

Toxicity Category & Signal Word on Label	LD50 Oral (mg active ing. per kg body weight)	LD50 Dermal (mg active ing. per kg body wt.)
I DANGER POISON	0 to 50	0 to 200
II WARNING	>50 to 500	>200 to 2,000
III CAUTION*	>500 to 5,000	>2,000 to 20,000
IV none*	>5,000	> 20,000

* Category IV material may have Caution signal word due to skin irritation or other hazard.

In addition to oral or dermal acute toxicity, a pesticide may also carry the **DANGER — POISON**, **DANGER**, or **WARNING** signal words because of other potential hazards, such as inhalation toxicity or the ability to cause severe eye or skin damage

LABEL COMPLIANCE

Under the present EPA regulations, pesticides may be applied:

- at a different rate per 100 gallons dilute than stated on label as long as the application stays within the dose per acre limit;
- at a lower rate per acre than on label; and
- less frequently than on label.

IMPORTANT — it is illegal to:

- increase amount applied per acre (overdosage);
- use shorter intervals between sprays than minimum interval stated on label; and
- shorten intervals to harvest (illegal residues on crop).

State regulations may be more restrictive than those of the EPA.

PROTECTING WATER QUALITY

Apple growers have a responsibility to prevent pesticide from contaminating surface bodies of water and groundwater supplies. Over 90% of the rural population in the U.S. depends on groundwater as their supply of drinking water. Groundwater is very difficult to clean if it does become polluted. Listed below are a few practices that can help prevent water contamination. Contact Extension for more information.

- Consider the potential for rinse water, spills, application or erosion to create pesticide laden run-off which can reach a surface body of water. If you do not have a self-contained mixing pad, use an area where the run-off risk is low. If you are working near a stream or pond, do not allow run-off to occur.

- Use an anti-backflow device when filling the spray tank.
- Periodically change the location of field mixing areas. Be aware of the location and condition of wells, stay at least 50 feet away from wells. Special caution is needed around wells with cracked casings.
- Be aware of the soil types, geology, and depth of water table in your local area. The potential for pesticide leaching into groundwater is generally greater on ledge, sandy soils, or other soils low in organic matter. The risk increases when the water table is close to the surface. Try to choose pesticides with a low leachability hazard if you are working under these conditions.
- Keep spray equipment accurately calibrated.
- Use proper procedures for pesticide storage and disposal. Keep pesticide storage and mixing areas away from streams, ponds, and springs.

RESTRICTED ENTRY INTERVAL

The REI values listed in Table 10 are the best information available as of November 2002.

Manufacturers may write the label with a longer REI than required by the EPA, or the EPA may change its minimum REI requirement. To know the use restrictions for a pesticide you must READ THE LABEL!

PESTICIDE RESIDUE TOLERANCES

Federal laws warn that food shipments bearing residues of pesticide chemicals in excess of established tolerances will be contraband and subject to seizures as “adulterated.” This applies to both raw and processed foods.

The amount of pesticide residue in or on a food material at harvest must fall into established tolerances, expressed in “parts per million” (ppm). The actual amount of pesticide chemical found in a food at harvest depends in part on the amount applied to the crop and the length of time since the last application. Therefore, growers are responsible for strictly following label information as to:

- maximum spray dosage, and
- the preharvest interval: which is time between the final pesticide application and harvest.

The FDA advises pesticide users to follow directions on recently registered labels, so they do not exceed the residue tolerance for any material. Use the following table as a general guide, but verify the preharvest interval by checking the label before using the product. Table 10 refers to use on apples only.