Agric. Sci. Digest, **29** (3) : 178-181, 2009

AGRICULTURAL RESEARCH COMMUNICATION CENTRE
www.arccjournals.com / indianjournals.com

ADOPTION OF CULTIVATION PRACTICES BY SUGARCANE GROWERS

J.V. Mande and B.M. Thombre

Department of Extension Education, College of Agriculture,
Latur-413 512, India.

ABSTRACT

The present study was carried out in two talukas of Latur district namely Latur and Renapur. The sample of 72 sugarcane growers was studied. Majority of respondents were middle aged, had secondary school education, nuclear type of family with medium family size, medium land holders and having agriculture as main occupation. Hundred per cent of the respondents adopting the ploughing practice and ridges and furrow method of sugarcane planting. Load shedding, low price for sugarcane offered by sugar factories, harvesting schedule is not properly followed by sugar factories, high prices of fertilizers and pesticides, non availability of FYM were some of the constraints expressed by the sugarcane growers.

Key words : Adoption, Sugarcane growers, Cultivation practices.

India is one of the most important sugarcane producing countries in the world which covers about 18.52 per cent area and contributes 18.45 per cent sugarcane production of the world. On the basis of extensive research on sugarcane over several decades, sugarcane technologies now available can boost sugarcane production. Although various viable technologies have been developed but many of these have not reached to the growers. This may be one of the reasons for poor average sugarcane yield and recovery or both. Sugarcane and sugar output can be increased, if the growers adopt the recommended practices relating to sugarcane production technology. The present investigation was therefore, carried out with the following specific objectives.

1. To study the profile of sugarcane growers.
2. To study the adoption of cultivation practices.
3. To identify the problems of sugarcane growers in sugarcane production.
4. To invite the suggestions for overcoming the constraints.

The present study was carried out in two talukas of Latur district namely Latur and Renapur. From Latur taluka three villages *viz.*, Katpur, Kava, Sikandarpur and from Renapur taluka three villages *viz.*, Govindnagar, Kharola and Patharwadi were selected randomly. Twelve sugarcane growers were randomly selected from each of the village. Thus a sample of 72 sugarcane growers was studied. The data was collected personally with the help of structured schedule. The data were analysed with the help of descriptive statistics like frequency and percentages.

It was observed from Table 1 that 50.00 per cent of the sugarcane growers were middle aged (31 to 45 years). As per their educational level, about 32 per cent of the respondents had a secondary school education. Majority of the respondents (56.95 per cent) belong to nuclear family and having medium size of family (51.39 per cent). It was also noted from Table 1, that 34.72 per cent growers having medium land holding which varies from 2.1 to 4 ha. As far as occupation is concerned, it was observed that 72.22 per cent sugarcane growers depended on only farming and 31.94 per cent farmers having annual income 1 to 1.5 lakh. (Jain, A.K. (1986).

It was noticed from Table 2 that, all the respondents followed the operation of ploughing. About 70.00 per cent of respondents adopting partial dose of FYM. (Bhama, 2003). As regards the improved sugarcane varieties 65.28 per cent and 48.61 per cent sugarcane growers cultivating CO-86032 and CO-671 varieties of sugarcane

respectively. Near about 3/4th of sugarcane growers were following the planting distance as per recommendation. Most of the sugarcane growers (90.28 per cent) using recommended seed rate. As far as seed treatment is concerned, only 12.50 per cent sugarcane growers giving *Azetobactor t*reatment to sugarcane sets regarding planting method cent percent sugarcane growers follow ridges and furrow method.

It is evident from Table 2 that, 70.22 per cent respondents following proper dose of fertilizers for seasonal sugarcane. Regarding irrigation management it was observed that 79.17 per cent and 72.22 per cent respondents following water management practices in winter and summer season, respectively. As far as diseases and pests management was concerned 45.83 per cent respondents applied Forate at planting and after infestation of woolly aphids sprayed of Methyl Demeton. None of the sugarcane grower gave hot water treatment to the sugarcane sets for controlling grassy shoots. (Wangikar, 1991).

It was observed from Table 3 that the respondents were facing the problems like load shedding (100 per cent), low price for sugarcane offered by sugar factories (84.72 per cent), harvesting schedule was not properly followed by the sugarcane factories (72.22 per cent), high prices of fertilizers and pesticides (68.05 per cent) non availability of FYM (56.94 per cent), non availability of labourers (37.50 per cent.), (Verma and Yadav, 1995), lack of knowledge about sugarcane production practices (30.55 per cent) etc.

Some of the suggestion (Table 4) were given by the respondents regarding sugarcane production such as period of load shedding should be reduced (100 per cent), harvesting schedule should be strictly followed by the sugar factories (84.72 per cent), remunerative price should be given by sugar factories (79.16 per cent) and knowledge of sugarcane growers should strengthened through training demonstration, field visits, rallies etc. to overcoming the constraints.

Table 1. Distribution of sugarcane growers according to their profile. N = 72.

Sr.No.	Characteristics	No.	Percentage
A)	Age		
1.	Young (up to 30 years)	13	18.05
2.	Middle (31 to 45 years)	36	50.00
3.	Old (above 45 years)	23	31.95
B)	Education		
1.	Illiterate	02	2.78
2.	Primary schools	17	23.61
3.	Secondary schools	23	31.95
4.	Higher secondary schools	17	23.61
5.	Collegiate	13	18.05
C)	Type of family		
1.	Joint	31	43.05
2.	Nuclear	41	56.95
D)	Size of family		
1.	Small (upto 4 members)	13	18.05
2.	Medium (5-6 members)	37	51.39
3.	Big (more than 6 members)	22	30.56
E)	Land Holding		
1.	Marginal (upto 1 hectares)	5	6.95
2.	Small (1.1 to 2 hectares)	16	22.22
3.	Medium (2.1 to 4 hectares)	25	34.72
4.	Semi medium (4.1 to 10 hectares)	19	26.39
5.	Big (above 10 hectares)	7	9.72
F)	Area under sugarcane		
1.	Upto 1 ha.	15	20.83
2.	1.1 to 2 ha.	26	36.12
3.	2.1 to 3 ha	15	20.83
4.	More than 3 ha.	16	22.22
G)	Occupation		
1.	Agriculture	52	72.22
2.	Agriculture + Business	14	19.45
3.	Agriculture + Service	6	8.33
H)	Annual Income		
1.	Upto 1 Lakh	19	26.39
2.	1.0 to 1.5 Lakh	23	31.94
3.	More than 1.5 Lakh	30	41.67

Table 2. Adoption of cultivation practices by the sugarcane growers. N = 72.

Sr.No.	Cultivation practices	Adoption		
		Full Frequency (Percentage)	Partial Frequency (Percentage)	No Frequency (Percentage)
I)	**Land preparation**			
1.	Ploughing	72 (100.00)	00 (0.00)	0.00 (0.00)
2.	2 to 3 harrowing	61 (84.72)	11 (15.28)	0.00 (0.00)
3.	25 cart loads FYM / ha	19 (26.38)	49 (68.05)	4 (5.57)
II)	**Improved sugarcane varieties**			
1.	CO-86032	47 (65.28)	0.00 (0.00)	25 (34.72)
2.	CO-671	35 (48.61)	0.00 (0.00)	37 (51.39)
3.	CO-94012	22 (30.56)	0.00 (0.00)	50 (69.44)
4.	CO-8014	0.00 (0.00)	0.00 (0.00)	72 (100.00)
III)	**Planting distance**			
1.	Between two sets (15 to 20 cm)	58 (80.56)	14 (19.44)	0.00 (0.00)
2.	Between ridges & furrow (100 to 120 cm)	52 (72.22)	20 (27.78)	0.00 (0.00)
IV)	**Seed rate (25 to 30 thousand sets/ha)**	65 (90.28)	07 (9.72)	0.00 (0.00)
V)	**Seed treatment**			
1.	Hot water treatment (50^0C for 2 hours)	0.00 (0.00)	0.00 (0.00)	72.00 (100.00)
2.	Azetobactar treatment (10 kg/100 lit.water)	9 (12.5)	0.00 (0.00)	63 (87.05)
VI)	**Planting method**			
1.	Ridges and furrow method	72 (100.00)	0.00 (0.00)	0.00 (0.00)
2.	Patta method	9 (12.05)	0.00 (0.00)	63 (87.50)
VII)	**Intercultural Operations**			
1.	Weeding (2 weedings)	31 (43.06)	35 (48.61)	06 (8.33)
2.	First earthingup	28 (38.89)	00 (0.00)	44 (61.11)
3.	second earthingup	59 (81.94)	0.00 (0.00)	13 (18.06)
VIII)	**Fertilizer management**			
1.	Seasonal (250:115:115 NPK kg/ha)	52 (72.22)	20 (27.78)	0.00 (0.00)
2.	Pre-seasonal (370:170:170 NPK kg/ha)	0.00 (0.00)	0.00 (0.00)	72 (100.00)
3.	Adsali (400:170:170 NPK kg/ha)	0.00 (0.00)	0.00 (0.00)	72 (100.00)
IX)	**Irrigation Management**			
1.	Summer season (8 to 10 days)	52 (72.22)	20 (27.78)	0.00 (0.00)
2.	Rainy season (18 to 20 days)	46 (63.89)	18 (25.00)	8 (11.11)
3.	Winter season (12 to 15 days)	57 (79.17)	15 (20.83)	0.00 (0.00)
X)	**Diseases and Pests Managements**			
1.	Grassy shoots (Hot water treatment)	0.00 (0.00)	0.00 (0.00)	72 (100.00)
2.	Red rot (Bavistin / Thiram treatment)	12 (16.67)	0.00 (0.00)	60 (83.33)
3.	Wooly aphids (Initially phorte, after infestation spraying of Methyl Demeton)	33 (45.83)	25 (34.72)	14 (19.44)
4.	White grubs (Chlorpyriphos)	07 (9.72)	0.00 (0.00)	65 (90.28)

Table 3. Constraints faced by the growers in sugarcane production. (N=72)

Constraints	No.	Percentage	Rank
Load shedding	72	100.00	I
Non availability of labour	27	37.50	VI
Low price for sugarcane offered by sugar factory	61	84.72	II
High prices of fertilizers and pesticides.	49	68.05	IV
Harvesting schedule is not properly followed by sugar factories.	52	72.22	III
Non-availability of adequate irrigation water	16	22.22	VIII
Lack of knowledge about sugarcane production practices	22	30.55	VII
Lack of roads and transportation facilities	9	12.50	IX
Non-availability of FYM	41	56.94	V

Table 4. Suggestions of sugarcane growers regarding their problems. (N=72)

Suggestions	No.	Percentage
Period of load shedding should be reduced	72	100.00
Harvesting schedule should be strictly followed by the sugar factories.	61	84.72
Remunerative price should be given by sugar factories	57	79.16
Knowledge of sugarcane growers should be strengthened through training, demonstrations, field visits, rallies etc.	29	40.28

CONCLUSIONS

1. Majority of respondents were middle aged, have a secondary school education, nuclear type of family with medium family size, medium land holders and having agriculture as main occupation.

2. Cent percent of the respondents adopting the ploughing practice and ridges and furrow method of sugarcane planting.

3. Load shedding, low price for sugarcane offered by sugar factories, harvesting schedule is not properly followed by sugar factories, high prices of fertilizers and pesticides, non availability of FYM were some of the constraints expressed by the sugarcane growers.

REFERENCES

Bhama Ajay Kumar (2003). *M.Sc. Thesis Abstract* (ISSN 0379-3390), **30(4):**313.

Jain, A.K. (1986). M.Sc. (Agri.) Thesis JNKKV, Jabalpur.

Verma, R.P. and Yadav, J. P. (1995). Indian J. Extn. Edn. **31(1&4):**117-199.

Wangikar, S.D. *et al.* (1991). *Maha. J. Extn. Edn.* **10(2):**83-86.