In the April 2009 issue of SportsTurf, I wrote an article “Poa annua: double whammy in Detroit” about controlling annual bluegrass with post-emergence application of Tenacity (mesotrione). At that time we were only recommending fall control by using three sequential applications of Tenacity in October (5.3 oz/A every 10 days, for a total seasonal application rate of 16 oz/A). I also stated that “post emergence control of annual bluegrass does not work in the spring and summer because the annual bluegrass seems to outgrow the herbicide affect.”

New research by Dr. Bruce Branhman at the University of Illinois has shown that Tenacity can in fact control annual bluegrass post-emergent any time in the spring and summer when annual bluegrass is actively growing by making more frequent applications at a lower dose. Here are some of the key components to effective annual bluegrass control with Tenacity.

- Multiple applications are necessary. For best results Dr. Branhman suggests 10 applications of Tenacity made every other day at 1.6 oz/A. It may be simpler and just as effective to make applications every Monday, Wednesday, and Friday for 3 weeks to get the full rate of 16 oz/A applied. The product is less effective under cloudy low light conditions so with 10 applications your chances are better to get some sunny days for good control.
- In an attempt to reduce the number of applications several of you have been trying and having good success with 5 applications (3.2 oz/A every 3 days) during the summer. John Netwal, North Scott Schools in Eldridge, IA started this program in mid-June just after hosting a regional STMA field day where he demonstrated his research findings with Tenacity on a 5-year old soccer and 1-year old football fields. A month later, 95% of the annual bluegrass was killed on the soccer field but only 50% of the annual bluegrass was killed on the football field. Both are sand-based fields and were treated the same.
  - We had lots of rain in June and 2 of the 5 Tenacity applications on the football field got washed off the leaves before drying. Even though Tenacity is foliar and root absorbed, you should anticipate that most of the post-emergence activity on annual bluegrass will come from foliar absorption; try to get it dry on the leaf.
  - Where patches of annual bluegrass are no bigger than your hand the existing Kentucky bluegrass may fill in without seeding. Larger areas of annual bluegrass should be slice or punch seeded with Kentucky bluegrass just before the first application of Tenacity. After 2 weeks and the last Tenacity application, Kentucky bluegrass will just be starting to germinate.
- Tenacity also kills crabgrass post emergence and gives about a month of pre-emergence control that helps the Kentucky bluegrass get established without being overrun by summer crabgrass.
- Tenacity fits nicely into a sports turf management program where fields are frequently overseeded to repair worn turf.
- Tenacity can weaken perennial ryegrass and we are in the process of determining how this may impact a mixed stand of Kentucky bluegrass/perennial ryegrass. I have not experienced extensive kill of perennial ryegrass, but you may want to consider interseeding with Kentucky bluegrass if perennial ryegrass makes up more than 25% of the existing turf.

John Netwal, North Scott Schools conducts his own onsite research trial to control annual bluegrass on a Kentucky bluegrass soccer field maintained at a 1-inch cutting height. Notice the white appearance of the annual bluegrass approximately 10 days after the first application of Tenacity. Plywood can be used to make a no-herbicide control plot for comparison.