



AGROFORESTRY SYSTEMS: SILVOPASTORAL, AF WITH HIGH NATURAL AND CULTURAL VALUE



Year of foundation	2001
Specialization	Sheep and cattle breeding, fruit orchards
Farm area	600 ha
Number of employees	6 (2 family members + 4 part-time workers)
Year of starting agroforestry practices	2001
Location	Milešov 78, 411 32, Velemín
Web page	-

The organic farm of Daniela Pitka and Marcela Horvátová with a total area of approximately 600 ha is located under the Milešovka hill and is **focused on sheep (800) and cattle breeding (100); maintenance of old and planting new orchards**. Daniel started farming in 2001 on lands invaded by natural vegetation (former arable land), which he gradually transformed into pastures with the preservation and planting of valuable deciduous trees. Daniel also deals with the maintenance of the original orchards and the planting of new ones (especially pear and apple trees), which are grazed by sheep.





Daniel Pitek comes from the Bohemian Forest, but at the age of six he moved to northern Bohemia and grew up in the beautiful countryside of the Bohemian Uplands. He is a forester by profession and also worked in Šumava forests for a short time. After the Velvet revolution in 1989 he worked for several years in Germany and when he returned in 1994, he established a successful building company. However, he did not lose his love for forestry and agriculture and at the turn of the millennium he began to buy up abandoned land after a former state agricultural cooperative, as well as from private restitutions in the vicinity of Mílesovka. The agricultural cooperative tried to run classical arable crop production on these steep slopes, but after the regime changes, they lost interest because the cultivation of wheat and corn was not profitable. Land gradually overgrown by pioneer vegetation.

Daniel started with agroforestry farming from the beginning, although he did not call it like it. Daniel gradually **cleaned the overgrown lands and transformed them into pastures, while sensitively leaving valuable trees such as beech, fir, linden, ash, maple, wild pear or cherry on the pasture.** Some of these species were also intentionally planted. Daniel first began farming with deer breeding on 40 hectares, but with complicated legislation he changed to sheep (Sumavka breed), cattle (Limousine and Charolais) and horses (Norik) breeding. **He began to restore the original orchards and he also established new ones, where he grows mainly pear and apple trees and regularly graze sheep.** The whole farm is registered in organic production. Daniel is a passionate conservationist and struggling to retain water in the landscape, **he began to build small water ponds on pastures that attract many animals.** Daniel currently manages a total of more than 600 ha of mainly permanent grassland with trees, but also orchards and forest.



- After the introduction of agroforestry management practices, the aesthetic value of the **landscape has improved significantly, the amount of water retained in the landscape has increased, and the occurrence of wild animals, especially birds, reptiles and amphibians, has increased.**
- Trees provide shade for livestock and thus improve their overall **welfare.**



Daniel does an agroforestry system which is natural and traditional for the area he manages. It is therefore a return to the original farming, which was destroyed during collectivization. Daniel learned from historical sources in establishing new grazed orchards, as the region of Litoměřice had been a large producer of fruit. The traditional orchard with tall-tree varieties were either grazed or other agricultural crops were grown there. **No subsidies were used for planting trees, the farm receives subsidies for organic farming**, but it is not used for planting tree species.

Since Dan Pitek is a forester by education and profession, he already had both theoretical and practical knowledge of tree growing. As Daniel claims **planting is done by trial and error. Further information he obtained from established fruit grower.**

DESCRIPTION OF USED TECHNICS DURING ESTABLISHING OF AGROFORESTRY SYSTEMS

The majority of the trees on the pastures were left from a natural regeneration, other trees were planted, and some forest trees were also sown (oak, maple).



THREATS/CHALLENGES

- When planting woody plants, **the biggest problem is drought, browsing and peeling by hoofed game and biting roots by voles and mice.**
- **Daniel does not irrigate the newly established stands, as it would be very expensive.** In recent years, planting has been possible only in the autumn months, but it is still necessary to replant trees as a substitute for dry individuals.
- **It is necessary to provide individual protection of trees against game.** Recently, the best method of protection seems to be quality mesh (min. 150 cm) attached to 1-2 stakes. Another relatively cheap option is to use three planks that surround the tree and are connected by binding wire and staples, while one board is focused, tanned and hammered into the ground. Plastic protection did not prove to be good because the hoof game breaks them, and voles build nests there.

Daniel and Marcela farm in accordance with the local landscape in an agroforestry way and, in fact, they use traditional farming methods that have already proved their worth in history.

Dan Pitek and Mariana Horvátová's farm is an example of how agriculture, if done in a right way, is **the guardian of diverse and healthy landscape**, and how agroforestry farming can contribute to create a diverse and beautiful landscape. It is also evidence that **agroforestry farming can be profitable** and can be used on relatively large extensions.



FUTURE PLANS

Daniel has plans to **continue in establishing new grazed orchards**. Another plan is to build its own fruit juice processing plant for its own organic fruit production.

FINAL RECOMMENDATION

Everyone has to try what will work and what will not in a given site. Daniel states that it is necessary to look and consult the experience with someone who is already doing something similar. It is also good to attend seminars and trainings. Last but not least, it is good to look for adequate literature.

KEY WORDS

Sheep, cattle, horses, orchards, pasture, organic farming, hall for apple juice, individual tree protection

Farmer recommendation:

„Do not do everything at once, but starting step by step. One will learn what works and what does not by practice, observations and errors ”



Co-funded by the
Erasmus+ Programme
of the European Union

