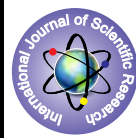


A Study On the Reasons for the Usage of Endosulfan and Economic Advantage of Endosulfan in Four Mandals Of Chittoor District of Andhra Pradesh



Veterinary

KEYWORDS : Endosulfan, Economic advantage, Pest control, Tree crops.

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ABSTRACT

A study was undertaken to find out the reasons for the usage and economic advantage of using Endosulfan in four Mandals of Chittoor District of Andhra Pradesh. All the (100%) respondent farmers revealed that effective pest control, reduction in number and cost of manual labour in weeds removal were the reasons for the usage. About 88 to 96 % convinced that removal of weed competition in tree crops helped the saplings to establish strongly in the soil. While 60-80 % replied that economic advantage was evidenced by increased crop yield and 20-40 % by observing loss of yield due to pest infestation if Endosulfan was not used. As far as season was concerned Endosulfan usage was more during Rabi season than during Kharif season. This might be due to increased prevalence of pests and insects and depletion of nutrients in the soil as a result of Kharif cropping.

INTRODUCTION

The Indian agriculture had witnessed a tremendous growth after attaining independence. In order to meet the food grain requirement of ever growing population, which stressed the need for the supply of inputs like improved seeds, fertilizers, pesticides and introduction of new technology. This was realized after the introduction of Green Revolution launched in 1967-68. Gradually the food grain production had increased and now we are self sufficient in food grain production. Pesticides are chemical substances belonging to different categories, which were important in modern farming and will remain indispensable in future for a few years to come, without their use it is practically impossible to produce enormous quantities of food that is required to feed the growing population (Agnihotri, 2000). Among the Organo-chlorine pesticides DDT and BHC were previously used widely in the country, but after imposition of ban on their usage, Endosulfan has gained lot of importance as an effective pesticide in the field of crop husbandry. Chittoor District of Andhra Pradesh is no exception. Hence a study was carried out in four mandals of Chittoor district to find out the reasons for the usage and economic advantage of usage of Endosulfan in the district.

MATERIALS AND METHODS

Selection of Mandals: Four mandals namely Nagari, Putalapattu, Vayalpadu and Yerpedu of Chittoor district, Andhra Pradesh, were selected. The mandals were selected from four Animal Husbandry divisions which were spread over to different directions of the district. The nearest was Yerpedu about 20 km and the farthest was Vayalpadu over 100 km from Tirupati.

Selection of villages: Five villages in each mandal were selected based upon the existence and functioning of all the four production systems, cropping pattern, wide usage of pesticides, milk production and utilization.

Selection of farmers: Five farmers from each village were selected based on possessing cattle and buffaloes, extent of land, usage pattern of Endosulfan. Thus the sample size has become 100 (4 mandals x 5 villages x 5 farmers = 100).

Collection of data from the farmers: A pretested Questionnaire was used to collect information from the farmers about the usage of Endosulfan on their crops, cropping pattern, etc., The data for the study covered, cropping pattern and knowledge level of farmers in using Endosulfan on crops etc.

RESULTS AND DISCUSSION

The reasons for the usage of Endosulfan were shown in table1. It revealed that all the respondents were spraying Endosulfan on crops by using 35 per cent EC technical grade Endosulfan. It indicated that all the farmers (100%), convinced that by using Endosulfan there was an increase in crop yield ranged from 25 to 100 %. This was in agreement with findings of Omongo (1998) in on farm experiments in cowpeas resulted in 50 per

cent increase in yield. Further, in the present study, effective pest control, reduction in the manual labour in weeds removal, reduction in cost of labour in manual weed control upon which all the farmers (100%) reacted positively. These results were in agreement with Porwal (2002) and Rameswar (2002). As regards usage of Endosulfan, 88-92 % of the farmers used Endosulfan immediately on observing the pest. Moreover 88 to 96 % convinced that removal of weed competition in tree crops helped the saplings to establish strongly in the soil.

The results in the present study on account of economic advantage of using pesticides was presented in table 2 and showed that 40-60 % of the farmers said that there was economic advantage of upto 25 % and of the respondents 20 % said that it was varying from 50-100 %. Even though there was difference of opinion about the extent of economic advantage. All the farmers in the study area accepted that there was a definite economic advantage of using pesticides on crops. 60-80 % of the farmers replied that evidence of economic advantage was found in obtaining increased crop yield and 20-40 % by observing loss of yield due to pest infestation. As far as season was concerned pesticide usage was more during Rabi season than during Kharif season. This might be due to increased prevalence of pests and insects and depletion of nutrients in the soil as a result of Kharif cropping. The similar views as expressed by the respondent farmers in the study area were observed by Dyanatha and Chand (1999). The selected farmers in the study area also felt that the economic advantage depends on the type of pesticide, concentration, method of application, type of crop and collective action of farmers in the area simultaneously of pest control measures, this might be necessary because of movement of pests from one place to another place and if pest control measures were confined only to one place, pests may invade this area from untreated area.

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Table 1 Reasons for the usage of Endosulfan on crops in the study area

Sl. No.	Reasons	Mandals				Overall Mean±SE
		Nagari	Putalapattu	Vayalpadu	Yerpedu	
1.	Whether any increase in the crop yield obtained or not by spraying Endosulfan					
	a) Obtained	25(100)	25(100)	25(100)	25(100)	25 ± 0.00

	b) Not Obtained	0	0	0	0	0
2.	Control of pests in the crops was observed or not					
	a) Observed	25(100)	25(100)	25(100)	25(100)	25 ± 0.00
	b) Not observed	0	0	0	0	0
3.	Reduced manual labour (Drudgery)					
	a) Significant	25(100)	25(100)	25(100)	25(100)	25 ± 0.00
	b) Insignificant	0	0	0	0	0
4.	Reduced Labour cost					
	a) Reduced	25(100)	25(100)	25(100)	25(100)	25 ± 0.00
	b) Non reduced	0	0	0	0	0
5.	When were they using Endosulfan?					
	a) Before the occurrence of pest damage	4 (16)	3 (12)	2 (8)	3 (12)	3 ± 0.47
	b) Immediately on seeing the pest	21 (84)	22 (88)	23 (92)	22 (88)	22 ± 0.40
6.	Broaden the range of viable crop options					
	a) Yes	23 (92)	25 (100)	24 (96)	23 (92)	23.75 ± 0.47
	b) No	2 (8)	0	1 (4)	2 (8)	1.25 ± 0.47
7.	Removing the weed competition in tree crops					
	a) Yes	24 (96)	23 (92)	22 (88)	24 (96)	23.25 ± 0.47
	b) No	1 (4)	2 (8)	3 (12)	1 (4)	1.75 ± 0.47

(n=100)

The figures in the parentheses indicate per cent.

Table 2 Economic advantage of using Endosulfan in the study area (n=100)

Sl. No.	Parameter	Mandals				Overall Mean±SE
		Nagari	Putalapattu	Vayalpadu	Yerpedu	
1.	The extent of economic advantage derived					

	a) Upto 25% more than normal	10 (40)	15 (60)	10 (40)	10 (40)	11.25±1.25
	b) Upto 50% more than normal	5 (20)	5 (20)	5 (20)	5 (20)	5.0±0.00
	c) Upto 75% more than normal	5 (20)	5 (20)	5 (20)	5 (20)	5.0±0.00
	d) Upto 100% more than normal	5 (20)	0 (0)	5 (20)	5 (20)	3.75±1.25
2.	How it was evident					
	a) Increased crop yield	20 (80)	20 (80)	15 (60)	20 (80)	18.75±1.25
	b) Below normal crop yield and no pest control measures	5 (20)	5 (20)	10 (40)	5 (20)	6.25±1.25
3.	Whether the advantage is same for all the crops or not if not in which crops it was more					
	a) Food crops	15 (60)	10 (40)	15 (60)	10 (40)	12.5±1.44
	b) Non food or commercial crops	10 (40)	15 (60)	10 (40)	15 (60)	12.5±1.44
4.	In which season the advantage observed was more					
	a) Kharif	10 (40)	12 (48)	09 (36)	10 (40)	10.75±0.75
	b) Rabi	15 (60)	13 (52)	16 (64)	15 (60)	14.75±0.62
5.	The advantage depended on					
	a) Selection of pesticide	5 (20)	6 (24)	5 (20)	6 (24)	5.5±0.28
	b) Concentration of pesticide	4 (16)	3 (12)	4 (16)	3 (12)	3.5±0.28
	c) Type of crop	4 (16)	6 (24)	5 (20)	5 (20)	5.0±0.40
	d) Method of application	5 (20)	4 (16)	6 (24)	4 (16)	4.75±0.47
	e) Type of pest	3 (12)	4 (16)	3 (12)	6 (24)	4.0±0.70
	f) Collective action of farmers of the area simultaneously	4 (16)	2 (08)	2 (08)	1 (04)	2.25±0.62

Figures in the parenthesis indicate per cent

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