

Wireworms

GWF357

Updated February 2009

Hidden from view, wireworms will attack and kill seedlings of root vegetables. They also damage many other fruit and vegetable crops.

Q What are wireworms?

A They are the grubs or larvae of click beetles, sometimes known as skipjacks. Although there are 60 or so species of click beetles, only five species (*Agriotes obscurus*, *A. sputator*, *A. lineatus*, *Athous haemorrhoidalis* and *Ctenicera*) are troublesome to gardeners. The larvae of these are hard to tell apart. This does not matter as they turn up in similar places and are dealt with in the same way.

Q Do the adults really click?

A Yes. If they fall on to their backs, they throw themselves into the air, to get back on their feet, making a clicking sound.

Look out for dark brown to black, fast-moving beetles up to 16mm long. They can be found in grass or on the soil from spring to summer, and you are most likely to see them at night in mild, wet weather. Although they feed on plant material, they do no real damage. *Ctenicera* adults have a shiny metallic appearance.

Q How can I recognise the wireworms?

A When young they are pale, transparent and extremely small. As they grow to reach their full 25mm length, they acquire the typical glossy, golden-brown

colour. They are very thin, with a tough, segmented outer covering. The head is darker, with mouthparts adapted for chewing tough roots. There are only three pairs of legs, which are just behind the head.

Q Could I mistake them for anything else?

A Many other types of larvae live in the soil. You often find the grubs of bibionid flies that feed on organic matter in soil. They are thinner and smaller than wireworms with a distinct black head, and are usually harmless. If they are present in very large numbers, they may do a little local damage. In pots you may find small, rather featureless sciarid-fly larvae - see factsheet GWF260 - these are more serious.

You are unlikely to mistake wireworms for cutworms. These are caterpillars with true legs at the head end and fleshy, sucker-like legs at the back. The head is clearly recognisable. See factsheet GWF237.

Other soil pests you may come across are chafer grubs, which are bigger, comma-shaped and have a bulbous abdomen and a black head, with true legs. See factsheet GWF247.

Leatherjackets are grubs up to about 25-40mm long. They are greyish brown, or even black, with tough, leathery skins enclosing a

soft body. There is no distinct head or legs. Their colour makes them hard to spot in soil. See factsheet GWF247.

Other soil-dwelling creatures you could mistake them for are usually faster moving ones such as millipedes, centipedes and predatory beetle larvae.

Q Tell me more about them.

A The adults spend the winter in cells in the soil, unless disturbed, in which case they shelter in hedges and similar cover. Eggs are laid in the soil in summer. These hatch after about a month into tiny wireworms which take up to five years to reach full size.

When fully grown, in their final summer they tunnel 20-25cm into the soil, and make a chamber in which they pupate. This pupa turns into an adult after about a month, in late summer, which begins the cycle over again.

Q What damage do wireworms cause?

A Wireworms feed on the roots of young plants in the spring and summer. Seedlings of root vegetables in particular wilt and die, due to loss of roots. The damage can be seen as small, dark wounds on the stems of affected plants.

Vegetables such as French beans,

lettuce, onions, strawberries and other garden plants are also affected. Beans, chrysanthemums and tomatoes may have tunnelled stems; this is how the wireworm travels up from the soil inside the plant. Widely spaced plants can suffer disproportionately as the wireworms concentrate their attack on the nearest available plants. The first sign you will see is the sudden wilting and collapse of plants. Exploring the soil round the plant will reveal the culprit.

They also tunnel into potatoes. Dark, narrow mines disfigure the inside of potatoes, making them unusable. You don't see this attack until you lift the crop, only to find it damaged beyond rescue. Cutworms and especially slugs also attack potatoes, but these two usually make large cavities. In some cases, millipede attacks follow the cutworms, slugs and wireworms, but they are not the primary cause of damage.

Q Where do wireworms usually turn up?

A Grassland is the wireworms' favourite habitat. Fortunately, they don't seem to do much damage to the grass. If you have lawn troubles, suspect leatherjackets or chafer grubs. However, if you dig wireworm-infested turf and turn it into a garden, you are likely to run into problems. For the first year or two the wireworms feed on the buried grass, but when that runs out, they will attack garden plants. Weedy, run-down gardens and allotments are also more likely to suffer attacks.

Naturally moist or irrigated soils are most at risk. Sandy soils don't suit them, they are too dry.

Q Are they a problem in containers?

A No. It is quite unusual to find wireworms in containers.

Q Can I tell if they are present before I plant?

A Unless you spot them when digging in spring, they are hard to detect. The small, immature ones are especially easy to miss. Be prepared to take preventative action where grass or weeds were present in the preceding year or where attacks occurred in the previous season.

Q Can I avoid wireworm attacks?

A Digging in late winter or early spring, followed by frequent cultivation, seems to reduce wireworm numbers. Getting rid of weeds and debris before digging will help to starve them out.

Q What else can I do?

A Getting plants off to a flying start will help them withstand mild attacks. Raise transplants in pots and cell trays. Sow in warm, firm, moist soil – use fleece to boost early growth. Also, don't thin the seedlings too early. In fact, sowing more thickly where attacks are expected is a wise precaution. Spread over lots of plants, wireworm attacks can be tolerated. Where they have to pick on just a few plants, damage can be fatal.

Trapping wireworms with baits of pieces of carrot, beetroot or potato on the end of sharpened sticks in the soil is one traditional method of control. You can pull it out of the soil using the stick. Any wireworms feeding on the bait can then be destroyed. This may be worth doing where only small areas are involved.

Feeding with nitrogen fertiliser and watering well will help your plants grow away from vulnerable stages and recover from damage.

Check potatoes in September for signs of damage. If they have been attacked, lift and store the tubers.

Q Can't I just leave it all to nature?

A You can often get away with ignoring minor infestations. Birds eat many wireworms and you can help the birds by forking over the soil in spring to expose the wireworms. Parasites and diseases also destroy them.

Q Will chemicals work?

A There are no chemical controls available for this pest.

Q Is it worth killing the adults?

A No – you would have to use a lot of pesticide, which is likely to kill helpful insects as well.

Q Are there any resistant plants?

A Peas and broad beans are said to be relatively immune.

Q Once I have got rid of wireworms will they come back?

A Once the original population has matured or been destroyed, they won't continue to be a serious problem. They can take 3-4 years to become re-established. There are exceptions, eg chalky sites, when low populations often persist.

If you reseed with grass, you can expect a slow return of the wireworms.