Intercropping of Faba Beans and Peas

How inspiration from historical farming practices can improve organic agriculture

SESSION 2: Innovative farming practises

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Intercropping of faba beans and peas in organic farming systems
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Loss of genetic diversity

• Albania 1941-1993: 72.4% genetic erosion.
• South Italy 1950-1980s: 72.8% genetic erosion.
• Greece lost 95% of its wheat landraces after the introduction of modern cultivars.
• Sri Lanka 1952-1992: from 2000 landraces of rice to <100 varieties, where 75 are close relatives.

A big loss in Sweden

- Landraces quickly disappeared in the beginning of 20\textsuperscript{th} century.
- Most were already lost by the second world war.
- NordGen’s collection mainly comes from collected material of plant breeding and seed companies.
- The landraces that still exists often lacks a big part of their original diversity.
To use a variety....
Trials 2023

Main trials (2 years + 1 year pilot):
- 26 plots x 3 replications (+ 6 multiplications plots)
- Plot size 3x2 m.
- 11 pea and 3 faba bean varieties

Split plots (1 year pilot & seed multiplication):
- 11 pea varieties.
- Intercropped with oats on one side and faba bean or the other.

Cereal multiplication (2 years + 1 year pilot):
- 38 plots (2x12.5 m)
- Landraces, old-, organic-, and modern cultivars (for comparison).

Larger pea multiplication:
- 4 pea varieties
- Largers plots, either intercropped with faba beans or oats.
Results

Presentation of a subset of the cultivar-combinations tested in the study. Intercrops were sown at 50% of each sole-crop seeding rate, unless another ratio is indicated by numbers after the cultivar codes. All peas are landraces or old cultivars unless stated otherwise. The faba beans are modern cultivars used in the Nordic countries today.

The coding is descriptive for the plant sizes: L = Large / M = Medium / S = Small / Mod-LL = Modern Leafless.
Continuation

• Farmer field trials (DIVINFOOD).
• Culinary and quality tests (DIVINFOOD).
• Comparative trials Pea+Faba vs. Pea+Oats (2 more years).
Thank you!

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