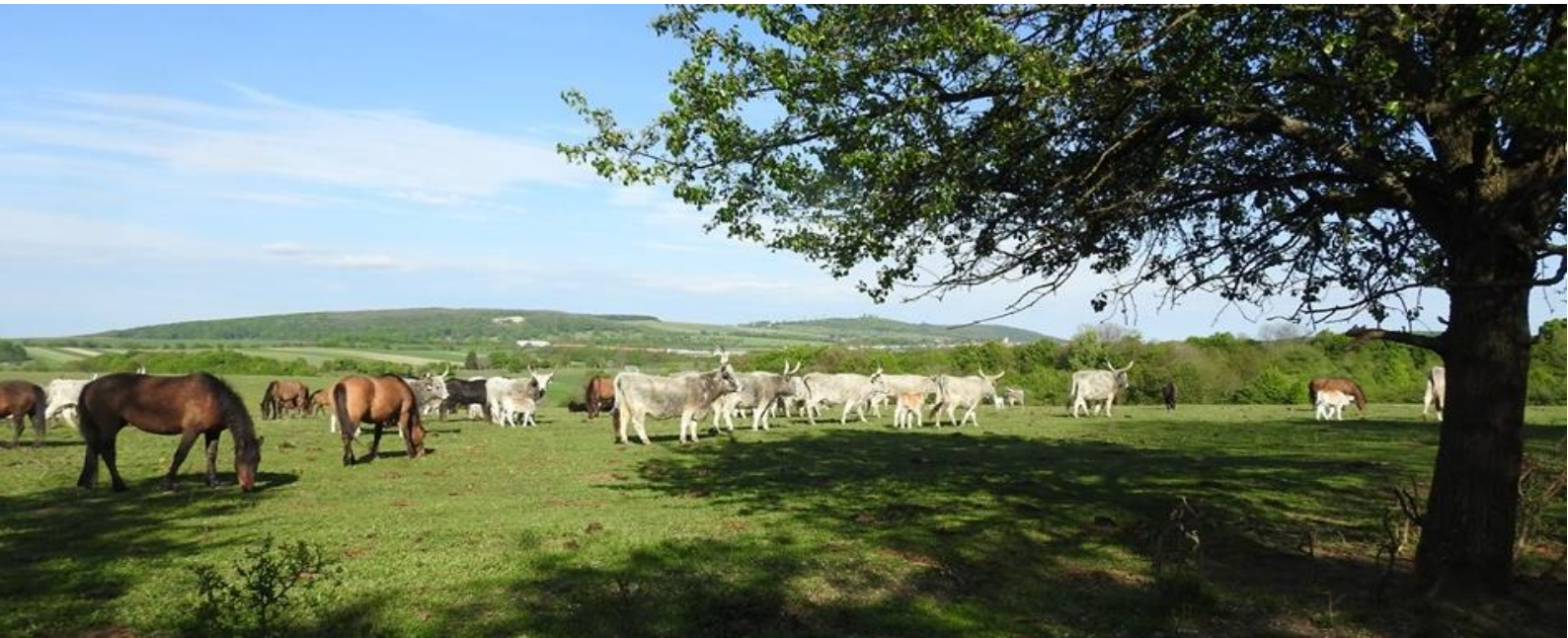
AGROFORESTRY SYSTEMS:
HIGH NATURAL AND CULTURAL VALUE AGROFORESTRY

Year of foundation	2007
Specialization	Breeding animal production, products of animal origin
Farm area	200 ha
Number of employees	3
Year of starting agroforestry practices	2009
Location	Veszprém county/ outskirts of Hárskút, Szentgál, and Pénzesgyőr
Web pages	https://www.facebook.com/pages/category/Sports---Recreation/Bakonyi-T%C5%B1zk%C3%B6ves-Hucul-M%C3%A9nes-300492510566653/ https://www.facebook.com/Cikta-Egyes%C3%BClet-1502030660094237/ www.nagybirtok.hu https://www.facebook.com/tuzkovesborc.tanya https://www.facebook.com/groups/755851917905449/

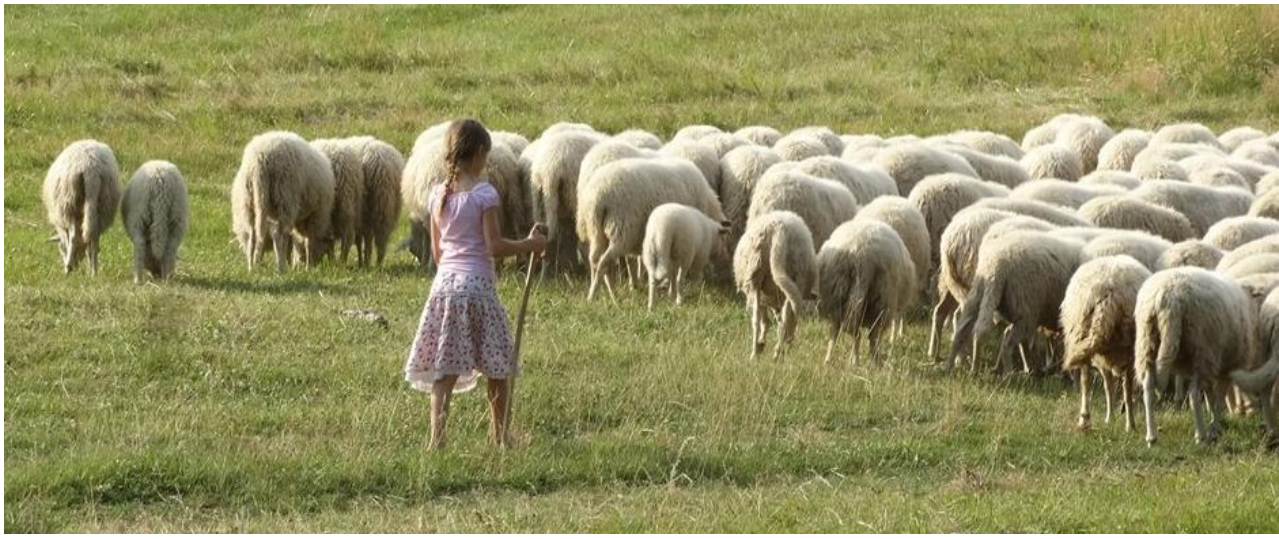
Gene conservation activities are carried out in a priofitable manner in this **wood pasture system**. Gene conservation extends to several species, including **Hucul horses, Hungarian Domestic Buffalo, Gray cattle , Cikta and Tsigai Sheep, black Hortobágy Racka Sheep, and the partridge-colored Hungarian hen**. The wood pasture is located in the heart of the Bakony mountains on 200 hectares. Their pasture management is not limited to rotational grazing, but they also change the animals grazing in a pastureland.



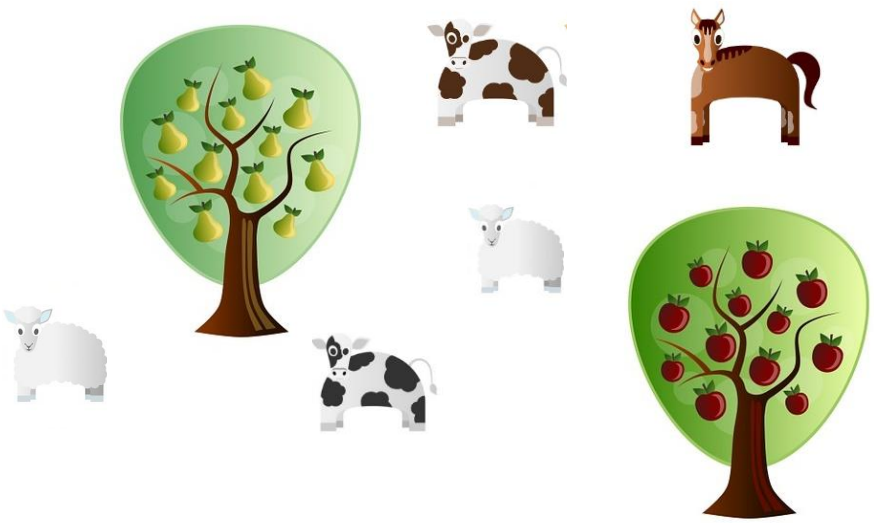
DATA ABOUT AGROFORESTRY AND AGRICULTURAL BUSINESS

The area was abandoned since 1995. The farmer restored it and established wood pastures.

During the first 3 years the area was formed without grazing a significant number of animals. In 2011, the animal population reached its final status. **Manual and mechanical cleaning was carried out**. They keep old Hungarian animal breeds that are best adapted to the climate. **Rotational grazing** is practiced.



- **The length of the grazing period should be extended** both seasonally and during the day.
- In addition, **improving the nutritional composition** of grazing animals and contributing to the conservation of biodiversity.
- Trees and shrubs provide wind protection, shelter and a better microclimate which improves animal welfare.
- Total biomass and feed yields are higher, and fresh fall foliage and fruits are utilized by animals.



PROCESS OF THE IMPLEMENTATION OF AGROFORESTRY

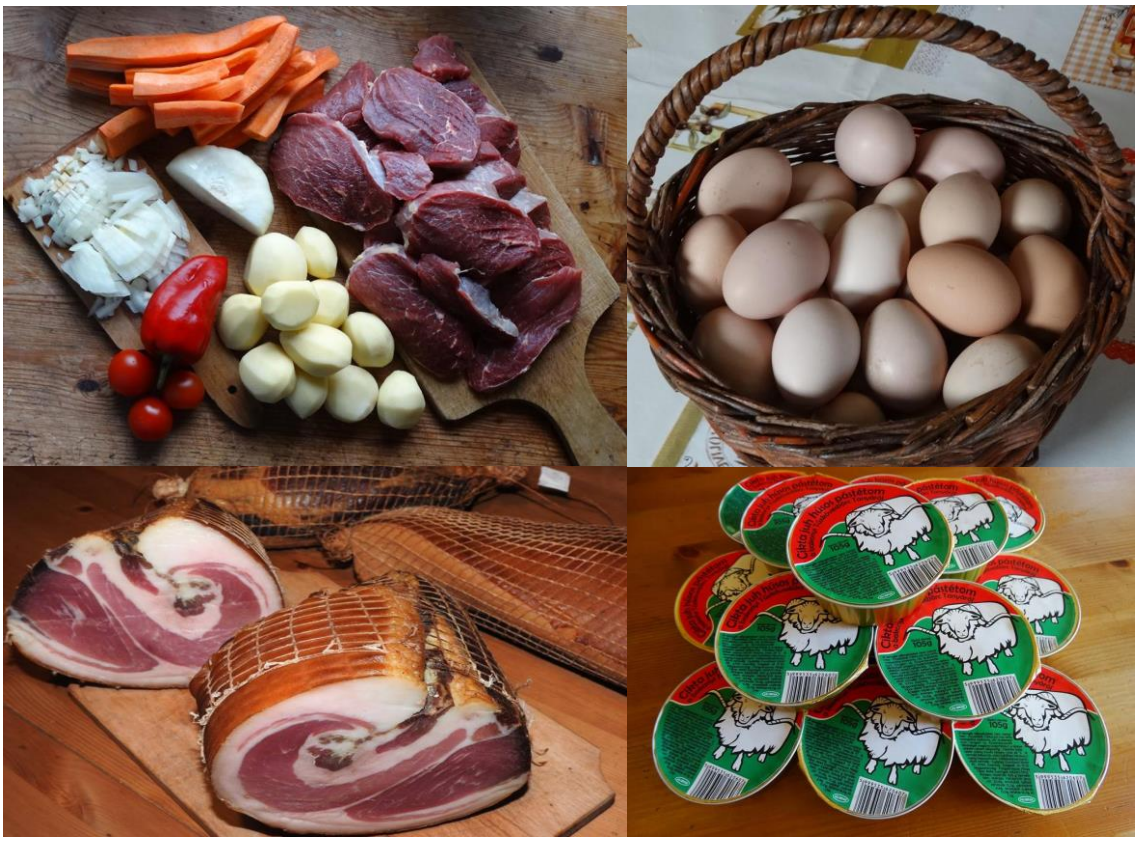
From the beginning, farmers planned to establish wood pastures, for which they obtained information from various articles and studies. In the previous CAP period, **they received support to set up their agroforestry system**, although this was not straightforward and entailed a lot of red tape. In the second CAP period, the tendering system was even less favorable, e.g. the bureaucracy and the way of control did not make the agroforestry systems sympathetic to farmers, so in the end they did not apply.

DESCRIPTION OF USED TECHNICS DURING ESTABLISHING OF AGROFORESTRY SYSTEMS

The area has been cleaned to varying plant densities to meet the different needs of different animal species / breeds. Wild fruit trees took precedence over cleaning. Where the **regeneration took place, the "protective vegetation" was left until the small seedlings grew up** in order to preserve them. **Where new trees had to be planted, they received unique tree protection (plastic mesh).** Thinning has been focused on preserving biodiversity. **The cleaning was done manually and mechanically.**

In order to establish such a system properly, the farmer needs

- enough land for the planned livestock
- to provide adequate accommodation in animal housing facilities
- water and electricity available in the area (as long as it is not available, do not engage in animal husbandry)
- to provide adequate feed supply



THREATS/CHALLENGES

- **Lack of transparency of tenders**, difficulties of execution, inflexibility. The livestock is less transparent due to the density of the vegetation. Sheeps may get stuck in the vegetation, and if the farmer doesn't recognise it, they die
- **Optimum time of cleaning** is the end of summer or early autumn which is still in the growing season of pasture vegetation, and it is extremely difficult to find the right time to minimize feed loss while cleaning the area effectively. There is no tried and tested method for doing this, so every year the farmer has to try and see how it's worth doing.

CONCLUSION

As a result of using this landuse practice, the farmer can provide **better quality and quantity of breeding animal**, including an improved quality and quantity of slaughter animal. Wild fruit yields are an added benefit to animals compared to woodless pastures and side product for the farmer's family. Besides, the biodiversity has increased or remained at expected levels.

Important notes:

- Well-considered, well thought-out tree planting and harvesting.
- Lawn maintenance should be adapted to the weather (mowing, rotation). For example, it is advisable to carry out mowing before optimum grass yields so that subsequent rainfall can allow for better grass cover. It is also a problem if it comes to rain immediately after mowing, as the wet material that has been cut rots and changes the rainwater infiltration conditions, which degrades water utilization, which is particularly important in a dry area.
- It is important to maximize the yield and quality of the meadow biomass by mowing at the right time to prevent overgrowth of weeds to ensure proper grass growth and utilization as fodder.
- It is advisable to split planning and management operations within one area (do not plan to do everything at once)

Taking the advantages of agroforestry, these land use practices should be promoted with financial support and a national program. After all, most of the lands in Hungary are suitable for agroforestry. So there is a huge potential in this, and would be extremely urgent to develop on a larger scale before it is too late! One feasible option for farmers who feel responsibility for the sustainability of the life on Earth is production in agro-forestry systems.

FUTURE PLANS

16 ha of **oak – truffle plantation**, because the sown grass in this area is not well utilized by animals grazing there.

FINAL RECOMMENDATION

- Plan out the species / breeds and how many animals you want and assess how much the area can feed. Livestock should be under-planned rather than over-planned.
- Plan the location and extent of the intervention (scrubbing, felling), and think about where it is worth to leave the original vegetation.
- Designing **seedling protection**
- Planning **grazing periods**
- Creating **resting places** with sepecies that are less favored by the animals.

Farmer recommendation:
„Agricultural and nature conservation knowledge is necessary and experience in forest management is an advantage."

KEY WORDS

gene conservation, wood pasture, profitable, pasture management, animal products, rotational grazing

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