

EUROPEAN CHAFER – A NEW TURF PEST

The European Chafer, *Rhizotrogus majalis*, is a serious pest of turf in eastern North America. In 2001 it was found in New Westminster, British Columbia, in lawns and boulevards. It is probable this pest has been in B.C. for a few years, and has likely spread beyond New Westminster.

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.

BIOLOGY

The European Chafer completes a life cycle in one year. Eggs hatch around mid-July, and the grubs moult twice over 8 weeks. The mature grubs are well adapted to cool moist conditions and feed all fall. During the winter they dig down during periods of freezing conditions, but otherwise remain within 5 cm of the surface. They feed in the spring until April when they become pupae. Adults emerge in late May, fly to nearby deciduous trees to mate and feed, and subsequently females deposit up to 50 eggs each.

DAMAGE

The grubs are the damaging stage. They feed on all types of grass and, if numerous and 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 ornamental and nursery plants by reducing their fibrous root system. Most of the damage is done by the the third (final) instar grubs 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).

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

MONITORING

To check for grubs, cut 3 sides of a 30 by 30 cm piece of sod to a depth of 5 cm, and fold it back to count the grubs. Generally if more than 20 grubs are found, control is warranted.

MANAGEMENT

There are no reliable commercial or natural biological agents for this pest. Healthy, vigorous, well-irrigated turf can withstand low levels of grub feeding.

Insecticides are most effective when applied in August and September against the smaller grubs. However controls can also be applied successfully to non-frozen turf in the fall and early spring. Before applying sprays, remove excessive thatch and irrigate if the soil is dry to bring the grubs to the surface. After applying a pesticide, water the treated area to move it to the root zone.

Apply:

Diazinon 500EC, 150 ml in 100 L per 100 m².
Diazinon 12.5EC, 410 ml in 100 L per 100m².
Sevin XLR Plus, 210-290 ml per 100 m².



Figure 1: Adult European Chafers



Figure 2: Mature European Chafer Grubs



Figure 3: European Chafer Grubs



Figure 4: Boulevard damage caused by skunks digging out grubs