TURFGRASS MATTERS

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Insect Monitoring: An Essential Tool for Insect Management

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A cornerstone of Intgegrated Pest Management programs (IPM) is the ability to monitor for the presence and also the level or degree of infestation for various turfgrass insects. Black light trapping and pheromone trapping are passive sampling techniques that allow someone to determine current and seasonal turfgrass insect populations. Also degree-day models, which use temperature as the basis for approximating insect development, have been reported over the last 15 years.

Since 1996 I have been involved in collecting, identifying and yes counting weekly insect catches (May through August) from several golf courses in Maryland and Northern Virginia. Also cumulative degree-days have been recorded to confirm and correlate insect development and current degree-day models. For the 1999 season three golf courses have been selected where turfgrass insects will be monitored using black light traps. Weekly insect counts and cumulative degree-days will be posted on the internet for easy access. The address for internet access is as follows: http://iaa.umd.edu.umturf/umturf.html and will be located in the folder on Insects.

Turfgrass insects collected with black light traps include masked chafers, the oriental beetle, May-June beetles, the Asiatic garden beetle, the black turfgrass ataenius beetle, sod webworms, and the black cutworm. Based on our sampling the major insects are masked chafers, sod webworms, the black turfgrass ataenius beetle, and the black cutworm. Some of the major findings to date are summarized below.

- In 1997 and 1998 masked chafers were extremely high when compared to 1996 counts.
- Black cutworm counts were extremely high in May of 1997 and in August 1998.
- In 1998 insect development was occurring earlier and averaging two to three weeks ahead of schedule for such insects as masked chafers and black cutworm.
- At the Montgomery County site there has been an annual increase in the number of oriental beetles collected from 1996-98.
- Sod webworm counts were extremely high in 1998 compared to the two previous years.
- Degree-day models have been fairly accurate in predicting emergence of first generation turfgrass insects.
- Black light trapping and degree-day models can provide future insight on insect populations and insect development.

With the assistance of the MAAGCS my goal is to provide monitoring information to area golf course superintendents via the internet to help in the decision making process with respect to current insect and degree-day conditions. With the newer reduced-risk pesticides available for insect control, monitoring becomes even more important to ensure both acceptable and consistent control.

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