



FACT- FILE [Broad Beans Pests 02]

Blackfly



Gardens are a haven for blackfly. In this sheltered environment they can double their numbers every week, quickly forming huge colonies.

Q What exactly are blackfly?

A Technically they are aphids, a common sap-sucking bug, very similar to greenfly. There are several different species, all of which are dark-coloured. Each species has different host plants and life cycles. Only a very few behave as pests, as most occur in small numbers and do little harm. The pest species are those that build up to large numbers. They spread on the breeze and tend to settle in sheltered sites – so gardens suffer disproportionately.

Q What damage do they do?

A Blackfly can weaken and stunt infested plants by sucking their sap. They can also spread virus diseases. However, they often do little damage, so try to live with them if possible.

Eventually, natural predators, parasites and diseases will get rid of them.

Q Which common blackfly am I likely to see?

A Telling different species of blackfly apart is usually a job for an expert with a microscope, but the following are distinctive: Black bean aphid (*Aphis fabae*). This is the common blackfly that infests broad beans, runner beans and French beans, as well as spinach, beetroot and spinach beet. They often attack ornamental plants as well. It overwinters as eggs on spindle bushes (*Euonymus europaeus*) and guelder rose (*Viburnum opulus*). In the spring, the eggs hatch and the blackfly move to the beans and other host plants. It builds up in large numbers, doubling its population each week. The numbers then decline, survivors returning to the spindle and viburnum in the autumn. Melon-cotton aphid (*Aphis gossypii*). These are small blackfly, usually dark-coloured, but sometimes yellow. They are mainly a problem on cucumbers, but they also attack other plants, such as chrysanthemums. They occur all year round, and can multiply by up to ten times in a week. They weaken plants, cause distorted foliage, disfigure flowers, spread viruses and produce honeydew, a sugary substance that becomes colonised by black sooty moulds. Melon-cotton aphids are increasingly resistant to insecticides. Chrysanthemum aphid (*Macrosiphoniella sanborni*). These are green, brown or black and feed on chrysanthemums. They attack the flowers and foliage, forming colonies. They are troublesome outdoors in the summer and indoors in the autumn.



Q Might I mistake blackfly for something else?

A At a casual glance, you might mistake them for capsid bugs or leaf hoppers. Large colonies of blackfly can even look like a disease. Rub them with your finger – if they crush into a watery mass, chances are they are blackfly or an aphid type.

Q When should I expect attacks?

A Blackfly don't usually start to multiply until late spring, but when they do, they rapidly reach very high numbers. They do this by giving birth to live young. The young already carry blackfly inside them when they are born.

Q Do they turn up every year?

A Blackfly can survive as eggs on host plants, or as adults on plants in a greenhouse or on a window sill until spring, when winged ones spread by drifting on the wind. Although this sounds random, there are so many blackfly that few gardens are likely to escape. Some years are worse than others. Blackfly numbers depend on the weather, how many pests and predators attack them and the effect of diseases.

Q Why do some have wings and some not?

A They have different forms. When their population is high, predators are about or at times of year when they disperse to alternative food plants, winged forms develop. When they find new hosts, the winged blackfly lose their wings.

Q Do blackfly spread plant diseases?

A Yes, they carry viruses. Melon cotton aphid can spread cucumber mosaic virus, which damages many plants.

Q Can they be sprayed?

A All blackfly are dealt with in the same way. Contact insecticides such as Bayer Organic Pest Control, kill only what they come into contact with. To get all the pests you have to be careful to spray the whole plant thoroughly. For a systemic control try a thiacloprid- or imidacloprid-based sprays, but check the packet to make sure it has approval for use on the plants and crops you're spraying. Some blackfly have become resistant to insecticides, so if your sprays do not work, **try ones based on fatty acids or soap** (organically friendly - they should be used first).

Q Can blackfly be avoided?

A Early and late sowings often escape the worst of the blackfly 'fly-ins'. Black bean aphids particularly like the succulent young broad bean leaves and shoots. For this reason, gardeners often pinch out the growing tips after the last of the flowers has formed. This removes the best feeding site for the pest, improves the yield and hastens maturity of the pods.

Q What should organic growers do? *

A Try Bayer Organic Pest Control. Alternatively, the blackfly can be excluded from the plants by covering with horticultural fleece or insect-proof mesh. The plants must be free of blackfly before the covering is put on, or they will multiply even faster. Fleece captures too much warmth for summer sowings. To avoid 'cooking' your plants, use insect-proof mesh instead. Raise young plants of the cabbage family in seedbeds covered by fleece or mesh, to get strong, pest-free

transplants. These covers will protect against flea beetles and cabbage rootfly.

Q Are there biological controls?

A Natural pests and diseases kill great numbers of blackfly. Sadly, they often fail to do this before the pest has damaged the crop. Predators and parasites can be introduced to control blackfly. These work best in warm, covered places where they are less likely to stray from the plants.

Q How do I use biological controls?

A Introduce the parasites and predators as soon as you see the blackfly, but only if average temperatures are greater than 10°C. Two introductions of *Aphidoletes aphidimyza*, a tiny (2mm) midge should be enough. However, more will be needed if the plants get heavily infested. This midge lays about 100 eggs during its two- week lifetime. The tiny larvae feed on about five adults or 15 juvenile blackfly, during their 1-2 week development. They work best in warm, well-lit conditions. *Aphidius* is a parasitic midge that is good at hunting down blackfly and laying eggs inside them. The larvae eat the blackfly from the inside. Use these when you only have a few blackfly in your greenhouse. Avoid insecticides unless based on soap or fatty acids if you are going to use biological control, as they may leave residues that will harm helpful insects.

Q What should I do with infested plants?

A When composted, or buried, blackfly are unlikely to be able to spread or cause further damage. In greenhouses, a thorough autumn clear-out should be done to make sure no blackfly survive.