



Pesticide Safety – Mixing Pesticides

Why is Mixing Pesticides an Important Issue?

When mixing or loading pesticides, the chemicals are in their pre-diluted and thus most dangerous form. Concentrated pesticides need special attention to prevent injury, environmental damage and groundwater contamination.

Safety Protocol Before Mixing

- Choose a location for mixing that can be controlled and cleaned quickly incase of an emergency spill.
- Wear the proper pesticide protection equipment (PPE) as directed by the label. Normally this will include a waterproof apron or coveralls for protection against splashes. Always wear eye protection (goggles, face shield, etc.).
- Read the label's mixing procedure entirely. Generally liquid pesticides are measured by volume and powders/dry material by weight. See *information sheet on conversions* if necessary.

Safety Protocol During Mixing

- Only use plastic measuring utensils. Metal measuring units may react with pesticides, particularly iron and aluminum.
- Always measure and pour concentrated pesticides carefully and below eye level to avoid splashes into eyes.
- If mixing with water, only use clean, sand-free water. You should be able to see the bottom of the pail filled with the water. Algae can react with pesticides reducing the potency as well as clog nozzles.
- Make sure when filling tank that the water hose spout is above the pesticide tank liquid to prevent environmentally hazardous back flow into the water source.
- Obviously measure pesticides carefully. Small measuring errors can lead to hazards for people, the environment and crop loss, or leave crops unprotected. In either case it is expensive and wasteful.

Safety Protocol after Mixing

- Clearly label all utensils used for mixing/measuring “for Pesticide Use Only” with paint or marker. Including knives used to cut pesticide packages.
- Thoroughly clean all mixing and measuring utensils before storing them in a locked shed or designated area to prevent possible contamination during future mixing.
- Triple rinse empty pesticide containers, cut side with knife and dispose/recycle/burn.

Prepared by Frank Zalom, Pat Thompson, Mark Henderson and Mark Bell, July 2009

References: Pesticide Safety for Small Farms, UC ANR Pub. 21555
The Safe and Effective Use of Pesticides, UC ANR Pub. 3324

For more information visit: International Programs: <http://ip.ucdavis.edu>

Copyright © UC Regents Davis campus, 2011. All Rights Reserved.