REGULATORY WA TCH

 AND ANY NUMBER of additional desirable traits.

Transgenic plants have "the greatest chance at improving turfgrass management of all the biologically based solutions," according to Dr. Nelson. The sad news is that these benefits for the turfgrass industry are probably at least ten years away.

Up to now, the association of endophytic fungi and turfgrass species has meant increased resistance to some insects. These naturally selected endophyte infected plants live a symbiotic life style: the fungus receives the benefit of living between the cells of the plants, and the turfgrass gets the benefits of improved pest resistance that the waste products of the fungus provide.

There are hundreds of species of endophytic fungi, and probably dozens of varieties that can provide other benefits. Research at Rutgers University recently established a link between high endophyte levels in some varieties of fine fescues and considerable dollar spot resistance. Carefully selecting "wild" types that exhibit disease suppression from endophytic fungi is probably the quickest way to produce edophitically enhanced resistance to disease.

Dr. Lea Brillman, the plant breeder at Seed Research, Inc., in Corvalis, Oregon (a major producer of high endophyte turfgrass seed) says that Seed Research had only moderate success in isolating other promising endophyte strains from multiple sources and introducing them into commercially desirable turfgrasses with low endophyte levels. Because the company has had greater success by cross-breeding varieties with desirable high endophyte levels , Dr. Brillman says that, for now, they would concentrate on identifying desirable "wild types" for their sources of new endophytic species.

Bio-engineering has the potential to produce desirable traits that do not occur naturally in a single variety of turfgrass, but for now traditional hybridization is the road being followed.

Some biological controls are currently available for plant managers, but over the next twenty years a whole range of new products, supplies, and procedures will enable tomorrow's turfgrass manager to get pinpoint, long-term control of turf problems that are hard to control today.

Massachusetts charters a different course on recertification

AS OF JANUARY 1, Massachusetts will substantially broaden the number and types of activities that qualify as pesticide recertification training, according to Mark Buffone of the Massachusetts Department of Food and Agriculture Pesticide Bureau.

To reduce the paperwork burden of approval required under its current system and to provide a set of guidelines that event producers can follow, Massachusetts will replace the existing system of credits assigned to a course with a new concept of contact hours—50 minutes of continuous exposure to educationally designed lectures, short courses, study courses, correspondence school, degree and non degree academic courses in the biological sciences, or self study materials.

The concept is designed to give the producers of materials and events with a guideline for evaluating the content of their productions and assigning it a value. The participant at an event will be given a certificate to keep and turn into the Bureau. The certificate would be good unless otherwise notified. The Bureau will randomly audit the productions, and provide their producers with comments on its appropriateness.

Mr. Buffone also noted that the first criteria that will be used when evaluating a program is how the material relates to pesticide use. The primary charge of his department is to regulate the use of pesticides. Programs or materials about alternate management strategies and biocontrols will be considered appropriate if the information presented is related to the use and regulation of pesticides.

Other regulatory changes effective this January also include:

- AN EXPANSION OF THE NUMBER of individuals required to be licensed or certified to include all public and private employees who use pesticides as part of their duties.
- ALL APPLICATOR AND CERTIFICATION EXAMS will be closed book exams.
- WITH THE EXCEPTION of dealer certification exams, all certification tests will be of two parts, a core exam and a specialty exam.
- CERTIFICATION CANDIDATES must have a minimum of two years related work experience.
- CERTIFICATION CANDIDATES must be at least 18 years old.
- A CANDIDATE WHO FAILS an exam may apply at the next available test date. After two failures, a candidate must wait three months before another re-examination.
- PESTICIDE DEALERS MUST GET THE SIGNATURE of an agent of a certified applicator and the signature of the certified applicator when that agent seeks to purchase restricted use pesticides for the certified applicator. ■

TGT's view: The expansion of the number of people that require some sort of training to handle or apply pesticides to include anyone who has to use pesticides on the job is the logical extension of this sort of regulation. The expansion of the number and types of recertification avenues is a excellent idea, and is long overdue. This greatly increases the turfgrass managers flexibility in dealing with his and his employees certification requirements.–CS