



Optimising profitability of crop production through Ecological Focus Areas (EFAs)

How can EFAs, specifically landscape features and buffer strips, contribute to the profitability of crop production?

Landscape features provide habitats for beneficial insects and other arthropods, birds and plants. These can increase crop yields or reduce costs of production through pollination or by controlling crop pests. When appropriately designed and targeted, landscape features also control erosion, wind, and nutrient loss and provide landscape amenities.

The EIP-AGRI Focus Group report focused on:

- ▶ **field margins:** the spontaneously established strips of herbaceous plants at the edge of fields
- ▶ **hedgerows:** composed of one or two rows of planted or naturally established shrubs and/or trees
- ▶ **grassy or flower strips:** intentionally sown, the former mostly with grasses and the latter with flowering plants

The main scope was to examine if and how landscape features could contribute to the profitability of arable crop production by increasing yields or reducing production costs. Additionally, other direct economic effects for the farmers can be considered including the production of wood, fruits, grass for horses, etc. The Focus Group also discussed the benefits of landscape features to society, such as aesthetic and social values, ecosystem services, that the markets mostly fail to provide.

“A farm and the embedding landscape are systems that should be approached in a holistic way.”

- Jacques Baudry, coordinating expert of the EIP-AGRI Focus Group
on Ecological Focus Areas -

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Ideas for Operational Groups

OGs could try to optimise the development of LFs by looking at the synergies and trade-offs between the different ecosystem functions and crop management needs:

- ▶ **Defining the objective(s)** of LFs to develop **win-win situations** where LFs support increased crop productivity and provide environmental benefits
- ▶ **Scale, both spatial and in terms of time** is particularly relevant when managing LFs to support effective pest control and pollination
- ▶ **Cost/benefit ratio and cost-effectiveness of LFs on crop production profitability**; direct and indirect costs and benefits have to be taken into account
- ▶ **Collaboration** among farmers and **dialogue** between farmers, scientists, and for instance public bodies is particularly important as some LF benefits are for society as a whole



To obtain interesting, practical results, it is helpful to focus on a narrow question, for instance type of flowers to seed or type of margin management.

Research needs from practice

- ▶ Relationships between landscape features and crop production, for instance factors supporting effective pest control and pollination, for different landscapes and crops
- ▶ Cost-benefit analysis of landscape features, looking at profitability for farmers, considering both monetary and non-monetary benefits, such as health and societal support for agriculture
- ▶ Ecological or social long term monitoring is also required as farming/landscape systems are highly variable depending on weather and market conditions

Training and education

Farmers and their advisers need a basic knowledge of ecology, agro-ecology and interdisciplinary training to usefully incorporate LFs in farm production. Including these topics in the **curriculum of agricultural schools** and opportunities for **life-long learning** based on different farmer experiences with LFs would therefore be helpful.

For more specific ideas for Operational Groups and research needs, including ideas on how to plan pest control experiments, please see the Focus Group report

More information:

[Final report](#)

[Focus Group webpage](#)

[Inspirational ideas: Setting up short wood supply chains using hedgerows](#)

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