PROSCAPE

By Michael Hurdzan, Ph.D., golf course designer and consultant

Q: *We have had little success removing Poa annua from our bent greens. Is there any new chemical I can use this fall to eliminate or at least slow down the annual bluegrass?*

A: Although researchers at many universities and chemical companies are working on this problem, there have been no recent major advances in selectively controlling *Poa annua* in bentgrass. The physiology of the annual bluegrass is so close to that of desired turfgrasses it is difficult to develop a selective control mechanism.

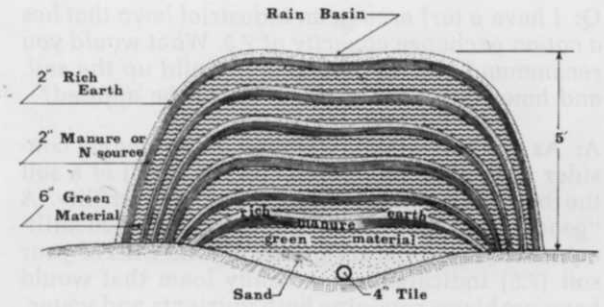
Annual bluegrass germinates during cool, moist times of the year (spring and predominately fall). It produces seedheads in late spring and early summer. Preemergence materials must be applied in both spring and fall during active germination. Post-emergence materials are applied after germination when the plant is most susceptible to the specific chemical. Although some superintendents have had remarkable success with post-emergence materials on bentgrasses, pre-emergence materials appear safer to use on bentgrass.

Bensulide (Betasan®) is a preemergent herbicide manufactured by Stauffer Chemical Co., which kills germinating *Poa annua* seeds. To be effective, the chemical must be in the root zone during germination. Disruptions of the root zone after application reduce the effectiveness of bensulide. Maintenance procedures such as thatching, vertical mowing, aerification or heavy topdressing should be done two to three weeks prior to application. In addition, overseeded or sodded turf should not be treated for a period of at least three mowings after installation or seeding.

The residual period of bensulide is about 4-6 months on sand-base greens and 8-12 months on soil depending upon soil type, soil texture, pH, and rainfall or irrigation frequency. This means that no reseeding should be done within four months of application. However, bensulide can be deactivated by applying seven pounds of activated charcoal per 1000 sq. ft. and washed into the soil by irrigation. Then reseeding can be done after only seven days.

Although our arsenal against *Poa annua* in bentgrass is limited, bensulide has a good safety factor, can be quickly deactivated with charcoal, and is readily available. It must be integrated into the overall maintenance and renovation program, but when properly done over a three year period, it has given good results.

Right now is the time to apply the fall application of any pre-emergence material. If you are uncertain of its performance, at least establish a test area for yourself on half of a green, tee, or well maintained nursery area. This field observation is valuable not only to yourself and other superintendents but to the chemical companies as well.



Q: *Can you recommend a good method of compost pile construction?*

A; The standard compost pile is made by first laying down a 5-6" layer of green material, a 2" layer of manure, (blood or bone meal, sewage sludge, or other high protein material), a 2" layer of rich earth, ground limestone and rock phosphate. This process of layering is continued until the pile is about five feet high and five feet wide. The length of the pile is optional. This gives the best aeration to the compost pile.

After this material has been piled up and the surface lightly tamped to prevent blowing, form a shallow basin on top of the pile to catch rain water. Lastly cover the pile with a thin layer of topsoil. All that remains is to thoroughly wet the pile and let it decay, turning the pile every 4-5 weeks.

From this basic method many variations have been developed such as pits, using fencing to hold the compost pile, or bricks, and using different materials. As long as the pile is turned every 3-4 weeks as the temperature inside the pile reaches 150° F.

Compost piles provide a perfect way to get rid of leaves and grass clippings and return a profit from the sale of the compost. To make a leaf compost requires a good size pile of leaves that have been shredded by either being put thru a shredder or mulched with a rotary mower with a mulching attachment. Since leaves are low in N they must be supplemented with a fertilizer for optimum composting. A good formula is a 1:1:1:.2

100# of leaves
100# of grass clippings or old hay
100# of manure (2-3# N)
20# of ground rock minerals (P,K, Ca)

Mix all these shredded materials together and wet the pile thoroughly. By the second day the pile should start to heat any by the third day it should be turned. Then turn the pile for the next 12-15 days on a three day cycle until the pile starts to cool. Place the material thru a shredder and it is ready to use.