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## EC159 Revised 1956 Crabgrass Control in Bluegrass Lawns

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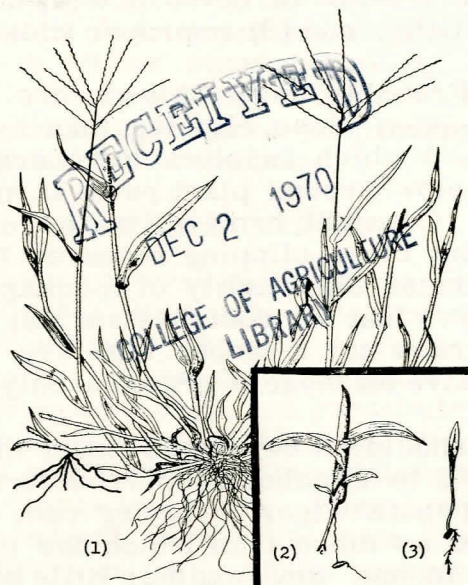
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## CRABGRASS CONTROL IN BLUEGRASS LAWNS



Crabgrass, *Digitaria sanguinalis* (L)  
(1) Mature plant, (2) and (3) Seedlings

Crabgrass, also commonly known as water grass, finger grass, and crowfoot grass, is Nebraska's worst lawn pest. The plant normally has a low spreading habit of growth. Roots are produced where each node (joint) touches the ground. The leaves and leaf sheaths are hairy. The seed stalk is branched into three or more finger-like projections. It seldom starts growing before the middle of May and is generally killed by the first frost.

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# CRABGRASS CONTROL IN BLUEGRASS LAWNS

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## Lawn Management for Crabgrass Control

Crabgrass rarely takes over a lawn unless the lawn grass has been weakened by improper care. The chief causes of weed trouble in lawns are (1) close mowing, (2) low soil fertility, and (3) improper watering.

Mowing - Probably more lawns are destroyed in Nebraska by frequent close clipping than by any other cause. The food which supplies the energy for growth of above-and below-ground plant parts is manufactured in the leaves. Constant removal of the above-ground parts by frequent close clipping removes the source of energy and reduces the vitality of the plants. Experiments have shown that the root system and underground stems of bluegrass cut 3 inches high are about three times as extensive as those of grass cut only 1 inch high.

Bluegrass should not be mowed closer than 2 inches. Mowing at 2 1/2 to 3 inches is more desirable from the standpoint of grass vigor. During cool weather clip often enough so no more than 1 inch has to be removed per clipping. In hot, dry weather little or no cutting should be done even though the grass may attain a height of 3 or 4 inches. The shade and cooler soil temperatures which result from high mowing create an undesirable environment for the germination and growth of crabgrass seedlings.

Watering - Established stands of bluegrass should not be watered by daily light sprinkling. The moist surface soil and humid air which result from daily watering encourage crabgrass, foxtail, and many other weeds, and in addition furnish favorable conditions for the development of many lawn diseases.

From early spring until June 15 and from September 1 to late fall, the lawn should be thoroughly soaked. Two or three inches of rain and supplemental water per week is not too much. This encourages the bluegrass to root more deeply and is especially beneficial to the trees and shrubs. During hot weather, watering should be done in the evening at intervals of 10 or 15 days to keep the sub-



soil moist and the surface soil moderately dry, thereby making conditions unfavorable for shallow-rooted weedy grasses.

Fertilization - Wellfed lawn grasses are good competitors for weedy grasses. Experiments have shown that the infestation of crabgrass in lawns can be greatly reduced by the application of 2 to 3 pounds of elemental nitrogen per 1000 square feet each spring and fall. Fertilization during hot weather is likely to encourage crabgrass and foxtail. It is important to stimulate the desirable grasses at a time when the weedy grasses are not in condition to be benefited. The shade provided by vigorous, healthy lawn grasses produces undesirable growth conditions for crabgrass.

### Chemical Control

During the past several years, experiment stations in the North Central Region have tested many materials for crabgrass control. There is no simple one-treatment control measure. Chemical crabgrass killers should supplement good lawn care, not substitute for it. Kerosene, phenyl mercuric acetate, and disodium methyl arsonate have given the most satisfactory results in tests conducted during recent years. Phenyl mercuric acetate (PMA) and disodium methyl arsonate (Sodar) are the active ingredients in many of the crabgrass killers that are now on the market.

One of the best ways to apply these materials is to use an ordinary 2- to 3-gallon pressure sprayer (knapsack sprayer).

Kerosene has given as satisfactory crabgrass control as any chemical tested. Apply 10 quarts undiluted kerosene per 1000 square feet of lawn area. The first application should be made about June 15 or when the crabgrass seedlings are in the two-to four-leaf stage. Repeat treatments will be necessary when new crabgrass seedlings appear. To avoid "burning" the bluegrass, spray when the air temperature is less than 90° F. Evening applications are suggested as a means of avoiding high temperatures soon after spraying. Withhold watering for four or five days prior to treatment to give the bluegrass a chance to "harden-off". Postpone watering for 48 hours after treatment. Use clear or water-white kerosene. The impurities in other kerosenes are likely to cause injury to the bluegrass.

Phenyl mercuric acetate (PMA) has the added advantage of being effective against certain fungus diseases of bluegrass. Apply 0.3 to 0.4 ounce of active ingredient in 10 quarts of water per 1000 square feet as soon as crabgrass seedlings are observed. The applications must be repeated at 7-to 10-day intervals until 3 to 5 applications have been made. The concentrations of PMA which appear on the market vary. If material containing 10 per cent PMA is used, apply 3 to 4 ounces per 1000 square feet. Manufacturers' recommendations should be followed for solutions which contain lesser amounts of active ingredient. Phenyl mercuric acetate is poisonous.

Disodium methyl arsonate (Sodar) is among the newest materials for crabgrass control. Apply 2 to 4 ounces of active ingredient in 5 gallons of water per 1000 square feet. A single application will usually be sufficient on small plants 2 inches in height or less. Two applications are often required for branched plants. If more than one application is necessary, apply the follow-up treatments in 7 to 10 days at reduced rates. Repeat treatments at the higher dosage may cause injury to the bluegrass, especially if applied during high temperatures. Follow closely the directions on the container. Air temperature has a decided effect on the action of disodium methyl arsonate. Reduced rates are recommended when the air temperature tends to be above 85° F. Good soil moisture prior to treatment and for several days after is essential for good control.

Potassium cyanate (KOCN), sodium arsenite, and certain dinitro phenols have been used with varying degrees of success. Follow the manufacturers' recommendations. All three are poisonous.

### Mechanical Control

Pulling - Pulling of crabgrass is most effective when the plants are young. Heavy watering prior to pulling makes the operation easier. Many lawns are kept free of crabgrass by this method.

Shading - Crabgrass does not thrive in the shade. When the plants are relatively young (mid-June to early July) they can be killed by shading for a period of eight to ten days. This may be done by using tar paper or similar material. This treatment leaves the bluegrass yellow, but it will soon recover.