

CHEMICAL LOG

Battling Poa Annuua With IPM

Turf managers fighting the prolific seed producer, *Poa annua*, which plagues playing fields each winter and spring, can conquer this grassy weed with an integrated pest management approach. IPM is a philosophy of weed, insect and disease management proven in years of practice, especially on golf courses.

To meet the goal of managing pests while balancing costs, benefits, public health and environmental quality, turf managers must:

1. Gather technical information on the pest, in this case *Poa annua*.
2. Consider all control options.

The Technicalities

Poa annua, or annual bluegrass, flourishes in closely mowed areas. In the South, *Poa annua* is a cool season invader of dormant warm season grass stands and overseedings of cool season species such as ryegrass, bentgrass, and *Poa trivialis*.

Poa annua flourishes and becomes highly competitive because it's a cool season species that germinates and begins active growth in the fall, when warm season grass stands of bermudagrass are beginning to enter winter dormancy. This is also a critical time for the establishment of cool season grass overseedings, which tend to be less competitive during the germination phase. This critical life-cycle link must be understood to develop an appropriate IPM plan for *Poa* management.

Moist soil conditions, as well as cool temperatures, promote germination and growth of *Poa*. This gives the grassy weed a strong advantage over desirable warm season turfgrass from fall through spring. Seeds continue to germinate as long as temperatures are cool.

Poa begins to emerge in early fall. The specific date depends on location and weather conditions. It generally germinates when night temperatures are in the 60s and daytime temperatures are below 85 degrees F.

Seedheads are initiated in late fall and



Proper irrigation timing is integral to IPM of *Poa annua*.

winter, but seedhead development is greatest in spring and early summer. Until seedheads appear, *Poa* isn't a highly visible nuisance. After seedhead development, however, the turf takes on a yellowish-white, uneven appearance.

By late spring, on closely mowed and irrigated turf, *Poa* can dominate desirable turf stands. However, through a combination of cultural, mechanical and chemical control methods, turf managers can reduce and even control *Poa* populations.

Cultural Control

Cultural practices designed to discourage *Poa* growth and favor the growth of perennial turfgrass species include the following:

- Water deeply and infrequently. Use irrigation to meet the physiological needs of the perennial species in the turfgrass population.
- In a dormant stand of bermudagrass, fertilize the established overseeding to maintain a highly competitive and dense turf.
- Practice good soil management to improve internal drainage and soil aeration.
- Avoid disturbance of the turfgrass during primary *Poa* germination periods.

Mechanical Control

The use of lightweight equipment results in a significant reduction in compacted soil. Reducing compaction speeds

the up drying of soils and reduces the competitive advantage of *Poa* over desirable turfgrasses.

Populations of *Poa* are also greatly reduced by increased mowing heights. Problems with this weed aren't as persistent on golf course roughs, lawns, parks, and other areas maintained at greater mowing heights with less irrigation.

Chemical Control

Cultural and mechanical practices alone usually won't control *Poa*. It's important to remember that the soil in most irrigated turf situations has immense quantities of *Poa* seed just waiting for an opportunity to germinate. For best control, use pre-emergent herbicides that have proven effective in preventing new crops of seed from germinating.

A single fall application of Team™, Surflan™, or XL™ herbicide prior to seed germination offers effective, season-long *Poa* control. In the south, Rubigan™ fungicide used at high rates can also be used effectively to prevent or reduce *Poa* in overseeded bermudagrass greens, tees, and other perennial turfgrass areas.

The bottom line is: When it comes to fighting *Poa annua*, an IPM program that incorporates cultural and mechanical practices, along with the right chemistry, is the best approach. □

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