

## HUNGARY

### Soil erosion & soil management

#### Location

Lenti

#### Programming period

2014 – 2020

#### Priority

P4 – Ecosystems  
management

#### Measure

M10 – Agri-environment –  
climate & M11 – Organic  
farming

#### Funding (EUR)<sup>1</sup>

Total budget 23 896  
EAFRD 20 311.6  
National/Region. 3584.4

#### Project duration

2016 – 2020

#### Project promoter

Robert Szunyogh's family  
farm

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#### Website

n/a

An organic cattle breeding farm is working to reverse the degradation of environmental conditions on the farm, whilst ensuring its long-term economic sustainability.

### Summary

The Szunyogh family farm was established in Zala County, Southwest Hungary, in 1993. Today they farm almost 150 hectares, of which about 70 hectares are used for the organic breeding of Aberdeen Angus cattle, while the rest are classified as forest. In 2018, after five years of cattle breeding, the farm showed signs of excessive land use.



The farm has been receiving RDP support under the measures M10 – Agri-environment –climate and M11 – Organic farming since 2016. The RDP support received was used as a basis upon which the farm owners could build on, to fulfil their ambition of improving the environmental conditions of their farm to an even higher level, much higher even than that prescribed by the two RDP measures. Using professional advice, they apply holistic planned grazing (leaving areas aside), created wooded pastures (silvopasture\*), cover the soil with wood chips from local sawmills and redesigned the watering system.

### Results

Due to the longer set-aside period of the pastures, more herbaceous plants have the opportunity to reach maturity. This has had a positive effect on insect and bird populations, which find shelter and food in the tall grass.

The water cycle of the pasture improves because the plants on the set-aside pasture have more time to grow roots, thus increasing the water absorption capacity of the soil.

Reduced erosion and deflationary effects due to improved soil cover and woody systems.

By limiting the animals to smaller grazing zones, they changed their behaviour and now graze upon plants that were previously less desirable to them. In this way, the farm owners do not have to spend time or money on weeding, which significantly contributes to increasing the cost-effectiveness of their business.

### Lessons & Recommendations

- ❑ External professional advice plays a key role in bringing about positive change in farming practices. The synthesis of the knowledge of experts from different scientific fields can help a farming business to ensure both ecological balance and its economic sustainability in the long run.
- ❑ Single area payment schemes (SAPS) do not currently cover ecologically outstanding bushy, wooded areas. So, the EAFRD subsidies based on SAPS do not support these areas. The beneficiaries hope that in the future the concept of support will change and will also apply to the maintenance of these habitats, which are so important for wildlife.
- ❑ The beneficiaries / farm owners consider that it would be very important to involve environmental and agricultural experts in the process of designing and managing a farm over time, because farmers cannot be expected to understand the full complexity of the natural processes that take place on their land.

<sup>1</sup> Combined support received from 2016 to 2019

<sup>2</sup> Silvopasture is the practice of integrating trees, forage, and the grazing of domesticated animals in a mutually beneficial way. It utilises the principles of managed grazing, and it is one of several distinct forms of agroforestry.

### Context

The Szunyogh family established their farm in Zala County, Southwest Hungary, in 1993, when they bought their first hectare. Today they farm almost 150 hectares, with about 70 hectares of the farm being used for cattle breeding, while the rest are classified as forest. The family started free range cattle breeding in 2013, with 17 Aberdeen Angus virgin heifers. The livestock currently consists of 49 mother animals and one breeding bull. Their first breeding bull was of Hungarian descent with award-winning ancestors. Later on, they bought A and AA-certified breeding bulls from Austria. In 2018, they joined the Aberdeen Angus and Galloway Breeding Association. Inspired by professionals who visited their farm in 2019, the farm focused on breeding exclusively Aberdeen Angus animals and received a pedigree certification. Their revenue comes from the sale of calves. The calves are classified as premium and are sold to the domestic market as well as in Austria, Slovenia and Croatia.

In 2018, after five years of cattle breeding, the farm showed signs of excessive land use. In the early years large-scale grazing was typical, as well as centralised watering. The animals had to walk to the drinker from even the most remote pastures, covering distances of up to one kilometre several times a day. This resulted in soil degradation (compacted soil, mud, sand). The scattered livestock placed strain on the area as there was a lot of trampling. The increasing use of areas around groups of trees in the summer caused damage to the trees. The ecological condition of the approximately 30-hectare pasture area started to deteriorate. Invasive plants that are not favoured by the animals multiplied (gradation), biodiversity noticeably decreased, and the water absorption capacity of the area deteriorated. This resulted in having stagnant water in rainy periods, while in drier periods the soil dried up in many places.

### Objectives

The objective of this project is to mitigate in a natural way, the adverse environmental damage caused by overgrazing on a cattle breeding farm, and to improve the habitat for the animals and the quality of pasture.

### Activities

In 2015 the farm owners submitted their application to receive support under the measures M10 – Agri-environment-climate and M11 – Organic farming. The support was approved in 2016 and since then organic farming has been practiced. After the first two transition years (2016 and 2017), in 2018, the farm was officially certified as organic by Hungária Öko Garancia Kft, an

independent and accredited certification body. Having already met the requirements of both measures, the farm owners used the support as the basis upon which to fulfil their ambition to improve the environmental condition of their farm to an even higher level, much higher even than that prescribed by M10 or M11.

In 2018, the farm owners contacted several organisations and specialists (István Hahn PhD, Permaculture Resources Ireland, Hungarian Permaculture Association), who have been advising them ever since. The recommendations of the consultants highlighted the complexity of the managed area. Thanks to this cooperation, the farmers identified several nature-saving solutions, which they have been experimenting with on the farm ever since. In the same year, they participated in the meeting of the Carpathian Basin Orchard Network, where they attended a presentation of the Hungarian Forestry Research Institute and which helped them to re-evaluate the role of afforested areas on the farm.

In 2019, they tried to regenerate the damaged areas. Thanks to a mutually beneficial agreement, in the second half of 2019, the farm received excess wood chips from local sawmills and recycled them as mulch in areas where they did not want to grass in the future: i.e. walking routes, cattle pen, drinkers. In the areas to be grazed, a bale is spread on the compacted soil instead of wood chips.

In 2020, they redesigned the dimensions of the grazing zones and the watering system. In the previous large zones of two to three or even six hectares, smaller temporary zones were created. In the new zones, it is aimed to ensure that the cows do not spend more than a day and that the grass can regenerate for at least a month before being re-grazed. The course of grazing and the development of the zones are carefully monitored. In addition, longer set-aside periods of two months are also tested in some zones. This year's plans (2020) include a survey of pasture performance to determine more precise individual set-aside time intervals.

The farm owners are also experimenting with tall grass grazing, which allows animals to choose from a larger selection of grasses. Another advantage is the rich wildlife, and it is hoped that it will prevent the overgrowth of unwanted weeds.

In the future, the farm owners would like to include additional forest areas in the grazing areas so that the animals can stay in shady areas for longer during the warmer months. Thus, less wooded parts of the farm could be exempted from use and their regeneration period could be extended.

## Main results

- Holistic Planned Grazing - through intermittent grazing of the area, each zone is re-grazed after a planned rest period followed by a short period of intense disturbance. Setting-aside parts of the grazing area has numerous advantages, including the fact that it allows for a large selection of grasses, deeper and stronger roots of grasses. In addition, parasites that develop in the grazed area do not find a host, due to which there is a reduced risk of diseases and infections developing.
- Effective grazing - by limiting the animals into smaller grazing zones, they become less choosy in their behaviour and they now graze plants that are less desirable for them. In this way, the farm owners did not have to spend time or money on weeding, which significantly contributed to increasing the cost-effectiveness of their business.
- Habitat improvement – the creation of wooded pastures (silvopasture), increases biodiversity, creates a favourable microclimate and provides shade for the pasture stock. In addition, due to the set-aside periods of 30-60 days, countless birds and insect species can find shelter and food in the undisturbed zones.
- Soil protection - introduced mulch in overused areas (application of hay and straw in open areas, wood chips in wooded areas).
- Circular economy - long-term cooperation has been established with nearby sawmills for the use of mixed wood chips (pine, beech, oak, acacia) for soil improvement (soil cover to alleviate the trampling load and soil compaction around drinkers). 10 m<sup>3</sup> of wood chips are used per month instead of being accumulated at local sawmills.

## Key lessons

- Receiving professional advice played a key role in the positive change in the farming practices. The synthesis of the knowledge of experts from different scientific fields on the utilisation of the ecological endowments of the landscape and the experience gained abroad have placed the farming business in a position that can ensure both ecological balance and its economic sustainability in the long run.

- The farm owner's experience so far, and the opinions of participants in educational programmes that have been hosted in the past, shows that this type of complex farming practice that takes into account natural processes, is becoming increasingly popular and may attract the attention of the general public in the future.
- Although the farm received RDP subsidies to help to pursue gentler and more nature-friendly farming, the farm owners observation is that the single area payment scheme (SAPS) does not currently cover ecologically outstanding bushy, wooded areas. Hence, EAFRD subsidies based on SAPS do not support these areas. The beneficiaries hope that in the future the concept of support will change and will also apply to the maintenance of these habitats, which are so important for wildlife.
- According to the beneficiaries, it would be very important to involve environmental and agricultural experts in the concept of designing and managing a farm, because farmers cannot be expected to understand the complexity of the natural processes that take place on their land. Unfortunately, in their experience, few people use professional advice in Hungary and most of them are satisfied with a one-time visit (sightseeing).



*“Previously, we focused the farm to what we saw were the needs of our cattle, but at the heart of our new approach, our cattle are only part of the ecological community we set out to improve. We believe that if we succeed in creating a stable and healthy living community, our cattle will also be of outstanding quality while maintaining their animal welfare.”*

Szunyogh family member

## Additional sources of information

n/a