

Flea beetles

Epitrix spp.

Crops affected: Capsicum, Chilli, Cucumber, Eggplant, Tomato

What are they?

Epitrix spp. (including *E. cucumeris*, *E. similaris*, *E. subcrinita*, *E. tuberosa*, *E. hirtipennis*, *E. papa*, and others) is a biological grouping of flea beetles which are thought to feed on a number of host plants but prefer members of the Solanaceae family. *Epitrix* species are extremely difficult to distinguish – even by experts. Hosts include **capsicum, chilli, eggplant, cucumber, tomato**, and potato.

What do they look like?

All species of *Epitrix* are similar. They are dark in colour, only 1.5–3 mm long and covered with short soft hair (Fig 1). The name ‘flea beetle’ derives from the adult’s ability to jump when disturbed. Mature larvae range in size from 1–5 mm long and are dirty-white with a brown head.

What should I look for?

Adult feeding on leaves produces a distinctive ‘shot-hole’ pattern (Fig 2, 3 & 4). Small lesions can appear on young fruit at the time of fruit set (Fig 5). As the fruit grows, the lesions become lignified and discoloured around the margins. Their incidence becomes more significant as the fruit develops and may result in downgrading (Fig 6).

How do they spread?

The spread of flea beetles is understood to be as pupae or dormant adults in soil associated with host and non-host plants.

Why are they important?

Adult flea beetles feed on plant leaves causing damage. This damage is not usually economically significant in older plants but damage to seedlings can result in death or stunted growth. The larvae of most flea beetle species feed on small roots or root hairs which may slightly reduce plant health and vigour but typically does not result in substantial economic loss. Fruit damage and discolouration reduce overall quality and saleability.

Where are they present?

Flea beetles are present in North, Central and South America, Europe, and parts of Oceania. The distribution of different species of flea beetles varies around the world.

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.



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Fig 1. Potato flea beetle (*E. cucumeris*).
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Fig 2. Leaf injury to tomato seedling by Potato flea beetle.



Fig 3. Shot-hole feeding wounds to a tomato leaf. Photo credit: Whitney Cranshaw, Colorado State University, Bugwood.org



Fig 4. Shot-hole appearance on eggplant leaf caused by *E. hirtipennis*. Photo credit: Ephytia Inrae



Fig 5. Lesions on young eggplant fruit caused by *E. hirtipennis*. Photo credit: Ephytia Inrae



Fig 6. Damage on eggplant fruit caused by *E. hirtipennis*. Photo credit: Ephytia Inrae