

Species mixtures for lentil production in Germany

Problem

Today lentil production is concentrated in India, Canada and Turkey. Economically competitive, high quality ecological production in the EU is challenging.

Solution

Intercropping with oat to increase harvest efficiency, suppress weeds, followed by efficient multi-step technical separation and local marketing.

Outcome

Ecological, high quality and efficiently produced local lentils as valuable local product and a second crop (cereals, false flax).

Applicability box

Geographical coverage

Southern Germany

Application period

From beginning of April/end of April to end of August

Required time

120 days from sowing to harvest

Period of impact

reduced weeds and lodging during cultivation, easier harvest

Equipment

Multi-step separation equipment

Practical recommendations

- Lentil production in Germany requires intercropping to reduce lodging, increase harvest efficiency and suppress weeds.
- Possible crop partners are barley, oat and false flax. Short oat varieties avoid competition with the lentil.
- A fine-grained seeding bed is required.
- Sowing from the beginning to the end of April with 55 kg/ha of lentil and 35 kg/ha of oat at a sowing depth of 4 cm (optimal seeding depends on local conditions).
- 5 days after sowing, one pass of tine harrow to reduce weeds. Harvest after 120 days.
- Technical separation of lentil and oat is critical and requires machinery at multiple steps: a cyclone, a cylinder separator, gravity separator and possibly an optical sorter. Sharing the machineries among farmers or producing the mixtures in large quantities will help reduce separation costs.



Figure 1: Combine harvesting of intercropped lentil and oat, photo provided by Hessisches Hochland.

Practical testing/ Farmers' experiences

The company Lauteracher Alb-Feld-Früchte organizes crop production, separation and marketing for 70 farmers. Products are marketed under the brand Alb-Leisa.



Further information

- Information about the Lauteracher Alb-Feld-Früchte can be found on their website.
- The company Hessisches Hochland also provides information about production and separation of lentils.
- Check the [Organic Farm Knowledge Platform](#) for more practical recommendations.

About this abstract

Authors: Johannes Timaeus Kassel

University Organic Agricultural Sciences, Ecological Plant Protection, Nordbahnhofstr. 1a, 37213, Witzenhausen

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ReMIX is a H2020 multi-actor project that will allow designing cropping systems based on agro-ecology for the benefit of farmers and the whole EU agricultural community. ReMIX will exploit the benefits of species mixtures to design more diversified and resilient agro-ecological arable cropping systems. Based on a multi-actor approach, ReMIX will produce new knowledge that is both scientifically credible and socially valuable in conventional and organic agriculture. The project will tackle practical questions and co-design ready-to-use practical solutions. The project will span from the specification of end-user needs and the co-design of in-field and on-farm experiments to demonstrations with evaluation of new varieties and practices. ReMIX will contribute to the adoption of productive and resilient agricultural systems. The project is running from May 2017 to April 2021

Website: www.remix-intercrops.eu

