



Coordinator(s) : *Alberto Lafarga and Nerea Arias*
Institute : *INTIA*
Location : *Navarra – Spain*
Climate : *Mediterranean, annual rain fall = 450 mm*
Soil and practices : *unknown*
Organic and probably something in conventional
Date of 1st implantation: *winter 2019*



1. The MAP context:

3 main problems in the organic sector: *production of legumes for human consumption, wheat with low protein, lack of forage quality.*

Targets: *to produce legumes (chickpea and lentil) in mixtures with wheat and to increase wheat protein.*

Small producers, specific and individual problems, sector in expansion.

Main activities: *study organic sector needs, set up targets for the MAP, workshops with experts, co-design seminars, field days (visiting already existing trials WP3)*

2. Partners in codesigning

Main actors involved :

Farmers, researchers, technicians/advisors, cooperatives, processors, administration, traders.
They are been identified and will be consulted to learn their expectations
Not much involved in crop mixtures

Farmers :

Around 10-15 farmers, they have been interviewed about their activities.
They do not expect much, but interested in solving some problems
At least they will be part of the field visits and workshop.
Previous experience mainly with forages

Other stakeholders :

How is organized the animation between partners? How do they interact? What do they exchange? Still in process of desinging, ideas???
Are there other actors interacting with the MAP, who are not involved in co-designing (visitors)? Actually no

3. The crops mixtures in the MAP

Crop mixtures selected in order to solve organic sector problems according to their achievability.

Proposed by technicians/advisers based on existing knowledge and literature/other experiences

Questions arisen: In our climatic conditions, legume is going to increase N? Growing cycles? Problems for harvest and grain separation?

Are they the same for each satellite farmers? To be figured out

Knowledge based on experts and technicians, previous experiences in INTIA and literature review

What knowledge is missing? Will the crop mixture solve the problem to which is designed for? Most adequate species? Machinery? Costs?

Crop mixture : probably wheat+faba bean

Crop mixture designed to increase N in wheat. Proposed by experts/technicians. It ha been tested in other climatic conditions.

Which eco-services are targeted? Which modalities are tested by farmers?

*Oct. Sowing sp1.
faba bean*

Red : Modality adapted for mixing species

Black: Modality same than in sole cropping.

Blue : experimental treatments for comparison

Sept.- Oct. Soil prep.

*Nov, sp2. sowing wheat
over faba bean already
implanted*

July. Harvest



Previous experiences:
Wheat + Pea

4. Next steps: field day visiting mixtures from WP3 and co-desing workshop

