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RESEARCH ARTICLE :

Constraints faced by the respondents in adoption of sugarcane production technologies

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SUMMARY : The present study was conducted with specific objectives to study knowledge and adoption of sugarcane production technology. For this study Latur district was selected and from Latur district two talukas *viz*., Chakur and Udgir were selected. From these two talukas twelve villages were selected randomly and ten respondents from each village were selected, *i.e*. 120 respondents from 12 villages constituted the sample for the study. Ex-Post Facto research design was used for the research study. The major constraints faced by respondents in adoption of sugarcane production technologies were lack of knowledge about the identification of insect and pest, lack of availability water and lack of knowledge about scientific plant protection measures. The majority of the respondents suggested that information should be provided about identification of insect and pests of sugarcane crop and their proper control measures, permanent water resources should be available *i.e*. farm pond and to provide the information about sett treatment.

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KEY WORDS :
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BACKGROUND AND OBJECTIVES

The world demand for sugar is the primary driver from sugarcane agriculture. Cane accounts for 80 per cent of sugar produced. Sugarcane is a renewable, natural agricultural resource because it provides sugar, biofuel, fibre and fertilizer. Sugarcane juice is used for making white sugar, brown sugar (Khandsari), jaggery (Gur) and ethanol.

India is the 2nd largest producer of sugar after Brazil. Sugar industry is the second largest industry in the country after cotton textiles and contributes around 6.00 per cent of the agricultural GDP. Indian sugar industry contributes substantially to the rural economy as the sugar mills are located in rural areas and employ rural folk to a large extent. Sugar plays important role in daily diet and it has nutritional importance. To supply the sugar to increasing population of India, it is essential to increase the production per unit area of sugarcane.

The area under this crop is low with low productivity. This might be the wide gap in between the knowledge already possessed by the respondents and their application in the field. It creates the wide scope for increasing sugarcane production per unit area. However, a majority of sugarcane growers do not have the knowledge and adoption of the

recommended production technology to the fullest extent. It indicates that sugarcane growers might be facing certain problem in adopting recommended production technologies of the crop. So present study was undertaken to see the constraints in adoption of recommended technologies with the following objective to find out the constraints faced by growers in use of recommended production technology and to know the suggestions to overcome the constraints.

RESOURCES AND METHODS

The present study was conducted in two tahsils of Latur district *viz*., Chakur and Udgir. Six villages were selected from each randomly selected tahsil. The data were collected from 10 respondents from each of randomly selected village *i.e.* 120 respondents from 12 villages constituted the sample for the study.

The respondents were personally interviewed with interview schedule. The data were tabulated and analyzed by using statistical tools like frequency and percentage.

OBSERVATIONS AND ANALYSIS

The findings of the present study as well as relevant discussion have been presented under following heads.

Constraints faced by respondents in adoption of sugarcane production technologies :

The objectives of the study were to identify the constraints in the adoption of about sugarcane production technologies. The various constraints faced by the sugarcane growers in adoption of about sugarcane production technologies are given in Table 1.

It was noticed from Table 1 that, the constraints like lack of knowledge about identification of insect and pest was the main constraint in the adoption of sugarcane production technologies which was reported by 93.33 per cent respondents, another major problem was lack of availability of water and lack of knowledge about scientific plant protection reported by 91.67 and 90.00 per cent respondents, respectively.

Whereas, other major constraints were the lack of knowledge about sett treatment (85.83 %), FYM/ compost preparation is difficult due to the less number of animal reported by (81.67 %), lack of knowledge about scientific method of FYM / compost preparation (75.83 %), lack of labour supply (69.17 %), lack of knowledge about proper weed control (68.33 %), buying of FYM / compost are more expensive and lack of knowledge about proper method of fertigation (66.67 %), unavailability proper prices in market (65.00 %), lack of knowledge about recommended varieties (63.33%), high cost of soluble fertilizers (62.50 %), lack of technical knowledge and inadequate supply of electricity (61.67 %), unavailability of sources and labour in proper time. (60.83 %), lack of knowledge about the proper NPK doses and good quality FYM is not available in market (60.00 %) of the respondents.

It was also observed that the constraints faced by respondents were transportation costs are high (59.17 %), decreasing soil fertility due to the use of chemical fertilizers (57.50 %). The constraints like cost of sugarcane setts are high, use of chemicals are hazardous to health, lack of knowledge about proper weedicide and lack of training about management of drip irrigation faced 56.67 per cent of the respondents, respectively. The other constraints reported by the respondents were lack of knowledge about importance of sett treatment (54.17 %), lack of knowledge about drip irrigation (52.50 %), lack of knowledge about proper method of irrigation (50.83 %), lack of knowledge about proper time of application of weedicide (49.17 %), high cost of preparatory tillage (46.67 %), lack of knowledge about intercultural operation (43.33%), lack of knowledge about proper time for weed control and important plant protection chemicals are not affordable (42.50 %), non-availability of plant protection chemicals in proper time (37.50 %), high cost of chemical fertilizers and lack of knowledge about scientifically application of weedicide (35.83 %), non-availability of recommended sugarcane setts at proper time and repairing of drip irrigation is expensive (35.00 %), lack of knowledge about proper time and method of weedicide application (34.17 %), intercultural operations are more expensive (32.50 %) and high cost of drip irrigation sets (30.00 %) was faced by the respondents.

The less number of respondents reported the constraints like lack of knowledge about scientific method of planting (27.50 %), unavailability chemicals required for sett treatment and lack of knowledge about benefits of intercultural operations (26.67 %), lack of knowledge about proper planting time (25.83 %), unavailability fertilizers at proper time (25.00 %), lack of knowledge about land requirement (20.83 %), unavailability of proper subsidy on drip irrigation (19.17 %), non-availability of

Table 1 : Constraints faced by the respondents in adoption of sugarcane production technologies (n=120)

Constraints	Frequency	Percentage
Land and Preparatory tillage		
Lack of knowledge about soil requirement.	25	20.83
Unavailability of implements for preparatory tillage operation	05	04.17
Non availability of bullocks pair	10	08.33
High cost of preparatory tillage.	56	46.67
Unavailability of sources and labour in proper time.	73	60.83
Selection of variety and planting		
Lack of knowledge about recommended varieties	76	63.33
Non availability of recommended sugarcane setts at proper time	42	35.00
Cost of sugarcane setts are high	68	56.67
Lack of knowledge about proper planting time	31	25.83
Lack of knowledge about scientific method of planting.	33	27.50
Unavailability of implements required for planting.	10	08.33
Sett treatment		
Lack of knowledge about sett treatment	103	85.83
Lack of knowledge about importance of sett treatment	65	54.17
Unavailability chemicals required for sett treatment	32	26.67
Use of chemicals are hazardous to health	68	56.67
Use of fertilizer		
Lack of knowledge about the proper NPK does.	72	60.00
Unavailability fertilizers at proper time	30	25.00
High cost of chemical fertilizers	43	35.83
Decreasing soil fertility due to the use of chemical fertilizers	69	57.50
High cost of soluble fertilizers	75	62.50
Application of FYM		
Lack of knowledge about scientific method of FYM / Compost preparation	91	75.83
FYM / Compost preparation are difficult due to the less number of animal	98	81.67
Good quality FYM is not available in market	72	60.00
Buying of FYM / Compost is more expensive	80	66.67
Weed management		
Lack of knowledge about proper weed control	82	68.33
Lack of knowledge about proper time for weed control	51	42.50
Lack of knowledge about scientific application of weedicide	43	35.83
Lack of knowledge about proper time of application of weedicide	59	49.17
Intercultural operation		
Lack of knowledge about intercultural operations	52	43.33
Lack of knowledge about benefits of intercultural operations	32	26.67
Non-availability of implements required for intercultural operations	18	15.00
Intercultural operations are more expensive	39	32.50
Lack of knowledge about proper weedicide	68	56.67
Lack of knowledge about proper time and method of weedicide application	41	34.17
Irrigation management		
Lack of availability water	110	91.67
Lack of knowledge about proper method of irrigation	61	50.83
Lack of knowledge about drip irrigation	63	52.50
Lack of training about management of drip irrigation	68	56.67
High cost of drip irrigation sets	36	30.00
Repairing of drip irrigation is expensive	42	35.00
Unavailability of proper subsidy on drip irrigation	23	19.17
Lack of knowledge about proper method of fertigation	80	66.67
Plant protection		
Lack of knowledge about scientific plant protection	108	90.00
Important plant protection chemicals are not affordable	51	42.50
Non-availability of plant protection chemicals in proper time	45	37.50
Lack of knowledge about identification of insect and pest	112	93.33
Other		
Lack of technical knowledge	74	61.67
Inadequate supply of electricity	74	61.67
Unavailability proper prices in market	78	65.00
Transportation cost is high	71	59.17
Lack of proper guidance from related extension department	64	53.33
Lack of labour supply	83	69.17

Table 1 contd...

Contd... Table 1

Table 2: Distribution of the respondents on the basis of obtained suggestions **(n=120)**

Suggestions	Frequency	Percentage
The information should be provided about identification of insect and pests of sugarcane crop and their proper control measures	89	74.17
Permanent water resources should be available *i.e.* farm pond	86	71.67
The information should be provided about sett treatment	78	65.00
The information should be provided about scientifically preparation of FYM / compost	77	64.17
The information should be provided about proper weed control	71	59.17
Timely supply of electricity should be available	64	53.33
Fair and remunerative prices (FRP) should be affordable	52	43.33
Develop the implements / technologies which help to minimize labour requirement	31	25.83
The information should be provided about scientific methods of application of liquid / soluble fertilizers	24	20.00
The information should be provided about drip irrigation	21	17.50
The information should be provided about hazardous effect of chemicals	19	15.83
The information should be provided about new innovation/technologies in proper time from extension department	18	15.00
The information should be provided about importance of intercultural operations	11	09.10

implements required for intercultural operations (15.00 %), non-availability of bullocks pair and unavailability of implements required for planting (08.33 %), unavailability of implements for preparatory tillage operation (4.17 %).

Suggestions given by the respondents to overcome the constraints faced by them in the adoption of sugarcane production technologies :

It is observed from Table 2 that majority of the respondents suggested to provide the information about identification of insect and pests of sugarcane crop and their proper control measures (74.17 %), permanent water resources should be available *i.e.* farm pond (71.67 %), to provide the information about sett treatment (65.00 %) and provide the information about scientifically preparation of FYM/compost (64.17 %) whereas, 59.17 per cent and 53.33 per cent of the respondents suggested to provide the information about proper weed control and timely supply of electricity should be available, respectively.

It is further reported that, 43.33 per cent of the respondents suggested fair and remunerative prices (FRP) should be affordable. While, 25.83 per cent of the respondents suggested to develop the implements / technologies which help to minimizes labour requirement.

It is also shown in Table 2 that 20.00 per cent of the respondents suggested that provide the information about scientific method of application of liquid/soluble fertilizers, 17.50 per cent of the respondents suggested to provide the information about drip irrigation, 15.83 per cent of the respondents suggested to provide the information about hazardous effect of chemicals. Similar results were also reported by Pandey *et al.* (2014) on rice, Karade *et al.* (2014) on potato growers, Chodavadia *et al.* (2013) on groundnut and pigeonpea, Shennewad and Shelke (2013) on papaya, Chourad *et al.* (2014) on rice food and Dhurwey *et al.* (2015).

While, the very less number of the respondents suggested to provide the information about new innovations or technologies in proper time from extension department (15.00 %) and to provide the information about importance of intercultural operations (09.10 %). Mane (2001); Kadam (2003); Deshmukh (2006); Kadam *et al.* (2010), Mane (2012) and Shinde (2014) also reported similar results.

Conclusion:

It is concluded that major constraints faced by respondents were lack of knowledge about identification of insect and pests, lack of availability of water, lack of knowledge about scientific plant protection (90.00%), lack of knowledge about sett treatment (85.83%), FYM / compost preparation are difficult due to the less number of animal (81.67%) were the main constraints.

Some of the suggestions obtained from the majority of the respondents were to provide the information about identification of insect and pests of sugarcane crop (74.17%) and their proper control measures, permanent water resources should be available *i.e.* farm pond (71.67%), to provide the information about sett treatment

(65.00%), provide the information about scientifically preparation of FYM / compost (64.17%), provide the information about proper weed control (59.17%) and timely supply of electricity (53.33 %) should be available were the major suggestions.

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REFERENCES

Chodavadia, H.C., Bariya, M.K. and Deshmukh, G.P. (2013). Constraints and suggestions in adopting groundnut - pigeonpea relay cropping system in saurashtra region of Gujarat. *Agric. Update*, **8**(4): 569-572.

Chourad, Raghavendra, Kiresur, V.R. and Kondaguri, Raghavendra (2014). Constraints to consuming nutrient rich food in Koppal district of Karnataka. *Internat. Res. J. Agric. Eco. & Stat.*, **5**(2) : 245-248.

Deshmukh, M.P. (2006). Knowledge and adoption of pigeonpea variety BSMR 736 by the farmers in Jalna district. M.Sc. (Ag.) Thesis, Marathwada Agricultural University, Parbhani, M.S. (INDIA).

Dhurwey, Chandresh Kumar, Choudhry, V.K., Banty, Ropan and Shrey, Ravi (2015). Constraints perceived by farmers in production and marketing of major cole vegetable crops in Bemetara district of Chhattisgarh state. *Internat. Res. J. Agric. Eco. & Stat.*, **6** (1) : 193-196.

Kadam, R.P. (2003). A study on the technological gap in soybean production technology. Ph.D. Thesis. Marathwada Agricultural University, Parbhani, M.S. (INDIA).

Kadam, S.S., Thombare, B.M. and Mande, J.V. (2010). Technological gap in sugarcane production technology. *J. Maharashtra Agric. Univ.*, **35** (3): 424-427.

Karade, Priya, Agrawal, S.K., Singh, S.R.K. and Chouhan, Sandeep (2014). Constraints in adoption of integrated pest management practices by the potato growers. *Agric. Update*, **9**(1): 149-150.

Mane, S.S. (2001). A study on the problems confronted in greengram cultivation in Parbhani district. M.Sc. (Ag.) Thesis, Marathwada Agricultural University, Parbhani, M.S. (INDIA).

Mane, S.S. (2012). Knowledge and adoption of recommended production technology of green gram. M.Sc. (Ag.) Thesis, Marathwada Krishi Vidyapeeth, Parbhani, M.S. (INDIA).

Pandey, Rakesh, Chaudhary, R.P., Chaturvedi, A.K. and Prasad, R. (2014). Knowledge level and production constraints of rice in Eastern Uttar Pradesh. *Agric. Update*, **9**(1): 106-110.

Shinde, P.B. (2014). Knowledge and adoption recommended seed production technology by the soybean growers. M.Sc.(Ag). Thesis. Marathwada Agricultural University, Parbhani, M.S. (INDIA).

Shennewad, B.A. and Shelke, R.D. (2013). Constraints and suggestions of papaya growers in Marathwada region of Maharashtra state, *Internat. Res. J. agric. Eco. & Stat.*, **4** (1) : 30-32.