

ICP equals IPM

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The foundation of our Insect Control Program at Collier's Reserve is an aggressive Integrated Plant Management (IPM) Program. By maintaining a strong, healthy, dense turf, you can more easily overcome minor insect, disease and weed pressures.

Our cultural practices for promoting a healthy turf include verticutting, aerifying, topdressing and mowing with sharp, well-adjusted reels, as well as utilizing a computerized irrigation system that delivers proper amounts of water based on evapotranspiration rates.

However, even doing all the right things to keep a healthy turf does not guarantee that you will not have some turf areas susceptible to insects.

Mole Cricket Control Program

In our area, mole cricket control must begin in February and March before overwintering adults begin to mate. We apply beneficial nematodes on problem areas to knock down the mole cricket population.

The nematodes are applied at dusk or during the dark to pre-watered turf (pre-watering cools the turf) with a flood jet nozzle at 50 gallons of water per acre. After the nematodes are applied we water again to ensure they get into the soil.

The application of beneficial nematodes has worked well but does not guarantee 100 percent control of the mole cricket. In May we begin soap flushes, which allows us to monitor the nymph hatch.

With evidence of the nymph hatch, we begin applying conventional insecticides at the lightest rate indicated for mole crickets.

In 1995 we tried Merit on 4 acres of turf at the very onset of the nymph hatch.

Our results were excellent, and we will be using it again this year. Also, we will continue to treat for adult mole crickets that were missed as nymphs throughout the summer using a variety of products.

In the past, we have used Crusade 5 G, Talstar Flowable and Orthene with good results on the nymphs and smaller crickets. We also apply mole cricket bait to the turf during the late summer and early fall to actively feeding crickets. Applications are made late in the day or on nights with a full moon and no irrigation scheduled.

Another program we have for mole crickets is to treat individual mounds with a one-gallon B&G sprayer fitted with a 12-inch brass tube which allows us to inject Lemon Joy and water directly into the mole cricket tunnel.

We usually assign our golf course setup person this task. Greens are treated when cups are cut, tees when tee markers are moved, and fairways as they are checked and cleaned of debris. You must take care to keep the soap mixture off the turf surfaces to avoid burning the turf.

A polycoated Dursban is also used when there is increased pressure from young mole crickets on greens, collars and approaches. When the mole crickets reach the third to fourth instar, we once again apply the beneficial nematodes,

following the same application methods used in the early spring.

White Grub Control Program

We have been fortunate that white grubs have not been a severe problem here. Problem areas are treated as needed. Those turf areas that resemble grub damage are checked by removing a piece of sod with a flat shovel and visually inspecting the root zone for grubs. In May and June, areas with evidence of grub activity have been treated with Turcam 2.5 G at the labeled rate and then watered in.

Fire Ant Control Program

Fire ants are one of our most serious insect pest problems. Not only do they inflict painful stings to golfers and the maintenance crew, but they are extremely damaging to turf as they build their mounds. In out-of-play areas their mounds cause damage to plant material as they build around the stems.

We treat wall-to-wall with Award once in the spring and again 4-6 months later if needed. Using a Hurd spreader mounted on a Cushman Truckster, we apply at 1 pound of material per acre. Application is done late in the afternoon when the ant population is more active,

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and when no rain is forecast. The irrigation will be turned off that night. Water tends to reduce Award's efficacy.

In addition to the broadcast method of Award, the course setup person, the IPM Specialist and myself will treat specific areas that are likely to cause problems for golfers and crew (i.e., green slopes, tees, etc.) with Orthene or Award. Also, out-of-play mounds that need specific attention are treated with Award sprinkled around the mound.

Worm Control Program

Sodweb worms, army and cutworms are treated preventively and curatively as needed. Areas such as trap faces and shadowboxes on fairways that have higher cuts of grass make it easier for larvae to go undetected until after damage has occurred.

For this reason, during the summer months we will treat with Vector TL as a preventive control. When conditions are right for worm activity on greens and tees

(i.e., cloudy days with rainfall) we will apply preventive treatments of M.V.P., which is a microencapsulated form of *Bacillus thuringiensis*.

This product has given us a 4-7 day control for sodweb worms as opposed to regular Dipel, which is 1-2 days at best. Greens are closely monitored during spring, summer and fall months. If treatment is needed, it is usually Dipel and a light rate of Orthene or Astro. Astro, a pyrethroid, has provided us excellent quick knockdown of worms.

Summary

A good IPM program, as the foundation to the insect control program, will ensure that you will remain in control of your turf insect problems and also control disease and weeds.

Nothing will substitute for developing and maintaining good cultural practices, keeping in mind that sound cultural practices and a good insect control program can mean dollar savings to you in the overall maintenance of your golf course for both time and material.

Turf Trivia

Oxygen Generation

Plants, including turfgrass release significant amounts of oxygen into the air. A turf area 50 feet x 50 feet produces enough oxygen to meet the needs of a family of four [Huffine and Grau 1969]. An acre of turf would support 174 people, and a 100 acre golf course would provide enough oxygen for 17,400 people.



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