Questions from the Floor

By Dr. R. Chris Williamson, *Department of Entomology, University of Wisconsin-Madison*

Question: Ant baits don't appear to provide as effective of control as suggested by the manufacturer; what are some possible explanations as to the "lack of effective control?" Sheboygan County, Wisconsin

Response: Ultimately, the most effective means to manage ants in turf are to eliminate the queen. The queen is responsible for producing offspring (workers); until she is destroyed the colony will continue to exist and grow; allowing worker ants to build soil mounds that we so love to hate. Much like humans, ants are also particular as to what they eat; would you like to eat soggy/wet bread? Neither would an ant; the proper application of granular ant bait controls is critical for successful ant management. Granular ant baits must be as fresh (properly sealed and stored) as possible, applied around (near the base) and not directly to non-disturbed (mowed or flattened) mounds, and they must be applied to dry turf (withhold irrigation for at least 24 hours; don't apply when rainfall or dew formation is anticipated). By following these simple guidelines, your potential for successfully managing mound-building ants in turf will be maximized. Too often, granular ant bait failure can be linked to improper application.

Question: You've studied earthworm management on golf course turf for several years now; in a "nutshell," what do you conclude from your research? Rock County, Wisconsin

Response: The bottom line is that there are no "silver bullets" or quick solutions to managing earthworms in turf. My research revealed that abrasive soil aggregates including Black Jack (crushed coal slag), Amber Jack or Minergy (paper mill byproduct), and Best Sand (man-made sand; crushed quartz) provided significant reduction (compared to the untreated control) in earthworm castings where these products were applied to turf. These soil aggregates were simply applied as a conventional, light (1/8" coverage) sand topdressing application that is commonly applied to greens, tees, or even fairways. My research also revealed that repeated applications (i.e., spring and fall) of angular, abrasive soil aggregates are necessary to achieve maximum effectiveness. It is unclear as to the long-term agronomic implications of this management strategy. It is possible that this strategy could drastically disrupt the soil texture, potentially causing layering or result in plant pathogen infection sites on the leaf sheath or roots due to the abrasive nature of the soil aggregate.

Question: Recently, I read an article that contained information that suggested turfgrass managers in the northeastern U.S. are beginning to experience isecticide resistance issues with synthetic pyrethroids. How might this affect us here in Wisconsin? Dane County, Wisconsin

Response: What you've read is correct; researchers in the Northeastern U.S. are beginning to document numerous occurrences of pesticide resistance of the annual bluegrass weevil to synthetic pyrethroids. It is theorized that this phenomenon may be due to both the widespread use and multiple applications of synthetic pyrethroids for control the annual bluegrass weevil as well as other important turfgrass insect pests including but not limited to chinch bugs, sod webworms, and black cutworms. This phenomenon has also been reported with the southern chinch bug in Florida. Remember, effective management of any pest (disease, insect, or weed) begins with a comprehensive knowledge of the biology (life cycle, behavior, ecology, vulnerable life stage, etc.); "know thy enemy." To minimize potential pesticide resistance, it is essential to follow these guidelines: 1) regularly rotate insecticides from different insecticide classes when possible; 2) do not exceed or cut (reduce) label rates; and 3) avoid "wall-to-wall" or blanket applications. Practice IPM, make only targeted applications of pesticides where pests are likely or are problematic.