

"I've worked at smaller golf courses, and (regular irrigation checkups) are part of the assignment," he says.

It's even more crucial for superintendents with a limited budget or water supply to

make sure their systems are running properly to avoid extra costs.

"Obviously, the more you can check, the sooner you can solve any problems," Emerson says. — HW

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Counter caterpillar care

Destructive turf caterpillars usually go unnoticed on golf courses until damage is noticeable. This was the message David Shetlar, Ph.D., entomologist at the Ohio State University Extension, shared at a recent Ohio Turfgrass Foundation regional seminar.

"They're always sliding under the radar until they build significant populations, and then superintendents say, 'What was that?'" Shetlar says.

The most common varieties of turf caterpillars in Shetlar's region include black cutworm, fall and yellow armyworm, common armyworm and true sod webworms. Black cutworms and fall armyworms can't survive Ohio winters, so they generally spend that time in the Gulf Coast states. It's common for the insects to be picked up in a storm as a moth and eventually land in northern states from Iowa to Ohio.

The first generation of black cutworm matures in late May or early June. They



Turf caterpillars slide under the radar until they build significant populations, says David Shetlar, Ph.D.

typically lay their eggs on the tips of grass blades and then go back into the turf. It would seem like the eggs would be removed when the turf is cut, but the eggs have been known to survive, and if the clippings are dispensed nearby, the insect remains nearby, Shetlar says. Then, in mid- to late July, the second generation emerges. At the same time, the second generation of armyworm generally emerges, followed by its third generation in August.

Aerifying during the summer months isn't advised if an infestation is known or probable, Shetlar says.

"You're just making ready-made burrows," he says.

Pock marks in the turf in late August and September are a sign that fall armyworms are feasting on the turf, Shetlar says. A black cutworm or fall armyworm infestation usually can be identified by twin pock marks in the turf. The insect burrows a hole in the soil, leaves its waste and burrows back out of the soil, creating a second hole. Another sign of an infestation is a trail through the turf that can be seen in the morning dew.

"During the third and fourth instars, they will leave the nursery and wander," Shetlar says.

The insects can move from 50 to 90 feet at a time and generally travel every three to five days, he adds. Because of this behavior, Shetlar recommends spraying insecticide outside the perimeter of tees and greens at least one or two boom widths to catch the worms that wander.

Armyworms are attracted to light, which often leads them gravitate to turf that's on the edge of a parking lot with lights that remain on during the night. Another place to look for the insect is post markers, flags and signs because they're known to lay eggs on those surfaces.

Another way to determine if there's a cutworm infestation is to flush an area of turf for larvae. Mix one tablespoon of Joy, Dawn Ultra or Ivory clear dishwashing detergent per gallon of water for a solution. Use two

gallons for every square yard area of turf. If there's a cutworm infestation, the larvae will surface within three to five minutes. If insects surface after a half hour, they're likely to be sod webworm larvae. – HW

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