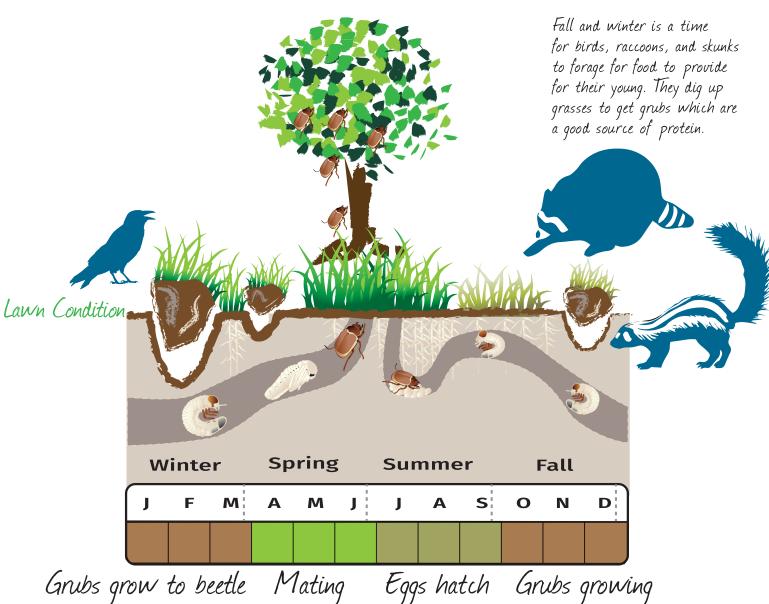
Chafer Beetle





Grubs grow to beetle Mating

Adult beetles emerge from the soil and fly to nearby deciduous (broad-leaved) trees to mate and feed. Once mated, females deposit eggs (up to 50 eggs per female) in the soil beneath thatch-forming grasses.

Eggs hatch

Eggs hatch in July and the larvae (grubs) begin to feed on turf grass roots. Infested turf may feel "spongy" when stepped on due to the grubs tunneling underneath. During this time, damage to turf can be seen by brown, drying patches of grass.

The grubs grow as they continue to feed in fall and winter. They remain within 5 cm of the soil surface unless in freezing conditions when they burrow deeper. During this time, damage to turf is most serious. Birds, skunks, and other predators dig up grasses to feed on the mature grubs. The grubs continue to feed until they pupate (undergo metamorphosis) to become adult beetles in May.

Chafer Beetle



Organic Chafer Solutions



Nematodes are perhaps the best biological control for European chafer beetle larvae. They should be applied in late July, in order to parasitize the eggs and early larval stages. The nematode Heterohabditis bacteriophora is the most effective species in hunting down and killing thick skinned soil grubs. Predatory nematodes are prey on over 250 species of insects. Only insects that have a soil-dwelling larval stage can be controlled by nematodes.

Apply Terranem® nematodes in late July for control of Chafer grubs. Nemotodes need the soil to be warm enough to thrive (outdoor temperature must be at least 14°C), and the pest that nemotodes are applied against need to be present in the soil during the larval stage. The fifty million nematodes included in one application of Terranem® will treat an area of 230m² (2,500 square feet).

The general principle for application is to dilute the nematodes in a volume of water, and then use portions of this solution, further diluted, to distribute the nematodes evenly over the growing area. Prepare the area by making it completely wet, then apply the nematodes, and then water again. The purpose is to help the nematodes wash down into the soil where the pests are.

Parasitic nematodes invade and destroy white grubs, pill bugs eggs & larvae, Japanese beetle larvae, crane fly larvae, and other pest species commonly found in lawns and turf.



Plant Non-Grasses

Micro-clover & Fescue

Creating lawns with plants that do not form thatch is one strategy to combat chafer beetles. The adults prefer to lay their eggs where their young can feed on healthy thatch.

Use micro-clover to replace grass altogether for a rich, green, drought tolerant turf, or combine it with other non-thatch-forming turf plants. Like other legumes, clover fixes nitrogen in the soil. This process acts as a natural fertilizer, producing lush growth in lawn grasses.

- It is tolerant of drought, frost, and foot traffic.
- · Micro-clover smothers out weeds like dandelion and buttercup.
- · If mowed every 2-3 weeks its leaves will stay significantly smaller than other clovers, giving lawns a fine textured appearance.
- Micro-clover is a perennial ground cover that does not require re-seeding.

Use Tall Fescue (turf type) as an alternative to traditional lawn grasses. Tall Fescue stands up to traffic, drought, cold, shade, pets, and mowing. It is far tougher than conventional lawn grasses like Kentucky blue grass, but it still makes a lush green lawn.

- · It is tolerant of drought, frost, and foot traffic.
- Fescue forms clumps, rather than spreading by dense underground root
- Tall fescue (turf type) is frequently used for sports fields.
- It can be mixed with micro-clover or even low-growing wildflower mixes.



3 New Lawn Spaces

Xeriscape

This is a concept in landscaping that combines soil preparation and plant selection to create beautiful, living spaces, that require very little water or maintenance. Drought-tolerant plants are mixed with large pieces of stone or wood. The borders can be mulched with gravel or bark chips to reduce weeds. Careful planning goes into a xeriscaped area, but it results in a very small carbon footprint, and can actually give back to the environment by reducing water use, while feeding insects and wildlife.

Landscape for wildlife

New research shows that when pollinator habitat is re-planted in urban areas, insect populations can rebound dramatically. Land does not have to be set aside to accomplish this. Instead of devoting the space to demanding lawn grasses. convert it into an oasis for passing butterflies and bees. Grow sunflowers and other plants that attract and feed songbirds. Be part of the solution to pollinator decline, and end lawn maintenance for good.

Raised Beds

The beauty of the raised garden bed is that it can be placed nearly anywhere. It has improved drainage and warmer soil, and the growing area is clearly defined and easy to access. Beds can be customized to any height or dimensions. and they can be very productive for growing vegetables, herbs, and flowers. Use landscape fabric to lay down over existing turf, position the raised beds, and fill in between with pea gravel or bark mulch.

Farm the space

Why not convert the lawn into a profitable plot for urban farming? Dense plantings and quick succession crops can earn an urban farmer a good living. Thoughtful urban farmers like Curtis Stone and Jean-Martin Fortier have shown that a very lucrative business can be had by working small plots of land and selling to restaurants and CSA shares. Both of these urban farmers generously share their knowledge in books and online.