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Suggestions given by the Sugarcane growers of Western Uttar Pradesh

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Abstract

A study was conducted in western Uttar Pradesh in which two districts Saharanpur and Muzaffarnagar were selected purposely. A total number of 240 Sugarcane growers were selected through random sampling from sixteen villages. The structured schedule was developed keeping in view the objectives and variable to be studied. The respondents were contacted personally for data collection.

Among the different 6 type of the suggestions viz. Psychological, Social, Technological, Infrastructural, Economical and other suggestions, the major suggestion were identified and in the psychological suggestions 'Create awareness about the IPM practices.' Got 1st rank, in the social suggestions 'Support from family members to adopt agriculture as a profession' got 1st rank, in the technological suggestions 'Link social media to agriculture/ Agriculture information disseminate through the social media' got 1st rank, in the infrastructural suggestions 'Agriculture fair, exhibition, health camps should be organized at Panchayat level through social media' got 1st rank, in the economic suggestions 'Loan procedure should be made easy' was ranked 1st, in the other suggestions 'Increase the youths involvement in the policy making' was ranked 1st, respectively.

Keywords: Constraints, IPM and Suggestions etc.

1. Introduction

Sugarcane, or sugar cane, are several species of tall perennial true grasses of the genus *Saccharum*, tribe Andropogoneae, native to the warm temperate to tropical regions of South and Southeast Asia, Polynesia and Melanesia, and used for sugar production. It has stout, jointed, fibrous stalks that are rich in the sugar sucrose, which accumulates in the stalk internodes. The plant is two to six metres (six to twenty feet) tall. All sugar cane species interbreed and the major commercial cultivars are complex hybrids. Sugarcane belongs to the grass family Poaceae, an economically important seed plant family that includes maize, wheat, rice, and sorghum, and many forage crops. The Indian sugar industry is a key driver of rural development, supporting over about 55 million sugarcane farmers, dependents and a large mass of agricultural labours involved in sugarcane cultivation, harvesting, machine manufacturing etc. Many sugar factories also promote education and cooperative movement in their area operation. A large number of sugar industry (607 sugar mills) spread over 16 states in the country which are based on sugarcane (Indian-industries/sugar.html). The overall high knowledge score was recorded in cultural and chemical control of insect-pests in sugarcane crop. However, majority of farmers had no knowledge about biological control of insect-pests. Among the ten personal characteristics studied - education, land holding, socio-economic status, extension contact, mass media exposure, risk orientation, economic motivation and change proneness were found to have positive and significant correlation with knowledge level of overall IPM practices of sugarcane growers. There is a need to educate the farmer about the importance and different approaches of IPM in sugarcane crop by using appropriate extension methods Singh *et al.* (2009) [3].

Sugar juice is used for making white sugar, brown sugar (khandsari) and jaggery (gur). Sugarcane is one of the main crops of earning foreign exchange. The main by-products of the sugarcane industry are bagasse and molasses. Bagasse is mainly used as a fuel. It is also used for the production of compressed fiber board, paper and plastics. Molasses is used in distilleries for the manufacture of ethyl alcohol, butyl alcohol, citric acid etc. Rum is the best potable spirits made from molasses. Molasses is also used as an additive to feeds for livestock.

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Green tops of cane are a good source of fodder for cattle. Press mud is used as manure in alkaline and saline soil. Sugar industry in India is next in importance only to the textile industry and provides gainful employment to a large number of people. Phuse *et al.* (2008) [4] reported that the 91.50 percent respondents who demanded for a cold storage facility at tahsil level. Also, 79.50 percent respondents felt the need for co-operative market through group marketing that would provide better remunerative prices for their produce.

Sugarcane is grown in diversified climatic conditions, tropical and subtropical. Out of 115 countries of world where sugarcane is cultivated. India is the only one in which both types of climate found. Amongst 115 countries in sugarcane cultivation, India ranks first in terms of area 5.09 million hectare, production 357.67 million tonnes and its productivity 70.31 tones /hectare. Among different states of the country Uttar Pradesh occupies first place in area 2.16 million hectare, production 128.82 million tonnes and productivity 59.583 tonnes /hectare of sugarcane, followed by Maharashtra, Tamil Nadu, Karnataka, Gujarat, and Andhra Pradesh occupying second third fourth and fifth places, respectively but in terms of productivity U.P. ranks seventh. In Uttar Pradesh, Meerut district occupies an important place in terms of area and production of sugarcane cultivation. It is grown on area 12.754 thousand hectares, production 8044.83 thousand tonnes) and productivity 630.76 quintal per hectare. (Source: Directorate of Economics & Statistics, DAC&FW 2016-17). Rajendran (2006) [5] IPM included trash mulching on ridges with sugarcane dry ash 3-5 days after planting, use of 20% more sett rate over the conventional sett rate of 75 000/ha for late season planting, irrigation once a week from the third to the tenth week, partial earthing up after the second weeding

and fertilizer application, detrashing the cane during the fifth and seventh month of cultivation, release of egg parasitoid *Trichogramma chilonisat* 2.5 CC/ha 6 times at fortnightly intervals after 5 months of planting and harvesting at the 12 month without delay. The IPM programme used increased the millable canes and yield of the crop by 36.45% and reduced the infestation of the crop by shoot borers (*Chiloinfuscatellus*).

2. Methodology

The present study entitled “*Study on Knowledge and Adoption level of Sugarcane Growers regarding IPM Practices in Western Uttar Pradesh*” was under taken.

Out of 26 districts of Western Uttar Pradesh, two districts were selected purposively on the basis of production and productivity (namely Saharanpur and Muzaffarnagar) and from the each district two community development blocks were randomly selected and from the every community development blocks, Four village were selected randomly and from every village 15 respondents were selected randomly.

A complete list of all sugarcane growers in each selected village was prepared. From the list a total number of 240 sugarcane growers were selected through random sampling technique. The researcher himself had collected the data from the respondents with the help of pre-tested interview schedule. The suggestive measures were recorded as found out perceived by the respondents at the time of investigation; total score and mean scores was done accordingly.

3. Result and Discussion

In this chapter the major suggestions given by the sugarcane growers regarding IPM practices are given below:

Table 1: Suitable strategies for overcoming the challenges: n=240

S. No.	Statements	Response		
		T. S.	M. S.	Ranks
A.	Psychological suggestion			
1.	Create awareness about the IPM practices.	495	2.23	I
2.	Must require higher education In Agriculture	513	2.22	II
3.	Be motivated for innovation in Agriculture	525	2.22	III
4.	Youth must have inclination	489	2.14	IV
5.	Continues updating of information towards traditional occupation	465	2.04	V
B.	Social Suggestions			
1.	Support from family members to adopt agriculture as a profession	501	2.23	I
2.	Extension agent and farmers collaborative approach	459	2.10	II
3.	Integration of participation between youths and elders should be prompted in agriculture.	468	2.08	III
C.	Economic Suggestion			
1.	Loan procedure should be made easy	576	2.43	I
2.	Loan should made available at no interest	582	2.43	II
3.	Extension officer should motivate farmer for KCC, Call centre and other Agriculture related schemes	558	2.42	III
4.	Crop insurance should be made easy	552	2.42	IV
5.	Facilitate access to land and credit	531	2.39	V
D.	Technological Suggestion			
1.	Link social media to agriculture/ Agriculture information disseminate through the social media	525	2.27	I
2.	Training should be given one time in a month to young farmers	519	2.25	II
3.	More up to date market research is required about farmer Social media use	534	2.23	III
4.	Timely availability of agriculture inputs at fair prices through social media	513	2.22	IV
5.	Scientist should be visit the farm and solve the problems related to agriculture and train the farming youth	492	2.10	V
6.	Good quality of farm literature should be made available through social media	465	2.09	VI
7.	We need a mixture of hi- and low-tech solutions related to agricultural activities	450	2.08	VII
E.	Infrastructural Suggestions			
1.	Agriculture fair, exhibition, health camps should be organized at Panchayat level through social media	465	2.04	I
2.	Provide suitable information about bio-agent, bio-fertilizers and bio-pesticides in rural areas.	477	2.01	II
3.	Setup more IPM information centers in rural areas	465	2.01	III
4.	Training programme related to IPM practices	444	2.00	IV
F.	Other Suggestions			

1.	Increase the youths involvement in the policy making	636	2.65	I
2.	Put agriculture in the school curriculum	624	2.60	II
3.	Strengthen higher education in agriculture	612	2.58	III
4.	Rebranding of Agriculture	573	2.48	IV
5.	Greater public investment in agriculture	543	2.32	V
6.	Organization of Gram Sabha at different time interval to solve local problem related to farming.	543	2.32	VI
7.	Unused land of village' should be made available for youth on lease for farming	483	2.15	VII
8.	Food growers should be given proper respect in the society	477	2.12	VIII

T.S. = Total Score, M.S. = Mean Score.

4. Psychological Suggestions

Tables-1 shows that the 'Psychological Suggestion' given by farmers. Create awareness about the IPM practices was expressed by a majority of the rural farmers given ranked 1st followed by Must require higher education In Agriculture, Be motivated for innovation in Agriculture, Youth must have inclination and Continues updating of information towards traditional occupation were ranked 2nd, 3rd, 4th and 5th, respectively. Create awareness about the IPM practices of the farmers through social media may be good for involvement of the farmers in IPM practices.

5. Social Suggestions

Among the social suggestions, Support from the family members to adopt agriculture as a profession was 1st ranked. Extension agent and farmers collaborative approach was ranked 2nd and Integration of participation between youths and elders should be prompted in agriculture was 3rd ranked in social suggestions. Support from the family members to adopt agriculture as a profession it's very good because according to present scenario agriculture needs to young brain power and beneficial tactics.

6. Economic Suggestions

The farming youth suggested to solve the economic constraints that the Loan procedure should be made easy was ranked 1st, Loan should made available at no interest was ranked 2nd, Extension officer should motivate farmer for KCC, Call centre and other Agriculture related schemes was ranked 3rd, Crop insurance should be made easy was ranked 4th and Facilitate access to land and credit was 5th, respectively.

7. Technological Suggestion

Another Suggestion made by the majority with rank 1st was Link social media to agriculture/ Agriculture information disseminate through the social media as followed by the Training should be given one time in a month to young farmers was ranked 2nd, More up to date market research is required about farmer Social media use was ranked 3rd, Timely availability of agriculture inputs at fair prices through social media was ranked 4th, Scientist should be visit the farm and solve the problems related to agriculture and train the farming youth was ranked 5th, Good quality of farm literature should be made available through social media was ranked 6th and last but not least we need a mixture of hi- and low-tech solutions related to agricultural activities was ranked 7th, respectively.

8. Infrastructural Suggestions

On the basis of problem faced by youths in the farming suggestion given by the farming youth one of them was infrastructural Agriculture fair, exhibition, health camps should be organized at Panchayat level through social media were ranked 1st as followed by the Provide suitable information about bio-agent, bio-fertilizers and bio-pesticides

in rural areas, Setup more IPM information centers in rural areas and Training programme related to IPM practices with rank 2nd, 3rd, and 4th, respectively.

9. Other Suggestions

The other suggestions made by the farmers that the increase the youths involvement in the policy making was ranked 1st as followed by Put agriculture in the school curriculum, Strengthen higher education in agriculture, Rebranding of Agriculture, Greater public investment in agriculture, Organization of Gram Sabha at different time interval to solve local problem related to farming, Unused land of village' should be made available for youth on lease for farming and Food growers should be given proper respect in the society with rank 2nd, 3rd, 4th, 5th, 6th, 7th and 8th, respectively. Youth involvement in the policy may be good for increase the involvement of the youths in agriculture, to attract the youth for IPM practices in sugarcane crop.

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