Value of Sampling and Monitoring

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Active or regular sampling and monitoring of pest (i.e., disease, insect, weed, etc.) populations is at the heart of an IPM program! Well before any control or pest management method or strategy can be applied, the presence, accurate identification and population density must be determined. Without such information, the likelihood of success for a control or management strategy is extremely low.

Sampling and monitoring programs are not all the same, nor do they have to be overwhelming or all-consuming. A sampling and monitoring program can be tailored to fit the needs and resources (i.e., typically time or labor) of the respective turfgrass management operation. Such a program can be quite simplistic to very complex. Whether you realize it or not, many of you are already practicing some type of sampling and/or monitoring. Simply by making regular visual inspections of the turf is a fundamental component of sampling and monitoring. Yet, others engage in a more comprehensive sampling and monitoring program whereby they utilize more extensive methods such as but not limited to trapping (e.g., pheromone or light traps), destructive sampling (e.g., white grubs), soap flush/drench (e.g., black cutworms), etc.

Moreover, some turfgrass managers use weather-mediated predictive (i.e., degree-day) models or phonological plant indicators to "best" determine the appropriate time to conduct sampling and monitoring of respective pest(s) that are most likely to occur. In addition to these efforts, turfgrass managers will also use pest mapping (i.e., record keeping) to provide invaluable historical information regarding pest problems as well as control strategies or methods that provided effective control.

Time and resources are extremely valuable, it is quite un-

"**Destructive sampling**" involves tearing back the turf to count grub populations. Threshold numbers are determined by grub species, turf type and customer expectations.

likely that anyone one wants to waste time or money on implementing a pest management strategy (e.g., insecticide application) that will not provide the level of control or performance needed. To maximize the performance of a pest management strategy, it is critical to first accurately identify the problem (i.e., pest).

Secondly, one must determine the population density of the respective pest and make a decision weather the pest is at a damage threshold (i.e., level) that warrants the implementation of a control or management strategy.

Thirdly, a turfgrass manager must make an informed decision to select the most appropriate or "best" management strategy or method that will provide the level of control desired. This important decision is based on several factors including cost, effectiveness (i.e., performance), efficiency and environmental concerns. Next, implementation of the pest management strategy or method is conducted.

Lastly, once again sampling and monitoring the turf will allow one to properly assess and evaluate the level of success (i.e., performance) of the pest management strategy used. This procedure will provide invaluable information for future pest problems that that will likely occur. Consider developing a sampling and monitoring program for your turfgrass management operation, it may just save you time, resources and damage to your turf.
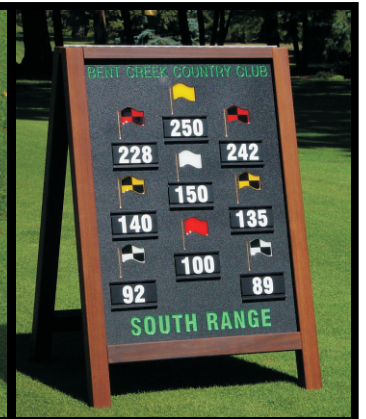
Purple triangles could be found along Wisconsin Roads the past two years as researches watch for Emerald Ash Borer. The traps are coated with glue and Manuka Oil as a pheromone attractant.

2 tablespoons of a lemon dish soap in two gallons of water poured on a square foot of turf will allow bring sodwebworms (above), armyworms, cutworms and ataenius beatles to the surface in a few minutes.