



## A STUDY OF DEVELOPMENT OF BHIMA COOPERATIVE SUGAR FACTORY SOLAPUR

**Dr. S. V. Shinde**

Associate Professor , D.A.V. Velankar College of Commerce, Solapur.

### ABSTRACT :

*Agro-processing is essentially a method important adding activity to agricultural production and therefore makes agriculture a simpler contributor to industrial growth establishing agriculture-industry linkages. In agro-based industries, the essential parts ar inputs drawn from agriculture and their process to suit the need of the shoppers.*



**KEYWORDS :** *Agro-processing , agriculture , crucial farm-industry.*

### INTRODUCTION

The agro industries therefore give the crucial farm-industry linkage that helps accelerate agricultural development by making backward and forward linkages. the expansion in agro-based industries features a huge potential to trigger development through adding worth to the farmers manufacture, generating employment opportunities and increasing farmers net profit. This successively motivates the farmers for higher productivity and exposes prospects of commercial development. The processed merchandise even has an oversized export potential.

### About Bhima Sahkari Sugar Factory, Takali Sikandar:

In the year 1975 BhimaSahakari Sugar Factory was established at Takali village Moholtaluka of Solapur district. After 10 years of establishment of the factory 50 villages comes under the jurisdiction area of this factory. In the beginning the crushing capacity of the factory was 1250 metric tons and produced 31365 quintals of sugar. The highest working days of the factory was 230 days in year 1995-96 and production of sugar was 458850 quintals, later in next year factory working days was 155 days, due to which it effect on its sugar production and sugar was produced 233035 quintals in 2000-2001. Presently there is 20326 members were joined with the factory and 51 villages are under this factory jurisdiction and total 73 villages are connected with factory to provide sugarcane. In the year 2012-13 total sugar crushing was 359455.096 metric tons and production of sugar was 504634.538 quintal.

### OBJECTIVES OF THE STUDY

1. To examine the role of Agro based Industries in rural economy of drought prone areas.
2. To explore the relationship between growth of agro based industries and rural development

### RESEARCH DESIGN AND METHODOLOGY

The data for the study has been collected from primary and secondary sources. A detailed study has carried out with the help of primary and secondary type of data.

**A) Primary data**

The primary data has been collected pretested questionnaires prepared specially for the study.

**Following techniques will be used for collection of primary data:-**

1. Observation method
2. Interview method
3. Questionnaire
1. Information from correspondent

**B) Secondary Data**

The secondary data has collected from books, PhD Thesis, Journals, Periodicals, Annual reports of the agro based industries, websites related to the present study etc.

**9 Parameters of the Study**

The parameters of the present study are development of the agro based industries, change in social status, change in economic conditions, employment generation, rural development, educational development, healthcare systems, development of self employment etc.

**10. Scope**

The present study is related to agro based industries in Solapur district and rural development and change in rural livelihood.

**11 Area of the Study**

Area of the study is limited to five sugar factories of solapur district.

**12. Period of the Study**

Time limitation includes for the study last five years 2010-11 to 2014-15.

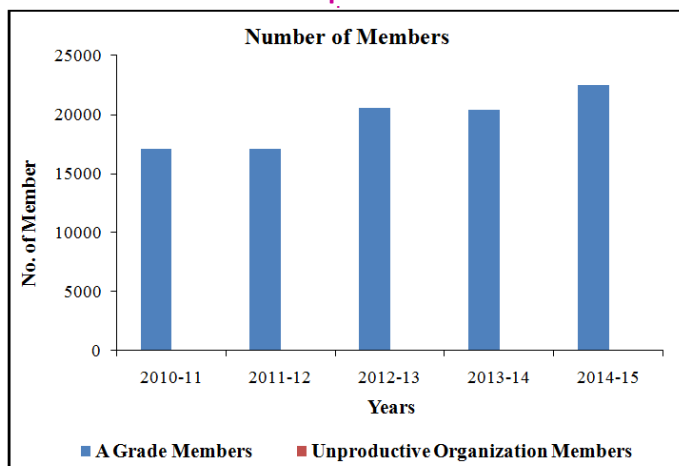
**Data analysis and Interpretation-**

Sr.. No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Number of Members					
	Productive Members					
	A) A Grade Members	17129	17130	20591	20508	22562
	B) Unproductive Organization Members	17	17	35	35	35
	C) Total Members	17146	17147	20626	20543	22597

Source: Data collected from the factory

In the above table number of member of BhimaSahakari Factory is presented. The data is taken from 2010-11 to 2014-15. In the above table member are divided into a grade members and unproductive organizational members. In 2010-11 there were total 17146 members out of whom 17129 were A grade members and rest 17 are unproductive. The number of A grade members is increasing year after year and in 2014-15 it was 22597.

**Graph 1.1**



There is also increase in the number of unproductive organizational members. It was 17 in 2010-11 and in 2014-15 it comes to 35. There is increase by 5451 in the number of members. Average 1090 members are increasing per year. The percentage of A grade members is 99.84%. The ratio of unproductive members is very low. The table number is presented in the following diagram for better understanding:

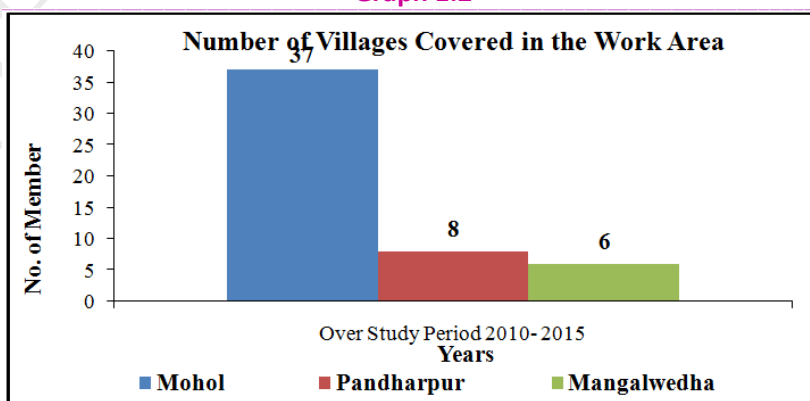
**Table 1.2: Showing Talukawise number of villages covered in work area**

Sr.. No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Mohol	37	37	37	37	37
2	Pandharpur	8	8	8	8	8
3	Mangalwedha	6	6	6	6	6
	Total	51	51	51	51	51

Source: Data collected from the factory

In the table number 1.2 talukawisenumber of villages covered in the work area of BhimaSahakari Factory is shown. The present factory is working in the 3 major talukas of Solapur District. They are Mohol, Pandharpur and Mangalwedha respectively. The number of villages is constant in all 5 years. There are 37 villages in Mohol, 8 in Pandharpur and 6 villages in Mangalwedha.

**Graph 1.2**



Overall 51 villages are there in the work area of Bhima Sahakari Factory. Average there is 17 villages in the all 3 villages of work area of BhimaSahakari Factory. There is no any change in the number of villages

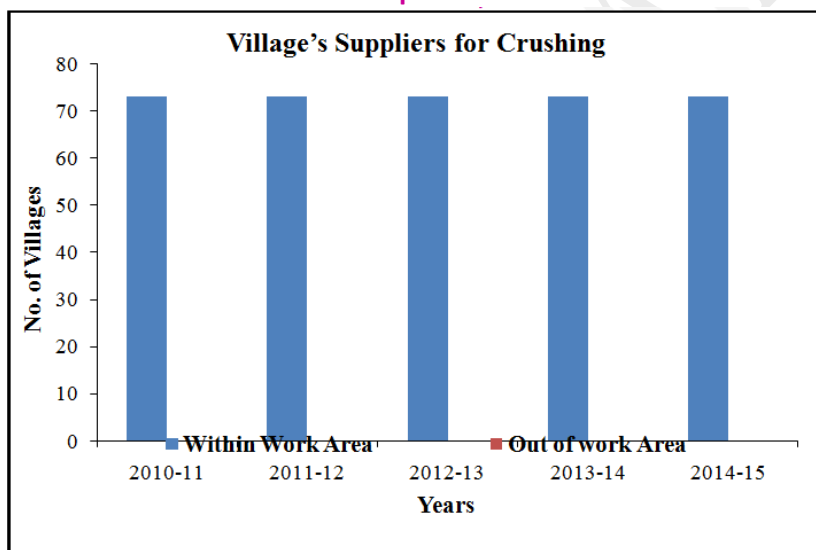
of work area of the said factory. The graphical presentation is made below for more clearness of the above table.

Sr.. No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Within Work Area	73	73	73	73	73
2	Out of Work area	0	0	0	0	0
	Total	73	73	73	73	0

Source: Data collected from the factory

The above table relates to number of villages suppliers for work area of BhimaSahakari Factory. The table is divided into suppliers within work area (Mohol, Pandharpur and Mangalwedha) and outside work area. The said factory BhimaSahakari is not taking raw material from outside work area. There are 51 villages in work area of the factory it means average more than 1 supplier is there from each village. There are average 24 suppliers in the each taluka of work area.

Graph 1.3



There are total 73 villages in all 5 years supplying raw material for crushing to the factory. If the factory starts accepting suppliers from outside work area; there may be increase in the production and income. We can present the above table in the following diagram. Even the number of villages of suppliers is not increased from 2010 to till date. There must be increase in the number of suppliers for better quantity of production.

Sr.. No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Installed Capacity	2500	2500	2500	2500	2500
2	Actual Capacity	2500	2500	2500	2500	2500

Source: Data collected from the factory

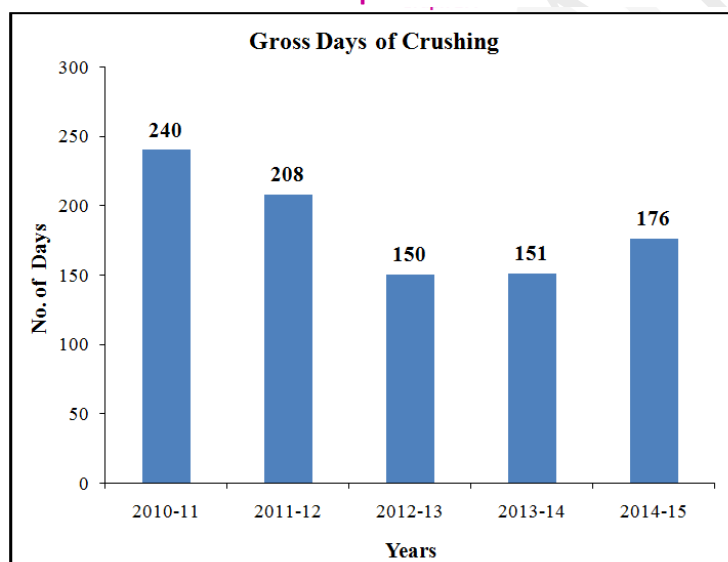
In the table number 1.4 daily cane crushing capacity of the factory is presented. The installed capacity of daily cane crushing is 2500 since 2010 to 2015. There is no any increase in the daily cane crushing capacity of the factory. The factory is fully utilizing its capacity for crushing. Which is a positive thing?

Sr. No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Commencement date of season	20/10/10	24/10/11	21/10/12	11/11/13	20/10/14
2	Closure date of season	16/06/11	18/05/12	19/03/13	10/04/14	14/04/15
3	Gross days of crushing	240	208	150	151	176
4	Actual hours of crushing	5758	4979	3583	3588	4222
5	Average daily crushing	240	207	149	150	176

Source: Data collected from the factory

The table number 1.5 shows details of crushing season in 2010-11 there was 240 gross days crushing was there. Which comes to 176 in the year 2014-15? It means the crushing capacity of the factory is decreased in last 5 years. In 2010-11 actual hours of crushing was 5758 and in 2014-15 it comes to 4222 hours. In 2014-15 average daily crushing was 176. Average gross days of crushing are 925, daily hours is 922. Season normally starts at the end of the year. In 2010-11 higher the crushing was there and in 2014-15 it was lowest. The data of the above table is presented in the following diagram.

**Graph 1.4**



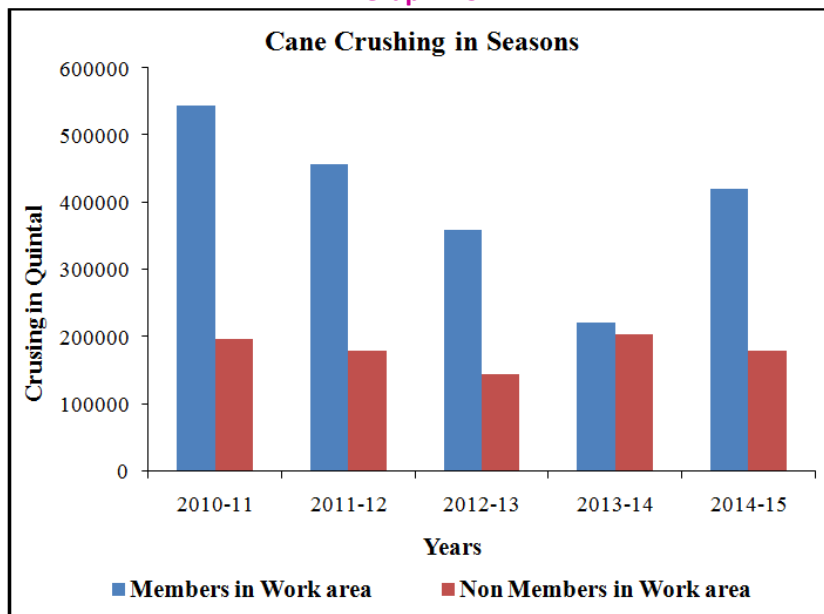
	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Members in Work area (in quintal)	544,958	457,156	359,455	221,820	420,520
2	Non Members in Work area	196,354	180,364	145,179	204,830	180,250
	Total (1+2)	741,312	637,520	504,634	426,650	600,770

Source: Data collected from the factory

The above table speaks about cane crushing in seasons. The table is distributed in two parts i.e. Members in work area and non members in work area. The information is taken for 5 years from 2010 to 2015. In 2010-11 741312 cane crushing was there out of that 544958 were of member in work area. It was highest in 2010-11. It reduced to 637520 in 2011-12 and to 504634 in 2012-13. In 2014-15 it was 600770. In 2014-15 420520 qt cane crushing was there in season. It was 180250 of non members in work areas. There is gap of 140542 in between 2010-11 to 201-15. Reduction in cane crushing in season days is a negative thing

for the factory. From the above table it is very clear that there should not be any difference in between cane crushing because it reduces the final production capacity of the factory.

**Graph 1.5**



**Table 1.7 Production of Sugar in quintal**

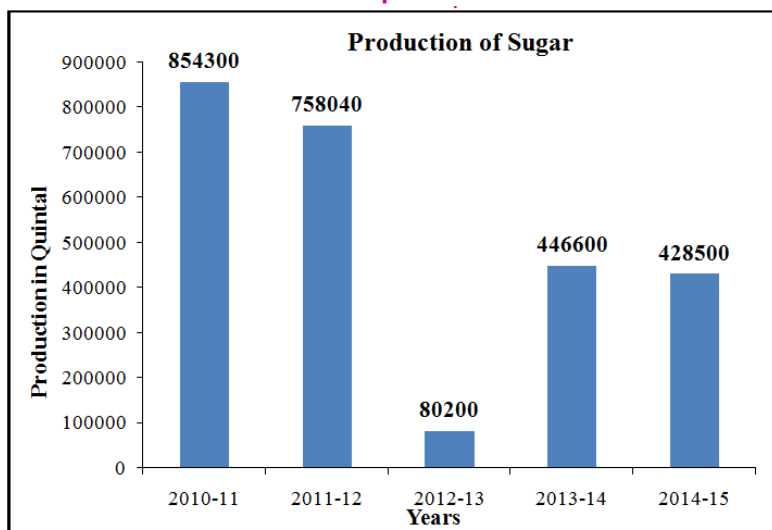
Sr. No	Year	Production of Sugar
1	2010-11	854,300.00
2	2011-12	758,040.00
3	2012-13	580,200.00
4	2013-14	446,600.00
5	2014-15	428,500.00

*Source: Data collected from the factory*

The above table is related to production of sugar in qu. The production of sugar in 2010-11 was around 854300 q where it is in 2014-15 was 428500 q. From the year 2010-11 the production is decreasing continuously.

It is not good sign to the factory that there is reduction in the production of sugar. It was 428500 in the year 2014-15. It is almost half of the production which was in the year 2010-11.

**Graph 1.6**



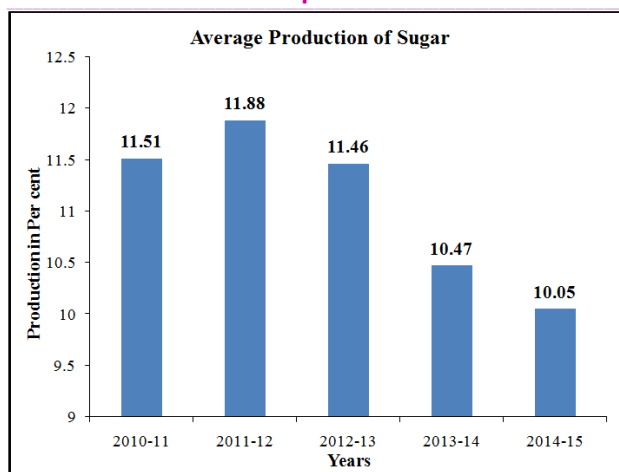
Sr. No	Year	Production of Sugar Average
1	2010-11	11.51
2	2011-12	11.88
3	2012-13	11.46
4	2013-14	10.47
5	2014-15	10.05

Source: Data collected from the factory

In the table number 1.8 average sugar in percentage is presented. In the year 2010-11 it was 11.51% and in the year 2014-15 it comes to 10.05%. As discussed in table number 1.7 here is also decreasing trend and which is not good from the point of view of production activity.

There is constant decreasing trend in the production percentage. From 11.51% to 10.05% it is decreasing. The factory should consider this fact seriously. It also affects on the employment and other activities of the factory.

**Graph 1.7**



Sr. No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Production of Mali Quintal	30,456	24,404	19,133	17,398	16,856
2	Proportion of Mali to Production of Cane	1.11	3.83	3.79	1.08	3.94

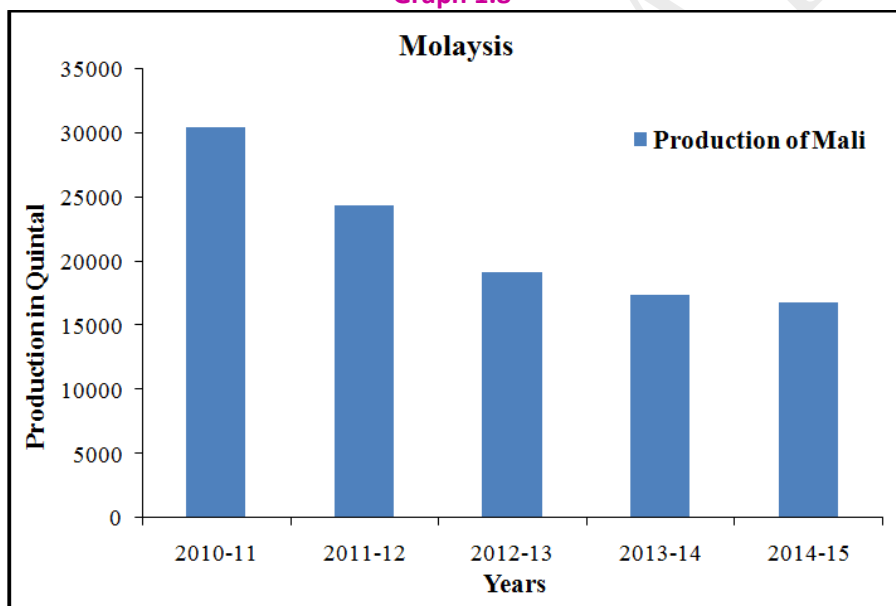
Source: Data collected from the factory

In the table number 1.9 molaysis is presented. In table is divided in production of Mali in q and proportion of Mali to production of cane. In the year 2010-11 the production of Mali in q was 30456 and in the year 2014-15 it comes to 16856.

Obviously there is decrease in the value of production of the sugar cane and sugar there is decrease in the molaysis also. The proportion of Mali to production of was 1.11 in 2010-11 it was 3.79 in the year 2012-13 and it was lowest in the year 2011-12.

At the year 2014-15 it was 3.91. The ratio is also low as compared to other factories. There is serious thing to think on these areas.

**Graph 1.8**



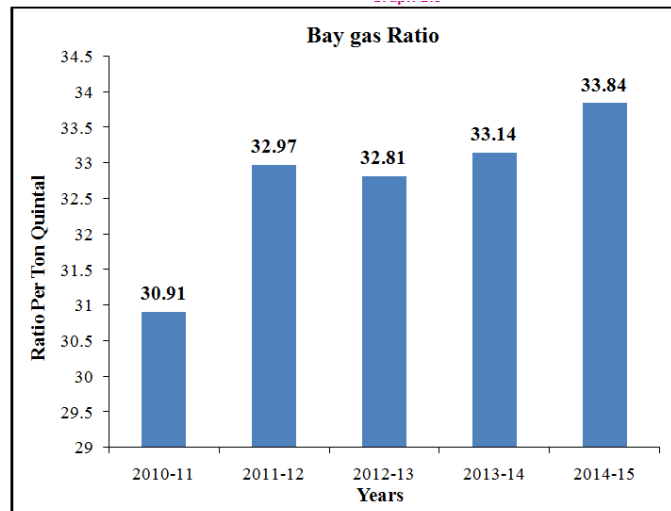
Sr. No	Year	Production of Sugar
1	2010-11	30.91
2	2011-12	32.97
3	2012-13	32.81
4	2013-14	33.14
5	2014-15	33.84

Source: Data collected from the factory

The table number 1.10 represents bay gas ratio to per ton of cane. The bay gas ratio to cane was 30.91% in the year 2010-11 and it was 33.84 in the year 2014-15. The average ratio is 32.73%. It is also very low as compared to other factories. There is a scope to save bay gas and use it.



**Graph 1.9**



**Table 1.11 Cane Area in Hector**

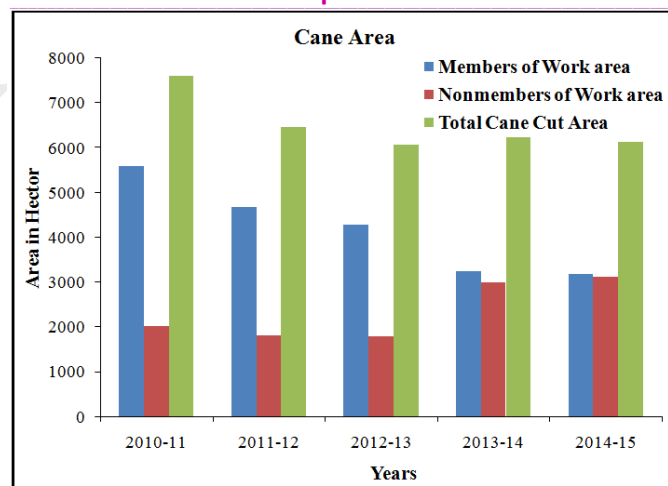
Sr. No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
A	Crushed Cane Area					
1	Members of Work area	5,581	4,668	4,277	3,236	3,186
2	Nonmembers of Work area	2,016	1,802	1,782	2,995	3,125
3	Out of Work area but within State	--	--	--	--	--
4	Total Cane Cut Area	7,598	6,470	6,059	6,232	6,125

Source: Data collected from the factory

In the table number 1.11 cane areas in hector is presented. In the year 2010-11 the Crushed cane areas members of woe areas was 5581, in the year 2012-13 it was 4277 and in the year 2014-15 it comes to 3186. The table is about cane area in hector.

Non members of work area were 2016 in the year 2010-11 and it was 3125 in the year 2014-15. It was lowest in the year 2012-13. There was no any out of work area but within state. There was 7598 total number of workers in the year 2010-11 and the total was 6125 in the year 2014-15.

**Graph 1.10**

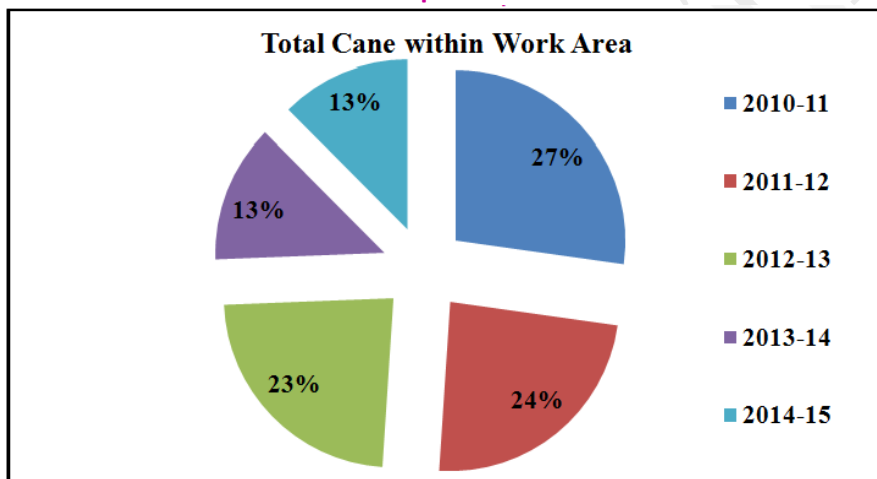


Sr. No	Year	Total Cane in tons
1	2010-11	1,057,640.00
2	2011-12	926,000.00
3	2012-13	907,000.00
4	2013-14	510,000.00
5	2014-15	485,200.00

Source: Data collected from the factory

The table number 1.12 shows total cane within work area from the year 2010-11 to 2014-15. In the year 2010-11 the total cane within work area was 1057640 q where it comes almost at half in the year 2014-15. In the year 2014-15 the total cane within work area was 485200 q. Year by year it is continuously reducing and it is no beneficial in long run.

**Graph 1.11**

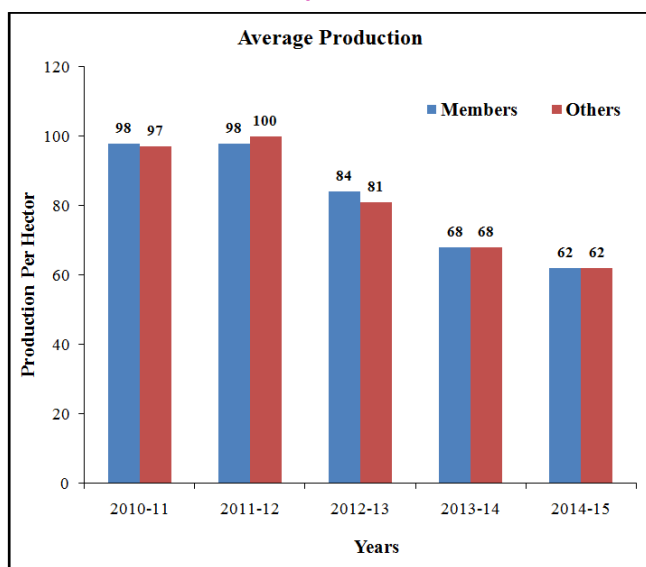


Sr.	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Members	98.00	98.00	81.00	68.00	62.00
2	Others	97.00	100.00	81.00	68.00	62.00
3	Total Average	98.00	98.00	83.00	68.00	59.00

Source: Data collected from the factory

In the table number 1.13 average production per hectore is presented. The average production per hectore in the year 2010-11 was 98 and it was in 59 in the year 2014-15. The table is divided in to members and others. It was lowest in the year 2014-15 and highest in the year 2010-11 and in 2011-12. There are 100 others production average highest in the year 2011-12 it was 100 q.

Graph 1.12



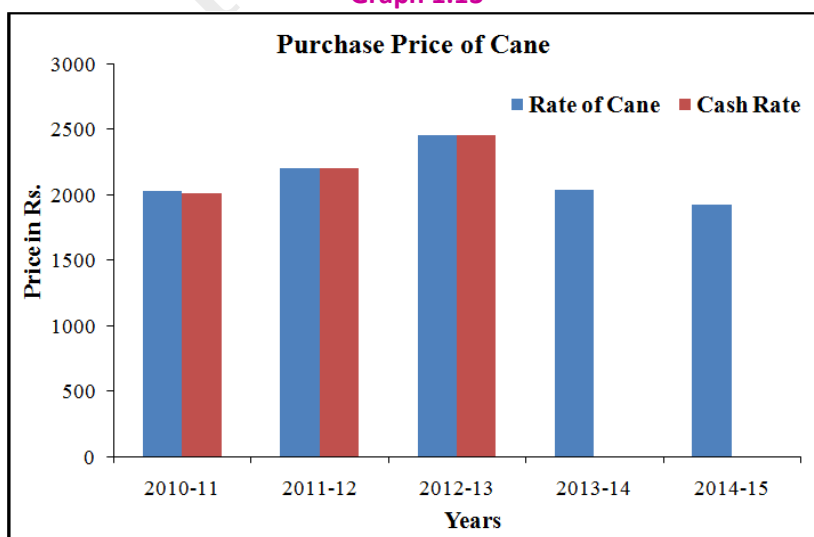
Sr. No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Rate of Cane	2,025.00	2,200.00	2,450.00	2,036.00	1,920.00
2	Cash Rate	2,005.00	2,200.00	2,450.00	-	-

Source: Data collected from the factory

The table number 1.14 speaks about purchase price of cane from 2010-11 to 2014-15. Rate of cane in the year 2010-11 was 2025 and it was 1920 in 2014-15. It was highest in the year 2012-13 and there is very low price for the purchase of cane in the year 2014-15 it was below 2000/-.

There is overall above 2000/- price for purchase of sugar cane for 4 years and in the last 5th year of study it comes to 1920/-. The table is divided into rate of cane and cash rate. The rates taken for 5 years from 2010-11 to 2014-15.

Graph 1.13



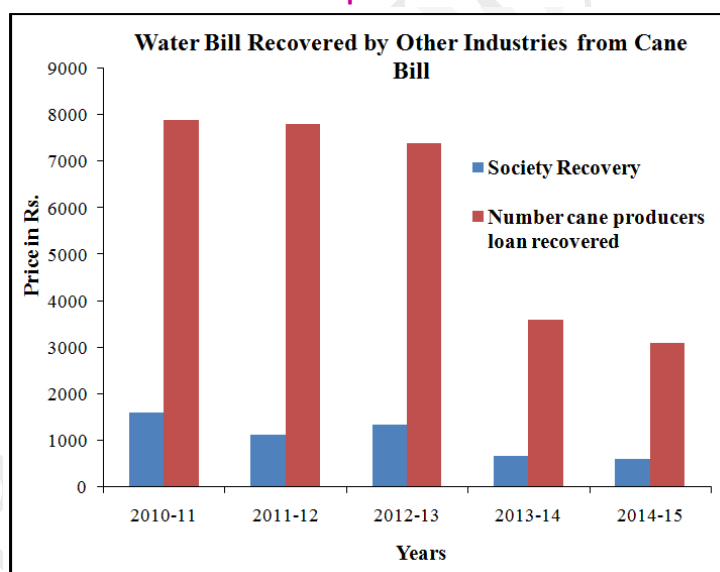
Sr.No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	Cooperative Recovery					
2	Society Recovery	1,606.00	1,131.00	1,350.00	671.00	610.00
3	Land Development Bank Recovery	3.36	1.78	0.52	-	-
4	Number cane producers loan recovered	7,900.00	7,800.00	7,400.00	3,600.00	3,100.00
5	Number of Relative Cooperative Society	99.00	99.00	99.00	99.00	99.00

Source: Data collected from the factory

In the above table water bill recovered by other industries from cane bill is presented. The table is divided into society recovery, land development bank recovery, number cane producer's loan recovered and number of relative cooperative society. In 2010-11 recovery is more from cane producer's loan and it was lowest from land development bank.

There is no any recovery from land development bank in the year 2013-11. There is very low recovery from land development banks. Cane producer's loan recovered is very high in the year 2010-11. It was around 7,900. Society recovery is very good from 2010-11 to 2012-13 but it also decreases in the year 2013-14 and 2014-15. It may be because of reduction in the volume of production of sugar cane. Low production effects low water bill recovery.

Graph 1.14



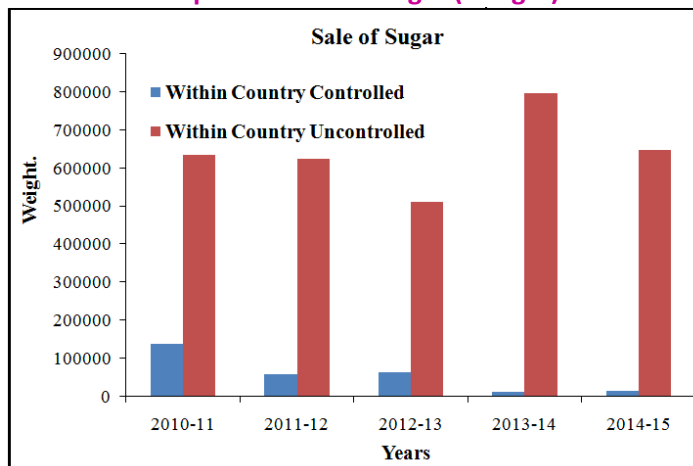
Sr.No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
A	Within Country Controlled	137,806	58,349	64,845	13,215	15,525
B	Within Country Uncontrolled	632,510	622,714	511,119	795,909	6,45,410

Source: Data collected from the factory

In the above table sale of sugar is presented. The table divided into within country controlled sale, within country uncontrolled sale and in total average sale. In 2010-11 there was sale of 137806 and it was very low in the year 2011-12. In that year it was only 58349. There is lowest sale in the year 2013-11.

The basic reason behind is low production and there are many things behind it. The percentage of uncontrolled sale is more than controlled sale. In the year 2013-14 there are very high sale. In the year 2013-14 there was 795909 sales was there. Uncontrolled sale is very low in the year 2012-13. It was only 511119. For good future of factory there is needed to increase in the sale of sugar.

**Graph 1.15 Sale of Sugar (Weight)**



**Table 1.17 Rate of Sugar apart from Tax Per Quintal**

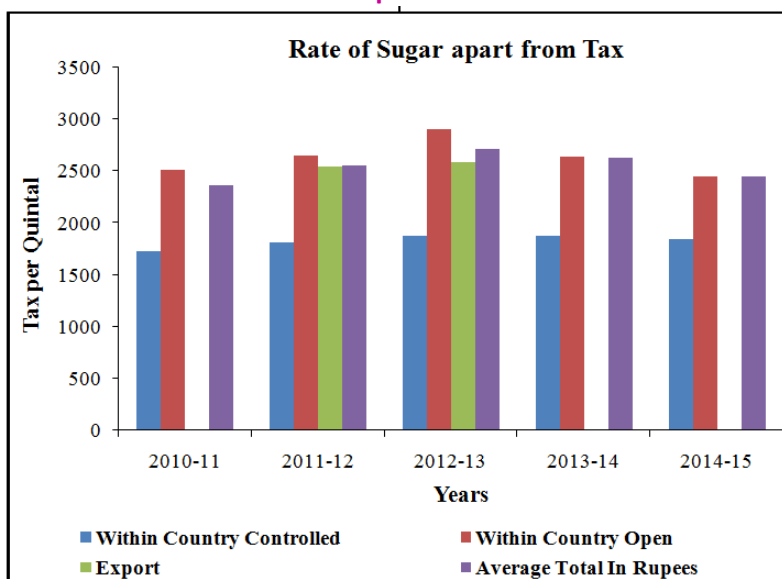
Sr.No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
A	Within Country Controlled	1,721.00	1,813.00	1,869.00	1,870.00	1,841.00
B	Within Country Open	2,511.00	2,647.00	2,899.00	2,642.00	2,452.00
C	Export	-	2,540.00	2,585.00	-	-
D	Average Total In Rupees	2,363.00	2,553.00	2,718.00	2,630.00	2,452.00

Source: Data collected from the factory

In the above table rate of average sugar apart from tax per q is shown. The table is divided into within country controlled, within country open, export, average total in rupees. In 2010-11 within country controlled rate was 1721. In the year 2013-14 the rate for within country controlled sugar was 1987 and it was highest in this 5 years.

Year by year the rate of sugar per quintal is increasing. There is high rate for open market sugar. In 2010-11 the rate for country open sugar was 2511 and it was highest in the year 2012-13. In 2012-13 it was 2899. There was no export in the year 2010-11 and 2013-14 and hence the rate for export sugar is not presented. The average total rate for sugar was 2363 in the year 2010-11 and in the year 2013-14 it was 2630. In the year 2011-12 it was lowest rate. In that year the rate was 2553 only.

Graph 1.16



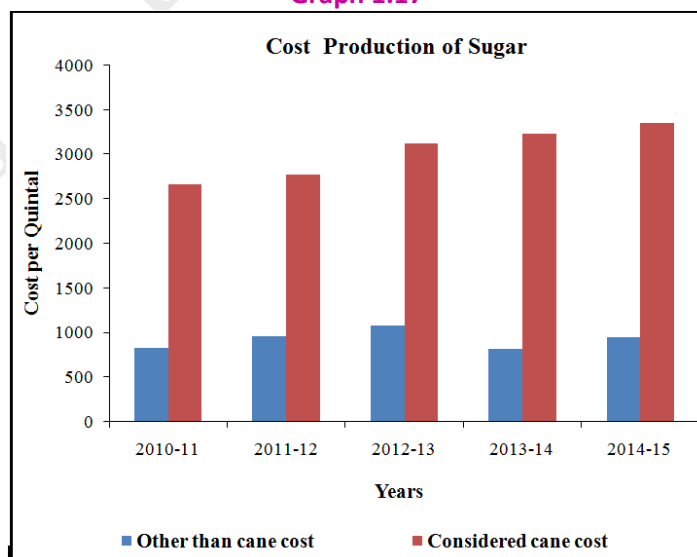
Sr.No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
A	Other than cane cost	816.00	947.00	1,070.00	810.00	940.00
B	Considered cane cost	2,652.00	2,769.00	3,117.00	3,222.00	3,341.00

Source: Data collected from the factory

In the above table cost of production of sugar per q is presented. The table is divided in to other than cane cost and considered cane cost. In the year 2010-11 other than cane cost was 816 and with cane cost it was 2652. It was highest in the year 2012-13. In the year 2012-13 other than cane cost was around 1017 and with cane cost it was 3117 and 3222 in the year 2013-11.

In the cost of production of sugar there is huge part of raw material i.e. cane. and as compared to cost of raw material there are other costs also very high. There is average 3000 average production cost is there for production of sugar per quintal.

Graph 1.17

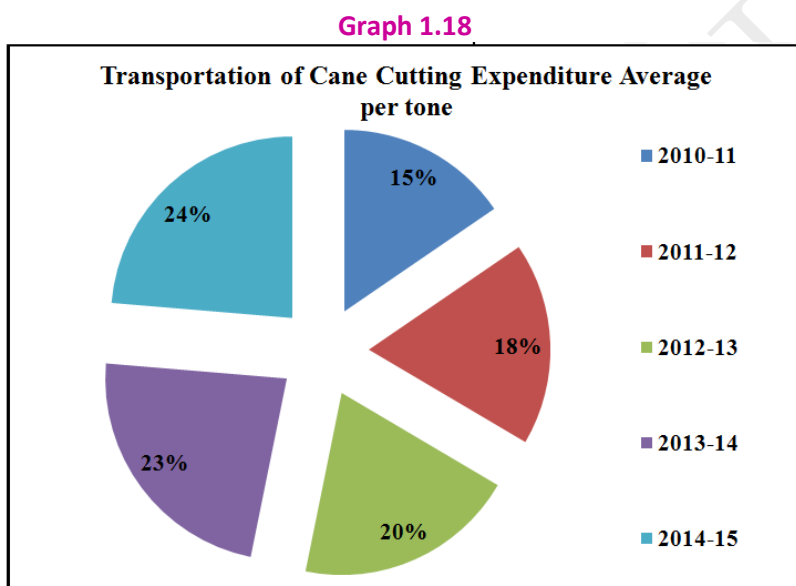


Sr.No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
A	Cane Cutting and Transport Expenditure	341.00	397.00	435.00	510.00	522.00

Source: Data collected from the factory

In the above table transportation of cane cutting expenditure aver per tone is presented. Cane cutting and transport expenditure in the year 2010-11 was 341 and it was highest in the year 2014-15. In 2014-15 it was around 522. There is big increase in the cost of cane cutting and transport expenditure.

Accordingly there is no any increase in the rate of sugar and hence there is difficult position to the factory. Average there is 441 expenditure on the cane cutting and transport expenditure. It was highest in the year 2014-15 and lowest in the first year of study in 2010-11. In 2010-11 the cost was 341 only.



Sr.No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
A	Owned Go down Numbers	6.00	6.00	6.00	6.00	6.00
B	Capacity of Own Godowns	595,000.00	595,000.00	595,000.00	595,000.00	5,95,000.00

Source: Data collected from the factory

In the above table godown capacity in numbers are presented. The data is taken for 2010-11 to 2014-15. The table is divided into owned godown numbers and in capacity of own godowns. There are 6 owned godowns and the capacity of self godown is 595000/-

There is no any increase in the number of godowns and capacity of godowns. It is all constant for all the years from 2010-11 to 2014-15. If there is increase in the number of production or raw material then there is need to increase in the number of godowns.

Sr.No	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
A	Bonus Percentage	20.00	20.00	8.33	-	-
B	Payments for Specific Days	-	-	-	-	-
C	Total Payment Expenditure	162.33	182.48	86.11	-	-

*Source: Data collected from the factory*

The above table speaks about bonus offered by the factory. The table is subdivided into bonus percentage, total payment of bonus. In 2010-11 the percentage of bonus is 20 and in 2011-12 also it was 20 but it was 8.33 in the year 2012-13. There is no bonus offered in the year 2013-14 and in 2014-15.

There is constant decrease in the production of cane and sugar and hence there may be reduction of bonus. The offered bonus was highest in the year 2011-12 it was 182.48 and lowest in the year 2012-13 and there is no bonus offered in the year 2013-14 onwards.

### **FINDINGS-**

1. In 2010-11 there were total 17146 members out of whom 17129 were A grade members and rest 17 are unproductive.
2. The number of A grade members is increasing year after year and in 2014-15 it was 22597.
3. There is increase by 5451 in the number of members. Average 1090 members are increasing per year.
4. The percentage of A grade members is 99.84%. The ratio of unproductive members is very low. The table number is presented in the following diagram for better understanding:
5. The present factory is working in the 3 major talukas of Solapur District. They are Mohol, Pandharpur and Mangalwedha respectively.
6. The number of villages is constant in all 5 years. There are 37 villages in Mohol, 8 in Pandharpur and 6 villages in Mangalwedha. Overall 51 villages are there in the work area of BhimaSahakari Factory.
7. There are 51 villages in work area of the factory it means average more than 1 supplier is there from each village. There are average 24 suppliers in the each taluka of work area.
8. There are total 73 villages in all 5 years supplying raw material for crushing to the factory. The number of villages of suppliers is not increased from 2010 to till date. There must be increase in the number of suppliers for better quantity of production.
9. The installed capacity of daily cane crushing is 2500 since 2010 to 2015. There was 240 gross days crushing, Which comes to 176 in the year 2014-15
10. In 2010-11 actual hours of crushing was 5758 and in 2014-15 it comes to 4222 hours. In 2014-15 average daily crushing was 176. Average gross days of crushing are 925, daily hours is 922.
11. The information is taken for 5 years from 2010 to 2015. In 2010-11 741312 cane crushing was there out of that 544958 were of member in work area.
12. There is gap of 140542 in between 2010-11 to 2014-15. Reduction in cane crushing in season days is a negative thing for the factory.
13. The production of sugar in 2010-11 was around 854300q where it is in 2014-15 was 428500q. From the year 2010-11 the production is decreasing continuously.
14. There is constant decreasing trend in the production percentage. From 11.51% to 10.05% it is decreasing.
15. Production of Molyasis in q and proportion of Molyasis to production of cane. In the year 2010-11 the production of Molyasis in q was 30456 and in the year 2014-15 it comes to 16856.
16. At the year 2014-15 it was 3.91. The ratio is also low as compared to other factories. There is serious thing to think on these areas.
17. The bay gas ratio to cane was 30.91% in the year 2010-11 and it was 33.84 in the year 2014-15. The average ratio is 32.73%. It is also very low as compared to other factories.



18. In the year 2010-11 the Crushed cane areas members of woe areas was 5581, in the year 2012-13 it was 4277 and in the year 2014-15 it comes to 3186. Non members of work area were 2016 in the year 2010-11 and it was 3125 in the year 2014-15.
19. There was 7598 total number of workers in the year 2010-11 and the total was 6125 in the year 2014-15.
20. In the year 2010-11 the total cane within work area was 1057640 q where it comes almost at half in the year 2014-15. In the year 2014-15 the total cane within work area was 485200 q. Year by year it is continuously reducing and it is no beneficial in long run.
21. The average production per hector in the year 2010-11 was 98 and it was in 59 in the year 2014-15. The table is divided in to members and others.
22. Rate of cane in the year 2010-11 was 2025 and it was 1920 in 2014-15. It was highest in the year 2012-13 and there is very low price for the purchase of cane in the year 2014-15 it was below 2000/-.
23. There is overall above 2000/- price for purchase of sugar cane for 4 years and in the last 5ty year of study it comes to 1920/-.
24. There is no any recovery from land development bank in the year 2013-11. There is very low recovery from land development banks. Cane producer's loan recovered is very high in the year 2010-11. It was around 7,900. Society recovery is very good from 2010-11 to 2012-13 but it also decreases in the year 2013-14 and 2014-15.
25. In 2010-11 there was sale of 137806 and it was very low in the year 2011-12. In that year it was only 58349. In the year 2013-14 there was 795909 sales was there. Uncontrolled sale is very low in the year 2012-13. It was only 511119.
26. In 2010-11 within country controlled rate was 1721. In the year 2013-14 the rate for within country controlled sugar was 1987 and it was highest in this 5 years.
27. The average total rate for sugar was 2363 in the year 2010-11 and in the year 2013-14 it was 2630. In the year 2011-12 it was lowest rate. In that year the rate was 2553 only.
28. In the year 2010-11 other than cane cost was 816 and with cane cost it was 2652. It was highest in the year 2012-13. In the year 2012-13 other than cane cost was around 1017 and with cane cost it was 3117 and 3222 in the year 2013-11. There is average 3000 average production cost is there for production of sugar per quintal. Cane cutting and transport expenditure in the year 2010-11 was 341 and it was highest in the year 2014-15. In 2014-15 it was around 522.

### SUGGESTIONS-

1. The sugar factories should include all villages by making by Rules in the annual general meetings.
2. Solapur district has close to Karnataka state it is need to increase their working area in Karnataka state.
3. There is need to increase suppliers of sugarcane .
4. The sugar factories should increase The installed crushing capacity of the machine 10,000 Quintals of sugar cane daily.
5. There is need to minimize Gross days of crushing.
6. There is need to increase the production of sugar ,for that sugar factories should provide good quality sugar cane seeds
7. The sugar factories should make proper use of its by-products.
8. There is need to minimize The biogas ratio per ton of cane.
9. There is need to increase land under irrigation in the district by providing loan facilities to societies.
10. The sugar factories should give affordable purchase price to farmers
11. The farmer members are getting Rs. 2263/- average price in the five years there is need to increase in it..
12. The factory is giving 9% and 6% interest for the deposits kept by the members. The factories has to change the rate of interest on members deposit .
13. There is need to increase in sale uncontrolled sales
14. Need to keep increased trend in The rate of sugar
15. The factories has to increase export of the sugar .

16. To understand new techniques in the farming industry there is need to educate farmers. But it is good sign that there are only 18 farmers who are uneducated. Even learning above SSC is also good. Such farmers should go for higher education.
17. There is need to come the young youth in the farming industry as there are more satisfaction in the work of farming.

References – Annual Reports of the sugar factory

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