

Protective clothing for pesticide applicators and other agricultural activities of farm families

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ABSTRACT

Clothing is a primary need of mankind throughout the world. Wearing proper clothes at work can help to prevent various injuries to the body. A variety of human problems have been attributed to occupational exposure to hazardous environments. Farm activities are one of the most vulnerable segments as the farm workers are constantly exposed to multiple hazards during pesticide application. The present study was undertaken to design protective clothing for pesticide applicators and other agricultural workers. The results revealed that the designed protective clothing was found to be highly suitable and comfortable.

KEY WORDS : Protective clothing, Pesticide application, Agriculture workers.

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Clothing is worn for various reasons. The reasons most often cited for the use of clothing are protection, modesty and self-adornment. The physical need for protection of the body from weather, animals and insects seem essential to man's survival in harsh and hostile environment. While modernization and technological advancements significantly contribute to the overall productivity, they have also created hazards to the workforce necessitating various functional, innovative protective clothing to protect them from various risks (Geetha and Jacob, 2001). On going concern for worker safety, protection from life threatening and disabling injuries and illness and specific protection for personnel from chemical agents has resulted in continued improvement in protective clothing.

The purpose of protective clothing is to isolate parts of the body from direct contact with hazardous chemicals used today. With new technologies adopted on economic grounds, the farmers are adopting the use of pesticides to a greater extent. The use of pesticides has brought substantial advantages to them and the population at large.

However, the agricultural workers are commonly exposed to toxic pesticides that cause serious health problems due to lack of suitable protective clothing (Desai, 2006).

Pesticides are valuable post management tools and like any tool, this need to be used carefully and responsibly.

Minimizing exposure is an important step toward reducing the risk of pesticide poisoning. The use of protective clothing provides benefits to the applicator and is a visual expression of appropriate and legal pesticide use. Due to failure, the person himself, his family and the environment may have to face a greater risk of exposure. The toxicity of any substance cannot be reduced but the risk can be managed (Tarafder and Manna, 2005).

Workers engaged in pesticide application are frequently exposed to substances which may cause considerable external and internal harm to body tissues. Hazardous chemicals exist in several forms like dust, liquids, mist and vapours and the injuries due to these may range from mild dermatitis and other skin trauma to pulmonary oedema or cancer. So while applying pesticides it is essential to wear suitable and safe clothing. Hence, the present study was conducted to design protective clothing for pesticide applicators and other agricultural activities of farm families. Further the cost of designed protective clothing/ accessories was also calculated.

RESEARCH METHODS

The present study was conducted at AICRP-CT unit, College of Rural Home Science, University of Agricultural Sciences, Dharwad during 2010-11. The methodology adopted is divided into following sub-headings: