

Black Bean Aphid (*Aphis fabae*)

What are they?

Black bean aphids (also known as black fly) feed on many hosts and is associated with a large variety of vegetables including tomatoes. Economic damage caused by black bean aphid is mainly as a result of direct feeding. Virus transmission is of relatively minor economic importance for affected crops other than beetroot.

What do they look like?

Adults are about 2 mm long with a small head and bulbous abdomen (Fig 1). Colour can range from a dark olive green to black. They sometimes have white flecks on the upper surface of their body. Legs are a light colour with black 'knees and ankles'. Black bean aphids have 2 black, backward pointing abdominal tubes called cornicles. They may be with or without wings (Fig 2).

Why are they an issue?

Black bean aphids have piercing and sucking mouthparts. This means they suck sap from stems and leaves and cause distortion of the shoots, stunted plants and reduced yield. Black bean aphids excrete a substance called honeydew which encourages the growth of sooty mould which can spoil crops. Heavy infestations may reduce seed formation and cause plants to die. Black bean aphids may also transmit viruses. Black bean aphid populations can increase rapidly in favourable conditions resulting in rapid exploitation of host plants

What should I look for?

Symptoms of black bean aphid damage include leaf curling, distortion and wilting especially on young actively growing leaves. Leaves may also yellow and wilt, along the edges first. Aggregations of black bean aphids may develop on soft shoot tips, flower stems and the underside of younger leaves. There may also be white skin casts associated with infestations. The presence of sooty mould (growing on honeydew excreted by aphids) and ants are often associated with black bean aphids.

How do they spread?

The black bean aphid can be carried on planting material and some vegetables. The main means of dispersal is through migratory flight. Black bean aphids overwinter on a primary host e.g. *Euonymus europaeus* or *Viburnum sp.* They then move to a secondary host to complete their life cycle. The secondary hosts are often the crops listed above. Female black bean aphids are able to reproduce without mating during some parts of the year.

Where are they present?

Black bean aphids are widely distributed in many parts of Europe, Asia, Africa and North and South America as well as Saba and Puerto Rico in Central America.

How can I protect my industry?

Check your production site frequently for the presence of new pests and unusual symptoms. Make sure you are familiar with common pests of your industry so you can recognise something different.



Fig 1: Black bean aphids – adult and nymphs (*A. fabae*)
Photo: Jack Kelly Clark, courtesy University of California Statewide IPM Program. Copyrighted by the Regents of the University of California.



Fig 2: *A. fabae* – winged adult
Photo: Hullé M., Turpeau E., Chaubet B., 2006. Encyclop'ahid, INRA, <http://doi.org/10.15454/1.4333379890530916E12>