

ANR-738

ALABAMA A & M AND AUBURN UNIVERSITIES

## Protecting Groundwater from Pesticides

**Store chemicals at least 100 feet from wells.** Maintain the same buffer zone between the storage area and any surface water, such as ditches, ponds, or slues. Chemicals should be stored in a well-ventilated, cool location, preferably with a concrete floor slanting inward. A 12-inch high retaining wall around the outside will contain spills. Always store chemicals in the original, labeled container. Make sure they are tightly sealed.

**Locate the sprayer mixing and loading pad at least 50 feet from well and surface water,** such as ditches, ponds, or slues, to prevent accidental water contamination. The mixing and loading pad should be sloped (at least 2%) to a sump. Keep the pad area covered.

**Prevent back-siphoning by installing back-flow devices,** such as check valves on the fill pipe between the water source and the sprayer. Pumps do not prevent back-siphoning. A drop in voltage or water supply can cause many pumps to "cough" and allow chemicals to be siphoned down the well. Another method for filling sprayers is an elevated tank located next to the mixing and loading pad. The sprayer tank is filled by gravity flow. The water storage tank is filled by a water line.

**Triple-rinse or pressure-rinse containers** to prepare them for disposal, and spray the rinse water back on the field. Rinse containers as soon as

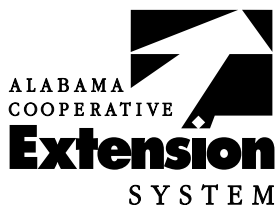
they are emptied to prevent chemical residues from drying out.

**Attend the sprayer while it is being filled** and keep the filling hose above the water level in the tank at all times. Mount a clamp on top of the tank to hold the hose if necessary.

**Collect the wash water and rinsate and transfer to storage tanks** located on the pad before a change in pesticide or after a field operation on a daily basis. Sediment that collects in the sump should be removed prior to switching from one chemical to another. Label rinsate according to the chemical type and crop on which the chemical was used. Rinsate used for makeup water should not exceed 20% by volume of the spray tank. When added, the tank should yield 101 to 102% of the recommended application rate.

**Study the labels for each material you apply.** Not only do they contain information on rates of application, but they list recommendations for safe disposal. Labels are frequently revised and expanded.

**Plan carefully your purchases** and required inventory of chemicals for a given year. Calculate needs carefully and buy just what you need. Keep records of total amounts, rates, dates of application, and type of chemical applied on each field.



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**For more information**, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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