

# Weed Control in Lawns and Flower Beds

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The adage, "If a little is good, then a lot is better," is not true for herbicides. Careful adherence to recommendations for the rate of application must be followed for effective weed control. To insure that desirable plants are not killed and that most effective weed control is achieved, follow recommendations for rate and timing of all applications.

## Lawn and Turf Areas

The following recommendations are for established lawns only. They should be used as an aid to good management and not a replacement for it. Proper fertility and cutting management will provide conditions for vigorous, healthy turf, which will greatly reduce weed problems.

The first step in weed control is to identify the weeds. Then select the herbicide or combination of herbicides that will provide the most effective control. Many of the commercial lawn weed control formulations are mixtures of herbicides. The individual ingredients are specified on the label so you can be sure that the right herbicide is present to control the weeds. Very specific application directions are given on the label of each of these products.

The recommended rates in the table are only for one formulation. Follow recommendations on your herbicide label if a different formulation (the number of pounds per gallon) is used. Addition of a wetting agent (1½ to 2 teaspoons per gallon of spray solution) may improve weed control with some of these products.

"Weed and Feed" products should be applied according to label directions. Do not apply these products in

## Chemical Weed Control in Established Turf

Weed	Herbicide (formulation)	Application rate per 1,000 square feet*
Dandelion, false dandelion, plantain, mustards, pigweed, lambsquarter	2,4-D amine (4 pounds per gallon)	1½ tablespoons
Clover	dicamba (Banvel) (4 pounds per gallon) —or— mecoprop (Mecopar, Mecopex) (2 pounds per gallon)	1 to 2 teaspoons 3 to 4 tablespoons
Chickweed	silvex (2,4,5-TP, Kuron) (4 pounds per gallon) —or— dicamba (Banvel) (4 pounds per gallon) —or— mecoprop (Mecopar, Mecopex) (2 pounds per gallon)	1½ tablespoons 2 teaspoons 3 to 4 tablespoons
English lawn daisy, sheep sorrel, knotweed	dicamba (Banvel) (4 pounds per gallon)	2 to 4 teaspoons
Speedwell	No effective treatments	.....
Mixture of the above weeds	2,4-D + mecoprop + dicamba (available as a formulated mix)	Follow label recommendations
Annual bluegrass	bensulide (Betasan) (4 pounds per gallon)	1½ cup with ¼ cup applied every 3 months thereafter
Crabgrass	DSMA (2.5% granular) —or— bensulide (Betasan) (4 pounds per gallon)	3¾ pounds Same as for annual bluegrass
Perennial grasses	Non-selective spot treatment with dalapon (Dowpon, Dowpon M) —or— amitrole T (Amitrol-T, Cytrol)	1½ ounces per gallon 3½ tablespoons per gallon

\* Consult the label for specific rates and methods of application.



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flower beds, in landscaped areas, or where the roots of desirable trees may be growing, as injury or death of desirable plants may occur.

### Flower Beds (Established Plantings)

The use of black plastic mulches will eliminate many weed problems. Be sure that all seams are tightly sealed or weeds may grow through these cracks.

In an area where ornamental shrubs are planted, with no other species present, diphenamid (Dymid or Enide), simazine (Princep), or dichlobenil (Casoron) can be used. Diphenamid and simazine will control most annual weeds. Follow the manufacturer's recommendations for rate of application on your soil type. Dichlobenil (Casoron) will control many annual and perennial weeds. Check the label to be sure that the species of shrub present is tolerant to this herbicide.

In an area where there are only plants which come from bulbs, simazine (Princep) or diphenamid (Dymid or Enide) can be used for annual weed control. Apply simazine at 1 pound active ingredient (1 $\frac{1}{4}$  pounds of the 80% product) per acre ( $\frac{1}{2}$  ounce of the 80% product per 1,000 square feet). Diphenamid should be applied at 4 to 6 pounds active ingredient (5 to 7 $\frac{1}{2}$  pounds of the 80% product or 8 to 12 pounds of the 50% product) per acre (1.8 to 2.75 ounces of the 80% product or 2.9 to 4.4 ounces of the 50% product per 1,000 square feet).

If a bark or sawdust mulch is present in landscaped areas, the use of simazine or diphenamid is not recommended. These mulches will inactivate the herbicides and make them ineffective in controlling weeds. The herbicides can be applied prior to mulching, if tolerant plants are established in the area. No new plantings should be made in the treated area for at least one year.

When mixed species, including annuals, are present, the application of herbicides is not recommended. Hand-pulling or hoeing will control annual weeds. If perennial weeds are the problem, either persistent mechanical controls or chemical treatment of individual plants can be used. If mechanical efforts are used, allow 10-14 days of regrowth to occur and then remove as much of the plant as possible. Do not allow more than this amount of regrowth or control will be reduced. If chemicals are used, paint or daub the leaves of the weed. Repeated treatments probably will be necessary.

### Use Care in Application

When making applications, be careful to avoid drift of the spray to other areas. If drift occurs, you are not only losing part of your herbicide that is needed to kill the weeds, but you also may be damaging or killing some desirable plants. To reduce the chance of drift, do not spray on windy days.

Herbicides are sold in different formulations (liquids, powders, or granules). Liquid herbicides generally are easier to use and require a minimum amount of mixing. Some powders require frequent agitation or mixing to insure uniform application for effective weed control and adequate safety to desirable plants. Granular materials are applied dry and should not be mixed with water.

### Applying the Correct Amount of Herbicide

Generally garden hose sprayers are not satisfactory for applying herbicides. Pressurized hand-carried or back-pack sprayers usually work best. If possible reserve the sprayer for herbicides only.

Before starting your spray operation, be sure that you know how much solution you are applying. One way to determine this is to spray the area with water, measure how much you used, and then add the appropriate amount of herbicide to enough water to spray the area. Measure the area to determine how many square feet you have to spray. Keep a record of these measurements where you keep your sprayer, so you will not have to measure the area each year. For example, an area 20 ft x 50 ft or 25 ft x 40 ft equals 1,000 square feet, which is the area most commonly used as a basis for making home-use recommendations. If you have less than 1,000 square feet to spray, then use proportionately less herbicide to spray the smaller area.

For best results, apply the herbicide in two applications, each at one-half the suggested rates, and sprayed at right angles to each other. This will result in better coverage of the weeds and reduce the risks from over-application of the weed killer and possible injury to desirable plants.

### Handling and Storage of Herbicides and Equipment

Herbicides, like all pesticides, always should be kept in their original containers with the label clearly visible. *Do not put chemicals in empty food or drink containers.* Store herbicides in a locked cabinet, out of the reach of children, away from foodstuffs, and in an area that is well ventilated and protected from freezing.

The sprayer also should be stored in the locked cabinet with the herbicides. *It should not be used to apply insecticides or fungicides* to desirable plants because *small residues remaining in the sprayer may damage susceptible species.*

To minimize the amount of residue remaining, rinse the sprayer thoroughly as soon as spraying has been completed. After thoroughly flushing the sprayer with clean water, allow it to dry to prevent rusting.

### Preventive Weed Control

Preventing weed seed formation is one of the most effective ways of reducing weed problems in future years. Weed seeds can persist in the soil for as long as 40 years, so allowing your weeds to mature and produce seed can give you weed problems for many years. When composting organic matter that contains seeds, it is important to maintain composting conditions that will kill the seeds. High temperatures best achieve this and can be maintained by aeration (periodic turning) of the compost and maintenance of good moisture levels.