Annual Bluegrass is a grassy weed found throughout many parts of the world. Here in New York, the struggle to eliminate this weed generally occurs on homeowner lawns and on golf course bentgrass greens and tees.

As the name suggests, it is not a perennial grass like many of our desirable lawn types such as Kentucky bluegrass or ryegrass, but rather a winter annual that germinates in August and September from the seed it has produced in the earlier months of the growing season. Annual Bluegrass is a prolific seeder and can produce up to 3000 seeds per square foot. Additionally, it is susceptible to a number of turf pests including turf pathogens like anthracnose.

Taking steps to maintain a healthy, dense turf such as employing proper irrigation, overseeding with appropriate grass varieties, maintaining grass at appropriate heights, and proper fertilization is key to precluding the establishment of unwanted weeds like annual bluegrass over the long term.

**Cultural Management**

If undesirable weeds like annual bluegrass are present on an isolated site, the infested area of turf may be removed with a sod cutter and reseeded. Removal of the upper 2 inches of soil may also assist in removal of significant amounts of weed seed. It is also important to keep in mind that germination rates of annual bluegrass may be reduced if lawn disturbance is avoided in August or September when annual bluegrass is germinating. Core aeration and other practices that disturb the soil should be delayed until October.

Because annual bluegrass thrives on moist, well-fertilized sites, minimizing lawn irrigation in the summer months and significantly reducing fertilization (in some cases by 30–40%) can also be an important part of a holistic annual bluegrass management plan.

**Chemical Management**

For settings where turfgrass is being managed commercially, such as golf course bentgrass greens, monthly applications of Paclobutrazol (Trimmitt, Turf Enhancer, TGR) may be applied at a rate of 8 oz. per acre. Applications should not begin until 100% green up and should occur no later than October 1st. Special care should be taken on low cut greens and low vigor turf. On sandy soils, product applications should occur at the low rate.

Ethofumesate (Prograss) may be applied in late August or early September with a follow-up treatment 30 to 60 days later to control annual bluegrass seedlings on ryegrass lawns and reduce annual bluegrass populations the following season. Product application should not take place before ryegrass seedlings are 1 inch in height. Do not exceed 40 lb. AI/A per year. Applications may need to take place over a period of three growing seasons to reduce annual bluegrass populations below 5%.

Pendimethalin (Pre-M) may be applied late August through mid-September with a follow-up treatment 30 days later to offer post and preemergent control of annual bluegrass on Kentucky bluegrass lawns and reduce annual bluegrass populations the following season. Applications may need to take place over a period of three growing seasons to reduce annual bluegrass populations below 5%.

An important note: using the above products and many other preemergence herbicides will significantly limit the ability to overseed in the fall and the following spring.

Andrew Sengstack
Extension Weed Specialist, Suffolk County

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**Guidelines for Eliminating Annual Bluegrass**

**Wastewater Use for Turfgrass Irrigation**

The availability of fresh water for irrigation in many parts of the United States is becoming critically limited. This is especially true for irrigation of non-food and -fiber production sites including parks, commercial and residential lawns, athletic fields, golf courses, cemeteries, sod farms, and other landscape plantings. This is true even for the northeastern US where many people perceive an abundance of fresh water. Major metropolitan water suppliers in the northeastern US are required to double the supply capacity of their systems for the three summer months that are dominated by landscape irrigation demands. As urban and suburban sprawl continues to grow, the demand for freshwater resources also increases. There is an obvious need to consider water conservation and the use of alternative water sources for landscape irrigation. Wastewater has long been successfully used for irrigation in the southwestern US. Wastewater includes treated sewage effluent and nonhuman wastewater: grey water. Most large-scale wastewater irrigation comes from sewage treatment plant effluent.

The benefits of wastewater as an irrigation source include conservation of freshwater that would be used for irrigation, supply of small amounts of nutrients to enhance plant growth every time the site is watered, and a reduction of pollutant (phosphorus and nitrogen) discharge to surface water.

The potential hazards from wastewater irrigation involve salt injury to plants, long term effects on soil health (reducing drainage and increasing runoff and erosion), other soluble compounds entering the water, and human pathogens in the wastewater. Proper water treatment has all but eliminated the human pathogen issue. Long-term use of wastewater irrigation of turfgrass sites in Arizona (Hayes, et al.), a low rainfall area, has shown to increase salt levels in the soil which could harm plant growth and destroy the structure of soils with day.

In the northeast there has been very limited use of wastewater for irrigation. For example, in New York there are just two of more than 850 golf courses in the state that use wastewater for irrigation. One golf course (36 holes) in Lake Placid, NY gets all its irrigation water from treated sewage effluent. Placid golf courses, which have very sandy soil, have seen no turf damage from salt.

A.Martin Petrovic

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