

The creation of an intercropping sector

Problem

Setting up an intercropping value chain for crops that have been grown conventionally for years is often a big challenge. To achieve this, it is necessary to work on several economic, environmental and psychological fronts.

Solution

Setting up intercropping value chain (in our case pea-wheat) can be approached in the same way as setting up a classical value chain. This starts with setting up the crop on a small scale, which this then slowly scaled up (such as on a private experimental farm, research centre or university). This allows you to understand the practicalities of growing the intercrop and see if it is feasible on a large scale.

Benefits

- Gives farmers the opportunity to diversify their rotation
- Reduces the impact of wheat price variability with a second, more profitable crop (per tonne).
- Enables grain collectors to offer innovative contracts to farmers
- Offers a cropping system that requires less inputs and is more beneficial to the environment.

Practical recommendation

- First, select a crop combination that is adapted to the climate of the region. Once this combination has been chosen, the feasibility of the crop (e.g. pea + wheat, wheat + faba bean, lentils + barley...) must be taken into account.

Applicability box

Theme

Intercropping, barriers and enablers, cropping system, actors, learning, value chain

Agronomic conditions

Maritime temperate climate (precipitation: 807 mm) and fertile loam and sandy loam soils

Application time

Same as a monocropped wheat

Required time

Same as a monocropped wheat

Period of impact

Same period as a classic wheat

Equipment

Conventional harvester for farmers and a sorter for collectors (picture 1.)

Best in

Low-input systems, regions where peas are difficult to grow in monoculture due to a high lodging probability, organic systems

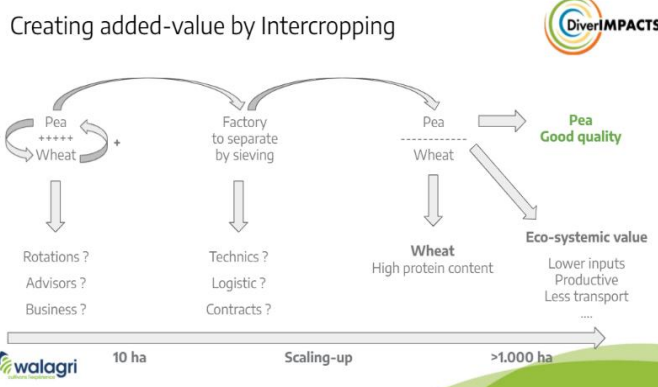


Figure 1- process of setting up the pea and wheat combination (Walagri).

Picture 1- monitoring harvesting at a customer's site using a conventional grain harvester (Photo: Gillain Benoît, Walagri).

- This feasibility is multi-criteria based and is based on three main pillars:
- Agronomic feasibility for the farmers- this includes considering machinery, inputs, crop monitoring and agricultural knowledge (Fig 1.).

- Economic feasibility- the target is that for the same working time and facilities the farmer must obtain a higher economic yield using intercropping than in a traditional wheat monoculture farming system.
- Demand- in order to be able to offer farmers remunerative contracts, it is necessary to work in parallel with retailers and manufacturers who can sell the goods on the market and follow economic trends, in order to have a buoyant market that allows the sector to be sustained from an economic viewpoint.
- For trialling and upscaling, we worked in collaboration with the Gembloux University and gradually expanded cropped surfaces (2012 = 10m², 2016=10Ha, 2021=100Ha). At the same time, solutions to problems highlighted all along the value chain have to be developed. For example, in our case : the separation of peas and wheat, which could be achieved thanks to existing and/or upgraded sorting structure. You also have to find reliable partners who can buy large volumes in order to perpetuate the association. Therefore, each link in the chain has an important role to play in the maintenance of the association and in the upscaling of the model.

Further information

Video

- Check the following video for further instructions (French).(<https://youtu.be/1rQBikyjE3c>)

Further readings

- <https://www.livre-blanc-cereales.be/>,

Weblinks

- <https://agrivirtual.eu/>

About this practice abstract and DiverIMPACTS

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This practice abstract was elaborated in the DiverIMPACTS project, based on the EIP AGRI practice abstract format. It was tested in Wallonia by the company Walagri.

DiverIMPACTS: The project is running from June 2017 to May 2022. The overall goal of DiverIMPACTS - Diversification through Rotation,

Intercropping, Multiple Cropping, Promoted with Actors and value-Chains towards Sustainability - is to achieve the full potential of diversification of cropping systems for improved productivity, delivery of ecosystem services and resource-efficient and sustainable value chains.

Project website: www.diverimpacts.net

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