Handling Leftover Spray Mixtures and Rinsates

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James Martin, Monroe Rasnake and Doug Johnson

Pesticide applicators are faced with the issue of what to do with leftover spray mixtures and rinsewater from cleaning sprayers or other equipment involved with the mixing and application of pesticides. There is increasing concern that releasing these diluted pesticides around such places as the workshop and loading or mixing areas could be a potential risk to human health and the environment.

If these forms of pesticides have no intended use, they are considered "waste". Disposal of pesticide wastes by high temperature incineration or by storing at approved sites are two ways to eliminate this problem. Obviously, this could lead to a great deal of expense and is impractical for the large volume of material that is generated.

Currently, there are no regulations that clearly define appropriate on-site treatment or disposal of these materials. The only legal and safe manner to deal with these forms of pesticides is to apply them according to the label directions.

The following information may help applicators deal with leftover pesticide mixtures and rinsates:

1. **Calibrate the application equipment and mix only the amount needed.** Ideally, applicators should mix only enough material to cover the field. However, in reality, many applicators mix extra spray material to be assured there is enough to take care of their needs. Before mixing the last batch, it may be helpful to estimate the area to be sprayed. If the sprayer contains more than 5 to 10 percent of what was planned for the last batch, then it may be beneficial to recalibrate the sprayer and to take more time to estimate what is needed for the next job.

2. **Check the pesticide label to determine areas where the leftover spray material may be applied.** For example, AAtrex, Princep and Gramoxone are each registered for use in corn and non-cropland areas. A farmer who used the three products together for weed control in corn could use the leftover mixture for weed control on a noncrop area such as a fence row between two corn fields. It is
important that the applicator follow the label directions regarding such things as pesticide rate(s), and grazing, feeding, and rotation restrictions when applying leftover mixtures to alternate sites. It is also important not to use these locations routinely due to the risk of building up excessive pesticide residues.

In many instances, it is not feasible or practical to use leftover mixes at alternate sites. However, it may be appropriate to use the leftover material to retreat a portion of the field, providing the total amount of pesticide(s) applied to the area does not exceed the label rate(s). For example, a farmer who used the combination of 2 pt/A Atrex + 2 pt/A Princep + 1.5 pt/A Gramoxone for weed control in corn could retreat areas in the field with the leftover pesticide mixture providing he took precautions against exceeding the full rate of 3 pt/A Atrex + 3 pt/A Princep + 2.5 pt/A Gramoxone. Diluting the leftover mixture with water before retreat ing the field may help avoid exceeding the recommended rate.

3. **Clean the sprayer before leaving the field.** The "Nurse" or storage tank that is frequently used to carry water to the field for loading the sprayer could also be used to help clean the sprayer. Also, some applicators have a reserve water tank attached to their equipment for cleaning the system once the job is finished. The pesticide residue is removed from the equipment before it has dried and is left in the field where it is used according to the label.

In some instances, it may not be practical to carry water to the field for cleaning equipment. Some commercial applicators who face this problem, have developed a recycling system at the mixing and loading area. This system allows the applicator to collect the rinsewater and store it in above ground tanks for future application. When using this system, it is important to take precautions against contamination, compatibility and misapplication of the rinsate. Monitoring the length of time of storage may also be important. Regulations suggest that rinsate held more than 90 days may be considered "pesticide waste" and may need to be disposed of by other methods.

4. **Avoid generating an excessive amount of rinsate when cleaning pesticide residue from equipment.** A simple nozzle attachment on the garden hose will help reduce water use and may be more effective in cleaning compared to using a hose with no nozzle. Using a pressurized washer to clean machinery may use even less water.

**NOTE:** When designing a specific plan for handling leftover spray mixtures and rinsates it is imperative that officials from the KY Division of Pesticides (502/564-7274) and the KY Division of Waste Management (502/564-6716) be contacted for regulatory guidance.

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