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Safe Disposal of Pesticide Containers and Residue

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SAFE DISPOSAL OF PESTICIDE CONTAINERS AND RESIDUE

Doug Johnson, Monroe Rasnake and James Martin

The use of pesticides (herbicides, insecticides, fungicides, etc.) has been an important factor in improving productivity of American agriculture to the point that quantity and quality of food and fiber produced by American farmers is unequalled in the world. However, in recent years, increased concern is being expressed regarding potential harmful effects of pesticide use on the environment. Most farmers want to know how to safely handle pesticides and dispose of waste materials, and the pesticide industry is working hard to develop better systems for handling pesticides. However, poor disposal practices are still too common.

Continued benefits from use of pest control chemicals will be dependent on learning and using good methods of handling pesticides and disposing of wastes. This is the first of a two-part series which will outline safe and legal procedures for disposing of pesticide containers and residues.

What do I do with empty pesticide containers?

This is an often asked question the answer to which is not to let the pile get ahead of you. Although there are certain limitations of law, the list below covers most circumstances for disposal of empty pesticide containers by farmers.

1. Paper, plastic and fiber containers:
   - Burn every day to avoid buildup of excessive amounts of packaging.
   - Burn downwind of inhabited areas.
   - Have a responsible person on site and upwind of burn site.
   - Burn only during daylight hours
   - Change location of burning to avoid buildup.

2. Metal and glass containers:
   These types of containers should be triple rinsed immediately after they have been emptied. When properly rinsed, these containers are not classified as hazardous waste and may be disposed of in sanitary landfills, unless some local ordinance forbids it.
Triple rinsing procedure:

1. Add the correct amount of rinse solution.
   Use either water or oil for rinsing, as appropriate for the type of formulation used, as follows:

<table>
<thead>
<tr>
<th>Container Size</th>
<th>Amount of rinse solution needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 gallon</td>
<td>One-fourth container volume</td>
</tr>
<tr>
<td>1 gallon</td>
<td>1 quart</td>
</tr>
<tr>
<td>5 gallon</td>
<td>1 gallon</td>
</tr>
<tr>
<td>30 &amp; 55 gallon</td>
<td>5 gallon</td>
</tr>
</tbody>
</table>

2. Replace closure.
3. Shake container or roll and tumble to get rinse on all interior areas.
4. Drain into sprayer or mix tank.

Other alternatives:

1. Metal containers can be useful sources of scrap metal. Although recycling technology for plastic containers is limited, it is expected to increase. Containers must be triple rinsed before you present them for recycling, and the containers should be punctured and crushed.

2. Reconditioning may be an alternative for large metal drums. After they have been properly rinsed, they may be commercially reconditioned. Because of volume requirements, a collection program may be required to gain the interest of a commercial reconditioner.

3. Burning in a high-temperature incinerator is an alternative for certain plastic and fiber containers. At this time, for the most part, it is too expensive and few such sites exist.

A number of pesticide manufacturers are considering the use of "returnable" containers. Although you might have to keep up with your containers and make a trip back to the dealership, this method could be cost effective and labor saving to the farmer.

Whatever type of program you decide to use, remember: Correct disposal of containers is the final step in the safe use of pesticides. Triple- or pressure rinsing removes more than 99 percent of the product residue that remains in "empty" containers. Containers should be rinsed for safety and for disposal.

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