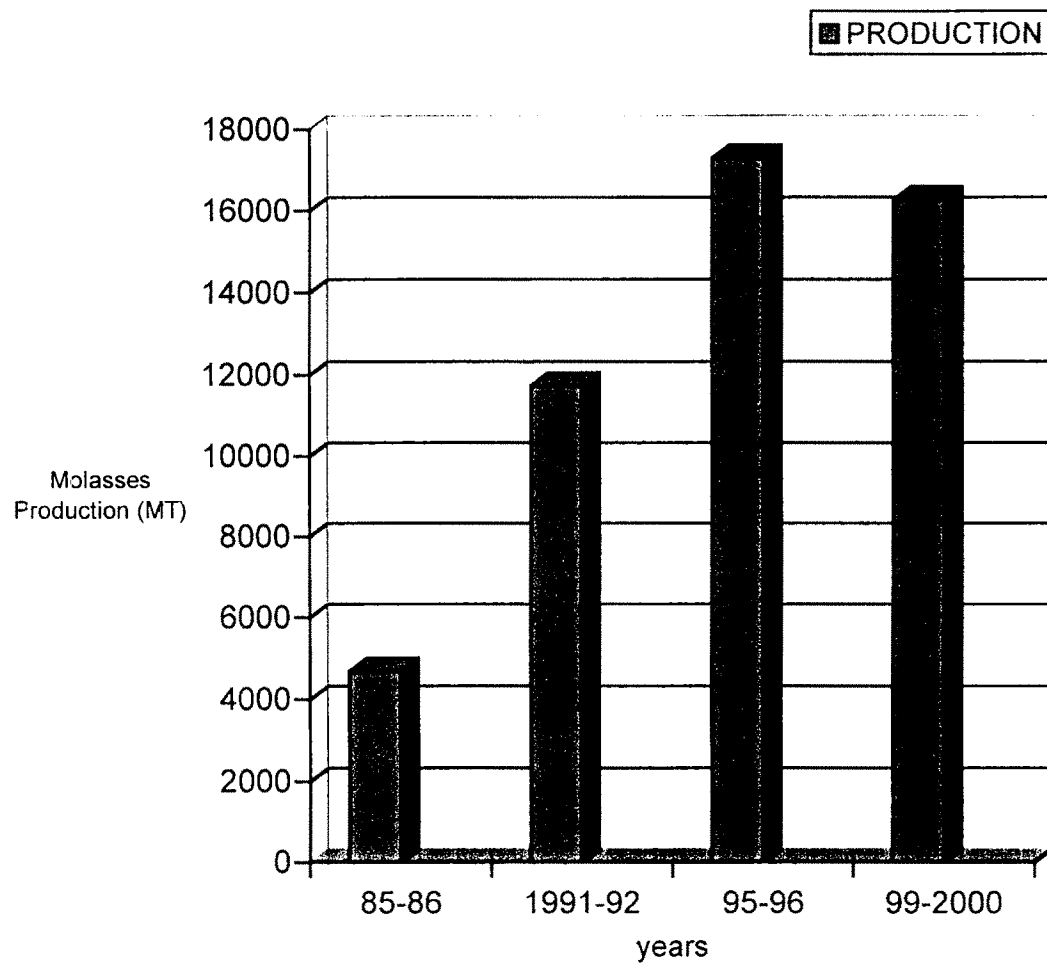
Year	Production of molasses (MT)	Total Sugarcane crushed (MT)	% of molasses to sugarcane crushed.
1985-86	4701	118059	3.98
1991-92	11726	301820	3.88
1995-96	17302	403770	4.28
1999-2000	16279	441540	3.69

Source : Compiled from Annual Reports of the Factory.

The above table shows that in 1985-86 the molasses production was 3.98% which was reduced to 3.88% in year 1991-92, then it is increased to highest of 4.26% and lastly it is reduced to 3.69% of total sugarcane crushed.

The percentage of molasses produced to total sugarcane crushed is in between 3.69% to 4.28%.

GRAPH NO. 3.1
PRODUCTION OF MOLASSES



3.2.4 Production of Bagasse :

The bagasse is produced by the factory from the solid waste of the crushed sugarcane. The bagasse produced is mainly used as a fuel by the factory and unused bagasse is sold on tender basis to other parties.

The production of bagasse as compared to the total sugarcane crushed year wise of Shri Mahankali Sugar Factory is given in table no.3.2.

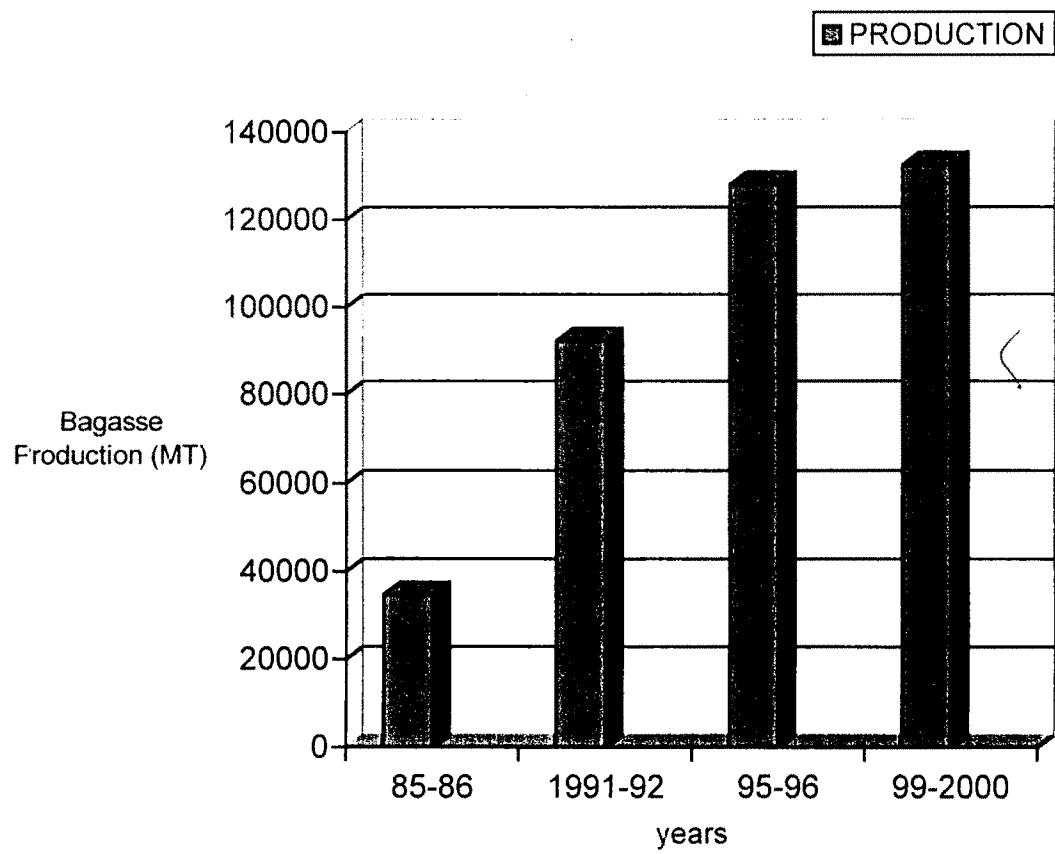
Table No. 3.2
Production of Bagasse

Year	Production (MT) of bagasse	Total Sugarcane crushed (MT)	% of bagasse of sugarcane crushed.
1985-86	34591	118059	29.30
1991-92	92297	301820	30.58
1995-96	128076	403770	31.72
1999-2000	132507	441540	30.01

Source : Compiled from Annual Reports of the Factory.

From the table it is seen that the bagasse production is in between 29.30% to 31.72% as compared to the total sugarcane crushed.

GRAPH NO. 3.2
PRODUCTION OF BAGASSE



3.2.5 Maximum Price for Sugarcane :

The price paid by Shri Mahankali co-operative sugar factory for the sugarcane producers both members and members is given table no.3.3 below

Table No. 3.3
Price of Sugarcane Paid by Factory.

Year	Price per Tonne(Rs.)	Percentage Changed
1985-86	300.00	-
1991-92	475.00	58.33%
1995-96	755.00	58.94%
1999-2000	910.00	20.52%

Source : Compiled from Annual Reports of the Factory.

From the above table it is seen that, in 1985-86 the price paid per tonne to the sugarcane was Rs.300/- in 1991-92 it is increased to Rs.510 (58.33% increase). In 1995-96 the price paid was Rs.755 per tonne (58.94% increase as compared to 1991-92). The rate given is again increased to Rs.910 per tonne in 1999-2000 (20.52% increase as compared to 1995-96)

The general trend of the rates given by the Shri Mahankali Sugar Factory to the sugarcane growers is increasing one. This is nothing but good and healthy sign of the factory.

3.2.6 Building up Infrastructural Facilities:

Shri Mahankali co-operative sugar factory has played important role in creating the infrastructural facilities, such as road construction, social forestry, financial assistance to school building, plant modernization of machinery etc.

In fact the factory has paid adequate attention to modernizing the machinery. Sugar grades installed by the factory is useful in gradation of the sugar produced, enabling the factory in getting high quality sugar. The factory has further planned to install more and more sophisticated machinery for the purpose of improving efficiency.

Moreover the factory has installed ETP plant for purification of waste water. This is in accordance with the directives of the water pollution control board.

3.3 COMPARATIVE ANALYSIS.

Managerial performance of shri Mahamkali co-operative sugar factory may also be studied by making comparative analysis of some other factories. These factories are situated in near about area from Shro Mahankali co-operative sugar factory. So there are no specific locational advantages or disadvantages except irrigation facilities. The factories are as under.

Sr.No.	Name of the co-operative factory	Capacity (MTD)
1	Hutatma Kisan Ahir, Walva	1250
2	Vishwas, Chikhali (Shirala)	1250
3	Yashwant, Khanapur	1250
4	Manganga, Atpadi	1250

All these four co-operative sugar factories have 1250 MTD capacity which is the case with Shri Mahankali co-operative sugar factory. Similarly all these sugar factories have began operations almost at the time, Shri Mahankali co-operative sugar factory started operating.

For the comparison, following parameters are used.

- i) Area under sugarcane in the jurisdiction of the factory.
- ii) Yield of sugarcane per hectare.
- iii) Sugarcane production in the area of jurisdiction.
- iv) Sugarcane crushed.
- v) Sugarcane recovery.
- vi) Season day's and
- vii) Sugarcane Price Paid.

3.3.1 Factory wise area under sugarcane.

Table No. 3.4

Sugarcane area in the jurisdiction of the sugar factories.

Year	Mahankali K.Mahankal	Hutatma Walva	Vishwas Chikhali	Yashwant Khanapur	Manganga Atpadi
1990-91	2215.60	3014.14	1620.75	2077.33	5633.40
1991-92	2092.50	3033.07	3643.01	2372.86	3581.05
1992-93	2321.40	3131.75	5018.00	1960.69	2912.20
1993-94	-	2522.50	3603.00	1917.73	0581.00
1994-95	1611.00	2677.11	4397.45	2848.67	3051.00
1995-96	1067.18	3455.97	4926.88	3524.08	1470.00
1996-97	2028.41	2956.26	5095.72	3494.44	1551.00
1997-98	2078.03	2969.79	3556.29	2476.95	1329.00
1998-99	2293.00	3775.04	4156.85	2094.26	1762.00
99-2000	4050.00	3452.15	4315.75	-	4205.00

Source : Regional Sugar Director, Government of Maharashtra
Kolhapur Office.

From table no.3.4 following observations can be stated :

The area under sugarcane for Mahankali factory Kavathe Mahankal has increased from 2215.60 to 4050 Hect (i.e. 82.79% increase) from 1990-91 to 1999-2000 which is the highest percentage increase as compared to other four factories.

Considering the area under sugarcane within jurisdiction for the year 1999-2000 the maximum area under sugarcane is of Vishwas factory, Chikhali (4315.75 Hect) followed by Manganga,

Atpadi (4205 Hect) and thirdly Mahankali, Kavathe Mahankal (4050 Hect).

3.3.2 Yield of Sugarcane.

Table No. 3.5

Yield of Sugarcane per hectare (MTS)

Year	Mahankali K.Mahankal	Hutatma Walva	Vishwas Chikhali	Yashwant Khnapur	Manganga Atpadi
1990-91	50.00	76.06	52.70	58.16	56.00
1991-92	50.00	78.07	62.13	65.68	53.00
1992-93	50.00	77.99	53.62	62.12	50.00
1993-94	50.00	71.04	49.86	56.07	50.00
1994-95	50.00	86.53	49.28	68.89	50.00
1995-96	57.05	91.29	62.56	62.45	50.00
1996-97	54.03	78.42	48.12	58.15	50.00
1997-98	58.00	87.50	52.15	61.66	51.00
1998-99	57.05	91.45	63.84	65.68	54.00
99-2000	66.00	83.10	55.73	-	66.00

Source : Regional Sugar Director, Government of Maharashtra Kolhapur Office.

From the table no.3.5 it can be stated that the Hutatma Kisan Ahir Walva has the highest sugarcane yield ranging from 71.04 to 91.45 MT/Hect, followed by Yashwant Sakhar Karkhana ranging from 56.07 to 68.89 MT/Hect and thirdly Mahankali, Kavathe Mahankal and Manganga, Atpadi ranging from 50.00 to 66.00 Mt/Hect and latterly Vishwas, Chikhali ranging from 49.25 to 63.84 MT/hect.

Considering the yield of sugarcane for the year 1999-2000, the highest yield is 83.10 MT/hect of Hutatma Kisan Ahir, Walva, followed by 66.00 MT/hect of Mahankali, Kavathe Mahankal and Manganga, Atpadi, both.

3.3.3 Factory wise Sugarcane production

Table no. 3.6
Sugarcane production in the area of jurisdiction of sugar factories (in MT)

Year	Mahankali K.Mahankal	Hutatma Walva	Vishwas Chikhali	Yashwant Sugarcane	Manganga Atpadi
1990-91	103275	240324	200000	116792	315464
1991-92	53360	229452	230000	137371	234312
1992-93	97072	244276	220926	101272	138068
1993-94	-	179274	178070	41247	29100
1994-95	95295	197035	214991	124151	160357
1995-96	51445	299285	308225	146347	82320
1996-97	108384	206290	247359	110603	80106
1997-98	114054	235873	193192	96043	75400
1998-99	116243	311293	264364	93231	95743
99-2000	264804	256012	245000	-	252300

Source : Regional Sugar Director, Government of Maharashtra
Kolhapur Office.

From table no. 3.6 following observation can be stated. Hutatma kisan Ahir factory, Walva has the highest sugarcane production ranging from 179274 to 311293 MT, followed by Vishwas factory, Chikhali ranging from 178070 to 308225 MT.

Considering the sugarcane production for the year 1999-2000, the Mahankali factory, Kavathe Mahankal has highest sugarcane production of 264804 MT as compared to others.

The Mahankali co-operative sugar factory, Kavathe Mahankal has the highest increase in sugarcane production from 103275 MT in 1990-91 to 264804 Mt in 1999-2000 (i.e.156.40% increase) as compared to the other factories.

3.3.4 Factory wise Sugarcane crushed

Table No. 3.7
Factory wise Sugarcane Crushed ((in MT)

Year	Mahankali K.Mahankal	Hutatma Walva	Vishwas Chikhali	Yashwant Khanapur	Manganga Atpadi
1990-91	270407	283279	261311	304208	364207
1991-92	301820	302567	255450	385769	303732
1992-93	218664	358224	219179	242291	268420
1993-94	-	290001	170561	294185	88500
1994-95	352725	353449	261684	354842	323260
1995-96	403770	487429	304052	224070	324018
1996-97	284290	351825	344096	205437	133000
1997-98	311195	377852	248954	289267	113366
1998-99	405710	442006	306066	-	245594
99-2000	441540	434520	363287	-	328057

Source : Regional Sugar Director, Government of Maharashtra
Kolhapur Office.

From table no. 3.7 following observation can be stated
Hutatma Kisan Ahir Sugar Factory, Walva has the highest range of

sugarcane crushed of 283279 to 487429 MT followed by Mahankali co-operative sugar factory, Kavathe Mahankal of 218664 to 441540 MT.

Considering the sugarcane crushed in year 1999-2000. The Mahankali co-operative sugar factory, Kavathe Mahankal has the highest record of sugarcane crushed of 441540 MT as compared to other four factories. Comparing the sugarcane crushed in 1990-91 to 1999-2000 the Mahankali co-operative sugar factory has the highest percentage increase i.e. 63.28% increase.

3.3.5 Factory wise Sugar Recovery.

Table No. 3.8
Factory wise Sugar Recovery (%)

Year	Mahankali K.Mahankal	Hutatma Walva	Vishwas Chikhali	Yashwant Khanapur	Manganga Atpadi
1990-91	11.20	12.60	11.62	10.69	09.98
1991-92	11.65	12.93	12.38	11.77	10.64
1992-93	11.65	12.77	12.12	11.29	10.60
1993-94	11.97	12.83	12.13	11.32	10.03
1994-95	12.12	13.10	12.17	11.22	10.79
1995-96	11.57	12.58	12.01	10.45	10.32
1996-97	12.00	13.18	12.47	11.13	10.61
1997-98	11.56	12.98	12.45	10.51	10.46
1998-99	11.85	12.54	12.34	11.50	10.57
99-2000	12.04	13.23	12.54	-	10.39

Source : Regional Sugar Director, Government of Maharashtra Kolhapur Office.

From the table no. 3.8 following observation can be stated-

The Hutatma Kisan Ahir Sugar Factory Walva has highest recovery record ranging from 12.54 to 13.23% followed by Vishwas factory, Chikhali ranging from 11.62 to 12.54% and thirdly followed by Mahankali co-operative sugar factory Kavathe Mahankal ranging from 11.20 to 12.12%.

The Manganga factory, Atpadi has the lowest record of sugar recovery ranging from 9.98 to 10.79%.

Considering only the record of 1999-2000, the Hutatma Kisan Ahir factory stood first having sugar recovery of 13.23% followed by Vishwas factory, Chikhali 12.54% and thirdly followed by Mahankali Factory, Kavathe Mahankal 12.04%.

3.3.6 Factory wise Season Days Used .

Table No. 3.9
Factory wise Season Days Used.

Year	Mahankali K.Mahankal	Hutatma Walva	Vishwas Chikhali	Yashwant Khanapur	Manganga Atpadi
1990-91	173	168	201	205	205
1991-92	190	169	187	190	202
1992-93	143	183	149	170	173
1993-94	126	150	116	140	105
1994-95	198	181	191	188	207
1995-96	222	232	223	229	222
1996-97	163	173	166	151	114
1997-98	157	178	164	149	125
1998-99	200	209	197	191	185
99-2000	181	181	185	-	227

Source : Regional Sugar Director, Government of Maharashtra
Kolhapur Office.

From table no 3.9 the following statements can be stated :

In year 1995-96 the season days used by every above factories are maximum considering from year 1991-92 to 1999-2000. This is because the sugarcane production in 1995-96 was increased to a considerable extend.

The Hutatma Kisan Ahir factory, Walva has highest record of season days of 232 days followed by Yashwant Sahkari Sakhar Karkhana of 229 days and thirdly followed by Manganga, Atpadi of 227 days.

The lowest season days per year record is of Manganga, Atpadi of 105 days followed by Vishwas Sugar factory, Chikhali of 116 days, and thirdly followed by Mahankali co-operative sugar factory of 126 days. The lowest seasonal days are seen of each factory is 1993-94, this is because of the low sugarcane production and consiquently low crushing.

3.3.7 Sugarcane Price Paid by Factories.

Table No. 3.10
Sugarcane Price Paid by Factories. (Rs./ per Tonne)

Year	Mahankali K.Mahankal	Hutatma Walva	Vishwas Chikhali	Yashwant Khanapur	Manganga Atpadi
1990-91	570	545	443	507	405
1991-92	475	500	456	452	410
1992-93	700	728	642	540	500
1993-94	-	940	855	830	670
1994-95	751	801	711	700	635
1995-96	755	850	715	565	460
1996-97	965	964	782	645	460
1997-98	985	1066	846	808	540
1998-99	885	1001	790	-	560
99-2000	910	1001	844	-	560

Source : Regional Sugar Director, Government of Maharashtra Kolhapur Office.

From table no.3.9, it is stated that –

The highest sugarcane price paid is Rs.1066/- per MT by Hutatma Kisan Ahir Factory, Walva in year 1997-98, followed by Mahankali co-operative sugar factory, Kavathe Mahankal Rs.985/- and thirdly followed by Vishwas Factory, Chikhali of Rs.846/- per MT and lastly Manganga, Atpadi of Rs.670/- per MT.

All the factories except Manganga, Atpadi record of highest sugarcane price paid in the year 1997-98. The lowest sugarcane price is paid by Manganga factory, Atpadi with range from Rs.405/- per MT to Rs.670/- per MT.

3.4 CONCLUSION.

Management of a co-operative sugar factory may be understand and seen in the context of how efficiently and effectively the factory has run. The efficiency of factory depends on ensuring continuous flow of sugarcane, measures to improve sugar recovery, steps to minimise losses, achieving the objective of paying maximum price for sugarcane and building infrastructural facilities.

The Mahankali sugar factory Kavathe Mahankal has well equipped department of agricultural sugarcane development to ensure timely and continuous flow of sugarcane. The area under

cultivation within jurisdiction was increased year (by year. The sugarcane crushing has been increased from 118059 MT in 1985-86 to 441540 MT in 1999-2000. Also the sugar produced is increased from 118540 bags to 531165 bags in 1999-2000. The sugar recovery of this factory was in between 10.10% to 12.04%. The sugarcane price given by the factory to the sugarcane growers is continuously increased from Rs.300 per MT in 1985-86 to Rs.910 per MT in 1999-2000.

From comparative study of five factories in the same locality it is seen that Mahankali factory, Kavathe Mahankal stood second in sugarcane crushed per year and in sugarcane price paid. It stood third in yield of sugarcane per hectare and in sugar recovery.