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RESEARCH ARTICLE :

Knowledge and adoption of recommended ratoon management practices by the sugarcane growers

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SUMMARY : The efforts were made to study the knowledge and adoption of ratoon management practices by the sugarcane cultivators from Kolhapur district of Maharashtra. The study was undertaken in purposively selected Karveer tahsil of Kolhapur district of Maharashtra in the year 2008. It is observed that most of the respondents had knowledge in respect of MPKV recommended ratoon management practices like arrangement of sugarcane trash in the furrows (100.00%), stubble shaving (100.00 %), spraying of 0.1 per cent bavistin on stubbles (96.00%), application of decomposing material (86.00 %) and application of 1st dose of chemical fertilizers (92.00%). Adoption of recommended ratoon management practices reveal that level of adoption was less as compared to their level of knowledge.

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KEY WORDS :
Sugarcane growers, Knowledge, Adoption, Management practices, Constraints

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BACKGROUND AND OBJECTIVES

India is predominantly sugarcane growing country. Sugarcane is one of the most important commercial crops grown in western Maharashtra. For the year 2006-07 total area under sugarcane in Kolhapur district was 1, 14,589 ha, out of which 50,626 ha. area was under ratoon crop. It is well known that Maharashtra sugarcane industry occupies supreme position in the economy of state. Sugarcane is one of main cash crop and playing a very important role in economic development of rural areas. The productivity of sugarcane is decreasing day to day. In case of sugarcane, Mahatma Phule Krishi Vidyapeeth, Rahuri has given the recommendations for the ratoon management to decrease the cost of cultivation. Here, the efforts were made to study the knowledge and adoption of ratoon management practices by the sugarcane cultivators from Kolhapur district. Also the efforts were made to study the constraints faced by the sugarcane cultivators in the adoption of recommended ratoon management practices.

RESOURCES AND METHODS

The study was undertaken in purposively selected Karveer Tahsil of Kolhapur district of Maharashtra in the year 2008. The five

villages having maximum sugarcane area, *viz.*, Vadanage, Prayag-Chikhali, Shiroli Dumala, Nigawe and Sadoli-Dumala were selected for the study in consultation with the office of the Superintending Agricultural Officer, Kolhapur district.Ten farmers following ratooning were selected from each village randomly with the help of VEW of the State Department of Agriculture. Thus, the data were collected from 50 ratoon following sugarcane cultivators. The data were collected personally with the help of structured interview schedule and were analyzed.

OBSERVATIONS AND ANALYSIS

The results obtained from the present study as well as discussions have been summarized under following heads:

Knowledge and adoption of recommended ratoon management practices :

Knowledge about the recommended ratoon management practices is pre-requisite for the adoption at field level. The data regarding the status of knowledge and adoption of Mahatma Phule Krishi Vidyapeeth recommended ratoon management practices among the sugarcane cultivators are presented in Table 1.

The data (Table 1) indicate that most of the respondents had knowledge in respect of Mahatma Phule Krishi Vidyapeeth recommended ratoon management practices like arrangement of sugarcane trash in the

Table 1 : Distribution of the respondents according to their knowledge and adoption of recommended ratoon management practices

Sr. No.	Recommended ratoon management practices	Knowledge (n=50)	Adoption (n=50)		
			Complete	Partial	No
1.	For ratooning, sugarcane may be planted in the furrow of four feet width or in pair row planting	45 (90.00)	39 (78.00)	6 (12.00)	5 (10.00)
2.	Follow ratooning of recommended sugarcane varieties *i.e.* CO-86032,., Co-7219, CO-8014, CoM-0265	15 (30.00)	3 (6.00)	--	47 (94.00)
3.	Do not go for ratooning of sugarcane harvested after 15th Feb	9 (18.00)	1 (2.00)	--	49 (98.00)
4.	For ratooning harvesting of sugarcane near the ground	35 (70.00)	33 (66.00)	2 (4.00)	15 (30.00)
5.	Arranging sugarcane trash in the furrows and opening of ridges	50 (100.00)	43 (86.00)	4 (8.00)	3 (6.00)
6.	Stubble shaving	50 (100.00)	42 (84.00)	5 (10.00)	3 (6.00)
7.	Spraying of 0.1 per cent bavistin on stubbles	48.00 (96.00)	35 (70.00)	2 (4.00)	13 (26.00)
8.	Application of 80 kg urea, 100 kg SSP and 10 kg of decomposing culture in equal proportion on spread sugarcane trash for fast decomposing	43 (86.00)	29 (58.00)	6 (12.00)	15 (30.00)
9.	Give 1st irrigation within 15 days immediately after harvestiing	50 (100.00)	50 (100.00)	--	--
10.	Sugarcane trash may be pressed in furrows when there is sufficient moisture	44 (88.00)	32 (64.00)	12 (24.00)	6 (12.00)
11.	Application of 1st dose of chemical fertilizers with the help of crowbar on one side of ridges after 3-4 days of 1st irrigation (Urea – 150 kg and 70 kg each of SSP and MOP with micronutrients)	46 (92.00)	33 (66.00)	3 (6.00)	14 (28.00)
12.	Application of 2nd dose of chemical fertilizers with the help of crowbar 135 days after the application of 1st dose (Urea – 150 kg and 70 kg each of SSP and MOP with micronutrients)	32 (64.00)	29 (58.00)	3 (6.00)	18 (36.00)
13.	Use micro-nutrients as per the soil testing report	22 (44.00)	13 (26.00)	8 (16.00)	29 (58.00)
14.	Use organic manures as per the availability	50 (100.00)	7 (14.00)	11 (22.00)	32 (64.00)
15.	Apply each 1.25 kg. of *Azatobacter, Azospirileum, Asitobacter* and PSB in equal proportion per hectare (total 5.00 kg)	23 (46.00)	7 (14.00)	3 (6.00)	40 (80.00)
16.	Reduce 25 per cent dose of chemical fertilizers, if bio-fertilizers are given	22 (44.00)	2 (4.00)	--	48 (96.00)
17.	No any kind of interculturing. If necessary, uproot the weeds and put on sugarcane trash	33 (66.00)	29 (58.00)	4 (8.00)	17 (34.00)
18.	Reduce number of irrigations than the regular method Give 13-14 times irrigation)	18.00 (36.00)	13 (26.00)	5 (10.00)	32 (64.00)
19.	Plant protection measures	9.00 (18.00)	3 (6.00)	2 (4.00)	45 (90.00)

(Figures in parentheses indicates percentage)

Table 2 : Distribution of the farmers according to their constraints in the adoption of recommended ratoon management practices (n=50)

Sr. No.	Constraints faced	No. of respondents	Per cent
1.	Lack of knowledge about the use of micro- nutrients as per the soil testing report	28	56.00
2.	Unavailability of bio-fertilizers locally	38	76.00
3.	Unavailability of crowbar developed by CSRS., Padegaon locally	42	84.00
4.	Lack of knowledge about the use of bio-fertilizers	27	54.00
5	Problem of rat in sugarcane trash	24	48.00

furrows (100.00%), stubble shaving (100.00%), spraying of 0.1 per cent bavistin on stubbles (96.00%), application of decomposing material (86.00%) and application of 1st dose of chemical fertilizers (92.00%).

Also it is observed that 44.00 per cent of the respondents had knowledge about the use of micro-nutrients as per the soil testing report, use of bio-fertilizers (46.00%) and reducing number of irrigations (36.00%).

Data in respect of adoption of recommended ratoon management practices reveals that level of adoption was less as compared to their level of knowledge. Further, the data indicate that majority of the respondents had completely adopted the ratoon management practices on the farm *i.e*. for ratooning, harvesting of sugarcane near the ground (66.00%), arranging sugarcane trash in the furrows (86.00%), stubble shaving (84.00%), spraying of 0.1 per cent bavistin (70.00%) and non-adoption of interculturing operations (58.00%).

However, very few respondents had completely adopted the ratoon management practices like following practice of ratooning of recommended varieties (6.00%), do not go for ratooning of sugarcane harvested after 15th February (2.00%), use of micro-nutrients as per the soil testing report (26.00%), use of organic manures as per the availability (14.00%), application of bio-fertilizers (14.00%), reducing number of irrigations (26.00%) and plant protection measures (6.00%).

Constraints faced by the respondents in the adoption of recommended ratoon management practices :

The information regarding the constraints faced by the respondents is given in Table 2.

The data in Table 2 revealed that the sugarcane cultivators faced the constraints like lack of knowledge about the use of micro-nutrients as per the soil testing report (56.00%), unavailability of bio-fertilizers locally (76.00%), unavailability of crowbar (84.00%) and lack of knowledge about the use of bio-fertilizers (54.00%) in the adoption recommended ratoon management practices.

Conclusion :

- Timely technical guidance should be made available
- Bio-fertilizers and soil testing facility should be made available locally by the State Department of Agriculture.
- Crowbar developed by Central Sugarcane Research Station, Padegaon should be made available locally by the University authority.
- Demonstrations of bio-fertilizer application should be conducted on farmer's field by the University authority and State Department of Agriculture.

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