



# **MAP Germany**

Redesigning European cropping systems based on species mixtures Paris Co-design seminar – February 27 & 28th 2018



Coordinator(s): Johannes Timaeus Institute: University of Kassel

Location : Vicinity Witzenhausen

Climate: Atlantic, annual rain fall = 770m

Soil and practices: diverse
Organic famers mostly

Date of 1st implantation: winter 2018



### 1. The MAP context:

Problems of agriculture: yield stability in legumes, competiveness of diversified systems with monocultures Targets local agricultural systems do not reach: reducing inputs while maintaining outputs, producing proteins characteristics of the socioeconomic context: good but most people want to live in cities and weak connection to agriculture

activities on your MAP / inks with other WP: Still open

## 2. Partners in co-designing

### Main actors involved:

Mainly farmers

Research colleagues to help with on-farm design

So far we are missing a bit people from administration and companies

#### Farmers:

Contacted through direct networking (Who do you know). Mainly young organic farmers willing to experiment. 10 signed up for a workshop in April. They can suggest mixtures and will also make presentations to share their knowledge Their Expectations: get new ideas, network and learn how to implement mixtures Some mixtures are established: e.g. barley-pea for fodder or lentil-oat/false flax)

Other stakeholders: Food and fodder processors

We interact with farmers especially through already on-going field research, the planned workshop, mails and telephone. We mainly exchange knowledge about the state of mixtures and potential cooperation

## 3. The crops mixtures in the MAP

Research station: winter wheat - winter pea (established).

On-farm: Mixtures are chosen together between farmers and scientists (not yet done)

Questions on the crop mixtures: yield, stability, quality, varieties, disease. Are mixtures practical?

What makes them more practical?

Are they the same for all satellite farmers: there needs to be a system for systematic learning/research What knowledge is available/mobilized for designing? Colleagues in Germany and Remix project What knowledge is missing: scientifically valid on-farm research design for mixtures relevant for farmers

Farmer cooperative



**Possible Crop mixture**: lentil+false flax, winter wheat+winter faba bean, winter wheat – winter pea

Lentil-false flax

Details not yet fixed!

Oct. Sowing sp1. 100% + sp 2 30% the same day

Mar, Fertil.
Full dose, dose reduction

Red: Modality adapted for mixing species

Black: Modality same than in sole cropping.

Blue: experimental treatments for comparison

Sept. Soil prep.

Nov, Weeding: None, 1 mech. 1 chem. July. Harvest in 2 times, 2 different height cuts

Lentil-False Flax mixture in Germany: cultivation, separation and final products

**4. Next steps:** Workshop on 14. April with farmers. Goal is to convince them to participate and negotiate possible mixtures and on-farm trial design



