

ATHLETIC FIELD ANNUAL BLUEGRASS CONTROL STRATEGY

Dave Minner, Horticulture Department
Iowa State University

Annual Bluegrass (*Poa annua*) is very difficult to control when athletic field conditions are shifted in favor of the annual bluegrass. Intense traffic, loss of turf cover, close mowing, and frequent watering to establish grass are some of the main reasons that sections of athletic fields are dominated by annual bluegrass. Drought, tall mowing and rapid turf cover are important tools to keep annual bluegrass at manageable levels. Prograss (ethofumesate) is the only herbicide that lends itself to control of annual bluegrass. It is most effective when combined with a program of intense perennial ryegrass overseeding. *Poa annua* usually starts as a few patches on the field and because of its prolific ability to produce seed it quickly germinates in any area where the turf is thin. It germinates predominantly in September and October or anytime when the soil temperatures are below 60°F. Fall germinating annual bluegrass plants survive the winter and produce seed primarily in the spring, but annual bluegrass plants can often be seen flowering any time from April through October. Seed produced in the spring can fall to the ground and begin to germinate as soon as water, temperature, and light are available. The following annual bluegrass control strategies are presented, however, the reality is that once annual bluegrass starts to populate a field it will eventually become the dominant species in the intensely trafficked areas.

CULTURAL STRATEGIES

Strategy 1: Correct any drainage problems and increase mowing height. Fertilize with nitrogen during the warmer months and allow field to go into moisture stress. Avoid over watering. Kentucky bluegrass and perennial ryegrass are more drought tolerant than annual bluegrass. Letting the field go to the point of permanent wilting can kill the annual bluegrass and allow the Kentucky bluegrass and perennial ryegrass to recover. Whenever annual bluegrass naturally dies it is a good time to immediately seed with Kentucky bluegrass or perennial ryegrass in an attempt to make the desirable grass more competitive against future invasion of annual bluegrass. Large areas of annual bluegrass can naturally die during periods of high temperature in late summer or during the winter under heavy snow cover.

Strategy 2: Renovate often by overseeding with perennial ryegrass in the intense traffic areas. Use Prograss primarily as a post-emergence control material with some pre-emergence activity.

Strategy 3: Avoid turf cultivation when soil temperatures have cooled enough for annual bluegrass to germinate. This is difficult for sport field managers because spring and fall are prime times for aerification. If possible shift aerification into the summer months when it is too hot for annual bluegrass to germinate. Light and frequent topdressing can also be done in the summer. Heavy topdressing should remain in the spring or fall.

Strategy 4: Collect clippings in late spring during the peak period of annual bluegrass seed production.

Plant Growth regulators have been used in golf course bentgrass situations to selectively slow the growth of the annual bluegrass to allow the bentgrass to competitively creep and overtake the annual bluegrass. While this is somewhat effective with low mowing heights (less than 0.5 inches) it is unlikely to work with taller mowing heights (1 to 2.5 inches) and Kentucky bluegrass/perennial ryegrass mixtures.

HERBICIDE CONTROL with Prograss + perennial ryegrass seeding

Month	Prograss*	Poa annua germination Less More	Perennial rye	Perennial ryegrass with Barricade**
Jan				
Feb				
Mar	Prograss	xx		Barricade
Apr		xxxx	Seed	
May		xxx	Seed	
Jun		x	Seed	
Jul			Seed	
Aug		x	Seed	Seed
Sep	Prograss	xxx	Seed	Seed
Oct	Prograss	xxxx		
Nov	Prograss	x		
Dec				

* Primarily targeted for post emergence control of Poa annua with some pre-emergence activity.

** Barricade for pre-emergence control of Poa annua.