



# Turf Tips

## For the Golf Course

### Watch for Grub Damage in the Fall and Next Spring

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In the spring, golf course turf may suffer from the fall feeding damage from two white grubs: the European chafer and the Japanese beetle. In general, the Japanese beetle is more common in irrigated turf and the European chafer in dry rough, but frequent rain in July and early August can make the rough look pretty good to female Japanese beetles when they are laying eggs. Consequently, golf courses can have more Japanese beetle grubs than usual in the rough plus the usual numbers of European chafer grubs. Signs that Japanese beetle or European chafer is active on your golf course may include skunk damage and some patches of dead turf that did not green up with spring rains. It is unlikely that you will see grub damage if Merit was applied in July (or May to early August). Check around damaged areas for the presence of white grubs by pulling back some turf and counting the number of grubs per square foot. Expect additional damage over the next four weeks where more than five grubs per square foot are found in dry turf, and where more than 15 per square foot are found in irrigated turf. Skunks are good at finding the hot spots for grubs (more than 15 per square foot) and tearing up turf to feed on them.

Pull samples from around the damaged areas to find out where the grubs are — patches of dead turf tend to grow larger and larger in September and October. Turf damage can be minimized with adequate irrigation. Grub-injured turf dies when the soil becomes very dry and the turf wilts. Spot treat damaged areas and heavily infested turf with Dylox or Sevin. Dylox and Sevin do not work well when the pH is 7.8 or higher. Sprayable formulations will not work well unless they are watered in immediately after application. Granulars are more stable after application but must be watered in with 1/2 inch of irrigation before they affect grubs. Check treated areas about three weeks later to see how well the insecticide worked.

Use a map of the golf course to mark portions of fairways and rough where grub damage is observed. This map can be used to apply Merit or Mach2 next summer.

**Reseeding.** If grubs are present, an insecticide should be applied before reseeding. Grubs can eat grass seed and the roots of new grass plants.

**Next spring.** New turf damage will also appear next spring in March, April (European chafer) and May (Japanese beetle) if turf is heavily infested with grubs. Watch for the first signs of grub damage and treat hot spots with Dylox, Turcam, Sevin or Oftanol.

***Merit and Mach2 will not control grubs in the fall or spring.***

Merit and Mach2 are highly effective against young grubs for the first two months after egg hatch. But they are not very effective against the full-grown grubs that are present in the fall or spring.

Your battle plan for next year. Although the hot spots for grub damage move about somewhat from year to year, depending on adult beetle activity, there is a tendency for the same areas to be hit repeatedly.

**1. Apply Mach2 or Merit in July.** Refer to your fall grub damage map and treat the most heavily damaged areas. Treating all the fairways is not recommended.

**2. Watch for the first signs of grub injury in September and spot treat where needed.** Follow the directions in the first and second paragraphs.

**What about using Merit or Mach2 for Ataenius, Aphodius and seasonlong grub control?** Some superintendents who have had problems with Ataenius or Aphodius grubs like to apply Merit in May or June for season long grub control. Treating all the fairways with Merit is not recommended unless grub damage is a problem on all of them. Although Merit is not as harmful to non-target organisms as most insecticides used on turf, it is still detrimental to some beneficial insects. Also, treating all of the fairways every year is extremely

costly and could lead to pest resistance to Merit. Merit applied in mid-May should control Aphodius in June, Ataenius in July and Japanese beetle grubs later in the summer. However, Merit applied in May will not work as well for European chafer as Merit applied in July.

Mach2 is not as persistent as Merit for grub control. However, Mach2 has the advantage of also working for cutworms and webworms; Merit does not. Mach2 is

also almost completely harmless to non-target organisms. Mach2 should be applied in July for Japanese beetle or European chafer grub control. It can also be used in May for Aphodius or in June for Ataenius, but do not expect Mach2 applied in May or early June to control Japanese beetle or European chafer grubs in August.



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