

A PESTICIDE MIXING AND LOADING CHECKLIST

Tips on Working Safely with Pesticides in North Carolina



This publication is available in Spanish.



With all the pressures of the growing season, don't overlook safety precautions when handling agricultural chemicals. If you mix pesticides often, consider building a pesticide mixing and loading facility with a spill containment pad. If not using a pad, do not mix and load in the same place each time to avoid buildups of contamination from splashes and spills. Cleanup all spills according to label directions.

The following checklist is a reminder to take the time to handle pesticides carefully when mixing and loading them.

General Handling Recommendations:

- ✓ Read the label carefully and take notice of personal safety and environmental precautions.
- ✓ Remember that labels may change from year to year, so reread the label instructions whenever you purchase new containers.
- ✓ Mix only what is required for the area to be sprayed so that you will not have leftover chemicals. Never exceed labeled rates.
- ✓ Maintain a distance of at least 100 feet between the mixing and loading site and wellheads, ditches, streams or other water sources.
- ✓ Mix wettable powders with water in a bucket to form a slurry before adding to the spray tank.

Containers:

- ✓ Use a knife or scissors to carefully open paper, cardboard, or foil packed pesticides. Do not rip or tear them.
- ✓ Close partially used pesticide containers. Store out of the sun.
- ✓ Before recycling empty chemical containers, triple rinse or pressure rinse them, and pour the liquid rinse water into the spray tank.

The Right Mix:

Use the W-A-L-E method when mixing different formulations together in the tank:

1. to the diluent (usually water).
2. add **W**ettable powders and **W**ater-dispersible granules
3. **A**gitate the mix thoroughly
4. add **L**iquids, surfactants, and flowables.
5. add **E**mulsiifiable concentrates last.



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Personal and Environmental Safety:

- ✓ Keep children and unauthorized people away from mixing and loading areas.
 - ✓ Wear the appropriate personal safety equipment for each handling task.
 - ✓ Mix in a well-ventilated and lighted area with your back to the wind so fumes and dusts are blown away from you.
 - ✓ Don't pour chemicals at eye level. Stand with your head well above the spray tank to reduce the chance of pesticide splashing on your face.
 - ✓ Avoid eating, drinking, smoking and touching your skin or eyes while mixing and loading pesticides.
 - ✓ Rinse your gloves before removing them and wash your hands and arms with soap and water.
 - ✓ Keep a spill kit (absorbent materials, such as non-chlorinated kitty litter, shovel, and drum) handy and clean up spills immediately.
 - ✓ While filling sprayers, avoid back-siphoning by always keeping the discharge end of fill hoses above the tank's water level.
 - ✓ When mixing and loading chemicals in the field, prevent spills that might contaminate water supplies.
 - ✓ Fill sprayer half full with water first, turn on the system and check for proper operation and leaks, then add pesticide.
 - ✓ Watch the filling process carefully; never overfill a spray tank.
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Compatibility testing

When mixing two or more products always check the label for any warnings about incompatibility. Use the "jar test" to determine if the components of a pesticide mixture are chemically and physically compatible.

1. Use a clear glass quart jar.
2. Add 1 pint of water from the same water source that you will be using for tank mixes.
3. Add the pesticides in correct proportions in the W-A-L-E order (see text box on front page). For liquid formulations, use a teaspoon measure for each pint / 100 gallons of final spray mixture. For dry formulations, use a tablespoon for each pound / 100 gallons of final spray mixture.
4. Once you have mixed all of the components and thoroughly shaken the jar, allow it to stand for 15 to 60 minutes (the longer time is better).
5. If the contents heat up or form clumps, scum or other solids, they are not compatible.
6. If the mix is not compatible and you did not use a compatibility agent on the first test, repeat the process with a proportionate amount of a compatibility agent.

If the mix is compatible, add pesticides to the spray tank in the same order that they were added in the test.

Warning: Chemical compatibility does not guarantee that the mixture will perform as expected. Combinations of some active ingredients can cause plant damage or phytotoxicity. In some cases, mixing chemicals together may cancel their effectiveness; in other cases, the effectiveness of some products may increase when they are applied together. Consider applying the mixture at the labeled rate to a test area in the field. Look for any damage or control failures. You have a compatible mix if no adverse effects are observed.

The information in this document is for educational purposes only. Individuals who use agricultural chemicals are responsible for ensuring that the intended use conforms to the product label and complies with current regulations.

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For questions regarding human health and pesticides, call the Carolinas Poison Center 1-800-848-6946 (1-800-84TOXIN).