Pest identification

Leatherjackets

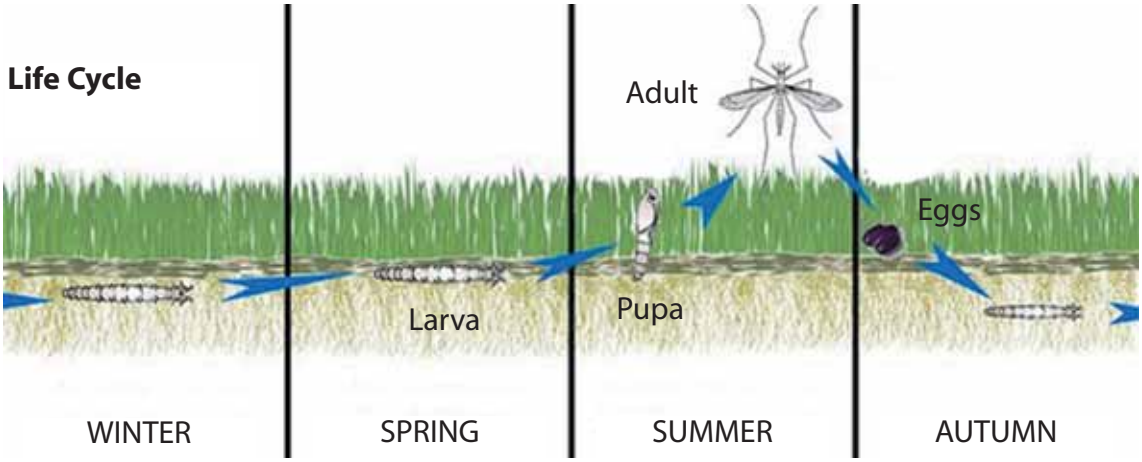
Leatherjacket

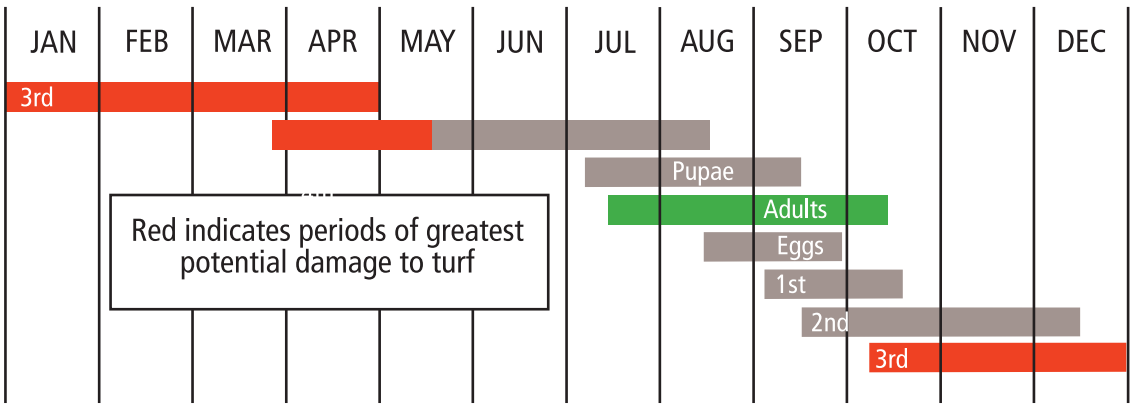
Crane Fly

Crane Fly eggs

Crane Fly larvae feed on the roots of grasses. Usually very little damage is done as plants have a remarkable ability to compensate for minor root damage. However, when populations are high (estimated to be about 25-30 larvae per square metre) damage to turf areas can be extensive.

The adult Crane Fly is found in the late summer and early autumn. It has long legs and resembles a large mosquito (body is about 1 inch long). The larvae, called Leatherjackets, live in the soil. They hatch from eggs laid in the late summer. They feed during the autumn and into the spring of the following year. They stop feeding in May. Damage generally becomes noticeable during the spring, caused by feeding that occurred the previous autumn and winter. Damage can also occur when birds scratch at the turf surface attracted to the larvae.





Chafer Grub

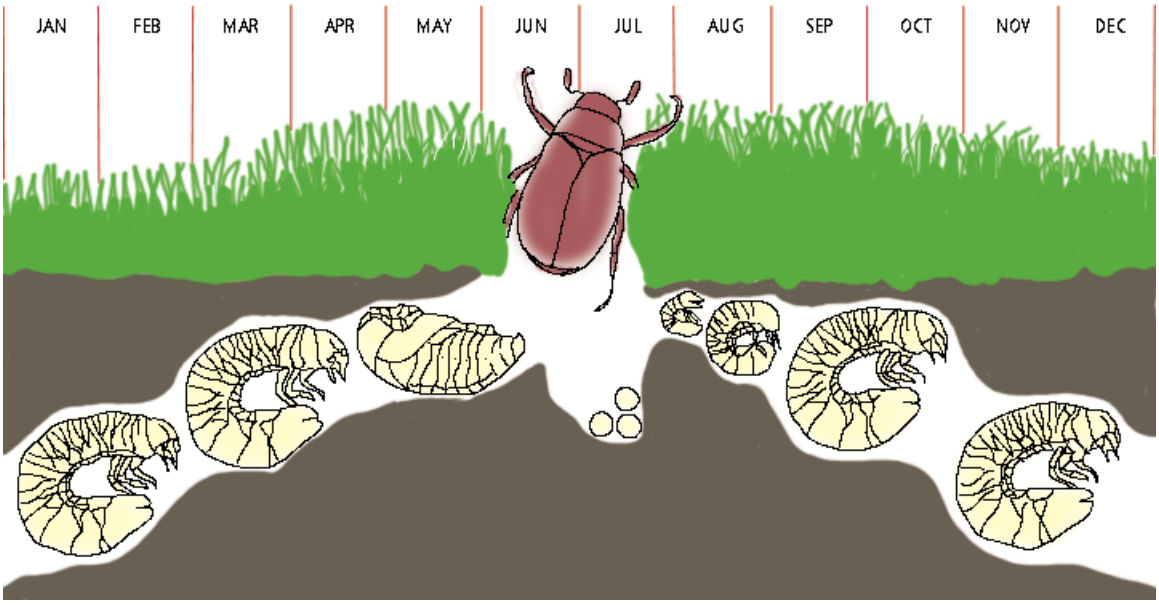
Adult Chafer

Chafer Grub

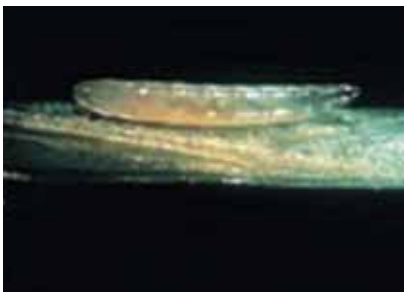
Adult Chafers are medium-sized reddish brown beetles about 13-15mm long. It is the grub stage however that is most likely to be found in turf. Damage is usually most evident in August and September. Early symptoms include gradual thinning, yellowing, and weakening of the grass stand followed by the appearance of scattered, irregular dead patches. As damage continues, the dead patches may increase in size, and apparently healthy turf areas may exhibit sudden wilting. The turf may feel spongy as you walk over the infested area.

Adult Chafers emerge from the pupal cells in mid-June and continue mating until late July. The adults emerge at dusk and fly to nearby trees and shrubs where copulation begins. This copulation occurs in mass until dawn when adults return to the soil. Cool or rainy nights greatly reduce flight and mating activities, but eventually females dig into the soil and lay eggs. Each female lays 15-20 eggs in 2-5 days. They are usually laid in compacted soil, up to 150mm deep.

The eggs swell to approximately 2.0 x 2.7mm as they absorb moisture and hatch in about two weeks. The first instar (stage) are approximately 4mm long and may remain in the soil if surface moisture levels are low. however eventually the young larvae move to the surface and feed on plant roots. If food is sufficient, the first instar matures in three weeks and the second instars take a further four weeks to mature. The third instars which can grow to 17mm when fully grown feed for a period in the autumn before moving down into the soil for the winter. Pupation then occurs in mid-May 50 to 150mm into the soil.



Frit Fly



Frit Fly larva

Frit Fly damage

Frit fly larvae are yellowish-white in colour and can grow up to 5 mm long. There are three times during the year when larvae are present. Those present from September to December cause the most damage. Frit fly larvae bore into the centre shoot causing loss of tillers. Plants attacked but not killed are stunted and grow poorly. The individual larvae can move and attack other tillers and other plants.

Frit fly occur in almost all grass swards in the UK, usually in vast numbers – 5 million per hectare are quite common. Because larvae of the frit fly are so small, they are difficult to see, and damage often passes unnoticed.

The target plant population for a new ley is approximately 450 plants/m^2, and to achieve this 1,200 seeds/m^2 are sown. By far the biggest cause of this loss in emergence is due to frit fly larvae.