



POSITION STATEMENT

Turfgrass Biotechnology

Over the past two decades, biotechnology has begun to make its mark on the turfgrass industry. Current applications of modern biotechnology in turfgrass management include the use of molecular markers for turfgrass breeding, genetic manipulation of turfgrasses, and the use of endophytes. Currently, beneficial endophytes are only available commercially in the fescues and ryegrass, thus limiting their use. However, other endophytes have been found to be compatible with creeping bentgrass and Kentucky bluegrass; breeders are aggressively trying to insert them into new varieties and produce stable relationships between the plant and fungi.

Endophytes are microorganisms that exist naturally inside several species of turfgrass. They emit chemical compounds that discourage pests and diseases from consuming the turf, creating a kind of natural resistance.

Endophytes have proven that they are a benefit — so much so that turf breeders as a matter of course breed endophytes into as many types as possible, which include varieties of perennial ryegrasses, fine fescues, and tall fescues.

University and industry research centers throughout the country are developing turfgrasses enhanced through biotechnology by using the same technologies that have been used successfully in conventional agriculture for the past 10 years. These technologies now are being applied to develop turfgrasses with traits that could help turf managers control weeds or insects, as well as lower required maintenance time and costs. Tangible benefits include reduced fuel consumption and emissions, lower labor costs, reduced lawn clippings and water usage, and fewer applications of pesticides.

We believe that this approach is consistent with current definitions of integrated pest management and will speed the process of developing superior turf varieties. Consequently, the Professional Lawn Care Network (PLANET) supports the development of turfgrasses enhanced through biotechnology using a measured, transparent, and science-based regulatory process involving appropriate government agencies.