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Resolve Obstacle: Protective Gears

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INTRODUCTION

Agrochemicals handlers, such as farmers and agricultural labourers, are frequently exposed to high quantities of chemicals, with the dermis and inhalation being the most prevalent routes of exposure. Agrochemicals can be ingested at any time during the handling process. Mixing/loading, spraying, cleaning related equipment, and entering or re-entering farms where pesticides have been used are among these processes. When pesticide handlers don't wear PPE and use risky methods while handling pesticides, the consequences of exposure to pesticides are most likely to occur. As a result, using personal protective equipment (PPE), selecting the appropriate type of PPE, and following safe practises when handling pesticides can help to limit the hazards of pesticide exposure.

Protective clothing is designed to protect the body from chemical exposure, high temperatures, and harm from sharp objects. Personal Protective Equipment, and refers to garments and equipment that are specifically designed to help staff avoid hazards and injury. These are commonly decided upon after a risk assessment has been conducted. Protective clothing includes things like lab coats, chemical-resistant aprons, and disposable Tyvek suits. The right choice should be made dependent on the target usage.

Common Protective Gears includes:

Respirators: Respiratory protective equipment's capacity to offer effective protection is dependent on good choice and fit, as well as instruction in how to utilise the respirator. Employees must not purchase or wear respirators intended to guard against dangerous dusts, fogs, fumes, mists, gases, smokes, sprays, or vapours without EH&S permission and in line with the Respiratory Protective Equipment Safety Program.

EH&S is in charge of this programme, which was created to meet with the OR-OSHA Respiratory Protection Regulations. The program's particular requirements are described in Safety Instruction 20, which is available from EH&S. EH&S keeps a stock of various types of respirators on hand. Respirators should be bought through EH&S if at all possible, to guarantee proper selection and fit.

Hearing Protection: Noise-induced hearing loss affects around 33% of all workers exposed to harmful noise at work. Hearing loss can occur when people are exposed to excessive amounts of noise. When the noise level is 85 dB or more over an eight-hour period, hearing protectors i.e plugs and muffs should be worn. Where noise exceeds this authorised threshold (90 dBA), hearing protectors must reduce the noise to a time-weighted average of 85 dBA or less.

Workers should not even be allocated to duties that require the use of respirators unless they are physically capable of doing the work and using the equipment. What health and physical issues are relevant will be determined by the local physician. The medical condition of the respirator user should be checked at least once a year.

Head Protection: Employees who work in environments where there is a risk of head injury from impact, falling or flying items, electrical shock, or burns must wear protective helmets. In most instances, a "hard hat" is the preferred protective helmet.

Eye and Face Protection: The chemicals in some pesticide formulations, particularly concentrations, are extremely irritating to the eyes. In order to protect from this, farmer have used protective eyewear includes goggles, face shields, and safety glasses with shields on the brow and sides.

Hand Protection: The hands and forearms are the portions of the body that are most exposed to pesticides. Any time pesticides may come into contact with hands, such as when working around contaminated equipment or surfaces, gloves should be used. Pesticides will not be protected by canvas or leather gloves because these materials absorb pesticides readily and cannot be decontaminated.

Foot Protection: Where personnel are exposed to conditions that may cause foot injuries, appropriate footwear that is effective in preventing or limiting injury must be worn. Low-heeled, closed-toe shoes must be worn in any laboratory procedures where spilt chemicals are a possibility. Employees will be required to wear safety-toe footwear if a supervisor and EH&S determine that they are at a moderate risk of foot injury from falling objects or crushing activities. The standards and specifications of American National

Standards Institute (ANSI) standard Z41.1 for Safety-Toe Footwear must be met by this safety-toe footwear. Employees will be responsible for obtaining their own safety-toe footwear.

Factor affecting use of PPE

a) Demographic (Age, Education and literacy level, Experience of illness,Income, Gender)
b) Farm structure (Farm size)
c) Behavioral and Psychosocial Factor (Contact with pesticides, Perception, Attitude, Awareness, Norms and Belief)
d) Environmental Factor (Information about pesticides, Access to extension services, Training programs, and Farm organization)

CONCLUSION

It can be concluded that personal protective clothing can be used when working in different crops i.e cotton, okra, chilli, sugarcane, fodder, weed cutting. It can act as barriers for the worker from dust and dirt, long exposure to sunlight, cut and burns occurred from blades, thorns, insect bites and thus increased the productivity of workers. Use of such protective clothing would be helpful to achieve the ergonomics objective of reducing health problems and improving performance.

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