

BIOLOGICAL CONTROL OF ANNUAL BLUEGRASS

The most serious weed pest on golf course turfs throughout the world is *Poa Annua* or annual bluegrass. Whereas it has become an acceptable turfgrass species in most of the temperate climates out of necessity, the majority of golf course superintendents would gladly rid their golf courses of annual bluegrass, if there was a safe economical means of doing so.

Several products have been used over the years to eradicate annual bluegrass from golf course turfs. These have included the arsenical, endothal and sulfur. All have met with limited success and some have killed desirable turfgrass species as well as the annual bluegrass. None of these products are used to any great extent today.

The plant growth regulators like Cutlass and TGR are currently the most widely used products to try and reduce the annual bluegrass populations on golf courses. Prograss, a herbicide with pre and post-emergence activity, is also widely used today particularly on perennial ryegrass turfs and to a lesser extent on creeping bentgrass turfs to try to eradicate annual bluegrass. All have met with some degree of success.

A biological control of annual bluegrass was developed and tested at Michigan State University. It is a bacterium known as *Xanthomonas campestris*. The Mycogen Corporation has obtained the rights from Michigan State University to market the bacterium. They are currently conducting research on their own as well as supporting research at several universities to obtain an EPA label for the product.

The bacterium has shown excellent control of the annual type *P. annua* var. *annua* under laboratory and field conditions. The bacterium has shown excellent control of the perennial type *P. annua* var. *retans* under laboratory conditions but poorer control under field conditions. Studies are currently under way to increase the efficacy of the bacterium on the perennial type annual bluegrass under field conditions.

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GOLF COURSE ARE TARGET AREAS FOR CONSERVATION

The Executive Committee of the United States Golf Association recently approved continued and increased support for the Audubon Cooperative Sanctuary Program for Golf Courses. The support totals \$100,000 for the year 1992. The grant will directly fund the golf program, including hiring additional staff to keep up with the expanding program, increasing, and enhancing educational materials for the program, and expanding efforts to increase golf program contacts.

The goal of the program is to inform golfers, golf course superintendents, professional golfers and anyone else connected with golfing about wildlife and environmental conservation issues on golf course lands. Aside from promoting a reduction in intensive management activities that require large quantities of chemical and water use, the program promotes the increase of wildlife habitat and general conservation efforts. Finally, the program publicly recognizes those courses that are already involved or that become involved in projects that improve the quality of an area's environment.

New York Audubon believes that golf courses, if managed in a sensitive manner, can be one of the better uses of developable land. They permanently serve to protect large areas of open space and, therefore, a diversity of habitats. Other potential land use may pave over habitats or place former areas of woods and grasses under the roof of a new shopping mall.

For further information of the Cooperative Sanctuary System contact the Audubon Society of New York State, Inc., Route 2, Box 131, Selkirk, NY 12158.

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