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WSSA Pesticide Stewardship Series: Always Be Diligent Concerning Personal Protective Equipment

LAWRENCE, Kansas – March 4, 2013 – This month pesticide safety educators, health professionals and other experts from around the U.S. will explore how to motivate pesticide handlers to use best practices concerning personal protective equipment (PPE). The discussion is part of a Pesticide PPE Seminar Series sponsored by the National Institute for Occupational Safety and Health (NIOSH).

PPE includes apparel and devices worn to protect the body from contact with pesticides or pesticide residues, including aprons, chemical-resistant suits, coveralls, footwear, gloves, headgear, protective eyewear and respirators.

“The PPE specified on a pesticide label is essential to protecting those who handle a pesticide,” notes Dean Herzfeld, Ph.D., coordinator of Pesticide Safety and Environmental Education, University of Minnesota. “But unfortunately, proper selection, use, cleaning, maintenance and storage of PPE are not practiced by everyone. It is critical that the pesticide product label and any applicable PPE user instructions and government regulations be followed diligently.”

Here are some fundamental principles concerning the use of personal protective equipment.

1) Any product that contains a pesticide – including baits, aerosols, fertilizers, seed, organic pesticides, “natural” products, etc. – must be handled using the required PPE in the correct way. If you don’t have the PPE required by the pesticide label, **don’t** apply the pesticide.

2) The required PPE can vary for different pesticide products and for different formulations of the same product. Follow the PPE section on every product carefully, even if the brand name is the same.

- 3) The required PPE may be different for different tasks, such as mixing, loading, application, repair, cleanup and/or early entry into a treated area.
- 4) PPE requirements can change at any time due to new research and/or regulatory requirements, so read the entire label every time you purchase a pesticide. The same applies to any instructions that accompany the PPE; read them carefully, even if you purchased the same brand and model before.
- 5) Correct selection of PPE is critical. For example, a “water-resistant” material is different than a “chemical-resistant” material. Chemical-resistant aprons, coveralls, eye protection, footwear, gloves and headgear are not equally resistant to all pesticides, under all conditions, and for the same length of time.
- 6) Pesticide labels will usually list “examples” of suitable glove types. Use one of the examples listed unless you are willing to do the research to ensure other types meet the same chemical-resistance requirements. Never wear canvas, leather, cotton or other fabric gloves unless specified on the pesticide product label.
- 7) Wear sleeves outside the gloves if spraying below the shoulders and inside the gloves if spraying overhead. If spraying both overhead and below the shoulders, duct tape can be used to temporarily seal the area where the gloves meet the sleeves. Always wear pant legs outside your footwear. Exposed footwear should be cleaned after each day’s use and should never be worn indoors.
- 8) If a respirator is required, use the exact type specified on the label and make sure it is certified by NIOSH. Whether you are required to use a respirator or choose to do so, an initial medical evaluation is strongly advised, even if not required by law. Certain respirators require a tight seal to the face and must be fit tested by a trained person before the first use, annually, and when there are significant changes in weight or facial features. In addition, conduct a seal check before every use, according to PPE instructions. Replace respirator filters, canisters, cartridges, etc. according to the PPE instructions **and** whenever there is equipment damage, breathing resistance, odor, taste, irritation or soiling.
- 9) Remove PPE as soon as you complete tasks where you were exposed to the pesticide. Wash your gloves with soap and water, even if they are disposable, and then remove other PPE while still wearing the gloves. Then wash the gloves again with soap and water before removing them.
- 10) If your PPE is reusable, follow the specified cleaning and maintenance instructions. Before and after every use, check for any type of deterioration or damage to components, seams, etc. and dispose of the PPE properly if it is no longer usable. Never reuse any type of disposable (one-time use) PPE.

11) Wash regular work clothes that have been exposed to pesticides as soon as possible to ensure maximum pesticide residue removal. Wash them separately from other laundry using detergent and hot water.

12) Follow the manufacturer's storage instructions for both reusable and disposable PPE. Keep PPE in its sealed package until use, and never store with pesticides or personal clothing. Most PPE must be protected from chemicals, sunlight, extreme temperatures, excessive humidity and moisture, or the specified shelf-life will be reduced.

13) Dispose of PPE carefully to avoid contamination to yourself, others or the environment. Properly cleaned PPE can be disposed of as regular garbage, while PPE that is contaminated with a pesticide must be disposed of according to directions on the pesticide product label and in compliance with all federal, state and local regulations. In the absence of specific label directions or government regulations, dispose of contaminated PPE as household hazardous waste, which can be taken to an appropriate waste collection event or disposal site.

14) Sometimes PPE is uncomfortable, particularly when working in hot weather. However, hot weather is **never** a good excuse for not using the required PPE. Attempt to work outdoors during the coolest periods of the day. Take all necessary steps to avoid heat stress, including frequent rest breaks in shaded areas and drinking plenty of water (not caffeinated drinks). Don't work alone. Know the signs of heat stress and how to treat it. Any circumstances that cause PPE discomfort and/or reduce protection must be resolved in a way that does not cause a health hazard.

15) If an accident results in exposure to the pesticide, follow the first aid instructions on the label. The proper first aid varies depending on the product and type of exposure, so it is critical that the label is always immediately available to the pesticide user as required by law. Follow the first aid instructions immediately after exposure, even if you do not have any symptoms.

"If you still have questions after reading both the pesticide product label and the PPE instructions, call the pesticide product manufacturer, the PPE manufacturer, your [Cooperative Extension Service](#) or your state's [Pesticide Safety Education Program](#)," says Herzfeld. "Your personal safety is of the utmost importance and is an essential part of proper and safe pesticide use."

This is the seventh in a series on pesticide stewardship sponsored by the Weed Science Society of America. Next month: Protecting Your Workers.

About the Weed Science Society of America

The Weed Science Society of America, a nonprofit scientific society, was founded in 1956 to encourage and promote the development of knowledge concerning weeds and their impact on the environment. The Weed Science Society of America promotes research, education and extension outreach activities related to weeds, provides science-based information to the

public and policy makers, fosters awareness of weeds and their impact on managed and natural ecosystems, and promotes cooperation among weed science organizations across the nation and around the world. For more information, visit www.wssa.net.