



Using Pesticides



Why be concerned?

Pesticides can harm people and pets, kill helpful organisms (such as bees, earthworms, and a pest's natural enemies), and pollute ground and surface waters. The potential harm from pesticides depends on many factors such as how persistent the pesticide is, whether it affects a few or many species, and whether it accumulates in living tissue.

The risks of using a pesticide are greatest when the label directions aren't followed *precisely*; not following the directions is against federal law. It's also illegal to apply pesticides for hire on someone else's property without a commercial applicator's license from the Georgia Department of Agriculture, Pesticide Division.



Choosing Pesticides

The fact that a pesticide is labeled "natural," "organic" or "biodegradable" doesn't guarantee that it's safe. For example, pesticides derived from plants such as *rotenone*, *nicotin*, *ryania*, *pyrethrum*, and *sabadilla* may not be any safer than many synthetic pesticides.

Carefully read product labels for information about the pesticide's toxicity and persistence. A pesticide's persistence is the length of time it takes to break down to one-half its previous concentration (also called half-life). In general, avoid pesticides with half-lives longer than 21 days. For more specific information about choosing the least toxic pesticide, contact one of the agencies listed under "Getting Help."

Developing a Pesticide Plan



For each landscape that your business is responsible for maintaining, develop a pesticide plan that lists:

- specific uses for selected pesticides;
- brands, formulations, application methods and quantities to be used;
- equipment use and maintenance procedures;
- safety, storage and disposal methods, and;
- monitoring, record-keeping, and public notice procedures.

Establish procedures for reviewing pesticide plans annually. Be sure to evaluate the effectiveness of all treatments used, public concerns, effects on sensitive areas, and any recent toxicological information.

Mixing and Applying Pesticides

- Schedule applications to take place during the most vulnerable stage in the pest's life cycle and when least disruptive to naturally existing pest controls.

- Always wear protective clothing when handling pesticides.

- Know what to do if spills occur and take steps to prevent them. Close containers tightly after each use, even if you plan to reopen them soon. Be sure to have adequate clean-up materials readily available. For more information about spill prevention and clean-up, see **Series #1, Fact Sheet 1.2**.

- Mix pesticides where spills won't be able to soak into the ground or enter a storm drain or stream. When using large tank sprayers, mix only the amount needed at the job site.

- Follow the label directions *exactly*. Never use rough estimates when mixing or applying pesticides. Never mix different pesticides unless explicitly instructed to do so on the product label.

- Calibrate application equipment frequently and be aware of weather conditions that can cause wind drift. Use application equipment that can be shut off immediately in an emergency.

- Apply pesticides to the problem areas *only*.

- After each application is made, evaluate its effectiveness.

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Cleaning Containers

Immediately triple rinse or power rinse empty containers in the field, at the time of application. Cobb County UGA Extension recommends triple-rinsing, using the following steps:

1. Allow the concentrate to drain from the empty pesticide container for 30 seconds.
2. Fill 20% of the emptied container with water, replace the lid and shake the container so that all interior surfaces are rinsed.
3. Drain the rinse water into the spray tank, allowing it to drain for at least 30 seconds.
4. Repeat steps #2 and #3 two more times for the pesticide.
5. Use the rinse water (or “rinseate”) according to label directions.

Unlike triple rinsing, pressure rinsing requires the use of a special nozzle. Studies indicate that pressure-rinsing may be up to three times more effective than triple-rinsing and can take less time. To pressure-rinse, wear protective clothing (especially gloves and goggles) and follow these steps:

1. Allow the residue or concentrate to drain from the empty pesticide container for 30 seconds.
2. Push the pointed pressure-rinse nozzle through the pesticide container while holding it over the spray tank.
3. Pressure-rinse the container for 30 seconds, allowing the rinse water to drain into the spray tank.
4. Triple-rinse the container cap with a slower flow of water, capturing the rinse water in the spray tank or appropriate receptacle.

Disposing of Empty Containers

Be sure to dispose of containers in accordance with label directions and federal, state and local laws. If empty pesticide containers can't be refilled, reconditioned, recycled or returned to the manufacturer, crush, break or puncture them so that they can't be reused.

Clean and Leak-Free Equipment

- Keeping application equipment free of leaks will prevent pesticides and other fluids from being deposited onto the ground.
- Clean equipment immediately after use - don't leave equipment that contains pesticide residue at the mixing, loading or application site. You can reduce equipment cleaning by clustering jobs that use the same spray solution.
- Don't allow rinse water to flow into water systems, including storm drains, ditches, wells, and streams. Collect rinse water and apply it to a compatible site at or below the labeled rate. Don't add rinse water to a pesticide mix if it could be incompatible with the mix or if it contains a cleaning agent that could harm plants and animals.

For more information about properly cleaning and maintaining equipment, see **Series #3** or call one of the agencies listed under “Getting Help.”



Storing Pesticides

- Before buying pesticides, calculate how much you need and purchase only that amount.
- Mark the date of purchase on each container so that older materials can be used first.
- Locate storage areas at least 150 feet from any drinking water well and at least 200 feet from any area that holds water, even intermittently, such as a drainage ditch or dry detention pond.
- Store pesticides indoors, in areas designed to *completely* contain leaks and spills. Clearly mark pesticide storage areas with warning signs. For more information about properly designing storage areas, see **Series #1, Fact Sheet 1.1**.

GETTING HELP

UGA Cooperative
Extension Service for
Cobb County (770) 528-4070

Georgia Department
of Agriculture (404) 656-3685
Pesticides Division (404) 656-4958

Community Partners for
Healthy Streams (770) 528-1482