



AGROFORESTRY SYSTEMS: SILVOPASTORAL

Year of foundation	1995
Specialization	Meat cattle, arable farming and fruit farming. Short chain sales
Farm area	50 ha
Number of employees	0 with 10 loose employees. For carrying out agricultural tasks and processing and sales. This is all contained in cooperation agreements
Year of starting agroforestry practices	2014 with money from the government. 1994 without them
Location	Sint-Truiden België
Web page	www.natlandhoeve.be www.kortwegnatuur.be

Natlandhoeve is a farm with beef cattle, arable farming and fruit. They try to use the animals as much as possible where they are most





I've always been into trees. Tree fruit has always been present in the region. Starting with a farm of **0.6 hectares, grazing standard orchards was an interesting opportunity to get grasslands for the animals.** The land here is expensive and very fertile. A lot of the land is taken up by apple and pear low trunk or by arable farming. The company started in 1995 with beef cattle with direct sales of meat. Systematically grown with many natural grasslands for grazing with the animals. **When a number of better plots of land were purchased as house plots around the farm, the idea of planting trees on these plots soon arose.** And then came the official one: agroforestry subsidy.

The change is not yet great. The trees grow, and are cared for to grow up as beautiful balanced trees. The intention is **to create an agricultural system that needs less input. Some owners of land that we have in use are now asking for their land to be furnished with trees and arable crops.**



- The farmer is very familiar with trees. He prunes trees, teach about trees, but he had no experience with walnuts and chestnuts.
- He has learned that there are different varieties of walnuts, that trees should be planted young, that grafted trees on *Juglans regia* rootstock do best. That the trees are really strong. That in very dry conditions the trees can go into summer rest. That trees that flower early are sensitive to spring frost.
- Walnuts have high juice pressure, but there are still large periods of time when pruning is possible.
- Chestnuts are also strong trees, but are difficult to grow. It is best to plant them as soon as possible after the leaf fall in the autumn. Planting in the spring is very dangerous anyway, with the risk of failure.





Implementation of agroforestry in general: The farmer had training and taught agriculture and horticulture. He is 55 years old and has been working in agriculture and horticulture all his life. So there was plenty of experience. **The walnuts and chestnuts are planted with an agroforestry subsidy system.** The apples are partly paid for by the owner of the plot and partly with a European subsidy. This was coordinated by the Regional Landscape Haspengouw and Voeren in the context of landscape conservation.

Main skills:

- Learning to **deal with trees**. Pruning, diseases...
- Learn to see **the value and valorise the yield**

DESCRIPTION OF USED TECHNIQUES DURING ESTABLISHING OF AGROFORESTRY SYSTEMS

Walnuts: plants of several varieties of grafted trees at 10 x 20m in grassland with grazing of cattle. The trees are grafted to the ground. **The first branches appear at a height of 2.2m. The trees have 1 pole on the side of the main wind direction.** The tree therefore hangs on the post. **The direction of travel is according to the plot and not according to the direction of the wind.** Each tree has a basket of heavy gauze wire with a mesh size of 5 by 5 cm. **Barbed wire has been twisted around the basket so that the cattle will not rub on the tree or hive. Probably in the long run the planting distance will have to be 20 x 20m. The planting was done manually.** Trees were planted in 2014 and 2018.

Chestnuts: plants of trees grafted at a height of 2.2m. All Dorée de Lyon at 10x20m in grassland with cattle grazing. **The trees have 1 pole on the side of the main wind direction.** The tree therefore hangs from the pole. The driving direction is according to the plot and not according to the wind direction. Each tree has a basket in heavy gauze wire with a mesh size of 5 by 5 cm. Barbed wire has been twisted around the basket so that the cattle will not rub on the tree or hive. The planting was done manually in 2014 and 2018. Same plot as the walnuts

Apple: planting of trees grafted to a height of 2.2 m. **Many trees are also grafted downstairs with a good trunk-forming variety because many varieties of apple do not do so and otherwise the trees do not grow strong enough. Several strong old varieties adapted to this region. Planting distance 9x 12m in relation to each other.** It is a plot that is certainly being replanted for the 4th time. In order: apple, plum, cherry and now again apple. The plot has probably been an orchard for more than 100 years. 2016 was very wet in May and June. The roots of the cherry trees have died, so we were obliged to plant completely new. The logs went to a sawmill. The thick branch wood became firewood. The fine branch wood was shredded with a heavy flail mower. The stumps were largely buried. Fresh soil was put in the old planting holes. In this way it was possible to maintain the existing planting pattern. Cherry after cherry is not possible because of soil fatigue. Apple after cherry does not have this problem. The trees were planted in the spring of 2018 and 2019. **Despite the fact that the years were very dry, most of the trees were successful.** The tree level was covered with old compost to prevent it from drying out. Tree protection as with nuts and chestnuts. The outer row of trees are upright pear trees. Between the pears and the edge there should be sufficient passage for a tractor with an arm. A hedge has been planted in the edge. The hedge must be able to be pruned mechanically.

THREATS/CHALLENGES

- Need for knowledge and dissemination of walnuts and chestnuts in Belgium
- **Modernisation of the old techniques** for standard fruit
- **Commercialisation of the fruit.**
- Choice of trees and system in function of the soil (what is already growing in the area).



It's important to share knowledge and learn from each other because that is how we expand and get better. Agroforestry has been going on for a long time, even though it hasn't always been referred to as agroforestry.



FUTURE PLANS

It's important to share knowledge and learn from each other because that is how we expand and get better.

FINAL RECOMMENDATION

Have a love for trees!

Seek advice from experts, plants and then complete knowledge.
Trees can grow as you learn.

Farmer recommendation:

„People with a lot of appetite and a lack of knowledge have to be well supported.“

KEY WORDS

Cattle, walnuts, chestnuts Apple,
fruit sale



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