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Awareness of farm workers regarding the handling of pesticides

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Abstract

This paper examines the respondent's awareness regarding the various aspects involved in the handling of pesticides. The study was conducted at Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth farms in South Konkan Coastal Zone region. The sample constituted of 120 farm growers from 8 farms. The respondents were interviewed with the help of specially designed schedule. In study locations the awareness of farm workers regarding the handling of pesticides was fairly good. 46.00 per cent of the farm workers read label and 27.00 per cent are aware about the colour triangle given on pesticide bottle. Almost all workers use particular equipment's and protective measures during pesticide application. Only 10 per cent had habit of eating tobacco at the time of pesticide application. Majority of workers clean their body after spraying and wash contaminated clothes separately. Very few of them wash empty containers near water bodies and did not use pin while spraying nozzle is blocked. Most (82.00 per cent) of workers never enter in the sprayed field and 60.00 per cent of the farm workers are aware about the safety storage of pesticides. The findings concluded that the farm workers had fairly good awareness regarding the handling practices of pesticides. The data in respect of awareness of the farm workers suggested frequent education about safe handling of pesticides.

Keywords: Handling, pesticides, south Konkan, awareness

Introduction

Pesticides are chemical compounds that are used to kill pests, including insects, rodents, fungi and unwanted plants, which are widely used in agriculture. Pesticides help in increasing crop production but their in-discriminant use adversely affects the environment and human health. Being one of the principle polluters, victims of pollution, farmers and farm workers are at the top of this risk. The World Health Organization (WHO) and the United Nation Environment Program estimate pesticide poisoning happen rates of per 2-3 minute, with approximate 20,000 workers dying from exposure every year, the majority of the farm workers acknowledge that pesticides are harmful to their health (71.00 per cent) and environment (65.00 per cent). (Kumari; 2013) ^[2].

Dolores Huerta said, farm workers who know how to do a number of different jobs, whether it be pruning, picking, crafting, and spraying, they see themselves as professionals, and they take a lot of pride in that work. They don't see themselves as doing work that is demeaning. But farm workers are at a very high risk of occupational diseases and injuries due to exposure to pesticides resulting from inadequate education, training and safety systems. Higher level of education gives pesticides user better access to information and more knowledge of the risk associated with pesticides and how to avoid exposure and follow recommended safety and application guidelines. The primary reasons for pesticides injuries and poisoning among agricultural workers include inappropriate use, inadequate knowledge and awareness about handling of pesticides and protective measures. (Magauzi *et al.* 2011) ^[3].

Present study focuses on the understanding of the awareness regarding various aspects involved in the handling of pesticides.

Objective of the study

To access the awareness of farm workers regarding the handling of pesticides.

Methodology

The study was purposively conducted at Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth farms at Dapoli, Wakawali, Bhatey, Shirgaon, Lanja (Dist- Ratnagiri), Mulde, Vengurle and Girey (District- Sindhudurg) in South Konkan Coastal Zone of Konkan region.

The list of farm workers who undertake the job of spraying of chemicals over the years were obtained from in-charge of various research stations. From the list 120 workers were selected randomly for the study. The data was collected with the help of a specially designed interview schedule by keeping in view the objective of the study. Collected data was classified, tabulated and analysed by using various statistical

method. 'Ex-post facto' research design was used to conduct the present study.

Result and Discussion

Awareness of farm workers regarding the handling of pesticides

The respondent's awareness with regards to the pesticide use, handling, toxicity level, protective measures, health impacts, safety storage of pesticide, disposal of empty pesticide bottles and resultant behavior decides the level and extent of negative externalities associated with pesticide use.

The responses of pesticide applicators to the questions related to this aspect is recorded in the following table:

Table 1: Show the data presented and particulars

Sl. No.	Particulars	Response (N=120)			
		Yes		No	
		Number	Per cent	Number	Per cent
1.	Do you read the labels on the package?	56	46.00	64	54.00
2.	If you cannot read, do you seek help from others and follow instructions given on label?	101	84.00	19	16.00
3.	Are you aware about colour triangle given on pesticide bottle?	32	27.00	88	73.00
4.	Do you use particular equipment's for taking, mixing and spraying of pesticides?	117	98.00	3	2.00
5.	Do you use protective gadgets during pesticides application? (like protective clothes, gloves, face mask, Google's, head cover, full-sleeved shirt and full pants and boots)	116	97.00	4	3.00
6.	Do you eat, drink, or smoke while spraying pesticides?	10	8.00	110	92.00
7.	Do you take bath or clean your body right after spraying?	118	99.00	2	1.00
8.	Do you change clothes right after spraying?	19	16.00	101	84.00
9.	Do you wash contaminated clothes separately?	102	85.00	18	15.00
10.	Are you aware about the safety storage of pesticides?	73	61.00	47	39.00
11.	Do you keep the pesticide bottle along with food items?	0	0	120	100
12.	Do you spray when it is windy?	7	6.00	113	94.00
13.	Do you determine the wind direction first and then spray?	116	97.00	4	3.00
14.	Do you wash the sprayer/ bottle/ in the pond/ canal/ river/ etc?	14	12.00	106	88.00
15.	When spraying nozzle is blocked blowing air do you	15	13.00	105	87.00
Clean it by using mouth pressure or pin?					
16.	Do you re-enter into the sprayed field/ orchard?	21	18.00	99	82.00

The data presented in the table, revealed that, 46.00 per cent farm workers read label on the pesticide bottle themselves while majority (84.00 per cent) seek help form others and follow the instructions given on label. One-third (27.00 per cent) of the workers were aware about colour triangle given on the pesticide bottle. Most of the farm workers knew that pesticides toxicity level by odour of chemical and more pungent were considered as more toxic. Almost all (97.00 per cent) workers use particular equipment's for taking, mixing and spraying of pesticide. Majority (96.00 per cent) of workers use protective clothes, gloves, mask, head cover, full-sleeved shirts and pants and rest of them not use any protective measures because of less awareness about pesticide exposure. The workers did not take food, drink and smoke while spraying but 10.00 per cent of workers had habit of eating tobacco during pesticide application. Majority of the farm workers take bath and clean body right after spraying of pesticide. Most (85.00 per cent) of workers wash contaminated clothes separately. Majority (60 per cent) of farm workers were aware about safety Safety storage of pesticides and 40 per cent workers were not. None of them kept the pesticide containers along with food items. Most of them considered the wind direction while spraying, but they did not postpone spraying even during the wind flow. Very few (12.00 per cent) of them wash sprayers, empty containers nearby water bodies. When spraying nozzle is blocked 13.00 per cent workers did not use any pin and tool for cleaning the nozzle rest of the workers use pin for cleaning the nozzle and never use mouth pressure. Most (82.00 per cent) of workers

never enter in the sprayed field or orchard and few of them re-enter in to the sprayed nursery or orchard for another work.

It can be observed that, the awareness of farm workers regarding the handling practices of pesticides, found to be fairly good. They seek information from others regarding safety use of pesticides also use particular equipments and protective gadgets during pesticide application. While in certain aspects like they were not aware about colour triangle given on pesticide bottle, never change clothes right after spraying and also did spray when it was windy.

The results of present study are more similar with Yassin *et al* (2002) [4], Devi (2009) [1], Kumari *et al.* (2013) [3].

Conclusion

It was observed that 46.00 per cent of the farm workers could read label on the pesticide bottle and follow the instruction given on label. One-third (27.00 per cent) of the workers are aware about the colour triangle given on pesticide bottle. Almost all workers use particular equipment's for handling of pesticides and use protective measures during pesticide application. Only 10 per cent had habit of eating tobacco at the time of pesticide application. Majority of workers clean their body after spraying and 85.00 per cent of the farm workers wash contaminated clothes separately. Very few of them wash empty containers near water bodies and did not use pin while spraying nozzle is blocked. Most (82.00 per cent) of workers never enter in the sprayed field and 60.00 per cent of the farm workers are aware about the safety storage of pesticides. The findings concluded that the

farm workers had fairly good awareness regarding the handling practices of pesticides. However, they were not aware about colour triangle given on pesticide bottle and never change clothes right after spraying.

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