

MANAGING WHITE GRUBS, BILLBUGS, AND CHINCHBUGS IN TURF
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Understanding the life cycle

What stage causes most damage and when is it present?

What stage is most susceptible to control and when is it present?

Larva or nymph just after it emerges from egg

Eggs and pupae are not susceptible to control

Monitoring techniques

Soil sample (white grubs, invasive crane flies)

Soapy flush / disclosing solution (billbug adults, many caterpillars)

Flotation (chinchbugs)

“tug test” (billbugs)

New products

Acelepryn™ (chlorantraniliprole)

Provaunt™ (indoxacarb)

Allectus™ (Merit™ + Talstar™)

Aloft™ (Arena™ + bifenthrin)

Maxide™ (Meridian™ + Scimitar™, targeting homeowners)

WHITE GRUBS

Life cycle

Adults fly mid June to mid August (depends on location and species)

Eggs laid in late June through early August (depends on location and species)

Larvae hatch 1 to 2 weeks later

Three larval stages, full size by late September

Overwinter as larvae

Feed again in spring for a few weeks

Pupate in mid June to early July

Adults emerge

Monitoring techniques

Adults – pheromone traps (JB), light traps ? (EC?)

Larvae – soil sample

Control options

Preventive

Neonicotinoid when adults laying eggs

Arena™ (clothianidin)

Meridian™ (thiamethoxam)

Merit™ (imidacloprid)

Combination product when adults laying eggs

Allectus™ (Merit™ + Talstar™)

Aloft™ (Arena™ + bifenthrin)

Maxide™ (Meridian™ + Scimitar™)

Acelepryn™ (chlorantraniliprole)

Apply between 15 April and 1 June (will not kill spring grubs)

Intermediate – when tiny grubs are present

Mach 2™ (halofenozide)

Does NOT work on oriental beetles
Apply from late July to mid August

Curative

Dylox™ (trichlorfon) – not on school grounds in Massachusetts

BILLBUGS

Life cycle

Overwinter as adults

Lay eggs in late spring

Larvae feed (often in crowns) throughout summer months

Pupate in late summer or early fall

Adults emerge to overwinter

Monitoring techniques

Look for “frass”

“tug” test

look for adults on paved surfaces

Control options

Neonicotinoids or combination products – when adults laying eggs

Pyrethroids when adults become active

bifenthrin (Talstar™)

cyfluthrin (Tempo™)

lambda-cyhalothrin (Battle™, Scimitar™)

deltamethrin (Deltagard™)

Acelepryn™ (chlrantraniliprole) – between 15 April and 1 June

CHINCHBUGS

Life cycle

Overwinter as adults

Lay eggs in late May to mid June

Nymphs feed all summer (damage worst in July and August)

Adults move to overwintering sites in fall

Monitoring techniques

Flotation

Visual inspection

Control options

Pyrethroids when adults become active

bifenthrin (Talstar™)

cyfluthrin (Tempo™)

lambda-cyhalothrin (Battle™, Scimitar™)

deltamethrin (Deltagard™)

Neonicotinoids – suppression only

Combination products when adults become active (the pyrethroid in the combo does the work)

Acelepryn™ - suppression only