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STUDY ON CONSTRAINTS FACED BY THE SUGARCANE GROWERS IN WESTERN UTTAR PRADESH INDIA

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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 constraints *viz*. Psychological, Social, Technological, Infrastructural, Economical and other constraints, the major constraints were identified and in the psychological constraints 'Lack of education' got 1st rank, in the social constraints 'Decreased the land holding size due to division of family' got 1st rank, in the technological constraints 'Lack of training for modern agricultural technologies' got 1st rank, in the infrastructural constraints 'Lack of training programme' got 1st rank, in the economic constraints 'Lack of alternative employment during lean period of agriculture' was ranked 1st, in the other constraints 'Lack of support of family member to continue higher education' was ranked 1st, respectively.

Keywords: Constraints, sugarcane etc.

Introduction

It is universally acknowledged that India is the homeland of sugarcane and sugar. The sugar is the focal source of sucrose in the diet of human being all over the world. The 'sugar' word derived from 'Sakkara or sarkara' of Sanskrit language. In India, cultivation of sugarcane dates back of the Vedic period. The earliest mention of sugarcane cultivation is found in India in writing of the period 1400 to 1000 B.C. It is universally accredited that India is the motherland of sugarcane and sugar. Alexander soldier, after their visit to India were reported to have marvelled at the production of honey without the 'intervention of bees. Two core crops, sugarcane and sugar beet are grown for as the raw material for producing of sugar. Two third of total sugar is produced by the sugarcane and it is the focal source of Indian sugar. India has the first largest area under sugarcane in the world.

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 and Statistics, DAC and FW 2016-17).

Sugar industry constitutes the second largest agro-based industry after the textile industry (Thangavelu and Subhadra, 2005). The low productivity of sugarcane in Haryana is mainly due to the attack of number of insect-pests, diseases and weeds right from the time of sowing

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till harvesting of the crop. As many as 200 species of insect-pests have been reported to cause damage to sugarcane crop from one stage to another. These cause huge loss to the crop in spite of extensive use of pesticides. The indiscriminate use of insecticides has led to serious consequences like harmful residues, pest resistance, pest resurgence and outbreak of secondary pest (Mathur and Upadhyay, 1999). Its solution lies in integrated pest management practices which will provide an acceptable as well as affordable basis for pest control in sugarcane.

Materials and Methods

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.

Analysis was done with the use of percentage as well as correlation coefficient. The respondents have experienced many problems and difficulties affecting adoption of IPM technologies. The sample percentage and mean score were calculated and finally ranked were given on the basis of the mean scores from highest to lowest.

Result and Discussion

In this chapter the major constraints faced by the sugarcane growers regarding IPM practices are given below.

Psychological Constraints

Table 1, shows that the different constraints level regarding the integrated pest management (IPM) practices in sugarcane crop. Lack of education is the major psychological constraints faced by the farmers given 1st rank, Lack of enthusiasm rank 2nd followed by Negative attitude toward IPM practices in sugarcane 3rd, drudgery involved in agriculture work rank 4th, Lack of economic motivation rank 5th and Lack of knowledge about improved IPM practices rank 6th, respectively. Thereby, it can be stated that in the psychological constraints lack of education is the major problem so there is need to improve the education level.

Social Constraints

Among the social constraints, decreased the land holding size due to division of family was seriously felt by most of farming youth first preference. Lack of faith by senior of family ranked 2nd, Lack of time due to social work ranked 3rd and early marriage is slight constraints having last rank with only 1.65 mean score. Among the social constraints decrease land size is the major problem to solve the problem govt. can distribute the unused land among the young farmers on the rent basis. It may be good solution to face this problem.

Technical Constraints

It is widen from the data contained in table 1 that the highest mean score of 2.14 was found in Lack of training for modern agricultural technologies ranked first and an ultimately considered as extreme technical constraints above all other 3 constraints. Lack of knowledge regarding critical stage of irrigation is also a technical constraints faced by farming youth ranked 2nd, Lack of knowledge about exact doses and time of application of fertilizers ranked 3rd and Not use of recommended seed rates, fertilizers, pesticides technology ranked 4th, respectively. Exact dose and time of application of the fertilizer dosage is the major problem under the technical constraints to solve this problem govt. can provide the training camps through the KVKs and NGOs. It may be a way to solve this problem.

Infrastructural Constraints

The table 1, shows that the among the different infrastructure constraints farming youths faced problems major one is Lack of training programme ranked 1st as followed by the Lack of awareness benefits of IPM practices ranked 2nd, Lack of information regarding mandi rates/Access to markets, Unavailability of Bio-agents in govt. sale centre, Non-availability of quality and improved seed in time/ Low quality of inputs, Lack of appropriate technology and education, Old information / communication technologies used in govt. extension system, Less production unit and storage facilities of Bio-agents with rank 3rd, 4th, 5th and 6th, 7th, 8th, respectively. Lack of training programme is the major constraints faced by the farming youths to solve this problem govt. can start training programme in the rural areas to relate to the IPM practices.

Economic Constraints

It is evident from table 1, that the Lack of alternative employment during lean period of agriculture mean score (2.13) in economic constraints was ranked 1st. High cost

Table 1: Constraints faced by the sugarcane growers regarding adoption of IPM practices. n=240

S. No.	Statements	Response		
		T. S.	M. S.	Rank
A.	**PSYCHOLOGICAL CONSTRAINTS**			
1.	Lack of education	450	2.03	I
2.	Lack of enthusiasm	465	1.94	II
3.	Negative attitude toward IPM practices in sugarcane	396	1.89	III
4.	Drudgery involved in agriculture work	354	1.64	IV
5.	Lack of economic motivation	363	1.57	V
6.	Lack of knowledge about improved IPM practices	285	1.40	VI
B.	**SOCIAL CONSTRAINTS**			
1.	Decreased the land holding size due to division of family	411	1.88	I
2.	Lack of faith by seniors of the family/ lack of family support	390	1.67	II
3.	Lack of time due to social work	384	1.66	III
4.	Early marriage	387	1.65	IV
C.	**TECHNICAL- CONSTRAINTS**			
1.	Lack of training for modern agricultural technologies	458	2.14	I
2.	Lack of knowledge regarding critical stage of irrigation	483	2.04	II
3.	Lack of knowledge about exact doses and time of application of fertilizers	471	1.99	III
4.	Not use of recommended seed rates, fertilizers, pesticides technology	450	1.97	IV
D.	**INFRASTRUCTURAL CONSTRAINTS**			
1.	Lack of training programme	549	2.41	I
2.	Lack of awareness benefits of IPM practices	450	2.27	II
3.	Lack of information regarding; Mandi rate/ Access to markets	473	2.12	III
4.	Unavailability of Bio-agents in govt. sale centre	471	2.09	IV
5.	Non-availability of quality and improved seed in time/ Low quality of inputs	483	2.09	V
6.	Lack of appropriate technology and education	492	2.08	VI
7.	Old information / communication technologies used in govt. extension system	456	2.08	VII
8.	Less production unit and storage facilities of Bio-agents	359	1.59	VIII
E.	**ECONOMIC CONSTRAINTS**			
1.	Lack of alternative employment during lean period of agriculture	498	2.13	I
2.	High cost of cultivation	492	2.10	II
3.	High cost of agricultural machinery	489	2.09	III
4.	High cost of new technology	489	2.09	IV
5.	High cost of Hybrid seeds	474	2.03	V
6.	More expensiveness of IPM practice	474	2.03	VI
7.	No finance by Government/ Lack of loan facility	471	2.01	VII
8.	High cost of agricultural labors	426	1.89	VIII
9.	Price fluctuation of agricultural product	402	1.84	IX
F.	**OTHER CONSTRAINTS**			
1.	Lack of support of family member to continue higher education	561	2.40	I
2.	Exploitation of farmers by middle man, dealers, fertilizer traders etc.	558	2.38	II
3.	Undeveloped Agricultural value chains	528	2.32	III
4.	Lack of timely guidance by RAEO, ADO, to farmers.	549	2.32	IV
5.	Migration to urban areas due 'to unavailability of employment	531	2.27	V

of cultivation was ranked 2nd, High cost of agricultural machinery was ranked 3rd, followed by High cost of new technology, High cost of Hybrid seeds was ranked, More expensiveness of IPM practice, No finance by Government/ Lack of loan facility, High cost of agricultural labors and last but not least Price fluctuation of agricultural products show 4th, 5th, 6th, 7th, 8th and 9th, respectively. Lack of alternative employment during lean period of agriculture is major problem comes under the economic constraints to solve this problem govt. can establish the govt. venture in the rural area.

Other Constraints

A perusal of table 1, makes it clear that the Lack of

support of family member to continue higher education was perceived, as an important constraint with top priority mean score is 2.40 with 561 total score. This was followed by Exploitation of farmers by middle man, dealers, fertilizer traders etc., Undeveloped Agricultural value chains, Lack of timely guidance by RAEO, ADO, to farmers and last but not least Migration to urban areas due 'to unavailability of employment with rank 2nd, 3rd, 4th and 5th, respectively.

Conclusion

Among the different 6 type of the constraints *viz.* Psychological, Social, Technological, Infrastructural, Economical and other constraints, the major constraints were identified and in the psychological constraints 'Lack of education' got 1st rank, in the social constraints 'Decreased the land holding size due to division of family' got 1st rank, in the technological constraints 'Lack of training for modern agricultural technologies' got 1st rank, in the infrastructural constraints 'Lack of training programme' got 1st rank, in the economic constraints 'Lack of alternative employment during lean period of agriculture' was ranked 1st, in the other constraints 'Lack of support of family member to continue higher education' was ranked 1st, respectively. On the basis of the result it can be said that the sugarcane growers have not proper information about the sugarcane, so there is need to improve the education level of the farmers. Everyone knows that the education play a vital role in the adoption of the new technology. Majority of the farmers were not aware about the IPM practices there were need to make them aware through the social media and all different type of communicating methods.

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