

Turfgrass Entomologists From Across the United States Converge in Wooster, OH




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Entomologists that study arthropods (insects and mites) in turfgrass recently participated in the National Turfgrass Entomology Workshop in Wooster, OH on March 11-12, 2007. The purpose of this meeting is to provide a venue for the exchange of current issues or pest problems, research ideas and data as well provide insight on the future of arthropod pest management as amongst academicians, graduate students and industry colleagues. The overriding theme of the meeting was alternative, non-chemical control of arthropod pests with emphasis on microbial control strategies including entomopathogenic nematodes and bacterial, fungal and viral control agents.

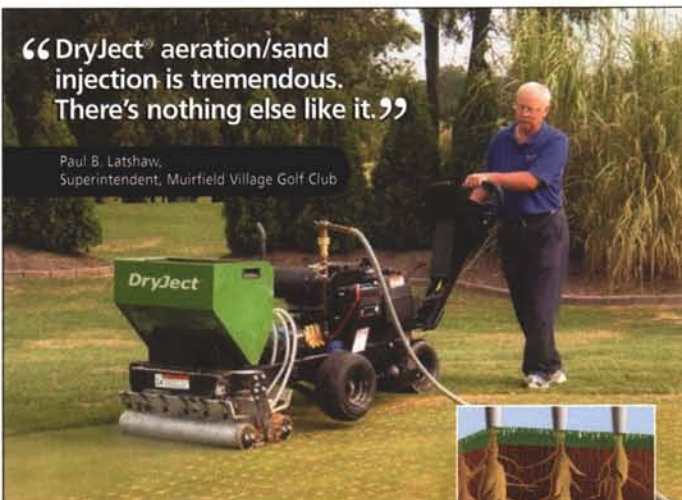
Without question, microbial control agents are potentially valuable tools that have utility and promise. However, due to limited research studies, comprehensive knowledge and understanding of not only the beneficial, but the potential negative attributes are unclear. Numerous informal presentations were made regarding the use of entomopathogenic nematodes; there were some exciting data presented that suggested entomopathogenic nematodes are capable of providing comparable control (efficacy) to conventional insecticides of several white grub species. Unfortunately, the nematode species used in the studies are not currently commercially available. One explanation is that mass producing entomopathogenic nematodes is not only physically difficult, but can be cost prohibitive, especially when conventional insecticides are relatively inexpensive comparatively.

This meeting also provided a platform for graduate students to showcase their current research project(s). One particular presentation discussed that was especially intriguing was the potential of *Bacillus thuringiensis japonensis* strain Buibui. Based on the information presented, *Btj* Buibui provided consistent control (i.e., > 70%) of 1st, 2nd or 3rd instar Japanese beetle, *Popillia japonica* Newman, larvae. These results are encouraging, especially since 2nd and particularly 3rd instar grubs are often quite difficult to control with conventional insecticides. Another noteworthy study revealed that entomopathogenic nematodes are a viable control strategy for the annual bluegrass weevil, *Listronotus maculicollis* (ABW), problem in the NE United States. Recent research findings suggest that ABW has developed resistance to the synthetic pyrethroid insecticides. For this reason, such information is invaluable.

Finally, this meeting also afforded industry colleagues to present their respective products. In terms of new turfgrass insecticides, Syngenta revealed that Meridian (thiamethoxam) now has EPA registration and is commercially available for purchase and use in 2007. DuPont revealed a new insecticide chemistry, chlorantraniliprole. Chlorantraniliprole is an anthranilic diamide, a novel class of insecticide that is effective against both white grubs and surface feeding insects such as sod webworm and black cutworm; few newly developed products have this attribute. Moreover, this compound has an acute oral LD₅₀ of > 5000 for the technical active ingredient. These, as well as other new insecticides, allow turfgrass managers to maintain an optimistic outlook for the future in managing troublesome arthropod pests in turf while making every effort to sustain environmental quality. 

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