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Extension Extra

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COLLEGE OF AGRICULTURE & BIOLOGICAL SCIENCES / SOUTH DAKOTA STATE UNIVERSITY / USDA

LAUNDERING PESTICIDE CONTAMINATED CLOTHING

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Clothing worn by agricultural workers during handling and application of pesticides is subject to contamination. It has been shown by scientific investigation that textiles, once contaminated, can be very difficult to decontaminate through commonly used laundry procedures. Any pesticide residues which remain in a garment are considered biologically active, and could be absorbed through the skin of the wearer.

BEFORE LAUNDERING

Read product label

1. **Which** pesticide was used? You need to know so that contaminated clothing can be handled and laundered appropriately.

2. **Toxicity level** of the pesticide indicates the degree of precaution to take:

"DANGER/POISON" indicates pesticide is **HIGHLY TOXIC/CONCENTRATED**.

"WARNING" indicates pesticide is **MODERATELY TOXIC**.

"CAUTION" indicates pesticide is **SLIGHTLY TOXIC**.

3. **Product formulation** is a factor in ease of pesticide removal:

EMULSIFIABLE CONCENTRATES are very difficult to remove from fabrics.

WETTABLE POWDERS are effectively dislodged by pre-rinsing.

RECOMMENDED LAUNDERING PROCEDURES

Washer loading

1. Wash contaminated garments **separately** from family clothes.
2. Wash together garments contaminated with the **same** pesticide.

Pre-rinsing (use one)

1. Pre-soak in suitable container.
2. Agitate in automatic washer.
3. Spray or hose garments outdoors.

Load size

Wash only a **few** contaminated garments at a time.

Water level

Use **full** water level so that fabrics are flushed thoroughly.

Water temperature

Use **hot** water when safe for the fabric. Generally, hotter is better.

Detergent

1. In **soft water**, detergent types (phosphate, carbonate, heavy duty liquid) are similar in effectiveness.

Effectiveness of detergent types at varying water hardness levels needs further investigation.

2. **Heavy duty liquids** are most effective for removal of **EMULSIFIABLE CONCENTRATES**.
3. Use amount recommended on detergent package.

Additives

Neither bleach nor ammonia seems to contribute much to pesticide removal. **Never** use both!

Wash cycle

Use normal 12-minute wash cycle.

Drying

Line dry garments to avoid contaminating dryer.

IN GENERAL

Disposable garments provide an extra layer of protection.

Destroy or **bury** garments that have been saturated with concentrated pesticides.

Avoid spreading contamination: Keep exposed garments separate from all other clothing **before** and **during** laundry.

Wash contaminated clothing **daily** when applying pesticides daily. Prolonged storage before laundry can affect results.

Re-wash garments contaminated with **HIGHLY TOXIC/CONCENTRATED** pesticides two or three times before re-use.

After laundering contaminated clothing, run washing machine through complete cycle without clothes, using hot water and detergent.

Always wear **rubber** gloves when handling highly contaminated clothing.

Handle clothing contaminated with **HIGHLY TOXIC/CONCENTRATED** pesticides with **extreme** caution, as they are easily absorbed through the skin.

This information based on results of research conducted at the University of Nebraska, Michigan State University, and the University of Tennessee.