Organic field trials of winter and summer crop mixtures of grain legumes and cereals in Belgium

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Summer- and wintersown crop mixtures of faba beans or fodder peas together with wheat/barley/triticale were tested in field trials in the growing seasons 2013-2014 and 2014-2015. Different regionally available varieties and European plant material of faba bean and fodder pea were harvested together with cereals as dry grain. Special attention was paid to weed suppression capability and crop reliability.

Materials & methods

3 locations in Belgium (sandy loam; fertile without limitations)
Legume varieties: selection of suitable offer EU breeding companies

Summer crop mixtures

Field trials 2014 – 2015 (Figure 3)
- barley + fodder pea, wheat + faba bean
- commercial varieties
Weed suppression sufficient, low reliability end of season
Suggested focus:
- Faba bean: early ripening, lodging resistance (shortness, sturdiness)
- Fodder pea: lodging resistance (semileafless, short, twining types)

Winter crop mixtures

Field trials 2013 – 2015 (Figure 4 & 5):
- triticale + fodder pea, triticale + faba bean
- commercial varieties + organic breeding lines (D)
Weed suppression good (triticale), more reliable crop
Suggested focus:
- Faba bean: winter hardiness, lodging resistance (shortness, sturdiness)
- Fodder pea: winter hardiness, post-winter resilience (slugs, birds, wildlife) and growth vigour, lodging resistance (semileafless, short, twining types)

References

- Dissemination reports to organic farmers in Flanders: www.biopraktijk.be and www.inagro.be