

POSTEMERGENCE GRASS HERBICIDE USE
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Chemical control methods for annual weed grass control must be combined with efforts to improve turf quality for lasting control. Herbicides are available for both preemergence and postemergence applications. Preemergence applications are made before the seed germinates and are designed to kill young seedlings. Postemergence applications are performed after plants appear in the lawn. The approaches discussed here will focus on crabgrass control but can, for the most part, be applied to other annual grasses such as foxtails, barnyard grass, and goosegrass.

Once annual grassy weeds have established, preemergence herbicides will no longer be effective. Several herbicides are available for spraying on young plants. Organic arsenicals have been used for a long time, such as DSMA, MSMA, CMA, and AMA. These herbicides are available from several manufacturers in liquids and dry forms. Liquids are usually more effective due to more uniform coverage.

The organic arsenicals are primarily contact herbicides. The chemical does not circulate in the plant and only kills the plant portions that come in contact with the spray. Effect control can require two-to-three applications, 7-10 days apart. The use of organic arsenicals has been limited due to the discoloration of turf that can accompany their application. These herbicides typically do not provide good control of mature grasses. However, warm-season grasses are much more tolerant of these herbicides and may be applied at higher rates which yield more consistent results without the threat of turf injury. Metharsenate residues are very persistent; it would be wise to examine possible environmental issues when using the arsenicals on a reoccurring basis.

The postemergence grass herbicide arsenal was enhanced in the 80's with the introduction of fenoxyprop-ethyl (Acclaim®). Acclaim® offers effective one application postemergence control of 1-3 tillered crabgrass and other annual grassy weeds. Control of mature crabgrass (>3 tillers) will require two applications 14 days apart. Slight yellowing of Kentucky bluegrass often followed Acclaim applications and lasted for up to a week. The potential for injury was reduced when a single isomer formulation (Acclaim Extra®) was introduced in 1997. The application rate has halved in the new formulation. Neither Acclaim Extra® or its predecessor should be tank mixed with 2,4-D as it will significantly reduce herbicide effectiveness and increase injury potential to the turf. This limitation prevents using them in a tank-mix to control broadleaf and annual grassy weeds in one application. If a 2,4-D application is planned for broadleaf weed control, wait at least 7 days after applying fenoxyprop-ethyl.

Dithiopyr, a preemergence herbicide, also has postemergence activity on very young plants. A postemergence application of dithiopyr will control young plants and additionally provide an eight-week preemergence barrier. This pre/post combination can be beneficial yielding season long control from one well timed herbicide application.

Pre/post control can also be accomplished with PreClaim® or PendulumPost®. These products both contain pendimethalin and fenoxyprop-ethyl herbicides.

In 1999, quinclorac (Drive®) a postemergence crabgrass herbicide became available for the first time. Drive has shown excellent turfgrass safety on all cool-season species. In addition to controlling young plants, quinclorac is very active on mature crabgrass plants (>3 tillers) and can be effective with just a single application. As stated earlier, two or more applications of MSMA are needed to manage crabgrass that advanced past the 1-3 tiller stage. Additionally, quinclorac may be tank-mixed with 2,4-D in order to control broadleaf weeds and crabgrass in one visit. Unfortunately, quinclorac has not displayed effective control of goosegrass. This inactivity has yet to be completely explained.

Many of the postemergence herbicides used for crabgrass control will control other annual grasses including, barnyardgrass, foxtails, and goosegrass. Some perennial grasses are often mistaken for crabgrass. Homeowners who complain of crabgrass infestations in April and May are usually identifying tall fescue, nimblewill, or quackgrass. These perennial grasses will not be controlled by conventional grass herbicides. Perennial grasses are much more difficult to control than annual grasses. Finding herbicides to selectively remove a particular perennial grass that is growing in another perennial grass can be tricky and frustrating. It

is hard to develop a herbicide with a mode-of-action that is only lethal to the target weed. A few niche products do exist for very specific situations. Correct weed and turfgrass identification is necessary for effective and safe control.

Tall Fescue can be a nuisance in home lawns. Chlorsulfuron (Lesco TFC®) is labeled for the control of tall fescue in Kentucky bluegrass. One application, typically, will not provide an adequate reduction of tall fescue, however, two or three applications made 21 days apart is much more effective. Chlorsulfuron is not suitable for all turf situations, as it will severely damage perennial ryegrass.

Few options exist for bentgrass, nimblewill and quackgrass infestations. Currently there are no selective means to eradicate these grasses. Often it becomes necessary to proceed with partial or complete renovation using a non-selective herbicide such as glyphosate (Round Up®). Several applications are often necessary in order to achieve control underground storage parts.

Herbicides can be very effective in controlling annual grassy weeds. Existing infestations can be controlled with a postemergence herbicide. Younger plants, as a rule-of-thumb, are easier to control than mature plants. When a lawn has a history of crabgrass pressure, a preemergence herbicide application combined with proper turfgrass management will help to prevent re-infestation. Read and follow all directions on the herbicide label.