



Product

Reference

Guide

PRODUCT OVERVIEW

The introduction of Merit® insecticide 10 years ago revolutionized grub control in the turf and ornamental industry. This broad-spectrum, systemic insecticide not only provides the industry's longest-lasting grub control, but also offers the most effective control on major grub species and other insects. Throughout the past decade, Merit has demonstrated an efficacy rate of greater than 90% on virtually every grub species. Merit may be used in preventive or curative applications, controlling the white grub complex from egg lay through second instar. Merit also is effective against mole crickets when applied before or during peak egg hatch. Delivering guaranteed control at low-use rates, turf and ornamental professionals rely on Merit for superior biological performance.

Merit is available in five formulations: Wettable Powder (75WP), Flowable (Merit 2), Water-Soluble Packets (75WSP), and Granular (.5G and 2.5G). With its low use rates, Merit helps reduce exposure to applicators and non-target organisms. Based on recommended application rates, Merit is effective at rates up to 96% lower than other registered soil insecticides for use on turf.

MODE OF ACTION/HOW PRODUCT WORKS

Imidacloprid, the active ingredient in Merit, is a chloronicotinyl insecticide. Imidacloprid binds to the acetylcholine receptor in the insect nervous system, thus preventing normal transmission of nerve impulses. This mode of action results in disruption of normal behavior; treated insects stop feeding, do not reproduce and eventually die.

FREQUENTLY ASKED QUESTIONS

- Q:** When is the best time to apply Merit for white grub control on turfgrass?
- A:** Merit is most effective when applied prior to, or just after, egg lay. In most cases, adult emergence occurs in early summer, often after significant rainfall or irrigation, followed by mating and egg laying. This usually continues for four to six weeks. Under normal circumstances, Merit will provide residual white grub control for four months or longer in turf.
- Q:** Does Merit control all major white grub species?
- A:** Merit protects turf from all major white grub species, including superior control of the major grub species: Japanese and oriental beetles, European chafer, and northern and southern masked chafers. Merit also controls green June beetles better than other insecticides used for turf and ornamentals.

Key Grubs Controlled

- Japanese Beetle
- Northern Masked Chafer
- Southern Masked Chafer
- European Chafer
- Oriental Beetle

Benefits

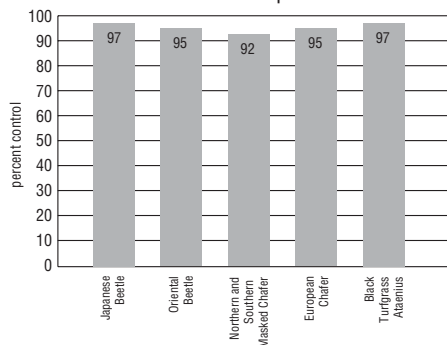
- Proven performance
- Broad-spectrum control
- Strong residual activity
- Superior biological performance
- Low use rates
- Low risk to applicator and non-target organisms
- Variety of formulations
- Mini-drum packaging
- Soil application to shrubs and trees provides long-lasting control
- Effective at use rates up to 96% lower than most currently registered soil insecticides for use on turf (based on recommended application rates)

INSECTS CONTROLLED

TURF PESTS	ORNAMENTAL PESTS
<ul style="list-style-type: none"> • White Grubs, including larvae of: <ul style="list-style-type: none"> • Japanese Beetle • Black Turfgrass Ataenius • Northern Masked Chafer • Southern Masked Chafer • European Chafer • Oriental Beetle • May and June Beetles (<i>Phyllophaga</i> spp.) • Billbug Larvae • Annual Bluegrass Weevil (<i>Hyperodes</i> spp.) • Mole Crickets • Cutworms (suppression) • Chinch Bugs (suppression) • European Crane Fly 	<ul style="list-style-type: none"> • Adelgids • Aphids • Borers (including Emerald Ash Borer) • Elm Leaf Beetles • Japanese Beetles • Lace Bugs • Leafhoppers • Leafminers • Mealybugs • Pine Tip Moth • Royal Palm Bug • Sawfly Larvae • Scale Insects (soft scales) • Thrips (suppression) • Whiteflies • White Grubs

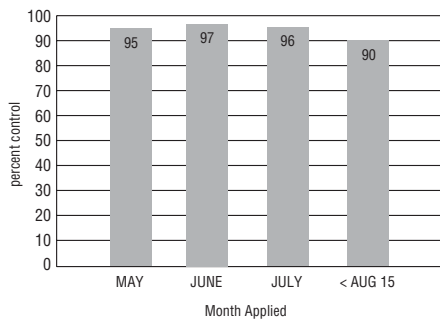
EFFICACY DATA

Effective Control of Five Major White Grub Species



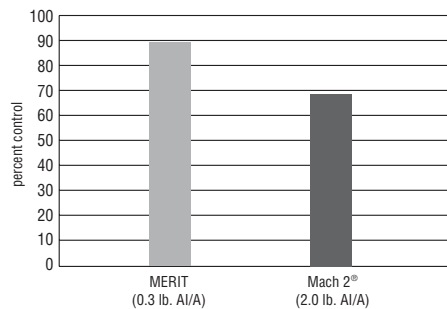
- Compilation of 144 trials; average of all labeled rates of Merit
- Untreated control contained five or more grubs per square foot

Effects of Application Timing on Grub Control



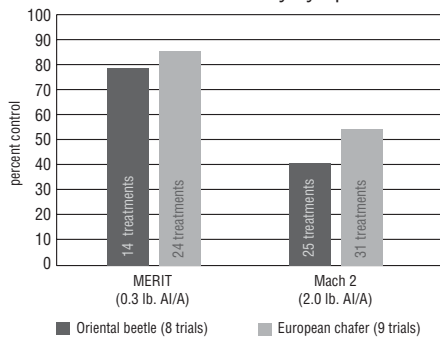
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White Grub Efficacy Comparison
Treatments Applied Before August 16*



*European Chafer, Japanese Beetle, Masked Chafer and Oriental Beetle

White Grub Efficacy by Species



Treatments applied before August 16
Data compilation from field trials conducted by independent university researchers. Includes only data from trials that made "Head-to-Head" comparisons of Merit applied at 0.3 lb. AI/A and Mach 2 applied at 2.0 lb. AI/A.