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Extension FactSheet

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Annual Bluegrass and Rough Bluegrass Control

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Numerous questions come from golf course superintendents, sports turf managers, and professional lawn care services regarding the presence of yellow patches of grass in turfgrass stands (Figure 1). Yellow or light-green patches can occur due to the presence of a number of weedy grasses including rough bluegrass (*Poa trivialis*), annual bluegrass (*Poa annua*), and older varieties of tall fescue and perennial ryegrass, timothy, or orchardgrass.

Figure 1: Patches of light-colored grass

Examination of samples of these yellowish patches typically reveals either rough bluegrass or annual bluegrass. Annual bluegrass is especially noticeable in May and June in the Midwest because of its prolific seedhead production (Figure 2). Rough bluegrass is most noticeable in late summer and early fall when it goes brown and dormant under heat stress.

Figure 2: Annual bluegrass seedheads

Annual Bluegrass

Annual bluegrass is one of the five most widely distributed plants in the world. Annual bluegrass is more prolific and competitive under an ecological regime of close mowing, light frequent irrigation, high fertility, and moist soils. It is a winter annual that germinates in late summer/early fall, once soil temperatures have

dropped below 70 degrees F. Seedlings mature in the fall, overwinter in the vegetative state, and produce seed in late spring and early summer. Some germination of annual bluegrass seed also occurs in the spring. The seed may lie dormant in the soil for many years before germinating, resulting in a significant build-up of indigenous seed overtime. It tends to be more prolific during wet seasons. Annual bluegrass often dies in the heat of the summer due to heat and drought stress, disease, and/or insect damage.

There are currently several products labeled for annual bluegrass control; however, there are limitations on the number of annual applications that can be made. Chemical control of annual bluegrass consists of either a rigorous preemergence program and/or a postemergence herbicide called ethofumesate (Prograss®). Prograss is most efficacious when applied in the fall using multiple applications. See label for specific recommendations. Velocity (bispyribac sodium) is a postemergence herbicide recommended for the selective removal of annual bluegrass in creeping bentgrass. This herbicide has been recently labeled by Valant Chemical Company. Of course, annual bluegrass patches can be spot treated with the non-selective herbicides glyophosate (Roundup) or glufosinate-ammonium (Finale) and then re-seeded.

Rough Bluegrass

Rough bluegrass has become a frequent weedy grass problem in desirable turfgrass stands. It is characterized by a mid/light-green leaf coloration that browns out quickly above 80 degrees F. It has extensive stoloniferous lateral stems that result in typical patches of 6 to 18 inches in diameter. This results in distinct, dense, patchy growth in monostands where other grasses tend to be absent. Bentgrass forms similar dense patches but its coloration is typically gray to blue-green in color (Table 1). Rough bluegrass can easily be confused with annual bluegrass. Many biotypes of annual bluegrass are perennial, possessing weak to very strong stolons. Rough bluegrass also favors an ecological niche similar to annual bluegrass that is light, frequent irrigation, moist/wet soils, low mowing heights, and/or high fertility. Wet seasons also tend to favor the incidence of rough bluegrass. Rough bluegrass also favors shady conditions and has been used alone or in mixtures as a desirable turfgrass species for wet, shaded areas in cool climates. Rough

Table 1: Morphology characteristics of three common weedy (patchy) grasses; annual bluegrass (Poa annua), rough bluegrass (Poa trivialis), and creeping bentgrass.

I.D. Characteristic	***Poa trivialis***	***Poa annua***	***Creeping bentgrass***
Leaf Tip Shape	Boat-shaped	Boat-shaped	Pointed
Vernation (leaf in bud)	Folded	Folded	Rolled
Leaf Surface	Smooth	Smooth	Veined
Ligule	Medium-long, pointed	Medium-long, pointed	Tall, rounded
Coloration	Light green, very shiny	Light green	Gray to blue-green
Stolons	Yes, thin and moderately vigorous	Bunch to vigorous	Yes, strongly vigorous
Auricle	Absent	Absent	Absent
Growth Habit	Patch	Bunch to patch	Patch

bluegrass lacks heat and drought tolerance and tends to discolor, thin out, and die during typical Midwest summers. Rough bluegrass is a perennial grass that spreads by stolons (Figure 3).

Figure 3: Rough bluegrass with stolon

Non-selective control with glyphosate (Roundup) followed by reseeding has been the only option for control. An herbicide called sulfosulfuron (Certainty®) is currently being labeled by Monsanto for selective control of rough bluegrass in creeping bentgrass. Refer to the Certainty® label for current recommendations.

Where does rough bluegrass come from?

There is a possibility that the source of rough bluegrass patches are due to rough bluegrass seeds or stolons lying dormant in the soil for many years, germinating or emerging under favorable conditions, like wet seasons, and/or contamination in turf seed.

Accordingly, it is advisable when purchasing seed for quality turf areas to include in the specifications a statement that the seed lot or mixture shall be free of rough bluegrass.

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