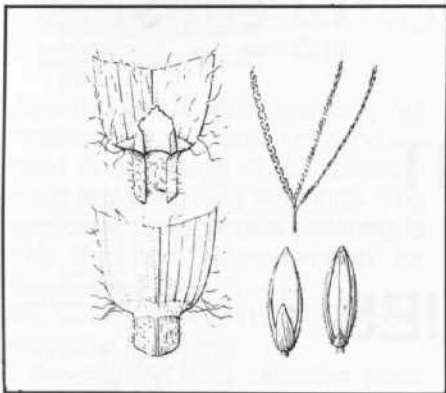


WEED GRASS CONTROL IN TURFGRASS

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Digitaria sanguinalis (crabgrass)

The 1987 growing season was a banner year for crabgrass. The annual, warm-season grass grew profusely the length and breadth of Wisconsin. Crabgrass produced lots of seed in 1987 so the potential for crabgrass invasion is high for 1988. The combination of temperature, drought periods and rainfall distribution will determine how much crabgrass we see this year. Cool temperatures with adequate moisture for turfgrass growth will mean much less crabgrass compared to a season of high temperatures and periodic drought periods that force non-irrigated turf into summer dormancy. Under normal weather conditions, most crabgrass germinates in June and July in Wisconsin.

Crabgrass prevention and control should be thought of as a total turf management program rather than only a herbicide selection and application project. The cultural management name of the game is competition. Do everything available to keep desirable turfgrasses as vigorous and competitive as possible.

In simple terms, mow as high as practical, fertilize correctly and irrigate sensibly. Prevent disease and insect attacks that weaken turf. Attend to soil compaction and thatch problems.

Herbicides are a part of the total management program for crabgrass control. A brief description of the available crabgrass herbicides follows. Be sure to use a herbicide labeled for your situation or problem. Pre-emergence herbicides must be applied before crabgrass seed germinates. Post-emergence herbicides should be applied to young, rapidly growing crabgrass.

Most crabgrass herbicides are not labeled for use on *Poa annua* or bentgrass greens. Read the label before making a serious mistake. Never apply a herbicide to turf under severe drought and/or heat stress. Remember — think in terms of a turf management program, not just herbicide application.

PRE-EMERGENCE HERBICIDES

Bernefin is pre-emergence herbicide labeled for control of crabgrass and other annual weed grasses including *Poa annua*. Bernefin may be applied to established Kentucky bluegrass, fescues, and perennial ryegrass. It is not labeled for use on bentgrass or for use on putting greens.

Bernefin plus trifluralin (Team)

Team is a mixture of 2 parts bernefin (Balan) to one part trifluralin (Treflan) and is a pre-emergence herbicide labeled for control of crabgrass and other annual weed grasses including *Poa annua*. Team may be applied to Kentucky bluegrass, fescues, perennial ryegrass and bentgrass fairways and lawns. It is not labeled for use on putting greens.

Bensulide (Betasan)

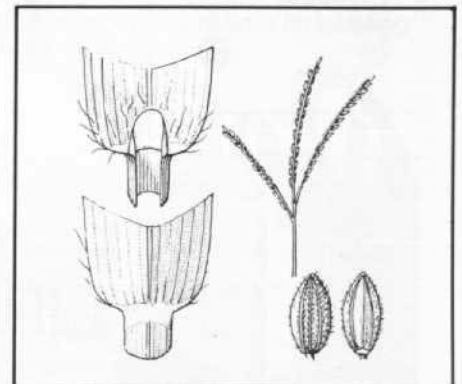
Bensulide is a pre-emergence herbicide labeled for control of crabgrass, other annual weed grasses including *Poa annua*, and some annual broadleaf weeds. The herbicide may also be used for pre-emergence weed control on selected flowers, shrubs and trees. Bensulide may be applied to established bentgrass, Kentucky bluegrass, fescues, perennial ryegrass, *Poa trivialis* and red top.

DCPA (Dacthal)

DCPA is a pre-emergence herbicide labeled for control of crabgrass, other annual weed grasses including *Poa annua*, and some annual broadleaf weeds. The 75 wp formulation may be used for post-emergence control of creeping speedwell, *Veronica filiformis*. DCPA is also labeled for use on selected flowers, shrubs and trees and vegetables. DCPA is not recommended for use on bentgrass mowed at putting-green height.

Ethofumesate (Prograss)

Ethofumesate is both a pre-emergence and early post-



Digitaria ischaemum (smooth crabgrass)

emergence herbicide labeled for use by professional applicators for control of selected annual weed grasses, primarily *Poa annua*, and annual broadleaf weeds. Ethofumesate may be applied to Kentucky bluegrass, mowed .75 or above, perennial ryegrass and creeping bentgrass fairways and roughs. It is not recommended for use on tees and putting greens. The primary interest in the herbicide is for *Poa annua* control.

Oxadiazon (Ronstar)

Oxadiazon is a pre-emergence herbicide labeled for control of crabgrass, other annual weed grasses including *Poa annua* and some annual broadleaf weeds. Oxadiazon may be applied to established Kentucky bluegrass, perennial ryegrass and tall fescue. It is not labeled for use on bentgrass and red fescue and is not labeled for use on putting greens or trees. Oxadiazon is also used on woody shrubs, vines and ornamental trees.

Pendimethalin (Scotts Turf Weed Grass Control, Lesco Pre-M)

Pendimethalin is a pre-emergence herbicide labeled for control of crabgrass, other annual grass weeds including *Poa annua*, and some annual broadleaf weeds. It may be applied to established Kentucky bluegrass, fine fescue, tall fescue and perennial ryegrass. Pendimethalin is not labeled for use on bentgrass.

Siduron (Tupersan)

Siduron is a pre-emergence herbicide labeled for control of crabgrass and several other annual grass weeds. Siduron will not control *Poa annua*, clover or most

broadleaf weeds. Siduron may be applied to Kentucky bluegrass, fescues, perennial ryegrass to the following bentgrasses:

Penncross	C-1
Seaside	C-7
Highland	C-19
Astoria	

Siduron use on golf greens is not recommended. Siduron may be applied at any stage of turf development including new seedings. The application rate for new seedings is half the rate recommended for established turf.

POST-EMERGENCE HERBICIDES

Fenoxaprop (Acclaim)

Fenoxaprop is a selective post-emergence herbicide labeled for control of crabgrass and several other grass weeds. Fenoxaprop may be applied to one year old and older established Kentucky bluegrass, fine fescue, tall fescue, and perennial ryegrass. Application should be made when crabgrass is in the 3-leaf to as late as the 5-tiller stage of development.

Organic arsenicals (DSMA, MSMA, etc.)

Organic arsenicals herbicides are labeled for post-emergence control of crabgrass, other annual grass weeds and several annual broadleaf weeds. Two or more treatments at 14-day intervals may be necessary. Application should be made when crabgrass is young, growing actively and when air temperatures are in the range of 80 to 90°. *Temporary yellowing of turfgrasses frequently occurs when using organic arsenicals.*

Bentazon (Basagran)

Bentazon is a post-emergence herbicide labeled for control of yellow nutsedge in established turfgrass. Bentazon may be applied to established Kentucky bluegrass, fescues, perennial ryegrass and bentgrass. Bentazon should not be applied to golf course greens or collars. For yellow nutsedge control, apply bentazon to young, actively growing sedge under good soil moisture conditions.

Glyphosate (Roundup, Kleenup)

Glyphosate is a non-selective post-emergence herbicide labeled for control of existing vegetation prior to turf establishment and for control of vegetation prior to renovation. Apply glyphosate to actively growing vegetation, wait 7 days for proper herbicide translocation into underground plant parts and then

prepare soil for seeding or sodding using normal tillage practices. Glyphosate is non-selective and kills all vegetation to which is applied.

Read the label before purchasing a

herbicide and again before using the herbicide. Pay careful attention to the following statement found on most, if not all, labels "It is a violation of Federal law to use this product in a manner inconsistent with its labeling."



The 1988 Turfgrass Management Short Course at the UW-Madison.

TURFGRASS SHORTCOURSE

Forty turf people from 7 counties enrolled in the 1988 University of Wisconsin turfgrass short course held on the University of Wisconsin-Madison campus, January 4-8. The January date is between semesters when space and facilities are available. Approximately 42% of the group were from golf courses, 40% associated with recreational turf, 11% from lawn care services, 8% from parks, and 5% were students. The 20-hour course covered basic grass growth, development and management. Instructors included Wayne Kussow, Soil Science; Charles Koval, Entomology; Phil Pelletteri, En-

tomology; Gayle Worf, Plant Pathology, in addition to Robert Newman, Horticulture. Mr. Monroe Miller, Superintendent, Blackhawk Country Club, presented an interesting lecture on public relations as it applies to the golf course management profession.

The turf short course is limited to an enrollment of 40 and will be held again in January, 1989. The course is geared to management principles as opposed to a cook book approach to turf management. The short course curriculum is flexible and can be altered to accommodate special needs of students.

CIBA-GEIGY DONATES

Joe Wollner took advantage of the Wisconsin Turfgrass Association Winter Turfgrass Meeting on January 12th to present WGCSA President Roger Bell a check for \$379.20. The check, due to the success of Subdue sales throughout the United States, was given by CIBA-Geigy on behalf of Brayton Chemical.

Ciba-Geigy has taken a leadership role in terms of contributions to the turfgrass industry. In December of 1987, the company contributed \$50,000 to the GCSAA ENDOWMENT FUND. These monies, used for scholarship and research, encourage the develop-



Joe Wollner and Roger Bell.

ment of future leaders in the golf turf industry. Given the ambitious program in Wisconsin to develop the O.J. NOER CENTER for TURFGRASS RESEARCH, the gift from Brayton and Ciba-Geigy is especially welcome. Sincere thanks are extended to both companies.