Factsheet

Flea beetle

WHAT ARE FLEA BEETLES?

Flea beetles are members of the chrysomelidae family and there are many species of flea beetle, most of which attack brassicas. They are particularly damaging to young seedlings, especially during dry weather. The adult flea beetles are small, oval and 0.15-0.5cm long they vary in colour from green – blue – black. The adults are active leaf feeders, have long hind legs and will readily jump off the plant when disturbed. Damage can be considerable to young plants (even destroy them), and the cosmetic quality of older plants can be badly affected by the flea beetle eating small round holes in the leaves. The larvae which don't measure more than 0.8 cm are whitish, slender cylindrical worms that feed on plant roots causing further damage. Many species of flea beetle attack only one plant or closely related kinds of plants although some are considered general feeders. Some species also vector serious diseases such as potato blight.

LIFE CYCLE

Most species of flea beetle overwinter in the adult stage sheltering in hedges, field margins and beneath tree bark – all of which should be present on organic farms. The fact that they can fly also up to 1000 metres means that elimination of the pest is unlikely; minimising damage should be the aim, it is therefore important to understand the flea beetles lifecycle.

The adults emerge from the over-wintering site in early spring and may feed on weeds and less-desirable vegetation until crop plants become available. The females then lay eggs in the soil from April - June that hatch in 5 - 8 days. The larvae then feed on the roots for 2 – 3 weeks and when they are mature they enter the inactive pupae stage for 10 – 14 days. The next adult generation then emerges from late July - October, which will feed for a few weeks before over-wintering. If conditions favour the pest there can be a third generation.

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PREVENTION – this must always be the first line of defence:

- Flea beetles prefer stable, warm spring weather and are repressed by alternating periods of hot and cold temperatures with periodic rains.
- Seedlings of crops are most open to attack by flea beetle when stressed, particularly by inadequate moisture.
- Providing good nutrition and favourable growing conditions shortens the vulnerable, early growth stages and helps plants survive flea beetle attack.
- Monitor the situation – can be very variable, only a problem in certain years
- Particularly bad during dry conditions, so irrigate during these periods if possible
- Young plants are particularly susceptible, so plant or drill before flea beetle emerges (from April - June) and ensure they get a good start. Not nearly so much of a problem if over 3-4 leaf stage
- Fleece crops, especially if drilling them, or when transplants are young. Note that flea beetle can get through Enviromesh (but not fleece)
- Get a good tilth before drilling (can be more difficult on silts and heavy clays)
- Ensure soil conditions are conducive to the crop getting a good start
- Companion planting may confuse the pest. A sacrificial row or two of radishes or mustard, which seem to be the flea beetle's favourite, may help to protect other young brassicas from attack by diverting the beetles attention
- Living mulches may reduce flea beetle damage as crop plants are not silhouetted against a bare soil background and are less obvious to the pest.

CONTROL:

- Irrigation - keep well irrigated during dry periods, though this may not be practical on all crops on all farms
- Use a greaseboard behind a tractor (or by hand) – when the plants are disturbed the beetles jump up on to the greaseboard – though must be done properly to have an effect
- Some growers have reported that sulphur mixed with codacide oil has a repellency effect against flea beetle.