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ADOPTION CONSTRAINTS OF CHEMICAL CONTROL OF INSECTS / PESTS AND DISEASES OF SUGARCANE CROP AS EXPERIENCED BY THE FARMERS

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Sugarcane being one of the most important cash crops of Pakistan occupies 2nd place in consumption after wheat. In spite of persistent emphasis laid by the Government upon the increase of sugarcane output, per acre yield of this crop has not come up to the expectations due to the attack of insects/ pests and diseases. Though the use of chemicals is tipped to be the only remedy for rapid control of insect /disease attack, but these are not being benefitted fully due to certain barriers. In order to probe the real situation the study was undertaken in fifteen randomly selected villages of Tehsil Faisalabad by interviewing 150 respondents. The analysis of the data revealed that the major difficulties faced by the farmers were the lack of capital and machinery, non-cooperation of the field staff and high cost of insecticides.

INTRODUCTION

Sugarcane is one of the most important cash cops, but the performance of this crop has not been consistent with expectations in spite of all efforts made for increase in per acre yield and area under crop. The area under sugarcane amounted to a record 946,000 hectares in 1981-82 , which declined to 762,000 hectares in 1985-86. The area under sugarcane crop again went up to 820,000 hectares in 1987-88 , however, it was still lesser than that of the year 1981-82. At the same time the potential yield has not been obtained so far (Anonymous, 1987-88; Anonymous, 1988) due to lack of consistency in yield and area under cultivation which was further aggravated mainly due to the attack of insects/pests and diseases. Singh et al . (1981) found that only stem borer caused mortality among the young sugarcane shoots to the tune of 57. 5%.

As compared to other practices, the chemical control measures are considered more effective and rapid. In order to get full benefit from the chemicals, the extension service and some other agencies are entrusted the job to make farmers aware of the importance of chemicals, and train them with the skill of their usage. Presently, the chemicals are either not utilized or are underutilized. Under these circumstances, the study was conducted to find out the barriers which stood in the way of adoption of chemical control measures against sugar- cane insects/pests and diseases.

MATERIAL AND METHODS

Main objective of the study was to determine the adoption constraints of chemical control measures against insects/pests and diseases of sugarcane. The study was conducted in Tehsil Faisalabad comprising 58 union councils. Of these five union councils were selected and then from each of these union councils, three villages were selected by simple random sample technique. In order to collect the required information, a total number of 150 respondents randomly selected from 15 villages were interviewed. The data so collected were analysed to draw the conclusions.

RESULTS AND DISCUSSION

Table 1 shows that 44.67 and 41.33% of the respondents applied Furadon and Diazenon, whereas Di-eldrin and Heptachlor were applied by 30 and 22% respondents respectively.Chemicals like Thiodan, Sumithion were applied by less

than 20 % of the respondents.

Table 1. Application of chemicals against insects / pests and diseases of sugarcane crop

Chemicals	Adoption	
	Number of respondents	Percentage
Diazenon	62	41.33
Di-eldrin	45	30.00
Furadon	67	44.67
Heptachlor	14	9.33
Methylparathion	33	22.00
Nuvacron	24	16.00
Sumithion	13	8.67
Thiodan	8	5.33

NOTE : Some of the respondents gave more than one response, so the number of responses exceeds the total number of respondents.

Table 2 depicts that the main difficulties being faced by majority of the respondents were high cost of chemicals (94. 00%) , lack of capital (90.00%), and high cost of spraying machinery (83.33%). The other difficulties pointed out by the respondents were lack of knowledge, lack of technical skills and non-cooperation of Agriculture Field Staff.

Table 2. Difficulties faced by the respondents in the adoption of recommended chemical control measures.

Difficulties	No. of respondents	Percentage
Lack of knowledge	35	23.33
High cost of spraying machinery	125	83.33
High cost of chemicals	141	94.00
Lack of technical skills	65	43.00
Lack of capital	135	90.00
Non-cooperaation of Agri. Field Staff	55	36.67

NOTE: Some of the respondents gave more than one response, so the number of responses exceeds the total number of respondents.

The following conclusions were drawn from this study:

1. Majority of the respondents used to apply chemicals for the control of insects, pests and diseases of sugarcane crop. Furadon, Diazenon and Dieldrin were commonly applied by the farmers.
2. High cost of chemicals and machinery and lack of sufficient capital were reported as the major constraints in the adoption of chemical control measures.

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