



# Turf Tips

## For Commercial Sod Production

### European Chafer and Japanese Beetle on Sod Farms

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**S**ome sod farms in Michigan have had problems with Japanese beetle or European chafer in recent years. Spring is a good time to review your strategy for the next generation. You don't have long: European chafer beetles will be flying by June 20, and Japanese beetle adults will be out by July 1.

**European chafer or Japanese beetle?** Spring is the best time to plan treatments for sod farms infested with European chafer or Japanese beetle. First, you need to know which grub — maybe both — is causing the problem. European chafer thrives under dry soil conditions and is responsible for most of the damage to home lawns and golf course roughs. In contrast, Japanese beetle prefers moist soil and is responsible for most of the damage to irrigated turf. The European chafer looks like a small June beetle (all light brown). It flies for only an hour or two just after sunset during a three-week period in late June. The adult Japanese beetle flies from early July to early September. The back of the beetle behind the head is a metallic green color and the wing covers are copper-colored.

**Insecticide products.** Of the two safest and most effective products, halofenazide and imidacloprid, only halofenazide is labeled for use on sod farms. Imidacloprid can be applied to home lawns (Bayer Advanced Lawn Grub Control, Merit) or golf courses (Merit) but not sod farms. Halofenazide (Mach 2)

works best when applied about July 1, close to the time the adult European chafer and Japanese beetle lay their eggs. The remaining grub control products can be used in September or October when grub activity and turf loss are observed.

**How they work: Halofenazide** mimics an insect hormone that controls molting. When grubs are exposed to halofenazide, they start to molt prematurely and die. Halofenazide works well for young grubs (within six weeks of egg hatch) and most caterpillars. It has little effect on other insects, earthworms or mammals. It is about as safe to come in contact with as most fertilizers. **Bendiocarb** and **carbaryl** are carbamate insecticides that affect the nervous system of all insects. Carbaryl breaks down quickly in soils with a pH of 7.8 or above and should not be used under these conditions. Applicators should be cautious when mixing and applying these carbamates, especially bendiocarb. Once insecticides are mixed in the spray tank, they are diluted about 800-fold and are therefore 800-fold less toxic. Even so, follow all label instructions when spraying. For more information, order a copy of Extension bulletin E-2178, "Chemical Control of Insects, Diseases, Weeds and Nematodes for Commercial Turf Managers," from the MSU Bulletin Office, 10B Agriculture Hall, MSU, East Lansing, MI 48824; phone 517-355-0240.

Products Labeled for Use on Sod Farms

Active ingredient	Products	Timing	Signal word / Chemical class
Halofenazide	Mach 2	July 1	Caution / insect growth regulator
Bendiocarb	Turcam	Sep-Oct	Warning / carbamate
Carbaryl	Chipco Sevin	Sep-Oct	Caution-Warning / carbamate

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