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# Pre-emergence Crabgrass Control

# Crabgrass Control

Each year home owners, golf course superintendents, and others are becoming more concerned with turf problems. Reasons for this range from a desire for higher quality turf to additional leisure time for lawn care.

Crabgrass, the grassy lawn pest, is one of these problems. Herbicides are commercially available for both postemergence and pre-emergence control of crabgrass.

Pre-emergence herbicides (those applied before crabgrass emerges from soil) for crabgrass control are newer and possess some advantages over postemergence herbicides.

### WHY CONTROL

Crabgrass is objectionable not only because its texture and color gives a spotty appearance to the lawn, but also because it competes with turfgrass for moisture, fertility, and light. This competition weakens the turfgrass and eventually results in an inferior lawn.

Crabgrass differs from recommended turfgrasses for South Dakota by being an annual grass which has wider leaf blades that are light green in color.

The fact that crabgrass is a warm season grass and consequently thrives during hot weather (figure 2) is another important characteristic of this weed. Turfgrasses most commonly used for lawns in South Dakota are cool season grasses. Often people observe the retarded growth of these cool season grasses during

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Figure 1. Large crabgrass (*Digitaria sanguinalas*). Crabgrass is a troublesome annual grass that infests lawns, crowding and smothering the permanent turfgrass. Stems may be decumbent or creeping and may root freely at the nodes.



Figure 2. Crabgrass makes its most rapid growth during the period of bluegrass summer dormancy. Improved cultural practices at this time generally are of more benefit to the crabgrass than to the desirable turfgrasses.

hot weather, and apply water and fertilizer which may favor the development of crabgrass.

Both large and small crabgrass are found in South Dakota. Large crabgrass (figure 1) is the species most commonly found in lawns. Small crabgrass is not as coarse or as tall as large crabgrass.

### CONTROL

Herbicides such as zytron<sup>1</sup> and dacthal<sup>2</sup> have been developed for pre-emergence crabgrass control. These, along with an earlier pre-emergence herbicide marketed under the trade name "Pax,"<sup>3</sup> gave excellent results at the South Dakota State College Experiment Station. Results with other pre-emergence materials were not as consistent or have not been tested to the point where recommendations can be made.

Apply zytron, dacthal, and "Pax" in dry form with a seed or fertilizer spreader. Overlap enough to avoid missing areas (figure 4). Follow manufacturers' directions closely for best results. Some damage, generally a temporary discoloration of perennial lawn grasses, results when the amount applied exceeds the recommended rate.

These herbicides must be applied before the crabgrass starts growing. Specific application dates are not possible as emergence time may vary. As a rule of thumb, make a spring application before the common lilac is in full bloom. Zytron and "Pax" applications may be applied in the fall from September 1 to freeze up.

Fall applications with zytron are as effective as spring applications of zytron, dacthal or "Pax." Several side benefits favor the fall application. These benefits are:

- (1) One often has more time for such work,
- (2) Patches for spot treatment which may be problems next year are easily located,
- (3) Herbicide will control some other annual weeds.

Difference in residual effects of spring compared to fall applications is not known. Wait 6 months after treatment with some pre-emergence herbicides before reseeding a lawn.

Pre-emergence herbicides appear to have certain advantages. The residual effect against germinating crabgrass seed may be as long as 3 years with one herbicide, and crabgrass is controlled before it becomes a turf problem. One disadvantage pre-emergence crabgrass herbicides may have is that some areas may be treated unnecessarily. Pre-emergence crabgrass herbicides are usually more expensive than post-



Figure 3. Crabgrass seed is small and produced in numerous quantities on finger-like racemes as seen in figure 1.

emergence herbicides but this added cost is generally offset by the benefits listed above. Usually more than one treatment per season may be needed with postemergence applications.

Lawn fanciers should not depend exclusively upon herbicides to keep their lawns weed free. Use herbicides only when deemed necessary. A good lawn management program is the basis for a beautiful lawn. Such a program should include fertilizing, mowing at correct height with a sharp mower, irrigating when necessary, and using disease, insect, and weed control practices.

<sup>&</sup>lt;sup>1</sup>Zytron is the technical name for 0-2, 4-dichlorophenyl o-methylisopropylphosphoramidothioate and is sold under names "Dow Crabgrass Killer" or "T-H Crabgrass Killer."

<sup>&</sup>lt;sup>2</sup>Dacthal is the technical name for dimethyl 2,3,5,6-tetrachoroterephthalate and is sold under the trade name "Vertagreen", "Rid", "Chipco DACTHAL", "Pre-vents" and others.

<sup>3&</sup>quot;Pax" is the trade name for a mixture of arsenate of lead, arsenous oxide, chlordane, and ammonium sulfate.

### SUMMARY

The following can be said about pre-emergence crabgrass control:

- 1. One herbicide application gives extended control.
- 2. Some materials require at least a 6 months waiting period after treatment before reseeding.
- 3. Some herbicides can be applied either spring or fall.
- 4. Fall application of zytron results in control of other early germinating seeds such as knotweed.

- 5. Follow manufacturer's recommendations closely.
- 6. A well-maintained lawn is capable of suppressing crabgrass seed germination and growth.

For additional information on lawns and lawn weed control, secure "Lawns for South Dakota", F. S. 54 and "Controlling Lawn Weeds with Herbicides", Home and Garden Bulletin No. 79, USDA. These bulletins are available at County Extension Service Offices. Contact your County Extension Agent for other recent lawn management recommendations.



Figure 4. Zytron, a pre-emergence herbicide, was applied in the spring of 1962 with a lawn seed and fertilizer spreader of the type shown. Areas missed because of not lapping with spreader are shown as light areas (crabgrass). In the darker areas the proper treatment was made and no crabgrass is present. Photo taken in August 1962.

It is sometimes necessary to use trade names in providing information. No endorsement of specific products named is intended, nor is criticism implied of products not mentioned.

BE SURE TO FOLLOW DIRECTIONS ON THE LABEL WHEN YOU APPLY CHEMICALS.



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