



Using pesticides in residential areas

It's no secret a well-maintained landscape can add value to your property, help prevent erosion, conserve water, supply oxygen, muffle sound and increase aesthetic and recreational values.

However, a landscape that does all of that requires intensive care such as watering, fertilizing, mowing and pest control. Protecting the environment also requires care because some pesticides, specifically insecticides, herbicides and fungicides, may be washed from the lawn area to surface and ground waters.

Pesticides are designed to stay in place to control the target pests, then degrade into harmless products. However, pesticides can leave the target area by degradation, evaporation, leaching to ground water and runoff to surface water.

Runoff is the most direct route to surface ponds, lakes or streams. Even if no body of water is visible, runoff may reach a water body via ditches, storm sewers or underground drainage pipes. This is of particular concern in subdivisions where numerous lawns are treated with pesticides and fertilizers.

Leaching is the extraction of chemicals from soil by water moving through the soil. While most pesticide chemicals degrade rapidly in soil, if they are highly leachable, they may reach ground water before they are degraded. In rainy periods or if there is excessive irrigation, leachable chemicals are likely to move to ground water.

Degradation is the time it takes a pesticide to break down into simpler substances. Degradation rate is measured by half-life, also known as the time it takes for half of the active ingredient to break down. For example, the half-life of the insecticide Sevin is 10 days. One ounce of active ingredient would degrade to half an ounce in 10 days.

The loss of pesticide to the atmosphere is called evaporation. In most cases, this isn't a big concern for water quality, although some evaporated pesticide may return to the earth on dust particles or in rainfall. Evaporation also can contribute to air pollution.

So, what is a homeowner to do to protect the environment? Always read the label before purchasing a pesticide, and read it again before application. Don't apply when rain is imminent as pesticides need time to dry and work. Don't spray pesticides when it is windy. Also, note the temperature range specified on the label. High temperature can increase evaporative loss or cause plant injury.

Use the correct amount of water. If too much water is used, the pesticide won't work properly and is more likely to run off. Make sure your sprayer is calibrated. Use integrated Pest Management to control pests. To protect ground water, choose pesticides with low leaching potential. Consider runoff potential to protect streams and lakes. Use care when handling chemicals and disposing of leftover material.

Pesticides have a place in the environment, we simply need to use them as directed.

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