

Poa annua Seedhead Suppression

Randy Kane, PhD
"Not the Expert"

Here is the second installment of our new monthly "Ask the Expert" column. Each month, we will explore a particular topic and seek information from real experts (i.e., **you guys**) in the field of golf course management. For answers to this month's question, how do I get good suppression of *Poa* seedheads on my greens, I have consulted a university professor as well as several local superintendents. Not surprisingly, there is more than one way to skin this cat. However, before you start cutting, you may want to decide if you really want to skin the cat in the first place. You can only reduce *Poa* seedhead proliferation by chemical means, and the potential for injury to the turf is always there.

Why do we want to suppress *Poa annua* seedheads? I can think of three or four reasons right off the bat: 1) if seed set is heavy, the greens and other fine turf areas have a displeasing off-white color, and many golfers will ask what disease is on the grass; 2) greens with heavy *Poa* seed set do not putt particularly smooth or fast, and golfers will wonder if your mowers are all broken; 3) all of those seeds are adding to the "seed load" in the soil unless you cut them off and pick them up in your baskets. By suppressing *Poa* seedheads, you may be able to gain ground in the *Poa* vs bentgrass population competition; and 4) there are several studies that suggest that if *Poa* doesn't seed heavily, it will have healthier root systems and be better able to survive summers like last year.

There are several options for suppressing seedheads, but none combine safety and consistency. The growth regulator mefluidide (Embark) has shown *Poa* seedhead suppression at low rates, but timing of application is critical, and some discoloration may occur following treatment. Moderate-to-low rates of growth retardants such as Scott's TGR (paclobutrazole) and Dow Elanco's Cutless (flurprimidol) may reduce seedheads by stunting the seed stalk, but this approach is very sensitive to timing and rate problems. Aqua Gro is a wetting agent that has been shown to reduce *Poa* seedset by 40 to 70 percent in university trials, but it, too, has phyto and consistency problems.

Professor Bruce Branham
from the University of Illinois turf
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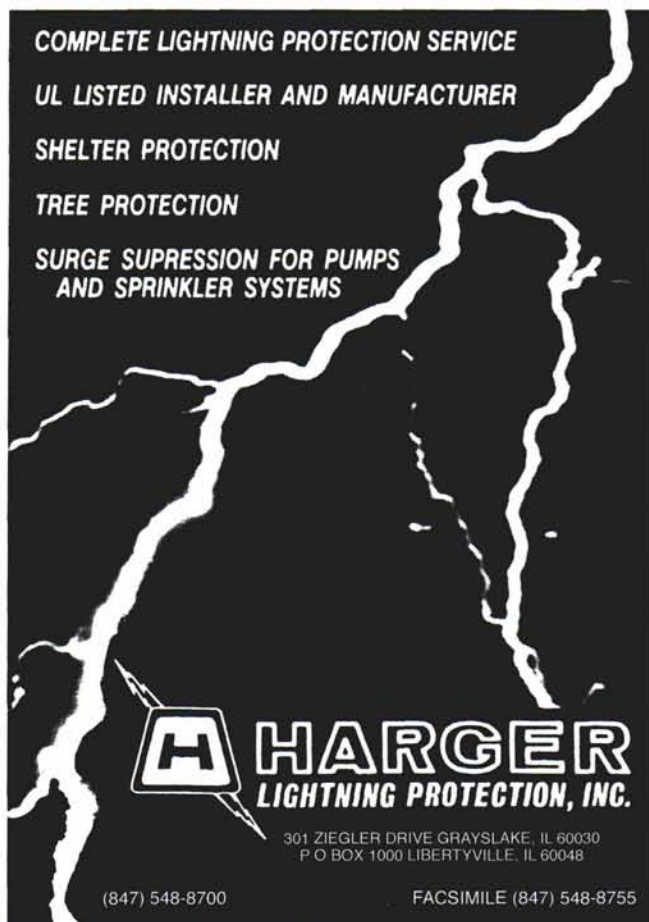
program is my university expert. While at MSU, Bruce and colleagues conducted a number of studies concerning control and suppression of *Poa annua* with herbicides and growth retardants, including those mentioned above. Results with these products are mixed at best, with a general effectiveness rating of Embark > Aqua-gro > TGR/Cutless. Bruce also added that they have found *Poa* seedhead suppression following fall applications of Prograss (ethofumesate); plants that survived the Prograss treatment had much less seedhead production than check plots. Of course, Prograss is intended to **kill** the *Poa*, so you would want to use this approach on areas that were high percent bentgrass and cut at fairway height. Prograss is not labeled for use on green height turf.

Embark is probably the best *Poa* seedhead inhibitor we have, but it is also the trickiest to use. The window for best control is pretty narrow, and application rates are light, which means the application must be done with great accuracy. Dan Quast, CGCS at Medinah CC, has used Embark the past few years on five greens that are mostly bent but have small, blotchy spots of *Poa annua*. When the small spots seed, greens become bumpy and roll unevenly. Dan applies Embark at 0.1 oz /1000 (4.3 oz per acre) with a spray hawk in mid April. The timing is based on early seed production of marker plants (and may be a little later this year!). There is a noticeable stunting of the entire green about two weeks after application, and this effect lasts another couple of weeks. About four weeks after the application, Dan applies a fertilizer to stimulate recovery as the growth retardant

effect of the Embark wears off. Dan feels he gets up to 90 percent seed reduction if all goes well, and he has seen little injury from these light Embark treatments.

John Gurke, CGCS at Aurora C.C. has received a lot of notoriety recently for his successful use of Aqua-Gro for *Poa* seedhead suppression on his greens. Once I talked to John, however, I found that he actually got (stole) the idea from Dan Anderson, CGCS at Fox Valley C.C.! So I talked to both experts. Dan has used Aqua-Gro the past three seasons with very good results. He applies 4 oz / 1000 for the first application and follows that at 10- to 14-day intervals at approximately 3 oz /1000. The product is applied in 5 gal / 1000 water and is left on the leaf surface to dry (it is not watered in). John follows a similar program but has

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Synopsis of the CDGA Green Seminar
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lines to keep you out of trouble. 3. On March 20, 1996, new rules and procedures were put into law concerning the "green card." All new hires that are not U.S. citizens must have the new "pink card." This card was developed to cut down on the forgeries of the "green card." The new card must have the following on it: photo (must show the right ear), a fingerprint and must be signed by the person. The "green card" is grandfathered if the person had it before March 20, 1996; but it is highly recommended that all of your non-citizen employees get the new "pink card." Cards can be procured at 10 West Jackson Street, Chicago. It is advised that the persons arrive early (6 a.m.) for the line could be blocks long. They will need \$90 cash or money order for the card and application.

Dr. Bruce Branham, Associate Professor of Turf Management, University of Illinois, spoke on "Nitrogen Fate Studies." The studies proved that very little nitrate is leaching from our soils. All of the hysterics accusing our industry of putting too much fertilizer on the ground and polluting the ground water, etc., are just not true. Yes, the fer-

tilizer that falls on the driveways and walks can be directly washed into the sewers and end up in our streams; but the fertilizer applied to turf stays there and is used by the plant or volatilizes into the air.

The study on rates of nitrogen to new sand greens was very interesting regarding the rates needed to establish the grow-in. Rates of .5, .75 and 1 pound were applied weekly to a green and charted. The green utilized all of the nitrogen that was applied, but in the end, the .5 pound rate was very adequate to provide the proper grow-in. This test also showed that a starter fertilizer was very important and should not be missed to save a few dollars.

Bruce Williams, CGCS, president of the GCSAA, spoke on "Value of Belonging and Participating in Professional Associations." Bruce gave a very good slide show talk on this subject. Very professional. A point he brought out was, "Associations provide the majority of adult education in America."

Dr. Randy Kane, CDGA turfgrass advisor, topic was "*Poa annua* Is, Too, a Hound Dog." Randy went on to describe some of the diseases that caused all of

the problems in summer 1995 and then touched on the winter of '95/'96 and the problems that could come about from it. From this introduction, the following gave a thumbnail outlook of what, when, and how of this past winter and maybe what to expect.

Paul Vermeulen, USGA, said "Don't panic" (easy for him to say). He stated that if you have a severely damaged green, keep the golfers off of it. Put a temporary green out in front to get the regular green back as fast as possible.

Dr. Hank Wilkinson, University of Illinois, stresses that you need to access as early as possible what you have or don't have as far as putting green turf. Your decision on what to do may depend on the budget that you have to repair any damage. But act early. If you think you may need to reseed, do so as soon as you can to gain as many days as possible for a quicker recovery.

Dr. Tom Fermanian, University of Illinois, reminded us that if we have to overseed in bluegrass and yet still need a pre-emergence herbicide that Tupersan is the only safe product to use. ■

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a higher initial application rate (a gutsy move). The timing of the first application is critical and is based on finding seed initials or early seedhead production in protected areas of the course. There is a definite discoloration of the turf "sing", but it is not very noticeable in many years because the other turf areas have not yet come fully out of winter dormancy. Besides, John says it mows off fairly quickly anyway.

The GA inhibitor growth retardants such as TGR and

Cutless have not found much favor in suppressing seedheads, probably for several reasons. First, the timing of application for best results is early in the spring, and there are potential negative side effects of applying PGRs to plants that are just coming out of dormancy. Also, these products do not stop formation of seeds; they only slow elongation of the seed stalk. Once the retardant effect wears off, seed stalks will resume growth and you still see the seedheads. In some cases, it appears that heavier seedhead production occurs once the PGR effect wears off.

As with any chemical program, do your homework and make sure you know what the risks of these approaches are to your turf. Have your rates and timing down, and make sure your application equipment is calibrated and in tip-top working condition. Also, don't forget that "the use of brand names and any mention or listing of commercial products or services does not imply endorsement by the CDGA, University of Illinois, or the MAGCS, nor discrimination against similar products or services not mentioned." ■