Turf Tips for the homeowner

Extension Bulletin E1509 File 29.22 September 1981

Crabgrass Control in Lawns

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Crabgrass is one of the most prevalent grassy weeds found in Michigan lawns. Crabgrass seeds germinate in the spring, but the most growth occurs in the sunlight and high temperatures of summer. In the summer, cool season perennial grasses are less competitive due to their reduced growth rates. Thus, crabgrass can take over a lawn. To control crabgrass it must be identified and controlled before vigorous growth begins.

Two species of crabgrass are found in Michigan, large or hairy crabgrass (*Digitaria sanguinalis*), and small or smooth crabgrass (*Digitaria ischaemum*). Both are annual plants. Five to seven consecutive nights with temperatures above 50°F, and moist soil, are normally required for crabgrass seed to germinate. Seed germination normally occurs in early May, about the time forsythia is in final bloom. Flowering and seed formation occur in midsummer to early fall. Mowing, as low as one-quarter inch, will not prevent seed production. In the fall, the plants are killed by frost.

Crabgrass grows best in sunny areas and rarely is a problem in shaded areas. Crabgrass seedlings can also be shaded and crowded out by a thick, vigorous lawn. Although open and weak turf areas promote crabgrass infestations, crabgrass does not cause poor turf.

Crabgrass cannot be eliminated from a lawn in one season because of the large numbers of seeds present from previous years. Several years of good control and improved lawn care are required to eliminate crabgrass. The objective

of the crabgrass control program is to prevent new seed production and eventually exhaust the supply of crabgrass seeds in the soil.

Many of the herbicides used for crabgrass control will also help control other annual grasses including barnyardgrass, foxtail, annual bluegrass, and goosegrass. A few perennial grasses, such as tall fescue, nimblewill, and quackgrass, are often mistaken for crabgrass, but herbicides used for crabgrass control will not kill these grasses. Be sure crabgrass is the problem. Take a plant sample to your county extension office for identification if necessary.

Cultural Control

Good lawn care practices, such as selection of suitable grass species, proper fertilization and liming, correct mowing, and timely watering are the best weed control approaches. Any practice which produces a thick, healthy turf will help shade and crowd out crabgrass seedlings.

Mowing bluegrass and/or fescue lawns too short weakens the turf and promotes crabgrass invasion. Mowing at a minimum height of 1½ inches, and preferably not below 1¾ to 2 inches, will leave a dense canopy to shade crabgrass seedlings.

Maximum turfgrass density and health is also maintained by proper liming and fertilization.

Improper watering can also cause crabgrass infestations. Frequent light watering causes shallow rooting of turfgrass and promotes crabgrass germination and seedling growth. Constant moisture at the soil surface also promotes disease and traffic injury. Deep watering (to a depth of 5 to 8 inches) when turfgrass begins to wilt is a good irrigation scheme. This practice allows deep rooted turfgrass to obtain water, while water stressing the crabgrass.

Chemical Control

Chemical control methods for crabgrass must be combined with efforts to improve turf quality for lasting crabgrass control. Herbicides for crabgrass control are available for both preemergence and postemergence applications. Preemergence applications are made before the crabgrass seed germinates and are designed to kill young seedlings or prevent germination. Postemergence applications are performed after crabgrass plants appear in the lawn.

Preemergence Applications

Preemergence treatments, preferred for crabgrass control, are generally more effective and less injurious to turfgrass than postemergence treatments. Kentucky bluegrass can tolerate most preemergence crabgrass herbicides, but red fescue and bentgrass may be injured by some chemicals. Check the safety instructions carefully on the herbicide label before using it on various grasses.

Many factors influence the effectiveness and safety of preemergence herbicides, including grass species and varieties, turf maturity, soil type, and climate.

When to Treat

Preemergence treatments are best when made two weeks before crabgrass germinates. Herbicide applications made from late April to the first week of May are often effective. The treatment should be made before forsythia reaches full bloom. Applications made earlier in the spring are less effective. In very dry or cool springs, a delay in application can be helpful. Preemergence herbicides will not control established crabgrass plants.

Preemergence Herbicides for Crabgrass Control

Common Name	Tradename	Formulations[1] Available
Benefin	Balan	Liquid
Bensulide	Betasan, Presan	Liquid, Granule
DCPA	Dacthal	Wettable Powder Granule
Oxadiazon	Chipco Ronstar G	Granule
Siduron	Tupersan	Wettable Powder

[1]Granules are spread dry while wettable powders and liquids are mixed with water and sprayed. Some materials are available in mixtures with fertilizer.

Turf Injury

Be careful when applying herbicides, they may damage lawns. Balan, Chipco Ronstar G, and Dacthal can injure fine fescues and bentgrasses, especially during drought periods. Tupersan and Betasan, however, do not appear to injure Kentucky bluegrass, fine fescues, or bentgrasses. Check the label for use precautions and rates with all these herbicides.

New Seedings

Tupersan can be used at reduced rates with new seedings of Kentucky Bluegrass, fine fescues, or bentgrasses. With other herbicides, wait 2 to 4 months, before seeding new lawn areas. These herbicides remain in the soil for this period and will kill turfgrass seedlings.

Postemergence Applications

Several herbicides are available for spraying on young crabgrass plants. The chemicals are forms of methanearsonates, including disodium methanearsonate (DSMA), calcium methanearsonate (CMA), ammonium methanearsonate (AMA), and monosodium methanearsonate (MSMA). These herbicides are available from several manufacturers in liquids and dry forms. Liquids are usually more effective due to more uniform coverage.

The methanearsonates are primarily contact herbicides. The chemical does not circulate in the plant and only kills the plant portions the spray contacts. Crabgrass is more susceptible than turfgrass to the killing action.

Two problems associated with these herbicides make their use less desirable than preemergence treatment: 1) At least three applications are required, often every 7 to 10 days; 2) The chemicals can cause discoloration of the turf, especially with fescues and bentgrasses.

For good control, crabgrass plants must be very young (plants with approximately three leaves) when the postemergence applications are made. Apply the chemicals at temperatures below 85°F to minimize turf discoloration. Early morning or evening applications work best. If discoloration occurs, it is usually temporary.

Products are available containing both a methanearsonate and 2,4-D (2,4 - dichlorophenoxyacetic acid). The addition of 2,4-D can increase the effectiveness on crabgrass and will also kill many broadleaf, but not grassy, weeds.

Herbicides can be very effective tools for crabgrass control. The preferred treatment is a preemergence application combined with an improved turf management program to prevent crabgrass reinfestation. Chemicals alone cannot eliminate crabgrass from the lawn.

Use all agricultural chemicals in accordance with the instructions and limitations found on the label. Consult Bulletin E-653 and your local county extension office for further information.

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Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8, and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Gordon E. Guyer, Director, Cooperative Extension Service, Michigan State University, E. Lansing, MI 48824.

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