Weed Control in Sport Turfgrasses

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Since sports fields are subjected to tremendous wear and damage within a relatively short period, turfgrass cover is decreased and weeds can become a major problem. Herbicides are often needed during the playing season and in the off-season to control these weeds. Successfully controlling weeds depends upon correctly identifying the problem weed species and applying the appropriate herbicide at the correct time of the year.

Bermudagrass

Bermudagrass usually becomes dormant before football and soccer game schedules are completed. The cool temperatures of fall produce poor growing conditions and the turf has little opportunity to recover from use, especially in the center of the field and around the benches. The dormant or semi-dormant turf provides minimal competition to winter weeds and subsequent summer annual weeds.

A dense infestation of winter weeds can severely inhibit the early spring growth of bermudagrass. The turf will weaken and summer annuals, such as crabgrass and goosegrass, will readily invade the open areas that remain when the winter weeds die.

The most commonly used herbicides to control winter annuals in bermudagrass that is not fall-overseeded with a cool-season turfgrass are atrazine (Aatrex), simazine (Princep, Wynstar), and metribuzin (Sencor Turf). These herbicides will provide good to excellent control of annual bluegrass, common chickweed, lawn burweed, and other winter annuals. All three herbicides have preemergence and postemergence activity on winter annuals; however, metribuzin has the shortest period of preemergence activity.

Preemergence or postemergence activity enables these herbicides to be applied over a wide time period, from November through February. It is generally recommended to apply atrazine, simazine, or metribuzin after the last game. Atrazine or simazine at the recommended rate (1.0 lb. a.i./acre) applied in November and again in early February consistently provides excellent weed control. For maximum turf safety, use atrazine only on dormant bermudagrass.

Pronamide (Kerb) which also has preemergence and postemergence activity on annual bluegrass, corn speedwell and common chickweed may also be used over a similar time period on non-overseeded bermudagrass fields.
Two-way and three-way mixed herbicides contain mixtures of 2,4-D, MCPP, dicamba or 2,4-DP and may be used for winter broadleaf control in non-overseeded and overseeded bermudagrass fields. In addition to controlling winter annual broadleaf weeds, these herbicides control perennials such as plantains and wild garlic. Apply these herbicides on warm, sunny days. Two applications, at intervals of 14 to 21 days, may be required to control certain weeds. Wild garlic can also be effectively controlled in non-overseeded bermudagrass with imazaquin (Image).

Weedy grasses constitute the greatest weed problem during the summer in bermudagrass. Annuals, such as crabgrass spp. and goosegrass, and perennials, such as dallisgrass and bahiagrass, are the most common grassy weeds. Preemergence herbicides provide good control of annual grasses. However, they will not control established perennial grasses. Preemergence herbicides are recommended for use on established turfgrasses that have good density and cover.

If the field has been severely damaged from the fall or winter sports program, use only a herbicide that contains oxadiazon (Ronstar, others). Unlike other preemergence herbicides, oxadiazon does not inhibit root development from the stolon nodes of bermudagrass. Ronstar formulations may also be used at the time of sprigging bermudagrass. If seeding of common bermudagrass is planned for the field, do not apply any preemergence herbicide. Residues from a spring application can prevent the establishment of common bermudagrass from seed.

In athletic fields with large, thin, weak turfgrass areas, or on sites where renovation operations are scheduled, postemergence herbicides can control emerged weeds. MSMA or DSMA can be used to control annual and perennial grasses. Two to three applications of MSMA or DSMA are usually needed to control emerged grasses. The second application should be made 5 to 10 days after the first application. If perennial grasses show signs of recovery 3 to 4 days after the second application, apply a third treatment 5 to 7 days after the second application. On newly sprigged bermudagrass, delay applications until the sprigs are well rooted and actively growing. MSMA and DSMA will moderately discolor (yellow) bermudagrass. However, the discoloration is temporary and normal color will return one to three weeks after the last application.

Goosegrass is less susceptible than crabgrass spp. to MSMA or DSMA. A mixture of metribuzin (Sencor at 0.125 lbs. a.i./acre) + MSMA (2.0 lbs. a.i./acre) will provide good control of goosegrass. Two applications, 7 to 10 days apart are required to control established, mature goosegrass. Metribuzin can interfere with root development from the stolon nodes of bermudagrass. Do not use MSMA + metribuzin on newly sprigged bermudagrass until complete soil coverage has been achieved.

If nutsedge becomes a problem during the summer months, use either imazaquin (Image), halosulfuron (Manage), bentazon (Basagran T/O) or MSMA. The choice of which herbicide to use often depends on the species of nutsedge. For example, bentazon will control yellow nutsedge and annual sedges, but will not control purple nutsedge. Imazaquin applied alone, or in combination with MSMA, will provide
approximately 6 to 8 weeks control of purple and yellow nutsedge, and other sedge species. Similar to imazaquin, halosulfuron has activity on both yellow and purple nutsedge; however, this herbicide is less injurious to bermudagrass than imazaquin. For season-long control of nutsedge, halosulfuron should be applied in two applications, each 6 to 10 weeks apart. Monthly applications of MSMA also can be used to suppress the growth of many sedges.

Two-way or three-way herbicides (2,4-D, MCPP, dicamba, or 2,4-DP) may be used for summer broadleaf weed control. Turfgrass tolerance and weed control will be better when applications are made in the late spring or early summer months when temperatures are less than 90°F.

GENERAL GUIDELINES FOR HERBICIDE USE ON ATHLETIC FIELDS

1. Use a spray volume of 20 to 40 gpa.

2. Avoid the use of postemergence herbicides at air temperatures greater than 90°F. Herbicide injury usually increases at high air temperatures.

3. Avoid the use of postemergence herbicides, simazine and atrazine during the spring green-up of bermudagrass. Herbicide use at this time can temporarily injure bermudagrass (about one month) and retard spring green-up. Use herbicides at this time only if there is a severe weed infestation.

4. The re-entry restriction, or time interval, for all herbicides that are used on athletic fields is listed on the specific herbicide label. Additionally, some states may have posting requirements that restrict entry for a certain time period after application.

5. Water-in all preemergence herbicides with one-half inch of irrigation water. This removes spray residues or granular materials from the foliage and prevents player contact with the herbicide.

6. Schedule herbicide applications during periods of time that players are not using the field.

7. **READ THE LABEL OF ALL HERBICIDES THAT WILL BE USED ON THE FIELD.**