

Insect control in warm-season turf

Close observance of pest populations is essential for maximum effectiveness of your various control efforts.

by Patricia P. Cobb,
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■ Turfgrass professionals in the South are growing a variety of grasses and managing them better than ever before. Part of the price of this success is often increased "opportunities" for controlling a variety of insect pests.

Successful turfgrass managers, who are always concerned about the environment, continue to weigh all pest control options when developing new control strategies. This concern, coupled with increased pest pressure and control costs, has stimulated the same creative ingenuity that has been responsible for the best turf quality in the South's history.

Because pest pressure is often so great and so varied, integrating cultural and biological tactics as part of the control plan is nothing new. What *is* new, is an increased interest in determining factors that influence control efforts, and in using this information to develop safe, effective, well-balanced tactics as a part of total turf management programs.

Field testing on parasitic flies and insect-parasitic nematodes continues. First results of massive releases of nematodes for mole cricket control look promising for long-range suppression. Formulations of virulent strains of *Bacillus thuringiensis* (Bt)—such as Biobit and Javelin—enhance control programs for surface-feeding caterpillar pests.

New subsurface technology—Subsurface, "precision" placement of insecticides has focused on controlling mole crickets and grubs. Spray insecticides can be placed into the turf by high pressure liquid injection—with or without slicing, depending upon the system.

Subsurface applications of lower rates of chlorpyrifos (Dursban) and isazophos (Triumph) for mole cricket control and isazophos (Triumph) for grub control have been promising in many cases. Recent studies indicate that saturated and poorly

drained soil, and extremely hot and humid weather, influence the effectiveness of liquid injection applications.

Improvements continue in placing granular insecticides under the surface to control mole crickets and grubs. Shallow slits are cut in the turf, granules are deposited and covered—much like an overseeder but with less turf injury. Subsurface placement often results in the same level of control with half the rates of surface applications. Less surface residues decrease the potential for runoff and human exposure. Less potential for ULV breakdown and placement close to the pests provides control with less product.

Weather considerations—Winter weather, together with spring rains—or lack of rain—affects insect populations.

For example, the winter of 1991-92 was mild throughout most of the South. Fire ants were active in mounds during warm

winter days. Tawny mole cricket emerges from the previous season's hatch that are usually present in March in the mid-Gulf states were rare in 1991.

Winter mole cricket activity during the 1990-91 "mild" winter indicates that these pests probably matured during this time. Tropical sod webworms, longtime pests in central and south Florida, again infested coastal areas from the Florida panhandle to Texas. Monitoring turf for insect pests is always important. In the South, the mobility of many pests and the variation of weather patterns from year to year make monitoring a must.

Keeping a close watch on pest populations is essential to get the most out of cultural, biological and/or insecticidal efforts.

—The author is an associate professor of entomology at Auburn University.

Tips for maximum efficacy:

- Mole crickets**
 - Map areas of spring activity
 - Monitor hatch time, apply as recommended to young nymphs.
 - Pre-water dry soil to move pests to surface, unless label states otherwise.
 - Treat late in the day.
- Grubs**
 - Map area to locate infestations.
 - Treat newly-hatched grubs, usually mid- to late summer.
 - Water before treatment unless label states otherwise.
- Fire ants**
 - Apply broadcast (area) treatments after spring mating flights (May-early June) before mid-summer, and/or fall when drought conditions do not exist. In high use areas, three to five days after broadcast bait applications, mound treat with a contact insecticide to quickly eliminate stinging worker ants.
- Chinch bugs**
 - Monitor early-season activity during warmer daytime hours.
 - Treat first generation nymphs in April-May.
- Spittlebugs**
 - Monitor turf areas for nymphs in spittle masses deep in the turfin May-June. Infested areas feel "squishy" underfoot.
 - Mow and water lawn before treatment.
 - Monitor landscape plantings for adults; movement between shrubs and turf is common, especially between Japanese or other "small leaf" hollies, and centipede grass.)
 - Dethatch turf if needed at proper time for grass type.
- Sod webworms**
 - Monitor spring moth flights of common sod webworms (April in most areas) and treat two to three weeks after peak flight (usually May).
 - Mow grass before treatment.
 - Watch for buildup of tropical sod webworms in coastal areas and Florida. Chewed grass blades are notched and ragged. Use lots of water when treating for tropical sod webworm (10 gals./1000 sq. ft.)

Source: Dr. Cobb

'Best Time' Uses of Some Common Turf Insecticides*

| INSECTICIDE/REGISTERED SITES | SPRING: March-May | SUMMER: June-August | FALL: September-December |
|--|--|--|---------------------------------|
| B.t. (i.e., Biobit, Dipel, Javelin) GT | | Sod webworm (young larvae): see label | |
| Crusade 5G, GC;S | | Mole crickets (nymphs): 4lb. ai/A | Grubs: 4 lb. ai/A |
| Diazinon, L | (adults) | Spittlebugs: 4lb. ai/A Billbugs (larvae): 4lb. ai/A | |
| Dursban, GT | | Fire ants (mounds): see label Grubs: 4lb. ai/A | young grubs |
| | | Chinch bugs, sod webworms: 4lb. ai/A | |
| | Cutworms: 1lb. ai/A | Chinch bugs, sod webworms: 1lb. ai/A | |
| | | Fire ants: see label | Fall armyworm: 1lb. ai/A |
| | | | Mole crickets: 75-150lb. bait/A |
| Dylox, Proxol, GT | | Cutworms: 6-8lb. ai/A | Fall armyworm: 6lb. ai/A |
| | | Grub | 8lb. ai/A |
| | | Sod webworms: 6lb. ai/A | |
| Mocap 10G, GC;S | | Billbug (larvae): 5lb. ai/A | Grubs: 5lb. ai/A |
| | | Mole crickets (nymphs): 7.5-10lb. ai/A | |
| Oftanol 2, 5G, GT | (Adults-oft.2) billbugs (larvae-5G): 2lb. ai/A | Chinch bugs: 2lb. ai/A | |
| | | Fire ants: see label | |
| | Mole crickets (nymphs): 2lb. ai/A | Grubs: 2lb. ai/A | |



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| INSECTICIDE | SPRING: March-May | SUMMER: June-August | FALL: September-December |
|---|--|--|--------------------------|
| Orthene Turf, Tree & Ornament. Spray, L; REC | ← (Overwintered) Mole crickets (nymphs): 2.6-3.5lb. ai/A | Fire ants: see label Fall armyworm: 1-21/2lb. ai/A Sod webworms: 6lb. ai/A | → |
| Carbaryl (i.e., Sevimol, Sevin SL), L; REC | ← (adults) Billbugs see label | Cutworms: 2-4lb. ai/A Chinch bugs: 6-8lb. ai/A Fire Ants (mounds): see label | → |
| Tempo2, WP, L | ← | Chinch bugs: 14lb. ai/A; sod webworms: .09lb. ai/A Fall armyworm: .09lb. ai/A | → |
| Triumph 4E, L; GC**, S** | ← (Overwintered) (adults) Billbug (larvae): 2lb. ai/A | (young nymphs) Mole crickets: 2lb. ai/A Grubs: 1-2lb. ai/A | → |
| Turcam 2.5G, 76WP, GT | ← Billbugs (larvae): 76WP: 3lb. ai/A | Chinch bugs: 1-2lb. ai/A Fire ants: see label Mole crickets (nymph): 3lb. ai/A | → |
| Fire Ant Baits Affirm (Ascend) Amdro Award (Logic), GT | ← | See label | → |

(————— = best choice application timing; - - - - - = 2nd choice timing.)

Registered sites: L = Home Lawns; GC = Golf Courses; S = Sod; GT = General Turf; REC = Recreational Turf

*No endorsement or exclusion of specific products is intended.

**Special registrations (24c) for golf greens, tees, aprons, sod in some states.

Source: Dr. Cobb



**THE WORST PART ISN'T
THAT SHE'S CALLED BACK
THREE TIMES, OR THAT
SHE PROBABLY WON'T RENEW.
THE WORST PART IS THAT
SHE'S GOT NEIGHBORS.**

If she's calling you about grubs, fire ants, or mole crickets, you can bet her neighbors are hearing about you, too.

Makes you wish you'd used Triumph®, doesn't it? You could have delivered up to 90% control in just 2 to 3 days. Too bad.

Bet you'll use Triumph first, next time.

