School Pest Solutions

Japanese Beetle

The Japanese beetle sometimes inflicts serious damage to turf . All turf grass species are susceptible. It is important to recognize damage caused by this insect and take steps to prevent and manage outbreaks. Larval stages of the beetle are susceptible to biological and chemical controls, whereas treatments directed at the adult beetles are generally ineffective. Therefore, understanding the insect's lifecycle is key for successful IPM. Below are information and management guidelines for this pest.

Symptoms

- Heavily infested turf appears to be suffering from drought stress, is off-color (gray-green) and wilts rapidly.
- Irregularly shaped areas of damage first noticeable in sunny, high and dry locations.
- Turf can feel spongy underfoot and may be rolled up like sod due to lack of roots.
- Skunks, raccoons, and crows may rip and destroy large areas of turf in search of grubs. These secondary animals may cause significant damage even when grub populations are below damaging thresholds.

Biology

- 1-year life-cycle: egg - larva - pupa – adult.
- Adults mate in July - August
- Young larvae are active during August - September.
- As cold temperatures arrive, the larvae move 4 - 8 inches deep to over-winter, then return to the surface as the soil warms (60 o F) in the spring.
- Larvae mature, pupate in June - July, then emerge from ground as adults around July 4th. Adults will travel up to 2 miles in search of sunny turf areas to lay eggs.

Scouting

- Scout turf from May 15 - October 1
- Remove a square foot of turf, search the top 1 -2 inches of soil for grubs
- Randomly select and record count of grubs at each location
- To select locations for monitoring, look for evidence of animal or bird feeding activity

Damage Thresholds

- Vary depending on turf use and irrigation.
- General damage threshold is 8 - 12 grubs per square foot

Management

- Irrigate to reduce damage caused by larval feeding on roots.
- Avoid planting trees or shrubs which are highly desirable food sources for the adults (such as roses, lindens, cherries, red-leaf maple, crab apple, etc.).
- Milky Spore Disease - *Bacillus popilliae* has been effective in some coastal locations. Parasitic nematodes are a new biological control.
- Monitor and map locations of grub populations for spot treatments with insecticides.
- Insecticides should be applied when larva are young (mid-August - September). For best control apply when soil is moist. Rainfall or irrigation is needed to deliver the insecticide to the grubs.

Anyone making pesticide applications on school property must be licensed by the Board of Pesticides Control. See "Standards for Pesticide Applications and Public Notifications in Schools".

Photo Credits

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For More Information

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