

The Lawn Man Fact Sheet: Leatherjackets

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What are leatherjackets?

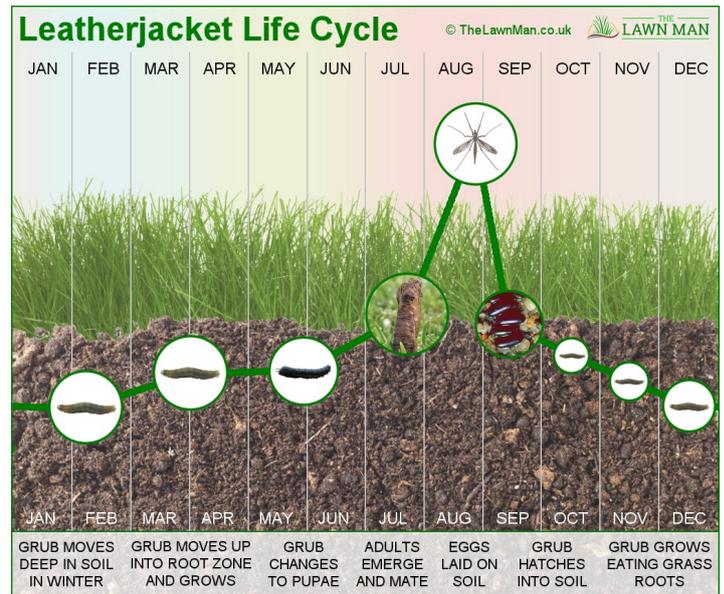
A leatherjacket is the common name for the larval stage of an insect called a **crane fly**. They are in the *Tipulidae* family of insects. In the UK, two species of this family are pests to lawns. These are *tipula oleracea* and *tipula paludosa*. The adult form of these insects are commonly known as daddy-long-legs. These are the large, clumsy insects which fly around our gardens in late summer and early autumn. They are often seen bumbling along the ground, getting trapped in windows and flying into our faces when we least expect it!



The leatherjacket life cycle

The adults are active in late summer into autumn. After they mate, the females lay their eggs on scrub grassland and on lawns. These eggs hatch into grubs two or three weeks later, depending on conditions. These grubs (the leatherjackets) move through the soil and feast on roots of plants found around them. They reduce their activity and dig deeper into the lawn in the winter due to the cold, but start up again in the spring. They need to eat more as they grow larger. Affected plants die suddenly. Lawns can be devastated.

In late spring the grubs pupate, forming a protective layer around themselves. Inside this pupae the insects transform over several weeks into the adult crane fly. They then emerge when they are ready. Unfortunately for them, their adult lives are very short. Their only aim is to find a mate and lay eggs for the next generation. They don't even have any mouths to eat food! As soon as their energy has been expended, they die, leaving the next generation as eggs in your lawn.



How can you spot leatherjacket grubs in your lawn?

Finding out if you have a leatherjacket infection in your lawn is quite simple. You only need a small pocket knife and good knees. Firstly, have a general look at the lawn and see if you see any patches of obviously dead or dying grass which seem rather out of place or randomly distributed. Down on the ground, have a closer look at these areas. First thing to do is to grab a handful of grass and try to pull it up. Healthy grass will not budge, being held in place by the roots. Grass subjected to a heavy grub attack will come away easily, almost like a carpet. This is because the roots holding it to the ground have gone.

Next, dig into the lawn and have a look to try to identify a grub. This is important as you need to confirm the pest you are trying to deal with. In a UK lawn you are only likely to encounter leatherjackets, chafer grubs, cutworms or wireworms. Wireworms are thin and orange. Cutworms are larger, 'C'-shaped blue-grey caterpillar type grubs. Chafer grubs are white, usually curled up in a 'C' shape with a black head. Leatherjackets are darker coloured, straight and can be between 0.5cm to over 2cm long.

What damage can leatherjackets do to your lawn?

In large numbers, leatherjackets can be a very destructive lawn pest. They can destroy a lawn completely. Such a severe attack is unusual, but even lighter damage can dramatically affect the look of your lawn which can require expensive repairs. The best way to deal with any possible infection is to make sure that it doesn't get out of hand. Just one or two leatherjackets in a lawn will barely be noticed, but it's when they appear in large numbers that you should be concerned. Measures to keep population numbers down should be taken as soon as they are detected in a lawn.



A mild, damp winter will bring leatherjackets closer to the surface and they will be able to keep feeding. As a result, damage to lawns in spring is always a lot worse after a mild winter. If your soil does not freeze in winter, be on the lookout for grub damage in the spring.

Further problems can arise from large animals taking an interest in the grubs. They offer a tasty meal, especially during the lean winter months. If a large population of grubs are found by a badger, fox or even birds, the subsequent damage to a lawn can be devastating! A lawn can be ploughed up overnight.

How can you control leatherjackets?

There are no chemical treatments or pesticides available to control leatherjackets!

Environmental legislation withdrew all professional and home use insecticides in 2015.

The only way to control a leatherjacket infection in 2020 is to try to control populations using non-chemical methods. Here are a couple of different approaches you can try. Like most garden pests, the best results come from using several methods rather than just relying on one.

Method 1 – Prevent the eggs being laid in the soil.

In late summer, you may notice the adult crane flies flying around your garden. This is when the next generation of leatherjackets are being produced. The adults do not live for very long and their only task is to mate and lay eggs. Preventing these eggs from getting into your soil will drastically reduce the chance of a leatherjacket attack the following winter. Once you see the adults, increase your mowing frequency and collect all the grass clippings. Even if the grass it doesn't need mowing! This will remove a lot of the crane fly eggs from the surface of the soil before they germinate.

Method 2 – Black plastic sheeting.

You may be able to encourage the grubs to the surface of the lawn using black plastic sheets, tarpaulin or thick bin-bags. First, you thoroughly wet an infected area of the lawn with a hose or watering can. This helps the grubs move through the soil. Then lay a thick plastic sheeting (not ground cover or anything which lets light through) over the lawn overnight or for a couple of days. Secure it with some stones or pegs. Then, when you remove it, the grubs should be on the surface of the lawn. You can either suck them up with your mower or leave them as a nutritious breakfast for the local bird population. Move the sheets to another affected area of lawn. This is an easy method for homeowners to keep the leatherjacket population down without professional help.

Method 3 – Nematode biological control.

This modern, natural treatment utilises a parasitic nematode worm called *Steinernema feltiae* for the control of leatherjackets. After correct application to the soil, these microscopic worms find a leatherjacket grub as a host and infect them with a specific species of bacteria. This multiplies and kills the grub. Nematodes have to be applied under very specific conditions. They must be refrigerated upon delivery and then applied when the soil is warm and moist. Watering in the treatment is also very important as the nematodes must come into direct contact with the insect grub. These restrictions on the treatment mean that I am unable to offer it as a professional treatment, but it is available to homeowners online. Just google 'Leatherjacket nematodes' for more information.

Method 4 – Encourage insect-eating birds.

Birds are natural predators of crane flies and relish the high populations of these insects in late summer. Encouraging birds into your garden with a variety of plants, water and bird feeders will build an army of predators which will keep a lookout for crane flies. They will despatch them before they even get a chance to lay their eggs in your lawn.

Method 5 – Dig them out!

For small areas it is quite possible to manually dig out the grubs. Using a knife or thin trowel cut into the soil in the affected area and look through the soil for the grubs. Pick them out and put them on the bird table. A few sessions of grub hunting should help minimise further damage and the lawn can be repaired with some seed.

Method 6 – Encourage strong grass roots.

If your lawn has not yet been attacked then you can minimise damage to grass by keeping it as healthy as possible. Grass with a shallow, weak root system will struggle with an insect attack. Deep roots from a strong, seeded lawn will be better equipped to cope and re-grow lost root mass. Aerate your lawn regularly and keep to a quality feeding programme to keep the lawn as healthy as possible throughout the year.

Method 7 – Garlic Spray.

Farmers in Scotland are experimenting with garlic sprays as a treatment to keep leatherjacket numbers down. This has so far looked encouraging, especially for regular treatments throughout a mild winter. The theory is to spray the grass leaves with a bad-tasting liquid so that the pests go elsewhere. Talk to your lawn care professional about this option.

Leatherjacket controls to avoid.

Some sources recommend rolling your lawn to compact the soil. The theory behind this is that it prevents the leatherjackets from moving through the soil and feeding. However I DO NOT recommend this for a domestic lawn. The resulting damage to the structure of the soil caused by compacting will be just as bad as a leatherjacket attack! Rolling your lawn is never recommended.

Also some professional lawn care companies have been offering to discretely spray lawns with their old stocks of banned insecticides. I cannot stress enough how bad this practice is. It is illegal to even hold stocks of these banned chemicals, let alone knowingly spray them as part of a business exchange. Both parties involved could get into some serious legal trouble if it was found out. If your lawn care company offers this, simply decline.

Will leatherjackets keep attacking my lawn every year?

Leatherjackets grubs are an annual lawn pest. Once they have turned into adults and flown away the lawn can be repaired. Your lawn may become re-infected with crane fly larvae from the next generation. I have seen lawns get infected in one year and never since. I have also seen lawns become infected several years in a row. It is just the random nature of these insects of where they happen to be blown, mate and lay eggs. Once you have confirmed that your lawn has leatherjackets, it is best to be vigilant every year so that you can minimise any future damage and take action quickly.

If you have any success with any of these controls, or have any other ideas or suggestions in keeping their numbers down, I would love to hear about it. Let me know at kris@thelawnman.co.uk

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