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Risk factors associated with farmers in pesticide use in Uttaranchal and Uttar Pradesh

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ABSTRACT
Pesticides may continue to play an essential role to ensure an adequate supply of food to meet the food needs of human beings. Farmers directly handle 70 - 80% of the pesticides they use, they are at the greatest risk of exposure. In view of this, the present study was undertaken with the objectives of assessing different aspects of pesticide use and their ill effects on 240 farmers of Uttaranchal and Uttar Pradesh States of India. The socio- economic data revealed that all the farmers were male with the mean age of 39.86 years. On the whole, 58.33 % of farmers were illiterate. The source of knowledge for most of them was shopkeepers. Most farmers followed poor practices of diluting pesticides that involved greater exposure to the body. None of the farmers had any training in pesticide handling and use. The ill effects of pesticides best known among farmers were headache, skin irritation and vomiting. Hence, thrust should be given on training and educational component to create awareness among the farmers about safe use of pesticides.

Key words : Pesticide, Knowledge, Illiterate, Training.

INTRODUCTION

Pesticides come under the category of economic poisons, a general term to describe chemical agents the use of which is acknowledged to confer benefits that outweigh the harmful consequences that may be associated with their use (Aiyar, 2003).

Dedek (1981) stated that the group of people applying pesticides in the field, have a higher level of exposure and are often less well trained in the safe handling of toxic materials. This can sometimes cause serious accidents and one can state without exaggeration that here the most serious risks in pesticide use are found. It is well known to the specialists working in pesticide toxicology and occupational health, that dermal exposure is much greater than respirator exposure, but this fact is usually not known to spray men working in the field or to other pest control workers.

Throughout the world, the highest levels of pesticide exposure are found in farm workers, pesticide applicators and people who live adjacent to heavily treated agricultural land. Farmers and farm workers directly handle 70- 80 per cent of the pesticides they use, they are at the greatest risk of exposure (McDuffie, 1994). In context of this, the present study was undertaken with the objective of identifying educational status, the source of information for application of pesticides and the toxicity symptoms associated with pesticide exposure.

MATERIALS AND METHODS

This study was conducted at 8 centres of Uttaranchal and Uttar Pradesh. Centers using pesticides in various agricultural operations were selected for the study. Interview method was used for collecting the information through a pre-tested structured questionnaire. All the interviews were conducted face to face. Thus a total of 240 farmers constituted the universe of this study.

RESULTS AND DISCUSSION

Most of the farmers were young with the mean age of 39.86 years and it ranged from 24 to 60 years (Table 1). Majority of the farmers were between the age group of 31 to 40 years. However, only 12 per cent were ageing greater than 50 years. All of the farmers *i.e.* 100 per cent were males.

Analysis of the educational status of the respondent farmers showed that most of them (58.33%) were illiterate and 38.34 per cent had finished primary school, high school and intermediate. Very few of them were graduates and post graduates. A high level of illiteracy was found among the farmers, reflecting a low educated

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