

How to minimise damage by aphids in organic faba bean production?

Problems

Aphids represent one of the key insect pests in organic faba bean production, where the use of aphicides is prohibited. Damage by direct feeding generally does not lead to crop failure. The main damage occurs by the transmission of viruses, causing virus mosaic and virus yellowing. Faba beans are most susceptible during seedling and vegetative stage.



Figure 1: Different life stages of the cowpea aphid. (GRDC, 2017)

Solutions



Figure 2: Faba beans with symptoms typical for virus infection by PSbMV (GRDC, 2017)

Control methods on the field:

- Avoid early sowing. It might maximise yield but increases the exposure of crops to aphid flights.
- Control weeds that host aphids.
- Avoid sowing of faba beans next to other pulses and forages.

Cultivar choice:

- Choose faba beans with a higher resistance to viruses. On-farm cultivar trials help to identify resistant cultivars (see practical recommendations).
- Desirable traits in faba beans are earliness of flowering. If beans flower early, they will be less vulnerable to aphid attacks.

Practical recommendations

On-farm cultivar trials have to be planned carefully to avoid bias and errors. The Organic Seed Alliance provides worksheets for planning and evaluating trials. These worksheets collect information on:

- Envisioning the trial: trial crop, trial goals, desired variety traits, trial varieties, standard check variety
- Planning the trial: ideal planting date, plot size, number of replications, production methods, field assessment, trial layout
- Evaluating the trial: evaluation criteria, evaluation timing

Further information

1. [Nordic Field Trial System, Faba bean – varieties](#)
2. [Organic Seed Alliance, Variety Trial Planning Worksheet](#)
3. [Organic Seed Alliance, Variety Trial Evaluation](#)
4. [Organic Seed Alliance, The Grower's Guide to Conducting On-farm Variety Trials](#)

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