LATE WINTER
(Nov.-Dec.)

Billbug and chinch bug adults may become active in March some years. Chinch bugs prefer varieties of St. Augustinegrass (except Floratam in most extreme southern areas). Billbugs prefer zoysias and bermudagrasses.

Treat infested turf during mid-day when chinch bug and billbug adults are most active. Treatment at this time can prevent population build-up and turf damage in June and July.

Late season reinfestation may occur from unmanaged areas. Evidence of "varmint" digging-armadillos, skunks, raccoons-may indicate grub or mole cricket activity. Generally, treatment at this time is "second best" for these pests.

Grubs often reinfest the same areas, and can be effectively controlled in the smaller, more susceptible stage in middle to late summer. Mole cricket nymphs are easier to control in June than the overwintered nymphs and adults are at this time.

New technology promises greater applicator and environmental safety.

Areas of grub or mole cricket activity can be "mapped" now and targeted for monitoring and treatment later. Warm season grasses usually recover from spring damages. Grub-infested cool season grasses may have to be treated before grubs pupate in order to reduce further damage before the turf enters summer dormancy.

Usually, Mole cricket mating flights begin in March.

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More than $40 million is spent annually on mole cricket control in Florida. Still, late-season damage remains a common site on southern landscapes.

Cultural practices are important weapons when battling insects

The following is a brief look at several cultural practices you can employ to reduce pest populations in turf areas.

Dethatching: Follow extension recommendations for specific turfgrasses. Thatch control increases movement of insecticides through turf and decreases moisture, which is essential for spittlebug development.

High pressure liquid injection: HPLI (1500-2000 psi) is a new technique whereby lower rates of certain insecticides are being used to control mole crickets and grubs with reduced surface residues.

Mapping: Initially done for grub treatments in northern Alabama, this procedure has also proven successful in reducing area treated and pesticide usage in mole cricket control. Areas of overwintered populations are located and marked on a map of the turf site (such as golf course fairway maps, lined football fields and home plant profile map). These areas are then treated when the more susceptible "new generation" insects are present, before visible turf damage appears.

Monitoring: This procedure is designed to verify the presence of certain pests or pest stages. Examples include soap flushes, which can be used to detect the presence of cutworms, fall armyworms, sod webworms, mole crickets and green June beetle grubs. Flushes are best done in late May. Irrigate the area afterward to prevent scalding.

Another method is to cut a square foot of sod on three sides, fold back, shake turf and count the grubs present.

A third practice is to cover a plug of turf with water and count the chinch bugs that float to the surface.

Plant selection: Choose plant varieties that are less-susceptible to insects present in your area. For example, chich bug-resistant varieties of St. Augustinegrass, endophyte-infected fescues and ryegrasses resistant to surface feeders. Japanese hollies planted near centipedegrass lawns make an ideal setup for spittlebugs. Choose a "less-deadly" combination.

Pretreatment irrigation: Soil insect pests including grubs, mole crickets and fire ants are more active in moist soil. Watering *before* treatment of mole crickets is essential. Watering before grub or fire ant treatments during drought can improve control. These pests move closer to the surface in response to moisture and therefore make contact with the insecticide.

—Dr. Cobb□