

# CHEMICAL LOG

## Turf Weeds: Preventative Control Crucial

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Controlling hard-to-handle weeds is a common problem among turf management professionals. Fortunately, there are a number of options available that can provide effective pre-emergent control. One of these control methods involves applying certain types of herbicides during late fall or winter that will not undergo rapid degradation in cold soils. The result is that an effective "weed barrier" is firmly in place whenever weed seeds germinate during spring.

This type of preventative weed control is far superior to curative control because it is more cost-effective, less stressful for desirable turf and not as timing-dependent. For example, post-emergent herbicide applications made during dry conditions are generally less effective because weeds are not actively growing. In addition, the cuticle may be thicker and less likely to absorb the control material. Before applying any material to control weeds, however, it is important to identify and understand the specific characteristics of the weeds you are targeting.

### Healthy Turf Is the Best Defense

Like insect pests and fungal pathogens, weeds are most likely to infest areas where turfgrass is weakened or stressed. In fact, the ability of healthy turf to out-compete weeds is so well-established that many researchers now refer to healthy turf as one of the best "herbicides" available.

The most important ways to promote healthy turf include keeping mowing heights as high as practical and providing adequate moisture, nutrients, light and air circulation. In addition, deep, infrequent irrigation, spring aeration, and other management practices that facilitate root growth should be conscientiously employed. Maintaining healthy root systems is absolutely crucial to turfgrass health because the health and vigor of any turfgrass canopy is directly related to the quality of the root system supporting it.

### Goosegrass

Goosegrass is often referred to as the single most "important" weed in the United States. This is largely due to its wide geographic distribution and the fact that it can thrive in a variety of environments, including closely mowed turf.

This grassy weed, which reproduces by seed, is classified as a "bunchgrass." It has smooth, flat stems and narrow leaves with parallel veins. Seeds produced by the short, stiff seed heads germinate when soil temperatures are between 65 and 85 degrees Fahrenheit and often out-compete other grasses in locations that are prone to drought stress and soil compaction. Areas with high amounts of foot traffic and especially vulnerable to compaction.

### Crabgrass

Although perhaps not quite as difficult to control, crabgrass is an even more widespread pest than goosegrass. Crabgrass is an annual weed that reproduces by seed when temperatures rise above 55 degrees F; however, germination declines for both the "hairy" and "smooth" varieties of this pest.

Both hairy and smooth crabgrass have the common characteristic of smooth, stout stems. Their leaves have a light "apple-green" color. Crabgrass seeds are tiny, thin, oval and light-colored.

### Annual Bluegrass (*Poa annua*)

Another very common weed encountered by warm-season turf management professionals is annual bluegrass. Although it is sometimes a desirable species, this grass can become a weed when it invades other types of more desirable turf. Because this seed-producing weed is a lighter colored grass than more desirable species, it can become very visible and unsightly.

Annual bluegrass is characterized by its slender, flattened stems and slightly tapering, smooth leaves with parallel veins. Like goosegrass, this pest is able to produce weed even on closely mowed turf. In some regions of the country, it germinates in the spring as well as the fall, making two herbicide applications necessary. While a winter application will con-

trol spring-germinating weeds, a second application will probably be needed for weeds germinating during late summer.

Avoid any management practices that make it easier for annual bluegrass to become established. These include the use of excessive amounts of phosphorous and high levels of irrigation.

### Chemical Control Options

Even with the best management practices, weeds often still emerge in areas that have had weed problems in the past. This is largely because the earlier generations of weeds in these areas left a reservoir of viable seeds in the soil, which can lie dormant for extended amounts of time before emerging when conditions are right.

Pre-emergent herbicides should be selected based on their ability to effectively control the targeted weeds and yet not injure vital turfgrass root systems. Such products include Ronstar® brand oxadiazon herbicide. Because it is shoot-absorbed, the product does not prune roots, even on newly overseeded or severely stressed turf. In addition, it can be applied several weeks in advance of weed seed germination with breaking down or losing efficacy. Because fall or winter applications of pre-emergent herbicides are not rapidly degraded during the winter, they will still be in place and ready to provide an effective herbicide barrier when weeds germinate in the spring.

### Diligence Is Key

Because weed seeds can lie dormant for years and can be blown into "clean" areas from nearby infested turf, the potential for infestation is always present. By applying effective pre-emergent herbicides during late fall or winter, and by taking every step possible to ensure your turf is healthy and established before weeds germinate, you will be well-armed to control weed outbreaks. □

*Editor's note: Tom Vrabel, Ph.D., technical development manager, and Laurence Mudge, field development specialist, are with Rhone-Poulenc Ag Company. Ronstar® is a registered trademark of Rhone-Poulenc.*