

HUNGARY

Carbon conservation & sequestration

Location

Somogyudvarhely and
Berzence

Programming period

2014 – 2020

Priority

P5 Resource efficiency &
climate

Measure

M08 - Investments in forest
areas

Funding (EUR)

RDP support 241 941
EAFRD 205 650
National/Regional 36 291

Project duration

2017 – 2018

Project promoter

POPULUS HUNGARY Ltd

Contact

noemi.szabo@derula.hu

Website

<http://derula.hu/>

Using Rural Development Programme (RDP) support to set up modern poplar plantations in response to the increasing demand from industry for high quality raw materials

Summary

New solutions are needed for the development of poplar management and the future of its processing industry. One of the great future opportunities is the widespread dissemination of industrial plantations, which will also lead to the introduction of high-quality cultivation practices.



The beneficiary, the company Populus Hungary Ltd., received Rural Development Programme (RDP) support to set up new innovative high quality poplar plantations to respond to the increasing demand for high quality raw materials, both nationally and abroad.

Results

Populus Hungary Ltd. established industrial poplar tree plantations on 109.18 hectares of land.

Two plantations were established in Somogyudvarhely, of 25.41 ha and 27.68 ha of land.

Two plantations were established in Berzence, of 26.14 ha and 29.95 ha of land.

70% of the production is sold to Derula Ltd., while 10% is sold to Italy and the remaining 20% is sold to Hungarian biomass power plants.

Lessons & Recommendations

- ❑ As the concept of RDP measures was completely new and unique for the project, the decision-making and paying process was found to be too long. As the RDP measure works in the same way as area-based support, there is no need to provide any invoices as the project is verified by satellite images.
- ❑ Choosing the appropriate variety of trees for the selected site is key, as is the need to create a diverse breeding ground based on many varieties. This can reduce the risk of monoculture in a single genotype plantation and it is also the only possible defence against new infections by potential pathogens.

Context

Hungary holds a leading position in Europe in terms of its poplar cultivation tradition, which is why the beneficiaries set up a processing plant and founded the company Derula Ltd. The investment was completed in the year 2000 when the production of poplar plywood started. Over the last 20 years, the company has expanded and added manufacturing facilities, thereby continuously increasing the demand for raw materials. Today they own three processing units in Szolnok, Magyarszecsőd and Dég, three different counties in Hungary. Currently, the company processes 150 000 cubic metres of wood per year, making it the country's largest buyer of poplar wood for raw materials.

Simultaneously to the continuous increase of its production volumes, the company faced difficulties in sourcing the raw materials, both in terms of quality and quantity, and subsequently faced risks in fulfilling its orders. In 2007, the company began negotiations on areas that it could manage. This resulted in the company establishing its first plantation in Pest County in 2008. The poplar plantation differed from conventional Hungarian poplar forests planted with traditional technology on two counts. First off was that intensive cultivation, including regular stem pruning and care over a period of 10 to 12 years, that provides peelable raw materials for the industry. Thanks to the short crop rotation, the area turns twice or three times, in the same amount of time compared to the traditional 20-30-year-old trees. The other aspect is the care technology employed (pruning, fertilisation, soil management), which allows first-class log selection, thus replacing the imported colour veneer. Later in 2014, for the cultivation of the primary raw materials the owners decided to establish another company called Populus Hungary Ltd, which is the beneficiary in the current project and mainly sells its production to Derula Ltd.

Objectives

Some of the objectives of this investment included:

- supplying the processing industry with raw materials covering at least one third of its total consumption;
- producing the raw materials not available in Hungary;
- helping expand the range of products with first-class semi-finished products;
- extending the product chain leading to sustainable

management;

- processing the wood from its own controlled management to allow the extension of FSC (Forest Stewardship Council) quality assurance certification to plantations, in addition to the production plants; and
- balancing market fluctuations and weather-dependent yields.

Activities

The most important step in plantation planning is assessing the site-specific characteristics of the area selected for planting. For the current project, four areas located in two municipalities in Somogy county (Somogyudvarhely and Berzence) were selected. In addition to assessing the suitability of an area, careful site exploration also helped to select the poplar variety to be planted and to determine the expected length of the rotation cycle.

It is important to mention that a profitable plantation should be established in an area with deep (at least 50 cm) permeable soil and with water sources. The optimal conditions are when the ground water table is at 100-150 cm with sandy-loamy and sandy-clayey soil texture, not too compact or open, of uniform profile and sub-acid or mildly alkaline pH.

The poplar variety used is the 'I-214' variety from Italy. This is due to its low wood density which is easy to peel and because of the lightness of its finished products. It is used in the interior design of ships and caravans. Its light wood gesture is also a popular feature for the manufacturing industry.

Industrial poplar plantations, for the production of high-quality peeling logs, use deep-drilling technology and top bud cutting. The industry requires almost exclusively two-year-old, 6 to 8 metre long cuttings. By deep drilling, the developing root system of the trees may be brought closer to the groundwater, resulting in more intensive juvenile growth and consequently greater crop safety. Only certified category reproductive material produced by licensed propagation material producers and certified by the supplier is used for planting. In the area chosen for planting, preparation works were carried out, whereby plants, plant parts such as shrubs, stumps and thicker roots, which had been left behind from previous tillage, were removed from the area.

The planting network for poplar for industrial use which was applied was 6 × 6 m. With this spacing, the number of planting units is 278 per hectare.

Industrial poplar tree plantations are also highly sensitive to damage by game, so defences should be focused at the tree level. Solutions include using body protection with plastic net, area protection using permanent fencing or an electric shepherd.

Main results

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70% of the production is sold to Derula Ltd., while 10% is sold to Italy and the remaining 20% is sold to Hungarian biomass power plants.

Key lessons

As the concept of RDP measures was completely new and unique for the project, the decision-making and payment process was found to be too long.

The application was sent in 2017. The decision was taken in 2019, and the payment will probably be made at the beginning of 2020. Since the RDP measure works in the same way as area-based support, there is no need to provide any invoices as the project is verified by satellite images.

One of the main tasks in poplar breeding is to produce new varieties with excellent properties, similar to 'I214' for example. Today, a number of new and locally proven varieties are available, partly through the improved activity of the NAIK Forest Research Institute and partly through the careful introduction of Italian and French varieties. Choosing the appropriate variety for the selected site is key, as is the need to create a diverse breeding ground of many varieties. This can reduce the risk of monoculture in a single genotype plantation, it is also the only possible defence against new infections by potential pathogens.

Additional sources of information

n/a