Questions From the Floor

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

1) I've treated my golf course for Japanese beetle grubs for five consecutive seasons; last year there was very little evidence of adults, grubs, or damage. Should I make an insecticide application this year? – Dane County, Wisconsin

Response: Historically speaking, Japanese beetles tend to establish in respective geographic areas for about 5-10 or so years. Various factors influence the length of time which they sustain damaging populations. Such factors include host plant availability (food sources), environmental conditions including soil moisture, natural enemies including insect predators and parasitoids as well as bacterial, fungal, and viral pathogens, and insecticide management practices. Only through a sound Integrated Pest Management (IPM) plan that utilizes routine sampling and monitoring can one effectively make an informed decision as to the need to make an insecticide application. If the data generated from an annual Japanese beetle sampling and monitoring program suggests that populations have been continuing to dramatically decrease, it may be advantageous to forgo making a preventative Japanese beetle insecticide application. Keep in mind, this approach is not fool proof. But, with the development of effective curative (corrective) white grub control products such as chlothianidin (Arena), prophylactic applications of insecticides to putting green surrounds, tee boxes and surrounds, fairways, and rough areas may not be necessary. Ultimately, this IPM approach will reduce the amount of pesticides applied, reduce the monetary cost of controlling Japanese beetles, and minimize potential environmental impact.

2) When do you think or predict the emerald ash borer (EAB) will become a problem in Wisconsin? - Waukesha County, Wisconsin

Response: If I could earnestly predict when and where EAB will be found in Wisconsin, I would likely be considered for some type of distinguished award. Realistically, EAB poses an eminent and serious threat to Wisconsin, especially since Wisconsin borders Michigan (including the Upper Peninsula) and is in relatively close proximity to Indiana where EAB is currently established. EAB was most recently discovered in the eastern Upper Peninsula of Michigan at Brimley State Park. Folks in Wisconsin and Minnesota are particularly concerned about EAB since both states have significantly more ash resources than Michigan or

Indiana, thus stand to lose much more. EAB is thought to spread by four primary means: 1) movement via firewood; 2) transportation via ash (Fraxinus spp.) nursery stock; 3) pallets and solid-wood packing material; and 4) adult flight (< 1/2 mile per year). Of these four, the movement of infested firewood from EAB infested areas appears to be the most likely means of introduction into un-infested areas. Thus, it is critical to educate as many people as possible about the threat that EAB poses as well as how its introduction can be minimized. So, to predict where EAB will be discovered first in Wisconsin is anyone's guess; however, the hypothesized geographic areas where EAB is most likely to be discovered are the gateway areas in Wisconsin including but not limited to SE and NE Wisconsin. Other high-risk areas for EAB include commercial properties where ash nursery stock may have been obtained from



Michigan, Indiana, or Ohio and planted before EAB was a know pest as well as industrial park areas where pallets and solid-wood packing materials from Asia are common. For additional information regarding EAB, visit the University of Wisconsin, Department of Entomology, Emerald Ash Borer website at www.entomology.wisc.edu/emeraldashborer

3) What advise would you give golf course superintendents experiencing problems with ants on putting greens? - Winnebago County, Wisconsin

Response: The predominate ant species found on golf course putting greens is Lasius neoniger, commonly referred to as the turfgrass ant. Although quite beneficial biologically speaking, this ant species is particularly problematic from the standpoint that it creates unsightly soil mounds that disrupt the playability and uniformity of the putting green surface as well as on tee boxes, and it can cause physical damage to the precision mowing units (bed knifes and reels). Recently published research regarding ants associated with golf course turf, especially putting greens, suggests that ant mounds found on putting greens are constructed by worker ants from nearby colonies located in the peripheral area (collar and rough) surrounding putting greens; > 90% of ant mounds on putting greens are typically located within seven feet of the perimeter. Superintendents often find that spraying putting greens provides only temporary suppression of mound-building ants. Surface-applied, contact insecticides only kill workers foraging on the surface, and often fail to eliminate the queen located underground in her nest chamber. Should you desire to take this approach to managing ants, the key to success is to get started treating ants as soon as mounds appear, at the time new colonies are just getting started. The newer classes of insecticides such as the neo-nicitinoids including thiamethoxam (Meridian, not currently registered) and chlothianidin (Arena) have been shown to provide up to 12 weeks of suppression. Keep in mind, this management strategy will not likely eliminate the ants. Another, possibly more effective ant management strategy that provides season-long suppression of mound activity is the use of fipronil, the active ingredient in Chipco Choice and Chipco TopChoice granular insecticides. Lastly, the use of granular ant baits is another effective ant management strategy. Ant baits such as MaxForce Fine Granule Insect Bait (Clorox Co.) contain a slow-acting insecticide. They are most effective when they are sprinkled around ant mounds; worker ants take the bait back to the nest and feed it to the gueen and her young (brood). Typically, the nest dies out in a few days. It is important to remember that ants do not take wet bait, so do not apply the bait when dew is present or rainfall is anticipated, and withhold irrigation for at least 12 hours after application.



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