

Guidelines for on-farm variety testing

Problems

Choice of varieties well adapted to organic conditions are limited. Farmers can try varieties available in other countries. In case of many varieties limited information is available on adaptedness to local conditions. Farmers are not always aware or may not have the know-how to do a comparison of varieties themselves.

Solutions

Simple on-farm testing is possible. A few guidelines are provided here for two type of crops: direct-sown and planted.

When direct sown:

- Sow several beds / strips with one to three varieties in the middle of your variety you know best. In that way you have two references on each side. The size of the beds / strips depends on your farm machinery for sowing, weeding and harvesting.

When transplanted:

- You can plant small plots (20-100 plants per plot depending on the crop) in several representative parts of the field, to have several impressions of crop performance.



Figure 1: On-farm variety trial of winter wheat
(Photo: ÖMKi)

Practical recommendations

- For a good comparison, use part of the field that has quite homogeneous soil and ensure that (partial) shading cannot affect plant growth.
- Ensure equal seed vigour of the varieties as much as possible; Seed vigour can effect differences in crop performance; Use fresh seed, and in the case of direct sown crops, make sure the plant density is the same.
- Compare the crop stand several times throughout the season; Are there differences between the varieties: in speed of growth, growth habit, disease tolerance, earliness? Are the differences due to different variety performance or because of differences in soil conditions?

Further information

1. https://seedalliance.org/wp-content/uploads/2018/03/Growers-guide-on-farm-variety-trials_FINAL_Digital.pdf
2. [PA#7 How to assess weed competitiveness in organic cultivar trials with wheat?](#)
3. [PA#8 How to set up a simplified on-farm cultivar trial to assess broccoli?](#)

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