

Common sense control

Pest mole cricket and fire ant control can be achieved more economically with a program based on proper identification and regular mapping.

By PAT COBB, Ph. D.



Observing fire ant foraging activity before bait applications can directly influence control.

Common sense is the foundation of any effective management program for turf and landscape pests. A few

important steps in imported fire ant and pest mole cricket management listed below illustrate this point.

Know the problem

It is not only important to identify the source of the problem, but also to know as much about the causal agent as possible. Vulnerable stages or time intervals can be identified by knowing life cycles, periods of pest activity and feeding, and other behavioral patterns.

For example, the fact that adult imported fire ant workers cannot eat solids plays a big part in control strategies that include the use of bait formulations. Peak mole cricket activity just after dark and just before daylight impacts directly on application timing of many controls. Knowledge of imported fire ants and pest mole crickets is also useful in identification of control options.

Monitoring for pest presence is important. However, continued monitoring is important in timing controls and in control evaluation. Observing fire ant foraging activity before bait applications can directly influence control. If worker ants are not actively foraging on the turf surface, bait applications should be delayed. Monitoring mole cricket development is important to application timing of controls.

Mapping spring tawny mole cricket activity for treatment of nymphs later in the season saves money. Mapping imported fire ant infestations can also save money and provide valuable information about reinfestation potential. Mapping and monitoring are important practices that can often determine the success of ongoing control strategies.

Develop strategies

Imported fire ant management in larger landscapes such as on golf courses can be very expensive in labor costs. Broadcast insecticide treatments can eliminate imported fire ants in an area. However, detrimental effects of this practice include the elimination of all fire ants as predators on new, incoming fire ant queens and the subsequent resurgence of fire ant colonies in the area, and/or the movement into these areas of other pest ant species.

Combined mapping of existing heavily infested areas, priority-setting and perimeter or spot treatment with baits and contact insecticides has reduced control costs and resulted in better ongoing control of imported fire ants.

Tawny mole cricket activity can be mapped in early spring, and mapped areas treated later when young nymphs are present. This practice, along with monitoring life stages, saves money by reducing the area treated and the amount of pesticide used.

If treatments are timed properly, more effective control usually results. Although new insecticides provide long-term mole cricket control, continued mapping and monitoring are essential to provide early-season information about mole cricket populations before serious turf damage occurs.

Control strategies for imported fire ants and mole crickets are site-specific. Although general guidelines are available and helpful, specific measures must be devised to fit specific situations. Where budgets are

Map and monitor to determine the success of fire ant and mole cricket control strategies.

limited, this probably means identifying priority areas and working with these most extensively.

Development of money-saving practices such as mapping are often the result of limited resources. In addition, identification of available control op-

tions before treatment is necessary and can save time and money. Knowledge of various "weak link" stages or periods in the life history or behavior of pests as related to identified control options can add purpose and meaning to monitoring.

Finally, there is no "silver bullet" for controlling imported fire ants and pest mole crickets. Both these pests were imported from South America and have few naturally-occurring biological controls in the Southeastern U.S. These highly mobile insects that live mostly in the soil are difficult to control. Regardless of available resources, common sense is still the most valuable asset in devising control strategies for these serious pests.

—The author, an entomologist at Auburn University, spoke about pest insect control at the Southeastern Turf Conference in May.

Slit application of fipronil demonstrated

Turfgrass managers at the Southeastern Turfgrass Conference in Tifton, Ga., last month learned about one of the latest weapons against pest mole crickets. John C. Wicker of Turf Solutions, Jacksonville, Fla., demonstrated a custom application of Chipco Choice (a.i. fipronil).

The product can only be applied by certified applicators trained and approved by Rhone Poulenc. They use specially designed machinery to make slit applications of the dry granular material into soil/thatch interface, about ½ inch below the soil surface. The product is deposited on 1 ½-2 inch centers which, considering the mobility of pest mole crickets, should bring them in contact with the fipronil. These machines are inspected and certified by the product manufacturer.

The machine that Wicker demonstrated in Tifton, Ga., was considerably smaller than those typically used on golf course fairways. Those machines can be 8-feet wide.



This machine makes slit applications at about a half inch below the soil surface.

Regardless of the size of the application apparatus, the product can be applied as low as 0.0125 lb. active ingredient per acre. Wicker, responding to questions from the turf managers, said the cost of an application is \$315 per acre (in four acre lots).

Clyde Gorsuch from Clemson University spoke briefly about fipronil at the conference and reminded turf managers that the product is, so far, labeled for golf courses and around commercial buildings, but not for home lawns.

Because of the technology needed to apply the product, it's unlikely an entire golf course could be treated. Therefore, said Gorsuch, it

would be wise to monitor for mole crickets in the areas that don't receive treatment.

Fipronil does not control white grubs, said Gorsuch. "Don't forget to get off the cart and get down on your hands and knees and look what's going on in the turf," he advised.

Dr. Pat Cobb of Auburn University also advised the golf course superintendents to keep mapping and monitoring for insect pests and not rely on any single "silver bullet."

—Ron Hall