


CUTT

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Integrated Biological and Chemical Pest Management

The future of golf turf management will be shaped by what we seek answers for today. Turfgrass research is maturing where more basic science is being used to understand practical observations. More research projects that address plant genetics, physiology and soil microbiology will lay a solid foundation for future management programs.

Applied research programs that address environmental concerns—such as reduced reliance on potable water and reducing pesticide use as a means of pollution prevention—are vital in an increasingly regulatory environment. Clearly, we are entering an important transitional phase where more people will be asked to use non-potable water and will be required to reduce pesticide use to be more environmentally compatible. 

Important research addressing these issues is underway, especially the integration of biological control programs with synthetic pesticides. Studies have shown that certain biological products are more effective when used in combination with pesticides. This will result in an overall reduction in pesticide use and an increased understanding of the mechanisms of biological control.

Your Daily Microbe?

Fungal diseases of turf are a major concern throughout northern climates and new diseases are wreaking havoc on southern turf. Diseases can work quickly to destroy high value areas and often preventative fungicide applications are required. Biological control of diseases has

been plagued with poor performance (inconsistency) and an inability to suppress diseases during an intense epidemic.

A system was developed (BioJect® System, Turf Labs, Inc.) to deliver a biological control organism, TX-1, proven in the laboratory to control dollar spot, brown patch and pythium diseases of turf. However, complications with the delivery system and an inability to deliver economic results has hampered its success.

Researchers Bresnahan and Drohen at the University of Massachusetts conducted evaluations of the BioJect® System in 1998. One objective of the study was to evaluate the ability of the BioJect® to suppress dollar spot on fairway turf.

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