

Rutgers Corner - Crabgrass control strategies for sports fields

Brad Park, Rutgers University

Editor's Note: This article was adapted from Rutgers Cooperative Research and Extension Fact Sheet E233 "Crabgrass and goosegrass control in cool season turfgrass" authored by Dr. Stephen Hart, Extension Specialist in Weed Science, Rutgers University

With spring soon to arrive, it is an important time to begin thinking about options for controlling crabgrass. If a significant soil seed bank exists and there are voids in the turfgrass stand which minimize competitive benefits of the turf, as a summer annual, crabgrass will germinate profusely in the spring, mature throughout the summer months, and die in early fall at the first killing frost leaving dead "skeletons" throughout the landscape. Crabgrass seed will typically begin germinating after April 10 in South Jersey and by April 20 in Central and North Jersey. Crabgrass will continue to germinate through mid-July.

Integrated Pest Management (IPM)

Recall that IPM attempts to reduce the risk that pest control strategies may have on the environment and people by incorporating all suitable techniques to maintain pests within acceptable limits. Although it is a common misconception, IPM *does not* entail the elimination of pesticide use.

Simply mowing at a cutting height suitable for the specific turfgrass species or mowing at a frequency such that scalping is avoided can constitute IPM. Improper mowing techniques leading to scalped turf will thin-out turfgrass areas, lead to voids in the stand, and subsequently provide opportunities for crabgrass to encroach. IPM also entails proper fertilization. Under-fertilizing turfgrass will often result in a weak stand, poor turf density, and an environment in which crabgrass can readily invade. Yearly nitrogen requirements per 1000 ft² for cool season turfgrasses used on New Jersey sports fields are: Kentucky bluegrass, 2-5 lbs; perennial ryegrass, 3-5 lbs; tall fescue, 2-4 lbs. High-use sports fields often necessitate the high-end of these nitrogen fertilization guidelines in order to encourage turfgrass recovery from traffic.

Preemergence herbicides: Are they an option?

For sports field managers whose cultural program includes spring overseeding of his or her fields, applying most preemergence herbicide products at the time of seeding will not only deter crabgrass emergence, it will also inhibit establishment of cool season turf. Products such as pendimethalin (Pendulum or Pre-M), benefin + trifluralin (Team), prodiamine (Barricade), oxadiazon (Ronstar), and dithiopyr (Dimension) are not viable options for preemergence crabgrass control if overseeding is a part of the manager's spring program. Depending on the product and the application rate, the residual of these products is such that the seeding of desired cool season turfgrasses may not begin for 2 to 6 months following

the application of the herbicide. Additionally, these products may not be used in newly seeded turf as young turfgrass seedlings are highly susceptible to the phytotoxic effects of these herbicides.

Siduron

Siduron (Tupersan) is a herbicide that is labeled for preemergence crabgrass control in newly seeded Kentucky bluegrass, tall fescue, and perennial ryegrass. Tupersan is formulated as a wettable powder and should be applied in the spring to coincide with maximum crabgrass germination. The label calls for either a single application of product at 4.0-12.0 lbs/Acre or sequential applications at 6.0-12.0 lbs/Acre followed by a 4.0-6.0 lbs/Acre application 4 weeks later.

Postemergence herbicides

In order to use the chemical tools available to selectively treat crabgrass postemergence, the sports field manager must be able to accurately identify crabgrass at various seedling stages. Large crabgrass seedlings are characterized by upright growth and leaves that are rolled in the bud, lack auricles, and have a jagged membranous ligule. Large crabgrass leaf blades and sheaths are covered with stiff hairs. Smooth crabgrass is similar to large crabgrass, however it has fewer hairs on its leaf blades and sheaths.

Quinclorac and fenoxaprop

Quinclorac (Drive) and fenoxaprop (Acclaim Extra) are labeled for the selective postemergence control of crabgrass in perennial ryegrass, Kentucky bluegrass, and tall fescue. Quinclorac is effective in controlling young, un-tillered crabgrass seedlings and may be applied up to 0.75 lbs/Acre (1.0 lb Drive/Acre). To increase the efficacy of weed control, the label recommends applying quinclorac with an oil-based adjuvant such as crop oil concentrate or methylated seed oil.

Quinclorac may be applied up to 7 days prior to the seeding of tall fescue, Kentucky bluegrass, and perennial ryegrass, at the time of seeding for perennial ryegrass and tall fescue, 7 and 14 days after the emergence of tall fescue, and 1 month after the emergence of Kentucky bluegrass, perennial ryegrass and tall fescue. The label notes that adjuvants should not be added to quinclorac applications to newly seeded turf prior to 28 days after seedling emergence.

(continued on page 16)

Rutgers Corner -

(continued from page 12)

Fenoxaprop may be applied at rates ranging from 0.016-0.17 lbs/A (3.5-39.0 fl. oz Acclaim/A) depending on the stage of crabgrass growth and established turfgrass species. For example, 4-5 tiller crabgrass may be treated with fenoxaprop at 0.17 lbs/A (39.0 fl oz Acclaim Extra/Acre) in perennial ryegrass and tall fescue whereas no more than 0.12 lbs of fenoxaprop (28.0 fl oz Acclaim Extra/Acre) may be applied to 3-4 tiller crabgrass in Kentucky bluegrass turf.

Following applications of fenoxaprop, tall fescue and perennial ryegrass may be seeded immediately. Following germination of tall fescue and perennial ryegrass, fenoxaprop should not be applied until seedlings have matured for 1 month. Of the cool season turfgrasses used on sports fields in New Jersey, Kentucky bluegrass is the most susceptible to phytotoxic effects associated with fenoxaprop. For example, when utilizing fenoxaprop rates greater than 0.04 lbs/A (9.0 fl oz Acclaim Extra/A), Kentucky bluegrass seedlings must be at least 3 growing months old before fenoxaprop can be applied. Additionally, 21 waiting days should be

allowed following the application of fenoxaprop prior to seeding Kentucky bluegrass

Due to the complexity of Drive and Acclaim Extra labeling with respect to crabgrass growth stage susceptibility, individual turfgrass species herbicide tolerances, and turfgrass seeding timings, pesticide labels **must** be thoroughly read and understood prior to the application of these materials.

*Brad Park is Sports Turf Res.
and Ed. Coor., Rutgers Univ.;
SFMANJ Board Member; and Editor,
SFMANJ Update*

SFMANJ Field of the Year Contest 2007

Sports Field Managers Association of New Jersey is announcing its annual Field of the Year (FOY) contest.

ELIGIBILITY:

- Must be a current member of SFMANJ
- Only school and parks/recreation fields are eligible
- Must be a natural grass field/fields

CRITERIA:

Award will be presented basis:

- Playability and appearance of the playing surfaces
- Five 5x7 photos & one before photo if possible
- Describe your maintenance program and what you did to improve your field
- Describe yearly budget used for this field
- Feel free to have sports groups in your photo



Edward Grekoski Park - Field of the Year 2006
South River, NJ

SUBMITTING YOUR ENTRY:

Entries are to be submitted by mail and must be received by September 30, 2007. Entries are limited to 10 color photos. Please include the name, location and owner of the facility, along with your name, position, and contact number.

Mail to:
SFMANJ 2007 FOY Contest
PO Box 370
Annandale, NJ 08801

AWARDS:

Winners will be honored with a plaque at New Jersey Turfgrass and Landscape Conference & Expo in December 2007 and will be featured in an article in SFMANJ Update newsletter. The winner will also receive a two-night stay at the Trump Taj Mahal, Atlantic City and three days of education and trade show admission at Expo 2007.

NOTE:

Photos will not be returned and may be used on SFMANJ website and promotional settings.