

# MULTIPURPOSE USE OF HEDGEROWS AND WINDBREAKS

Productive family farm with multipurpose use of green belts



## THE WHAT AND WHY

### Protect your land and build a productive system

It can be a challenge to build up a self-sustaining organic family farm operated on some ten hectares in an intensively managed agricultural area. As this case study implies, it is a work-intensive project but can be successful with proper planning and management. The family farm introduced in this case study is established on 12-hectares of land in Hungary. Their land has some unfavourable properties (drought-prone area exposed to wind and soil erosion) and is subject to many negative effects

caused by human activities carried out on the neighbouring land. Based on their knowledge of the fact that linear green belt systems have age-long history in some European countries, for protecting fields, people, and livestock and improving productivity by altering wind flow and regulating climate, the farmers built their concept on a well-considered plan of a structured system of hedges, windbreaks and shelterbelts as well as a combination of different agroforestry practices.



Mowed orchard (right) protected by windbreaks (left) - one of the several ways agroforestry is practiced at Valaha-Tanya, Vértesacsza, Hungary

Photo by A. Vityi



European Economic and Social Committee thematic session on the CAP.

European Economic and Social Committee (EESC).

## HOW IS THE CHALLENGE ADDRESSED

### Protection and diversity

The farm is located in an exposed location, surrounded by big, intensively cultivated agricultural monoculture parcels which has the effects of increasing weed abundance and contamination from agrichemicals. In order to avoid any negative effects from the surrounding agriculture, planting of protective green belt around the farm was one of the first steps taken by the farmer. Due to this, within 2-3 years there has been a significant decrease in spray drift and wind pressure. To further reduce the exposure and the evaporation loss the area has been sectioned

with tree and bush lines, perpendicular to the prevailing wind direction. The hedgerow around the farm is mixed species. The aim of using multilevel vegetation and wide variety of indigenous or adaptive species and varieties in the windbreaks is to increase biodiversity (can be considered as a gene bank), support protective functions and ensure its multipurpose use (food, wood, bee pasture, forage etc.). Diversity and a mix of land use practices provide the basis for the profitability and sustainability of the farm. (Fig1 and 2)



watch video



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Keywords: Hedgerow, windbreak, diverse, wood, food, sustainable, productive, Hungary

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## HIGHLIGHTS

Farmers often experience that farming adjacent to large-scale, intensive agricultural areas has a negative impact on their productivity. In such cases, planting windbreaks and hedgerows to separate the farms also has the effect of altering wind speeds and regulating climate, as well as providing a range of products and services and thus have a key role in protecting the farm and improving productivity.



Lovely, unique and delicious products of the multipurpose windbreaks and orchards at Valaha-tanya

Reference: Valaha-Tanya

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## ADVANTAGES AND DISADVANTAGES

### Make it worth the effort!

The use of diverse windbreaks and hedges in and around the farm reduces wind speed and regulates the climate, which prevents soil erosion and supports higher productivity. Increasing species diversity of windbreaks, hedgerows and shelterbelts can make the production more stable and thus the farm sustainable through a variety of products.

As disadvantages, protective green belts require space and thus the farmer has to withdraw a part of the area from cultivation of annual and perennial crops. Furthermore, for trees and bushes planted for flower and fruit purposes (e.g. in the case of elder), the farmer has to leave at least two metres from the boundary of the area in order to make the bushes accessible for harvest. Though this loss of area might generate a negative impression, practically, it doesn't influence or even increase the total productivity as these areas still remain productive, but in a different way, providing a range of food and non-food products and services in the global farm. Farmers must also ensure by pruning that the branch height on the adjacent agricultural area of the protective belt is adequate and fit to agricultural machines.

In total, the higher diversity of land use practices applied and proper management of green belt systems require more work compared to intensive monocrops or low diversity systems, but it results in more sustainable farming, which provides both livelihood for the farmer today and in the future for the next generations.

### FURTHER INFORMATION

More detail about the farm is available here:

[http://www.eurafagroforestry.eu/afinet/rains/agroforestry-action/Vmultifunctional\\_agroforestry\\_organic\\_farm\\_in\\_hungary](http://www.eurafagroforestry.eu/afinet/rains/agroforestry-action/Vmultifunctional_agroforestry_organic_farm_in_hungary)

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