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Problems faced and their suggestions from sugarcane farmers in the adoption of integrated pest management

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Abstract

This study was conducted at Khairabad Development Block of Sitapur district, Uttar Pradesh during 2015-16 to find out the problems faced by sugarcane farmers in the adoption of Integrated Pest Management (IPM) practices. Five villages were randomly selected from this development block, and 20 sugarcane farmers from each village were selected by random sampling, resulting in a sample size of 100 respondents. The study found that information on 'lack of information about bio-agent, bio-fertilizers, and bio-pesticides in rural areas' (89%), quality IPM materials are not available in farmer's sales centers' (88%), and found that the 'improved IPM tools are not available in rural areas' (86%) were the major problems faced by respondents in adopting integrated pest management for sugar cane crop cultivation. 'Credit facilities made easily available at low-interest rate' (86%), 'provide quality IPM materials at farmer's sales centers' (84%), and 'provide suitable information about bio-agent, bio-fertilizers and bio-pesticides in rural areas' (78%) were major suggestions offered by respondents in the adoption of IPM practices in sugarcane crop cultivation.

Keywords: Constraints, integrated pest management, sugarcane, sugarcane growers and suggestions

Introduction

Sugar cane crop is an important source of income grown all over the world. It belongs to the family Gramineae. Sugarcane is the world's largest crop. In 2012, FAO estimated that cultivated about 26 million hectares of land in more than 90 countries, with a global yield of 1.83 billion tons. India is the world's largest sugar cane producer. The next five largest producers are Brazil, China, Thailand, Pakistan, and Mexico.

Sugar cane is a moderately non-sunny, weather-loving crop grown in two different climatic regions, tropical and subtropical. The total sugarcane planted area in India is 5.06 million hectares, with a production of 356.56 million tonnes in 2014-15, of which 70% is in the subtropics and the remaining 30% is in the tropics.

The major states growing sugar cane in India are Uttar Pradesh, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, and Punjab, but northern India has a subtropical climate. The major sugar cane-producing states in the northern region are Uttar Pradesh, Haryana, Punjab, Bihar, and Jharkhand. Uttar Pradesh is the largest sugarcane-producing state in the subtropical region, with an area of approximately 2, 22, 800 hectares and production of 134.69 million tons. Haryana boasts the highest sugarcane production in the subtropical region. In Sitapur district, sugarcane covers 1.44 lakh hectares of land in 2013-2014 and production of 9.32 million tons and a productivity of 64.68 tons/ha.

Integrated Pest Management (IPM) is a harmonious and compatible way to reduce pest populations below levels of economic harm by using all available pesticides, including the use of chemical pesticides as a last resort is a comprehensive ecological approach to pest control that uses the skills, techniques, and methods of regular monitoring and monitoring of crop pests. IPM is a dynamic approach and process that varies from region to region, from time to time, from crop to crop, from pest to pest, etc., reducing crop losses to be brought to life with due consideration of human health and environmental safety let life is the philosophy behind IPM. The IPM approach is recognized worldwide for achieving agricultural sustainability.

Methodology

The study was conducted in a purposively selected Sitapur district of Uttar Pradesh. There are 19 community development blocks in the district, of which Khairabad was purposively selected. Purposively selected five villages and created a list of total farmers for each of the selected villages. 100 farmers were then selected as respondent by random sampling on the categories of farmers in each selected village. Data were collected using a specially developed semi-structured interview plan on a standard scale with some modifications as to the purpose and analyzed using appropriate statistical methods.

Result and Discussion

Constraints faced by the sugarcane growers

The data regarding the constraints faced by the sugarcane

growers is described in Table 1.

Table 1: Constraints faced by the respondents in the adoption of IPM practices in sugarcane crop N=100

S. No.	Constraints	Respondents		Ranks
		Frequency	Percentage	
1.	Lack of knowledge about improved IPM practices.	55	55	VII
2.	Improved IPM tools are not available in rural areas.	86	86	III
3.	Quality IPM materials are not available in farmer sale centers.	88	88	II
4.	Poor economic status of farmers.	65	65	VI
5.	Lack of information about bio-agent, bio-fertilizers, and bio-pesticides in rural areas.	89	89	I
6.	Less numbers IPM information centers in rural areas.	75	75	IV
7.	Unavailability of bio-agents, resistant varieties, bio-pesticides and mechanical instruments.	70	70	V

A perusal of Table 1 indicates that the maximum number of the respondents 89% with adopting a rank of first agreed with the statement that “Lack of information about bio-agent, bio-fertilizers, bio-pesticides in rural areas” is the common problem, followed by “High cost of chemical fertilizers” 88% at ranks second, “Quality IPM materials are not available in farmer sale centers” 86% at rank third, “Less numbers of IPM information centers in rural areas” 75%, at rank fourth, “Unavailability of bio-agents, resistant

varieties, bio-pesticides and mechanical instrument” 70% at rank fifth, “Poor economic status of farmers” 65% at ranks sixth and “Lack of knowledge about improved IPM practices” 55% at rank seventh, respectively.

Suggestions offered by the respondents

The data regarding suggestions offered by the respondents is presented in Table 2.

Table 2: Suggestions offered by the respondents N=100

S. No.	Suggestions	Respondents		Ranks
		Frequency	Percentage	
1.	Create awareness about IPM practices.	65	65	VI
2.	Provide improved IPM tools that are not available in rural areas.	76	76	IV
3.	Provide Quality IPM materials in farmer sale centers.	84	84	II
4.	Credit facilities made easily available at low-interest rate.	86	86	I
5.	Provide suitable information about bio-agent, bio-fertilizers and bio-pesticides in rural areas.	78	78	III
6.	Set up more IPM information centers in rural areas.	62	62	VII
7.	Provide bio-agents, resistant varieties, bio-pesticides and mechanical instruments.	73	73	V

A perusal of Table 2 indicates that the maximum number of the respondents 86% with adopt a rank of first were agreed with the statements that “Credit facilities made easily available at the low-interest rate” is the common problem, followed by “Provide Quality IPM materials in farmer sale centers” 84% at ranks second, “Provide suitable information about bio-agent, bio-fertilizers and bio-pesticides in rural areas” 78% at rank third, “Provide the improved IPM tools are not available in rural areas” 76% at rank fourth, “Provide bio-agents, resistant varieties, bio-pesticides and mechanical instruments” 73% at rank fifth, “Create awareness about the IPM practices” 65% at ranks sixth, “Set up more IPM information centers in rural areas” 62% at rank seventh, respectively.

Conclusion

The results indicate the lack of information about bio-agent, bio-fertilizers, bio-pesticides in rural areas, quality IPM materials are not available in farmer sale centers, and improved IPM tools are not available in rural areas. It can be concluded that the major constraints faced by the respondents in the adoption of IPM practices in sugarcane crop. Therefore, policymakers and administrators of developmental departments, agricultural universities, and other organizations involved in rural development and extension activities have to formulate suitable extension

programmes to overcome the constraints faced by the respondents in the adoption of IPM practices in sugarcane crops.

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