

## A New Preemerge After 10 Years Of Testing

Chemical weed control has given the greatest single improvement in turf during the past 30 years. The phase known as preemerge crabgrass (*Digitaria*) control is second in importance only to 2,4-D and the phenoxy family. DCPA, the first of our modern pre-emerge herbicides that are in use currently, appeared about 20 years ago, and this chemical along with several others have reduced crabgrass from a number one weed to just one of our weeds.

These chemicals have been very helpful, but they have brought disappointments. Too little study has been given to the best methods of using these herbicides.

Possibly, we have not always used techniques that give the best control of crabgrass and the greatest safety to the turfgrasses. We know several of these herbicides work best when they are applied in granular form rather than spray form. They can be applied too early and too late with respect to crabgrass germination. Apparently thatch interferes with the action of several of the herbicides. They differ in phytotoxicity to the grasses.

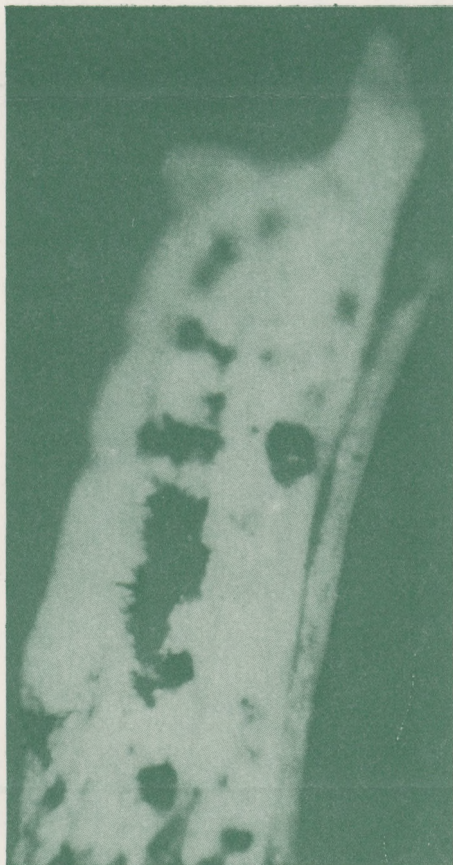
DCPA is the oldest of the current market group, and it has been used widely. Bensulide has been one of the better long-term performers. Benefin requires the lowest rate/acre of active ingredient which makes it very competitive. Siduron is one of the safest on the red-fescues and it can be applied over new seedings.

### Consistent Control

This year a new chemical is available to some growers. It has been tested on crabgrass for the past 10 years at the New Jersey Agricultural Experiment Station as RP17623.

(Page 4, please)

## May Overlook Importance of Anthracnose on 'Poa'



Anthracnose (*Collectrichum graminicola*) as it appears through hand lens.

J.M. Vargas Jr. and R. Detweiler,  
Department of Botany and Plant  
Pathology, Michigan State University

A new disease problem attacking "Poa" (*Poa annua* — annual bluegrass) has been identified on many golf courses over the past three years. That is not to say anthracnose (*Collectotrichum graminicola*) is a previously unidentified problem for it is reported in the literature. But while the disease has been reported before, its importance has been overlooked, or more correctly stated, the damage done to "Poa" by anthracnose has been blamed on other factors: *Pythium*, *Helminthosporium*, and high temperature.

It was not uncommon to go onto a golf course in the summer and hear a superintendent say, "Pythium has wiped out my fairways" or "Helminthosporium has wiped out my fairways" and "I treated it with this or that and it didn't help." Nor was it uncommon to walk on a golf course and hear someone say, "Look, I can't apply more water, the fairways are saturated and they're still wilting" or "I have even syringed in the middle of the day and they are still wilting."

### Attacks Grass Under Stress

The reason the *Pythium* and *Helminthosporium* fungicides didn't work was because neither was the problem. Excess water and syringing didn't work because the grass was not wilting. If anything, the excess water contributed to the anthracnose problem.

The one characteristic symptom of "Poa" infected with anthracnose is its yellow appearance. When Poa or any grass wilts, it turns dark blue to purple, and yet superintendents were talking about their "Poa" turning yellow and wilting.

(Page 3, please)

## BENTAZON NEW FOR NUTSEDGE

A chemical, bentazon, produced by BASF-Wyandotte Corporation, has been introduced to the market for nutsedge control. The commercial package is known as "Basagran."

Researcher Johnny Jagschitz, who has collected considerable data, reports that two applications of 1 lb./A. each at 10-day intervals in July will give good results. Of course, follow the instructions on the label.

## Sound Advice Out of The Past

"As a general rule, turf (sod) for greens should be cut as thin as 1½ inches. This is especially important if the turf contains many tap-rooted weeds. The roots of the weeds and many of the coarser grasses are then left behind in the cutting. In the experience of the writer, it is frequently not a difficult matter to get excellent turf in the immediate neighborhood of a golf course."

This is one of the many still-useful observations by Dr. A. Mackenzie, author of "Golf Course Architecture," published in 1920 and now regarded as a classic.

*Dr. Mackenzie has better known statements in his book. And we might react to the above as interesting writing and something of historical interest. Yet, there is hidden wisdom for us. When we try growing something that does not have well-defined cultural procedures, we might begin with the natural varieties, natural soil and the natural habitat where the species occurs. Man is seldom wise enough to develop new procedures without study and mistakes.*

In the introduction to his book Dr. Mackenzie wrote:

"No doubt many mistakes were made in our early attempts, and I never visit a course which I have designed without seeing where improvements could be made in the constructional work, and as long as this is so, I feel that we shall all continue to learn and to make progress, our instructor being nature herself."

*"Strangely" mistakes in construction of golf courses are still occurring. The statement suggesting that we "continue to learn and to make progress, our instructor being nature herself," should be a guidepost to all in turf and the landscape.*

—R.E.E.

## EARLY APPLICATION OF DACONIL CONTROLS RED LEAFSPOT DISEASE

(Does this headline look familiar? It should, as it appeared over the following information and request a year ago. The idea seems worth trying but we received no response. If you use this method in 1978, please let others know your results. A few small unsprayed check strips will make any results of lack of results more convincing. — Editor)

Research at the University of Illinois on red leafspot (*Helminthosporium erythrosplum*), which causes serious turf decline of bentgrass turf in late spring and summer, is especially interesting.

They found that application of the full rate of Daconil in late April or early May gave good control while later applications made near or at the time of the disease occurrence were much less effective. This situation suggests what might be a parallel. Snow-mold control has been improved on some occasions when fungicides are applied in late October rather than at the end of the growing season only.

These observations suggest that we need more study on timing of fungicide applications. If you try the early Daconil treatment and find it convenient to leave a check, pass along your results.

Every job is important when done with pride. Because pride gives us more than title of power. It gives us fulfillment. And fulfillment casts out disappointment like demons from the temple of our temperament.

— S. W. Martin,  
"Better Corps"

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### ALL YOURS

This page is open to you for your comments and opinions. Let's hear from you.

## EPA Adds More RPAR's to List

Hot off the press is a new list of pesticides which are called "candidates for intensive scientific review" to determine whether they should be put on the RPAR list. The April 20 Federal Register lists 31 pesticides among which are such well known products as Captan, 2, 4-D, Dacthal, Folpet, and Thiram.

Where will it end? EPA will be reviewing the risk/benefit assessment of each of the 22 candidates presently on RPAR as well as those mentioned above. Your dependency on these new ones and all the other products on RPAR should be voiced.

You could write directly to EPA; but, if you prefer, write to the manufacturer and let him forward your letter to EPA at the appropriate time.

— Paul Sartoretto  
("What You Can Do About  
EPA's List of RPAR's" in Fall  
1977 Green World.)

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## ANTHRACNOSE (from Page 1)

What is anthracnose? It is a weak pathogen that can attack "Poa," Kentucky bluegrass, and red fescue under stress. It appears to attack during cool as well as warm weather. The yellowing is present under cool or warm weather but death of the grass plant occurs in hot, humid weather conditions. Most of the stress on "Poa" came from the high temperatures last summer. The disease in "Poa" was worse in heavy soil, compacted areas, and heavy traffic areas or hillsides. In one case excess nitrogen fertility was also attributed to symptom development. In Kentucky bluegrass, shade and short root systems contributed to the severity of the disease.

How can the disease be properly identified in the field? By the black fruiting bodies, acervulus, (acervuli, pl.) of the fungus, with spines (setae) protruding from them, which are present in the infected tissue. The black bodies can be found in the green or chlorotic tissue (yellow) when the disease is moving rapidly during warm weather but they are more commonly found in the dead tissue.

### Effective Control

The benzimidazole systemic fungicides (Tersan 1991, Fungo 50, Cleary's 3336, Scotts DSB & Fertilizer) at the 2-oz. rate give the best control when applied as eradicants. Rates of 1 oz./1000 sq. ft., while effective, did not give as good control as the 2 oz. rate. Four and 8-oz./1000 sq. ft. rates also gave excellent control but the cost is prohibitive. The quickest recovery occurred where the systemic fungicides were drenched in after application. Weekly applications of the contact fungicides Tersan 75, Tersan LSR, Fore and Daconil 2787 were effective.

Many fairways which lost 50 to 75 percent of their turf prior to treatment recovered ten days to two weeks after treatment indicating that the crowns of the plants had not been killed by the anthracnose fungus. Often the roots of the treated annual bluegrass plants are up to 2 inches in length following treatment in spite of the fact the daytime temperatures were in the high 80's and low 90's. In the untreated controls the annual bluegrass roots remained shallow to the point where the turf could be easily torn out. The evidence indicates that much of what has been previously called high temperature killing of "Poa," Helminthosporium and Pythium, is in fact due to anthracnose.

## Preventive Applications

If this summer is hot and humid, or if you are in an area that always has hot humid summers, you may wish to apply 1 oz./1000 sq. ft. of a systemic fungicide when the daytime temperatures start to go above 85°F. and the nighttime temperatures stay above 70°F. This should last for 4 weeks. Then you could apply Tersan 75, Tersan LSR, Fore or Daconil 2787 followed a week later by an additional ounce of a systemic fungicide. Applied as a preventative, one ounce has been effective.

Why the contact fungicide if the systemics are so effective? Because resistance to the systemic fungicides has developed for every major pathogen on which it was used. This includes *Collectotrichum* spp. on other crops. There is no reason to believe it won't happen here and if it does happen on your course, you will have to spray every 3 to 7 days with a contact fungicide from July through August to prevent anthracnose. Using a contact between systemic fungicides application and during the rest of the year will hopefully delay the development of this resistance.



Anthracnose fruiting bodies (acervuli and setae) on "Poa" blades as seen through hand lens.

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\*U.S. Plant Patent: #3186, Dwarf Variety  
\*\*Protection applied for under the U.S. Plant Variety Protection Act

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## PREEMERGE (from Page 1)

The common name of this chemical is oxadiazon, and its commercial name is Ronstar. This herbicide has given more consistent crabgrass control and has a better 10-year crabgrass control rating than the several market types (see table).

Application in late April appeared better than the third week of May. A preparation for spray application gave good crabgrass control, but a product for this method of application is not available.

Unfortunately, the herbicide tends to be severe on red fescue types, *Festuca rubra* types and bentgrass *Agrostis* spp. and is not recommended where these grasses are important. Its safety to Kentucky bluegrass, *Poa pratensis*, has been very good.

Observe results with this grass to determine how it might fit into your program.

### PREEMERGE CONTROL OF CRABGRASS WITH RP17623 GR FROM 1968 TO 1977.

YEAR	ai/A (LBS.)	CRABGRASS CONTROL (%)
1968	4	93
1969	3	72
1970	3	81
1971	3	92
1972	3	93
1973	3	96
1974	3	93
1975	3	87
1976	3	93
1977	3	99

### CRABGRASS LATE TOO?

Many are asking if it is too late for premerge herbicides. It seems everyone is on a late schedule this spring and we might hope crabgrass is also. Very little crabgrass has germinated to date and if you see no seedlings, this could be the best time of the season.

While premerge (benefin, bensulfide, DCPA) is less successful on goosegrass (*Elensine*), mid-May should be a prime date for 1978 application.

If you do apply premerge, do not forget the old admonishments: 1) Read the label, 2) calibrate equipment correctly, 3) apply the herbicide in a uniform pattern.

Keep records on the date of applying premerge and your results for a future guide.

— R.E.E.

## LUSH, GREEN LAWN POSES A PROBLEM

*Question* — Last summer I had a lawn problem. My lawn continued to be lush and green long after the neighboring lawn had turned a fashionable tan. What did I do wrong?

*Answer* — This sounds like the result of fertilizing the lawn in spring, watering it deeply in dry spells and setting the lawn mower height too high to assure proper burning of the grass. This summer, remember to lower the wheel height to its lowest position, and hope that your grass roots will go dormant. We hope you haven't done any fertilizing or sprinkling thus far, for this would prolong your lush, green lawn condition.

— Gerald Kloss,  
in "Slightly Kloss-Eyed,"  
*Milwaukee Journal*

*"Man blames fate for other accidents, but feels personally responsible when he makes a hole in one."*



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## ABSTRACT

Impact of Thatch on Preemergence Activity in Kentucky Bluegrass Turf. K.A. Hurto and A.J. Turgeon. 1977 Agronomy Abstracts p. 111.

Field and laboratory experiments were conducted to assess the impact of thatch on herbicide efficacy, mobility, and persistence. Preemergence herbicides were applied to a Kentucky bluegrass (*Poa pratensis* L.) turf at two sites; one with thatch 3 cm. thick; and one with no thatch. Results showed good to excellent crabgrass control without injury to thatch-free turf treated with benefin at 4.5 kg./ha. and with all treatments of DCPA, bensulide, and oxadiazon. Crabgrass control in thatchy plots was excellent with all herbicide treatments; however, turfgrass injury was moderate to severe in plots treated with benefin, prosulfalin, and oxadiazon. Laboratory studies showed differences in herbicide adsorption and mobility in thatch and soil. Persistence of benefin and DCPA was evaluated in vitro using C-14 labeled materials incubated under aerobic conditions in soil and thatch. After 28 days, 68 and 56 percent of DCPA and benefin, respectively, were detected in thatch; in soil, greater than 90 percent of both herbicides was recovered.

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## ABSTRACT

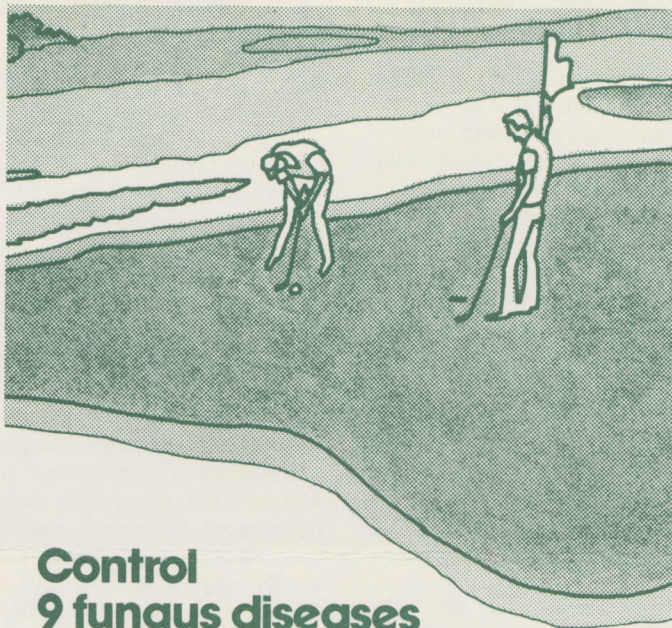
**Midsummer Occurrence of *Helminthosporium Sorokinianum* Leaf Spot on Selected Cultivars of *Poa Pratensis*. Clinton F. Hodges and William M. Blaine. Plant Disease Reporter 58:448-450.**

Several cultivars of *Poa pratensis* were evaluated for midsummer *Helminthosporium sorokinianum* (*H. sativum*) leaf spot. Field plot evaluations of natural infections revealed that all cultivars were susceptible. Severity of midsummer *H. sorokinianum* leaf spot was minimal on Fylking, Glade P-29, and Pennstar; Nugget, Park, South Dakota Certified, Sydsport, and Delta were severely infected. It was concluded that the environmental conditions under which evaluations were made may have encouraged the near maximum expression of susceptibility among the cultivars. The general increase in the incidence of midsummer *H. sorokinianum* leaf spot on *P. pratensis* in Iowa is believed to be closely associated with irrigation practices and possible changes in virulence of the pathogen.

### More N for G.W.?

Sorry about the sick green of our last issue. Let's blame it on the harsh winter. Betty Murdock, my secretary, said more nitrogen would bring the good green back, and our printer took her advice when he mixed his new batch of ink.

— R.E.E.



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