



European Chafer Beetle

The European Chafer Beetle, *Rhizotrogus majalis*, is a serious turf pest. In 2001 it was found in New Westminster, British Columbia, in lawns and boulevards. It has spread and is now found throughout Greater Vancouver. There are several things to know to help you prevent or manage an infestation.

Description

The adult beetle (Figure 1) is tan coloured and resembles a smallish June beetle. The larvae, or grubs (Figures 2, 3), have a C-shaped body and brown head. Mature chafer grubs are smaller than mature June beetle grubs. A microscope is required to confidently identify the grubs.



Figure 1: Adult European Chafer.



Figure 2: Mature European Chafer grubs

Biology

The European Chafer completes a life cycle in one year. Eggs hatch in the soil around mid-July, they turn into a larvae and then molt into grubs over 8 weeks. The larvae stage is the only time they are susceptible to being controlled. During the winter they dig down during periods of freezing conditions, but otherwise remain within 5 cm (2 inches) of the surface. They feed in the spring from March until April when they become pupae. Crows, Skunks, and Racoons feed on the grub during spring and again in fall. Adults emerge in late May and early June and fly to nearby deciduous trees to mate and feed. The adult beetle lays their eggs in late June and early July. Each female can deposit up to 50 eggs each in the lawn.

Damage

The grubs cause damage to your lawn by eating the roots of the turf. They feed on all types of grass and, if food is scarce, may move into vegetable plantings to feed on corn, potatoes and other crops. European chafer grubs prefer to feed on fibrous roots and can damage your lawn by reducing their fibrous root system. Most of the damage is done in the fall and early spring, but damage can be masked by the abundant moisture at these times. Drier weather can quickly result in the appearance of brown, dying patches. Considerable damage to turf can occur in the fall and winter from animals, especially skunks, and birds digging up the grass to feed on the larger grubs (Figure 4 next page).

The adult beetles feed at dusk on the leaves of deciduous trees but, even when numerous, seldom cause significant damage.



Figure 3: European Chafer grubs in turf



Figure 4: Damage caused by crows, skunks, or raccoons

Monitoring

You should check your lawn for grubs in the spring and fall. The grubs will come to the surface in late March and late September. To check for grubs, cut 3 sides of a 30 by 30 cm (12 inch by 12 inch) piece of sod to a depth of 5 cm, and fold it back to count the grubs. Generally if more than 10 grubs are found, control is warranted.

Management

A healthy, vigorous, well-irrigated lawn can deter a grub infestation. It has been shown that a Turf Type Tall Fescue with micro-clover can deter the adult beetles from laying their eggs in your soil. Although birds and mammals feeding on larvae damages turf, it also helps decrease the pest population. Wait until after animals feed on the grubs, then top dress with fresh soil and over-seed with a tall fescue and micro-clover. Mow at 6-9 cm (2 to 3 inches) height, as taller turf is less preferred by egg-laying female beetles and is more drought tolerant.

Control

Chemical insecticides are no longer available to control the beetle. Predatory nematodes are available for grub control in late July, but they need to be ordered in early June. Nematodes work best if applied when grubs are in the larvae stage which is from late July until early August. There are many types of Nematodes, be sure to ask for the Nematodes for the **European Chafer Beetle**. Before applying treatments, remove excessive thatch and irrigate if the soil is dry to bring the grubs to the surface. After applying nematodes, water the treated area every day for two weeks to move them down into the root zone. You will require a watering permit from your local municipality to water outside of the watering restrictions.

If you have an ongoing problem with European chafer, consider employing a commercial lawn care company to help manage the problem year-round. There are insecticides, not available to homeowners, that can be applied by a turf management company in the early spring and fall.

Alternatively, remove the lawn from chafer-prone areas and replace with a garden!

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15175 72nd Avenue, Surrey BC, V3S 2G3
Tel. 604-590-2431

2560 West Broadway, Vancouver BC V6K 2G1
Tel. 604-733-1534

HuntersGardenCentre.com