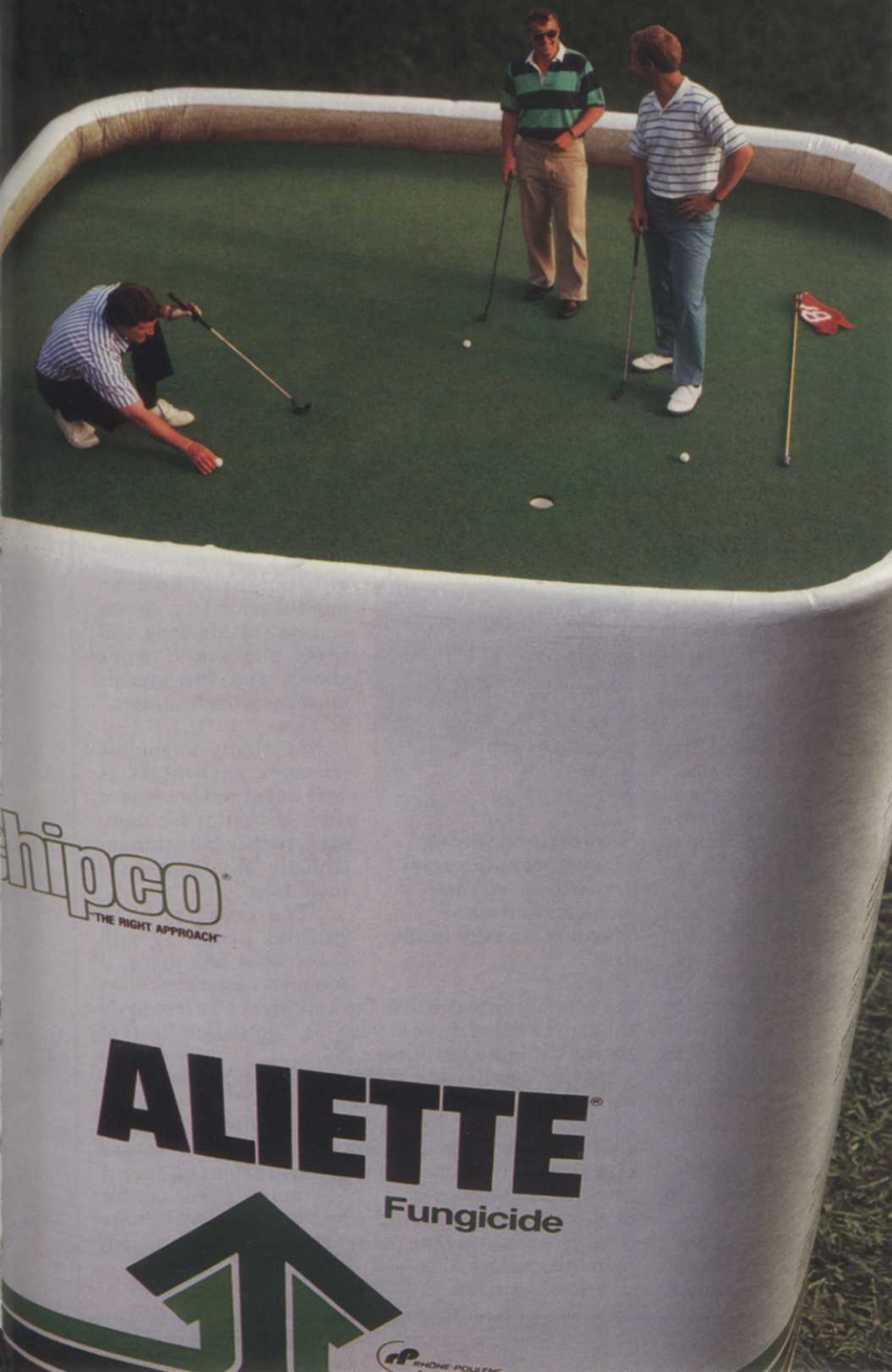


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use it, but it doesn't seem to be that functional," he adds.

Paul Woods, landscape operations manager for Garden of Memories, Myrtle Hill Cemetery in Tampa, Fla., has opted for Shindaiwa 35s.

"It's an important decision because of the volume of work we do with trimmers," notes Wilster. "We run a crew of five string trimmers. In our application it is one of the most important pieces of equipment we use."

He chose Shindaiwa trimmers for their performance, their ease of maintenance, and the availability of spare parts.

### Strange bedfellows

"Mechanical reliability is the bed-fellow of preventive maintenance. That is easily done on these units," Wilster says.

"When I came here four years ago, they had a hodge-podge of equipment. After experiencing some problems with power and with replacement parts, we came across Shindaiwa. They were reasonably priced, we were offered some good service agreements and we have been able to get the parts we need," he explains.

"With some other brands we had a problem obtaining the parts we needed to keep the equipment running longer—I'm speaking of small

things like clutches and clutch springs," he adds.

Trimmers are doubly important to Woods because his operation relies on them almost exclusively for controlling growth in the cemetery and memorial park.

Woods has also been pleased with the optional aluminum "speed head" with which the trimmers have been equipped. "Working in a memorial park and monument cemetery, we were wearing out the plastic reservoir heads extremely fast. We were going through \$5 worth of brass eyelets a day on the hole where the line feeds out," he says.

The speed heads don't hold a reservoir of line. Instead, line is cut into 10-inch lengths and laced something like shoelaces through a series of holes in the head, leaving several four-inch pieces as the cutting blades.

In addition, Woods' crews add a twist to working with their trimmers. "One thing we do to facilitate working around markers and monuments is to keep the handlebars in position and rotate the trimmer shaft and cutting unit about 40 degrees to the horizontal. This way the operator doesn't have to try to angle himself to put a nice edge around a monument. When we need to trim a broad area, it's a simple matter to rotate the shaft and head back to the horizon-

tal," he explains.

Because of the heavy volume of trimming, all operators use shoulder harnesses with the trimmers.

"We use a double-shoulder harness, a true harness, not a shoulder strap. My men like it more than a shoulder strap because it centers the load and reduces the physical exertion and strain of having this load of about 12 pounds hanging from one shoulder for seven hours a day," Woods says.

Plant Care uses Echo and Green Machine trimmers. Mayer points out, as do several other landscape managers, that the harness or sling used with a trimmer can make a big difference to the operator using the machine.

"As much as I've tried to get my men to use the harness, they tend to fight it because they are picking up and putting down the trimmers so often during the day. The Echo harness is more trouble to get into than some others, so the crews tend to lose them or throw them away. The Green Machine, on the other hand, you can just put over your shoulder, and it has a padded strap, which I like. Either machine gives good performance, though," Mayer adds.

Another landscaper who has found important differences in the harness arrangements of different trimmers is Don

## Emphasizing trimmer safety

In addition to the mechanical reliability of trimmers, landscape managers are concerned about their safety aspects. Most, if not all trimmers available today, have standard safety features such as a guard over the rotating line. But the action of the spinning line has danger potential that can only be countered by safe operating methods.

"A string trimmer will really pick up stones and fling them, and it will put some good velocity on them, too," says Steve Wilster, Town 'n' Country Landscaping of Melbourne, Fla. "It's best to wear long pants. You've always got to wear eye protection. And it is important to keep the guard on the machine, even if it is an inconvenience."

Proper use is also important, although the speed and versatility of a string trimmer can tempt the operator to use it improperly to save time.

Safe operation is also a high priority for Paul Woods of Garden of Memories/Myrtle Hill Cemetery in Tampa, Fla. "Operator safety goes hand-in-hand with operator comfort," Woods says. "I require my guys to operate string trimmers for six to seven hours a day when most landscape management companies may have only two or three guys that run them a couple hours a day."

He also requires trimmer operators to wear goggles and particle masks, uniforms with long pants and leather workboots.

Safety problems with string trimmers have been almost nil at Plant Care in Dallas, says Robert Mayer, because "we enforce safety regulations on all our



**Steve Wilster: "String trimmer manufacturers have ironed out their problems and many trimmers are very similar now."**

the trimmer, you can take the bark right off a tree or do the same kind of thing to your leg," notes Don Davis of Lawns Unlimited in Sussex, N.J.

Mayer handles the problem by giving good safety and equipment education to his crews. "You've got to be very vigilant," he says. "You've always got to be concerned about the problem of girdling trees because of the amount of damage you can do in a short amount of time. We're very careful in our training program for new crew members. And when we familiarize them with trimmers we take pains to highlight this problem particularly," he adds.

—Jay Holtzman □

equipment. The men must wear safety glasses or face shields, long uniform pants and work shoes, and the guards must be on the trimmers," he says.

The ability to guide a trimmer accurately is very important because of their potential for damage—swiftly inflicting potentially lethal damage to small trees.

"The user has to be trained properly and know what he's doing. If you aren't good at guiding

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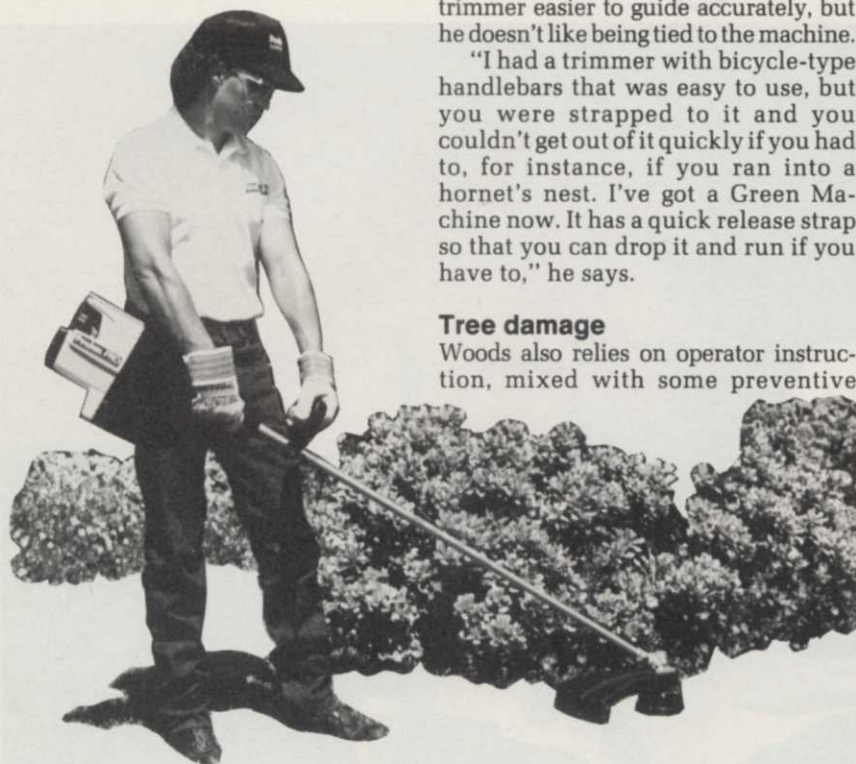
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Most trimmers available today have standard safety features such as a guard over the rotating line.



Davis, owner of Lawns Unlimited of Sussex, N.J. Davis says he always uses a harness strap with the trimmer because it eases the fatigue of use and makes the trimmer easier to guide accurately, but he doesn't like being tied to the machine.

"I had a trimmer with bicycle-type handlebars that was easy to use, but you were strapped to it and you couldn't get out of it quickly if you had to, for instance, if you ran into a hornet's nest. I've got a Green Machine now. It has a quick release strap so that you can drop it and run if you have to," he says.

#### Tree damage

Woods also relies on operator instruction, mixed with some preventive

measures. "Trees can be a very severe problem with trimmers. Most trees under two inches (in diameter)—Drake elms and camphor trees here have thin, easily-cut bark. With live oaks and Laurel oaks, the bark tends to be a little heavier and they can stand a little more abuse. But some of our trees have wounds as the result of mechanical injury from string trimmers that are healing over now," he says.

To prevent this, his crews now dish out an area around trees so they don't have to trim right up to the trunk. Woods also has considered using flexible black plastic drain hose, cut to 10 inches, split and placed around the trunks of small trees as a shield.

Although generally landscape managers are well pleased with the trimmers they use, there are differences in styles and types that any landscaper must take a close look at if he's to get the trimmer best suited to his needs. Purchase price is less important than value over the life of the machine. And a machine that is just that little bit easier to use can help prevent an injury or property damage that can be very costly in the long run. As in buying anything, let the buyer beware and remember that you get what you pay for. **LM**

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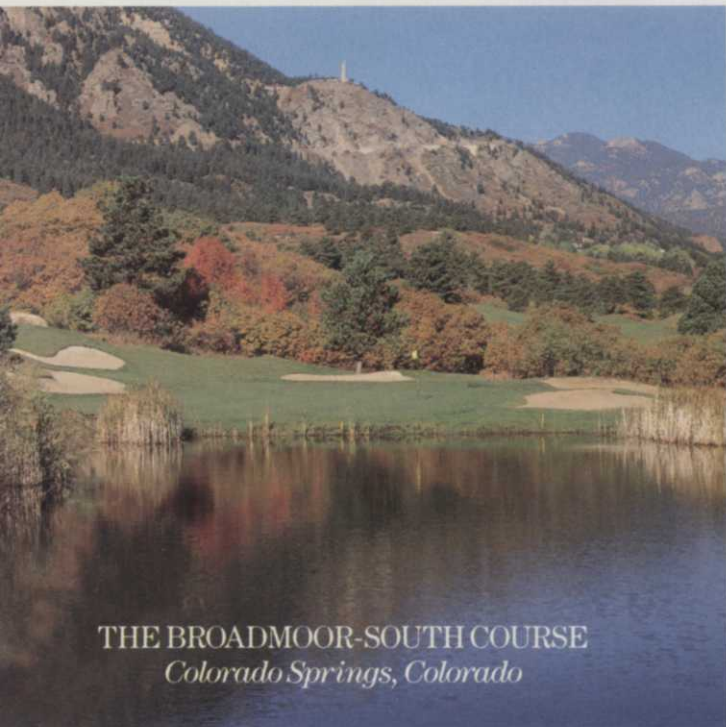


**From  
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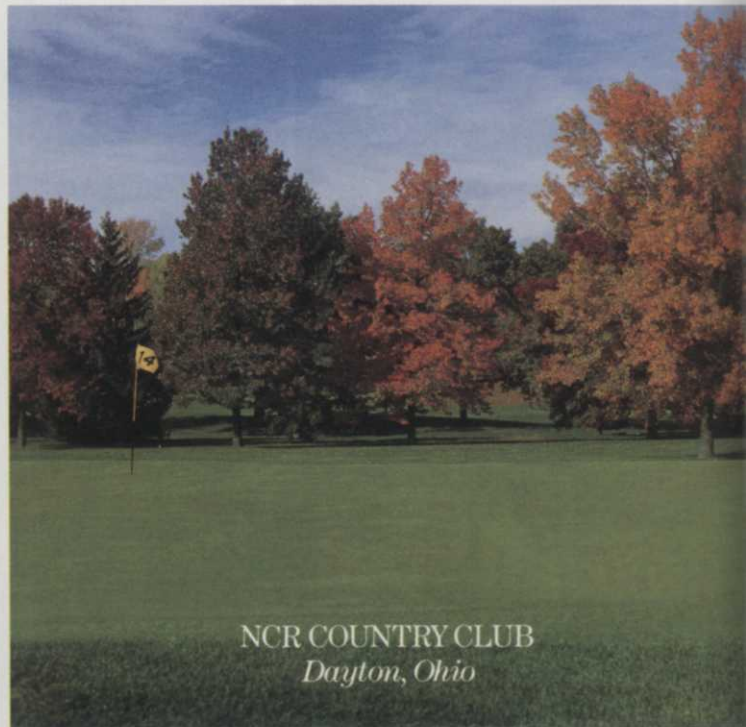


**...to dollar spot (!?!%!!)**

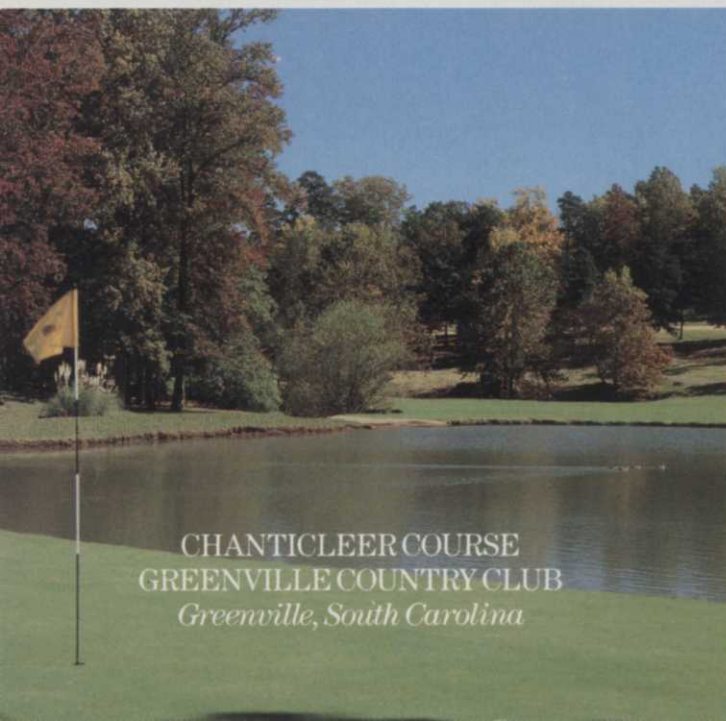
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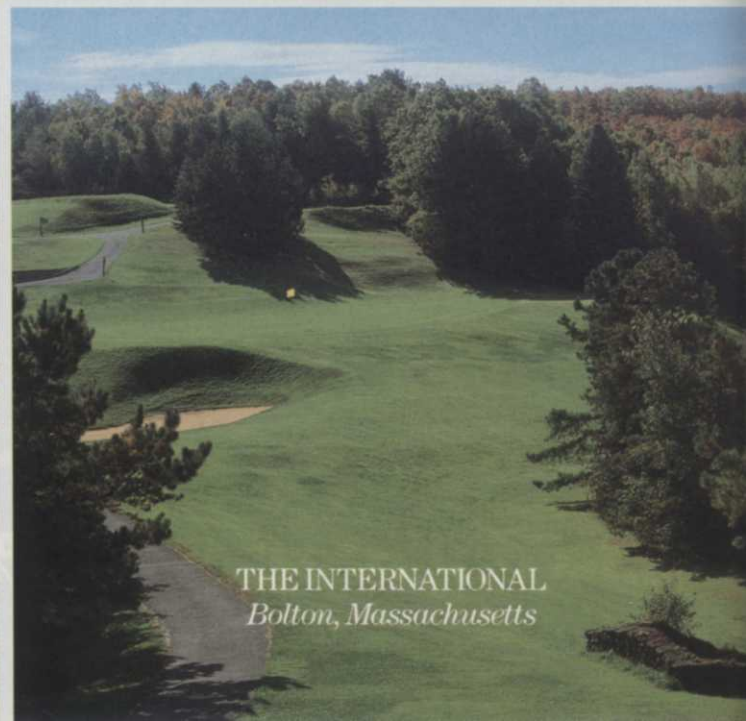
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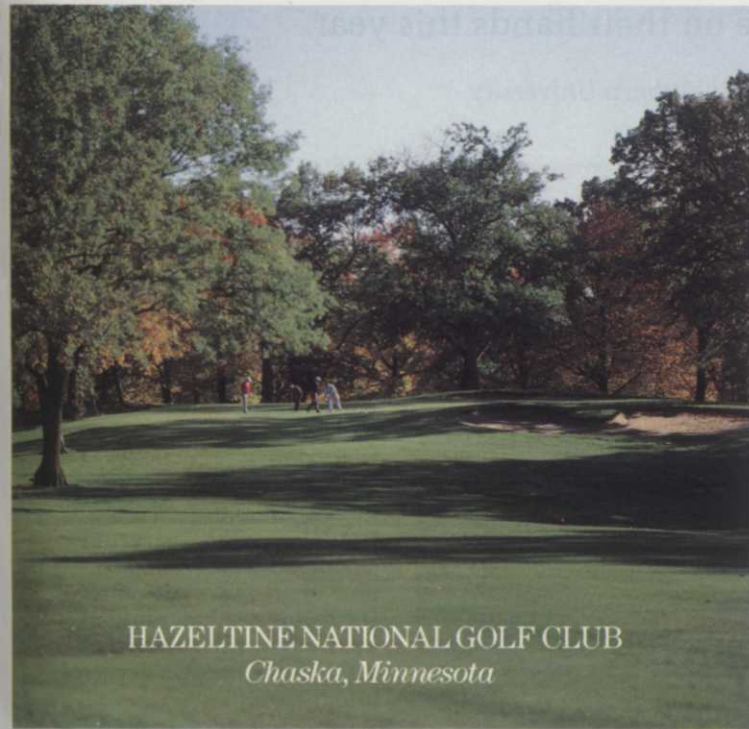
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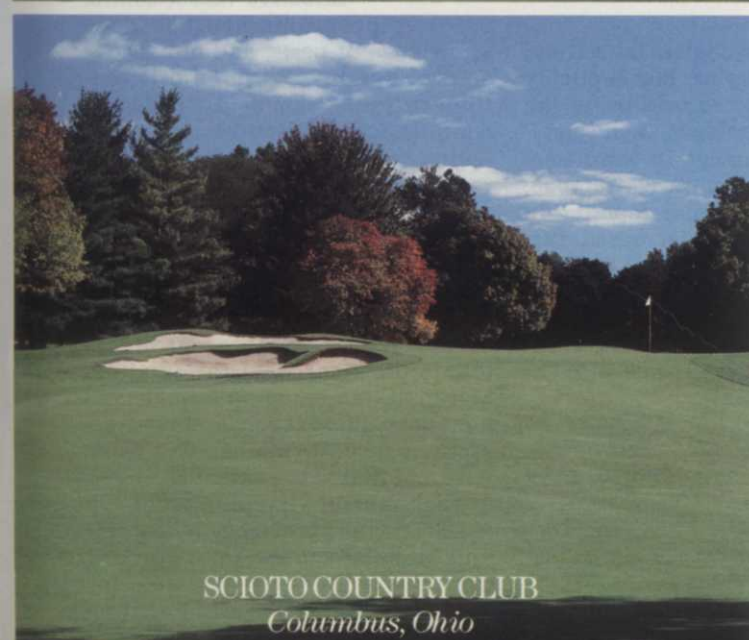
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# WARM-SEASON INSECT CONTROL

The dry summer and mild winter means that southern turf managers can expect a fierce battle on their hands this year.

by Patricia Cobb, Ph.D., Auburn University

**I**nsect control programs are an important part of the total system of growing grass for most southern turf managers. Drought, high temperatures and insect damage are three factors that have greatly influenced warm-season turf management the last three years.

Although we can only talk about the weather, insect control strategies must be reconsidered and updated annually. In the Southeast, "the big three"—mole crickets, grubs and fire ants—continue to require the most intensive and expensive control efforts.



Control of soil insects such as grubs, mole crickets and fire ants is often complicated by fall drought conditions.

## Mole crickets

Mole crickets—now the South's most damaging turf insects—caused severe turf losses in 1988 as far west as Louisiana, and northward along the eastern coast of the Carolinas.

Mole crickets are annual pests in Florida, southern Georgia and the southern half of the mid-Gulf states. Most turf managers believe the drought conditions that existed during spring mole cricket flights resulted in higher infestations on irrigated turf. In addition, control strategies were complicated by the fact that mole crickets were two weeks late in hatching this past season.

Mole cricket control costs often range from \$7,000 to \$15,000 or more annually on golf courses. Monitoring populations in order to time controls properly is essential, and can reduce costs substantially. The loss of

organochlorine residuals in the soil and an increase in irrigated, higher quality turf are often cited as reasons for the increase in grub problems each year.

While grub damage in warm-season turf has been more widespread, the severity of problems reported in most areas generally decreased during 1988. Dan Potter, Ph.D., at the University of Kentucky, reports that drought conditions in soil adversely affect grub hatching and development. (Perhaps there is one drought advantage, after all!)

## Fire ants

Fire ants are a major "people problem" in the South.

Pat Cobb, Ph.D., has been at Auburn University for 12 years. She is a professor, extension entomology, Department of Entomology.

Fire ant mounds are unsightly and make mowing difficult. But painful stings are the real problem. Several million dollars are spent in Alabama alone each year for fire ant control.

A hybrid form, found in northern Georgia, Alabama and Mississippi is reportedly more cold-tolerant than either of the two introduced parent fire ant forms. "Multi-queen" fire ant colonies are becoming common in many areas. Control strategies are complicated by drought conditions that drive fire ants down deeper into the soil.

Effective insect control programs are based on knowledge of pests, and of effective control options. While efforts continue in the development of biological controls, for most southern pests our options are properly timed and correctly applied insecticides.

This season, turf insecticides are still few in number. Some are currently under EPA review. A few are restricted to very precisely defined sites for use by permit only. New formulations of older products (Sevimol, a carbaryl formulation; Mocap 5G, an ethoprop formulation) have been introduced. Continued regulations of pesticide use will make wise and timely use essential.

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*continued on page 40*



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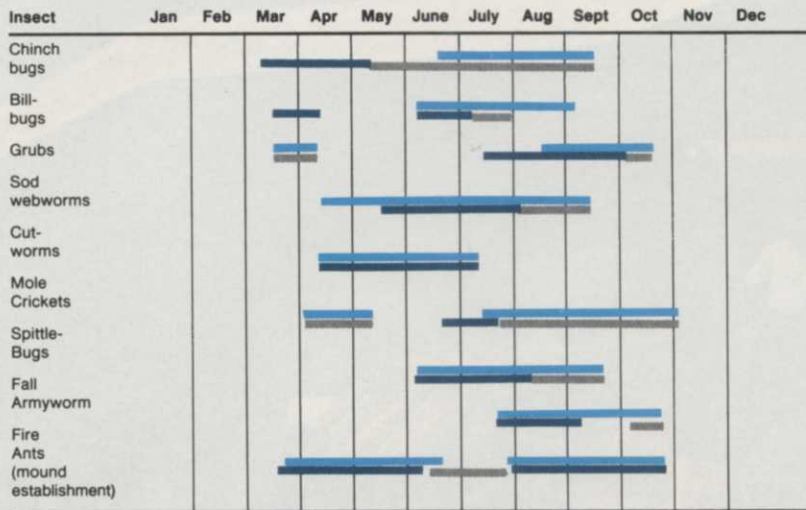
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\*MONTHS DURING WHICH DAMAGE IS MOST LIKELY TO OCCUR (——);  
MONTHS WHEN INSECTICIDE TREATMENTS MAY BE RECOMMENDED  
(—— = 1ST CHOICE, —— = 2ND CHOICE)



\*Timing of treatments varies from one area to another, and is considerably different in South Florida. Check with Extension Agents in your area and monitor pest populations to determine exact timing of controls.

Biological control products are, for the most part, still in the future. However, insect-infecting nematodes are for the first time being marketed for such lawn pests as grubs.

Research with "bio-engineered" insect bacterium-bearing endophytes (plants within plants) holds promise for making some warm-season grasses exempt from insect damage.

### Back to basics

Adverse weather conditions that complicate and increase costs of strategies often remind us of the need to get "back to basics." There is no substitute for proper timing of cultural and insecticidal control efforts. Healthy grass sustains and recovers from damage quicker.

Monitoring pest populations and directing insecticidal controls at the vulnerable pest stage is more cost effective than "hit-and-miss" preventive treatments. The information contained herein is intended to assist the Southern turf manager with development of control strategies for common insect pests.

### Late winter

Billbug and chinch bug adults may become active during warm days of late March in some years. Treatment if adults are numerous and active may prevent population build-up and turf damage later in the season.

Zoysia and Bermudagrasses are preferred by the hunting billbug. St.

Augustinegrasses (except Floratam in most extreme southern areas) and occasionally Bermudagrasses are infested by chinch bugs.

Early season treatments should be done during midday when billbug and chinch bug adults are most active. Re-infestation later in the season may occur from infested, untreated adjacent turf areas.

Grubs become active in more southerly areas in late March. Evidence of "varmint" digging—armadillos, skunks, raccoons—may indicate movement of grubs into the root zone of the turf.

Generally, treatment at this time is "second best" behind middle to late summer applications for smaller grubs. However, late March treatments may be necessary in areas where grubs are detected for the first time, especially in cool-season grasses in order to reduce damage before the turf enters summer dormancy.

Warm-season grasses, in many instances, will recover from early season grub damage. In the south, the period between spring grub activity and pupation is short. (The pupa is the stage from which the beetle emerges that is not affected by insecticides). Therefore, if spring treatment is done it is most effective during late March or early April.

Areas receiving spring grub treatment should be checked in middle to late summer for small grubs since re-infestation may occur. Mole crickets

are the most damaging turf insect pests in the southeastern U.S. Timing of controls may vary from one area to another. Therefore, monitoring populations is critical since proper timing is often as important as insecticide choice.

In southern Florida mole crickets are active year around. Mole crickets may be active during winter months anytime a few consecutive days of warm weather occur. In mild winters—such as the last three—tunneling damage may continue periodically from November into late winter months. However, tunneling usually increases dramatically during late March in most areas.

Mole crickets begin mating flights in late March, so in most areas March treatment is not recommended. Turf should be maintained properly throughout this time however, in order to minimize tunneling damage.

### Spring (April-May)

Chinch bug and billbug adults become more active during the warmer days of spring. Generally, egg laying occurs in April on warm-season turf. April treatments may prevent population build-up by eliminating egg-layers and, therefore, reduce damage later in the season.

Chinch bug treatments in May reduce the first nymphal (immature) population. Grubs that have not pupated can be controlled during early April. Infested areas that don't "green up" should be checked to verify the presence and stage of development of grubs.

Irrigation or rainfall should follow grub applications. In some areas of the South, Japanese beetle grubs are a problem on lawns. Spring is a good time to make applications of milky spore disease products for these grubs. However, other grub species are not controlled by these products.

Mole crickets remain active during April and early May. Spring treatments may be needed in severely damaged areas if overwintered crickets are present. To determine cricket presence, pour soapy water (2 tbs. liquid dishwashing soap in 1 gal. water) on turf areas where infestation is suspected. Crickets will usually surface in three to 15 minutes (longer in cool weather).

Irrigate soap-flushed areas afterwards to avoid sun-scald damage to the grass. Egg laying takes place during April and May. Nymphs usually hatch in central Florida during April and May. Farther north, hatching begins in late May or early June. Sod webworm larvae that have overwintered in the turf begin feeding when