



## **BEST PRACTICES FOR GRUB CONTROL**

### **Preventive Strategies**

1. Japanese beetle grubs can be eradicated for decades by applying milky spore 2X a year for three consecutive years. Applications can be made from spring through late summer and can be applied with organic fertilizers or compost without losing its efficacy.
2. Parasitic nematodes can be used for other white grub species, but must be applied under wet conditions and kept wet for a specified period of time. Nematodes are most effective when applied to turf between mid-August and mid-September.
3. Cultural practices for keeping grub numbers low in general include planting grasses that have deeper root systems, primarily tall fescues. Overwatering during mid-summer will attract the females who are looking for a place to lay their eggs. Watering deeply and less frequently will make the top few inches of dryer soil unfriendly for egg laying.

### **Curative Strategies**

4. Neem oil (active ingredient, azadirachtin) and clove oil (active ingredient, eugenol,) are new tools for grub control. They both have very low mammalian toxicity and are fast-acting minimum-risk botanical pesticides. Neem oil does not produce a quick knockdown, but will stop the grub from feeding and limit reproduction. Clove oil is a fast acting contact insecticide.
5. Grubs are feeding on grass roots in April and May and then again in August and September. Subject to local laws, emergency applications of the pesticide Acelepryn (with low mammalian toxicity and not bearing the signal words “caution,” “warning” or “danger”) may be made in targeted areas, as grub outbreaks tend to be localized and sporadic and only a small percentage of lawns require treatment in a given year. Broadcast applications over an entire field or lawn will defeat the populations and effectiveness of the grub’s natural predators.

Preventive strategies, using biological controls and cultural practices are best used in the spring. Curative strategies using a least toxic pesticide product (Acelepryn) are best used in late summer.

**Knowing how to detect grubs is key to treating them.** Visible lawn grub damage can be seen from late summer to early fall. Look for irregular brown patches of lawn that peel away easily from the soil, like a carpet. To determine the extent of infestation or which areas require treatment, dig up small sections of lawn. Typically, more than five grub worms per  $\frac{1}{4}$  square foot warrants treatment. Keep in mind that grubs will return to the same area to lay their eggs the next year, so make sure that you use your preventative strategies in these areas in the spring.