WSDA Pesticide Applicator Advisory

With the pesticide use season well underway, the Washington State Department of Agriculture (WSDA) strongly urges growers and their employees to properly select, use and decontaminate their personal protective equipment (PPE). This is especially important when applying organophosphate and carbamate insecticides, such as azinphos-methyl (e.g. Guthion), chlorpyrifos (e.g. Lorsban), formetanate hydrochloride (e.g. Carzol) and carbaryl (e.g. Sevin), through airblast sprayers. These types of insecticides can negatively impact humans by inhibiting cholinesterase, a chemical that regulates nervous system function.

Pesticide labels list the minimum PPE requirements for different activities – mixing and loading, applying and early entry into treated fields. Review these requirements carefully to comply with the law but take the extra steps to best protect yourself and others. WSDA recommends that people mixing, loading and applying organophosphate and carbamate pesticides always use respiratory and eye protection.*

While it requires additional commitment on the part of the employer and employee, the best protection when applying organophosphate and carbamate insecticides with an airblast sprayer is a full-face respirator. The second best option is a properly fitted half-face respirator, safety glasses and face shield, a combination which not only offers better protection to the eyes, but also to parts of the face that would otherwise be unprotected. If one of these two options is not available, WSDA suggests the use of a half-face respirator with safety goggles as opposed to safety glasses. Safety glasses are not as protective as goggles and they may not be chemically resistant, a requirement of some labels.

PPE Selection and Use

The following are some important pesticide safety recommendations to keep in mind while using pesticides.

- Use all the PPE required by the pesticide label. Remember, you can use more protection (recommended) but not less.
- Use PPE correctly and for the entire duration of the handling task.
- Replace PPE parts as they get damaged or worn out.
- Clean and inspect all PPE parts before using. Note: Refer to the WSDA 12-Step Personal Protective Equipment Removal and Decontamination process available at http://agr.wa.gov/PestFert/Pesticides/WorkerProtection.aspx.
- Store PPE in a clean place, such as a locker, away from pesticides and other clothing.
- Do not take PPE home or carry it in a family vehicle.
- Do not use gloves made out of leather or fabric when handling pesticides.
- Always use eye protection especially when mixing, loading and applying organophosphate and carbamate insecticides.
- Do not remove PPE during mixing and loading activities or when cleaning pesticide contaminated spray equipment.
- Do not eat while wearing contaminated PPE.
- Change respirator cartridges according to manufacturer recommendations. In the absence of such recommendations, change them at the end of each day’s work period or after ten hours of use, whichever is longer.

*The Department of Labor and Industries (L&I) has extensive requirements for protecting workers from both chemical and physical hazards that includes the use of respirators. For further information on respirator requirements, see WAC 296-307-594-61210 Part Y-5.
Personal Protective Equipment (PPE) Removal and Decontamination

Note: The blue text provides guidance regarding touching dirty PPE parts with dirty gloves and/or clean PPE parts with clean gloves during the removal process.

Step 1: Rinse the entire PPE suit with a hose or shower head to remove as much pesticide residue as possible.

Step 2: Before removing the respirator or goggles, remove the hood or hat by grabbing it from the contaminated outside part - Dirty Gloves ► Dirty Hood or Hat

Step 3: Carefully remove goggles by grabbing them from the outside part and pulling them forward and up - Dirty Gloves ► Dirty Goggles

Note: Wearing dirty goggles while removing coverall or other PPE parts can reduce vision and increase risk of potential contamination.

Step 4: Take off the respirator by grabbing it from the canister or cartridges and gently pulling it forward and up - Dirty Gloves ► Dirty Cartridges

Note: Removing the respirator by pulling it forward and up is easier than unhooking the respirator straps.

Step 5: Take off the jacket in two steps:
- Carefully unbutton or unzip the jacket without touching the clothes underneath - Dirty Gloves ► Dirty Outside Jacket
- Once the jacket is unbuttoned, wash gloves and jacket sleeves up to the elbow with soap and water. Remove the jacket by grabbing it from the clean sleeves or inside. Clean Gloves ► Clean jacket sleeves and inside

Step 6: Remove the pants in four steps:
- Unhook straps and place them inside pants – Clean gloves ► Clean straps
- Roll down the top part of the pants – Clean gloves ► Clean Top Part of Pants
- Using a support to maintain balance, use one foot’s toe to help the other foot slide out of the boot. Pull out the pant leg from that foot and boot by grabbing the pants by the clean insides - Clean Gloves ► Clean inside pant legs
- Return foot back into the boot - Clean glove ► Clean top part of the boots
- Repeat procedure for other foot

Step 7: With boots and gloves still on, either wash and dry goggles and put them back on or wear clean safety glasses or goggles. While wearing these three items (boots, gloves and eye protection), proceed to the next step.
Step 8: Wash respirator using the following steps:

- Remove cartridges and pre-filters
- Discard pre-filters
- Discard cartridges, or wipe those cartridges with less than 10 hours of use with a wet towel. Dry them and store in a sealable plastic bag.
- Take apart respirator and wash the parts in soapy water with a soft sponge. _Note: A brush is too harsh on the respirator._
- Rinse off the respirator parts.
- Dry respirator parts with single-use towels. Dry headbands with single use towels or, when possible, hang them up to air dry.
- Inspect, reassemble, and store in a separate sealable plastic bag. _Note: Store respirator separate from used cartridges._
- Store respirator in a cool area in a locker or rubber container.

Step 9: Wash PPE suit (outside/inside) on a flat surface:

- Using a brush, scrub side-to-side with soapy water to minimize splashing contaminated water onto your cloths or body.
- Rinse under running water.
- Hang to dry in a clean area.
- Store in a pesticide-free area.

Step 10: Wash boots while wearing them.

_Note: Boots are washed after washing all PPE items taken off earlier._

Step 11: Remove and wash goggles with soap and water using a soft sponge.

Step 12: Wash gloves and then boots:

- Wash outside of gloves while still wearing them.
- Remove gloves and wash the inside using a brush, water and soap.
- Fill the gloves with water and check for any holes.
- Wash boots thoroughly.

Inspect all PPE parts and replace or repair if necessary. Move to a pesticide free zone. Take off your boots and put on your shoes.

_For more information on this 12-Step process, contact Ofelio Borges at (509) 249-6939._

AGR PUB 640-265 (N/7/09)

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