

ALTERNATIVES TO SILVEX FOR BROADLEAVED WEED CONTROL

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The Environmental Protection Agency has temporarily suspended many uses of silvex (2, 4, 5-TP), including virtually all uses on home lawns, golf courses, and other turfgrass areas. Because of this ban, many questions have been asked concerning broadleaved weed control in turf, especially relating to alternatives to silvex. The University of Maryland Agronomy Mimeo 79, "Weed Control in Established Bluegrass Lawns," which describes broadleaved weed control in turf, is no longer distributed due to its recommendations for silvex use and is currently being revised.

Most broadleaved weeds which were controlled by silvex can be controlled by either 2,4-D, dicamba, MCPP, or a combination of two or all of these materials. Chemical alternatives to silvex for some of the broadleaved weeds commonly found in turf are shown in Table 1. Often, combinations of the herbicides listed in Table 1 provide better control than the individual herbicides alone.

The weeds for which silvex was formerly recommended and about which most questions have been asked include white clover, the chickweeds, black medic, henbit, ground ivy, oxalis, wild strawberry, and violets. Use of 2,4-D will not control these weeds. MCPP will control white clover and the chickweeds, but higher rates and repeated applications are needed for what may be marginal control of black medic, henbit, and ground ivy. MCPP will not control oxalis, violets, or wild strawberry, which presents a special problem when

growing under trees or near shrubs. Although dicamba will control oxalis and wild strawberry, it will not control violets and should not be used under the drip line of trees or near shrubs since it moves readily in the soil and is absorbed by plant roots. Thus, although oxalis, wild strawberry, and violets could formerly be controlled to some degree by silvex, these weeds are now considered nearly uncontrollable by home lawn care companies, which cannot afford to take the risk of applying dicamba near trees or shrubs.

One possible hope for chemical control of oxalis in shady areas is Ronstar (oxadiazon), which is labeled for preemergence control of oxalis. Also, some alternatives to silvex for these difficult to control weeds may be found in current research which is being conducted to further study the effectiveness of various combinations of 2,4-D, dicamba, MCPP, and other less commonly used materials such as 2,4-DP. However, due to the difficulty that has been encountered in chemically controlling many broadleaved weeds, which has been compounded by the restrictions placed on silvex use, new emphasis needs to be placed on non-chemical methods of control, especially management practices.

Many steps can be taken to reduce the dependence on the use of herbicides for broadleaved weed control. The most effective means of control of any weed is to prevent the weed from becoming

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Table 1: Alternatives to silvex for chemical control of broadleaved weeds in bluegrass and fescue turf.

Weeds Controlled By Silvex	Alternative Means of Chemical Control
black medic	dicamba
buttercup (creeping)	2,4-D*, dicamba*
carpetweed	2,4-D, dicamba, MCPP*
chickweeds	dicamba, MCPP*
chicory	2,4-D, dicamba, MCPP
cinquefoil	2,4-D*, dicamba*, MCPP*
clover (white)	dicamba, MCPP
daisy (oxeye)+	dicamba*, MCPP*
dandelion	2,r-D, dicamba, MCPP
dogfennel	2,4-D*, dicamba, MCPP*
ground ivy+	dicamba*, MCPP*
henbit	dicamba, MCPP*
knawel	dicamba, MCPP*
mallow (common)+	2,4-D*, dicamba*
oxalis (yellow woodsorrel)	dicamba*
pineappleweed+	dicamba, MCPP*
purslane	2,4-D*, dicamba
violets+	-----
wild carrot	2,4-D, dicamba, MCPP*
wild strawberry	dicamba*

+ Usually required more than one application of silvex for fair to good control.

* May require repeated treatments for fair to good control.

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established in the first place. Thus, proper turf-grass establishment is important in preventing future weed problems. Steps that can be taken include:

Buy good quality seed. Poor seed, containing varieties not adapted to your area, will ultimately result in a poor turfgrass stand which will enhance the chances of weeds becoming established. Buy certified seed of varieties adapted to your particular state.

Seed at the proper time. Seeding during stressful periods results in a poorer turfgrass stand and thus less competition against weeds. Also, conditions for germination and growth of many weeds are more favorable at other times of the year.

Fertilize seedbed according to recommendations. Too little or too much lime and fertilizer will result in poorer turfgrass establishment and thus more weeds. Soil should be tested to determine the proper amount of liming material and fertilizer to apply.

Any other management practice, such as proper mulching and watering, which encourages vigorous seedling growth and thus increases competition against weeds should be used.

Many of these same principles apply to established bluegrass and fescue. Management practices which encourage a vigorous and dense turfgrass stand will help reduce the chances of weed encroachment. Proper mowing, watering, and fertilization are critical. Grass mowed too close or not frequently enough (which results in too much of the grass plant being removed at one time) results in a poorer root system and less competitive turf. Frequent, light watering can result in a shallow root system and more disease susceptible turf and thus a less competitive turf. Also, a continually moist soil surface encourages weed seed germination and provides a more favorable environment for weeds such as clover, chickweed, and ground ivy. Watering thoroughly and only when needed will thus discourage weed encroachment.

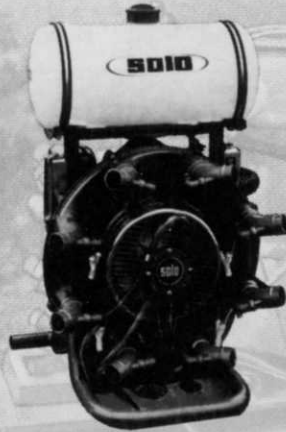
Applying fertilizer in the proper amounts and at the correct time is a must for obtaining a vigorous stand of grass and discouraging weed encroachment. Good soil drainage and minimizing soil compaction are also important in favoring your grass

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Hustler highway rotary mower.
Log fork from Tube-Lok Products.



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over weeds. If a few weeds do appear, removal by hand can help keep the problem from becoming serious by preventing spread of weed seed.

These basic principles of good management to reduce weed encroachment are not new, but need to be re-emphasized. Too much dependence has been placed on using herbicides to cover up what may be the result of bad management. When a chemical such as silvex is lost, we can be faced with a weed problem which may only be solved by complete renovation of the area.

Also, a weed problem which is solved temporarily by herbicides is certain to return if bad management continues. Good management will certainly not eliminate the need for herbicide applications, but it will greatly reduce the seriousness of weed problems that could eventually occur.

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