

BULGARIA

Agri-food chain integration & quality

Location

Tsarichino

Programming period

2014 – 2020

Priority

P3 – Food chain & risk management

Measure

M4 – Investments in physical assets

Funding (BGN)

Total budget 1 215 428.37
RDP contrib. 607 714.00

Project duration

2017 – 2019

Project promoter

RASTITELNA ZASHTITA -
AGRO“ Ltd.

Contact

rz.agro@gmail.com

Website

n/a

Setting up an innovative lavender distillery in response to increasing market demands for high quality, niche products.

Summary

In recent years, many new lavender plantations have been established in Bulgaria. At the same time, the processing capacity for raw lavender is insufficient. This was a major constraint in exploiting the full potential of the promising sector.



In this context, a family business decided to diversify its activities and to respond to the new trend towards healthy, organic products. They decided to invest in lavender processing and set up a distillery for raw bio-lavender. The investment included the construction of an industrial processing building with modern equipment.

Results

The investment will increase the business's revenues and ensure quality production through innovative technologies and strict control over the whole process. The investment provides/guarantees a secure income for a minimum of 10 years.

The investment allowed for the development of a new organic product in response to market demand.

Two new jobs were created.

The investment demonstrates the opportunities for young people/specialists to become young farmers, or entrepreneurs in rural areas.

Context

In recent years many new lavender plantations have been established in Bulgaria. This outlines a tendency to increase the annual production and supply of raw lavender. At the same time, the processing capacity for the raw lavender is insufficient and this is a actual constraint for companies that want to process and produce of new high quality bio products from lavender.

‘RASTITELNA ZASHTITA – AGRO’ Ltd. is a company registered in 1998 and its main activity is to trade plant protection products, fertilisers and seeds. In 2014, it began trading small quantities of lavender oil, which was bought from farmers. The company has its own property in the village of Tsarichino, Balchik, reg. Dobrich which is an old farm yard, together with an existing building. In this context the family business decided to invest in the construction of a new modern distillery for lavender, that will produce high quality lavender oil.

The company owner’s son possesses a Masters in Agronomy and works as a Deputy Manager and Project Manager on the farm. The young entrepreneur diversified into organic lavender production and every year more area is used for its cultivation. By 2016/2017 nearly 300 hectares were certified as organic. Since 2015 the farm has been producing lavender oil, and the final product has been very successful both domestically and abroad.

Objectives

The project objectives include:

- to improve the competitiveness of the company;
- to introduce new technologies and processes contributing to the production of high-quality bio-products;
- to increase the market share of the company’s products;
- to contribute to the diversification of the company through the production of a new product that will ensure its sustainability in the long term.

Activities

The activities of this investment project included the construction/repairing works for processing plant; purchase, delivery and installation of a steam boiler, a water-circulating cooling system, a distillery, an electrical telfer; a telescopic loader with a frame of pallet forks and a bucket with a paddle.

An existing old building in the farm was used to set up the facility. The building was rebuilt and a new part was constructed.

The production in the distillery begins with the loading of the raw material into the distiller. The telescopic loader feeds raw material from the top of the process, which makes the process faster and minimises the loss of raw material. Steam produced in a gas-fired steam generator heats the raw material and produces an oil-rich vapour blended with essential oils. The vapour moves through a horizontal condenser (cooler). The vapour is cooled and converted to a condensate which is a mixture of steam and oils in liquid form. The resulting liquid condensate is the moved to a serpentine cooler for additional cooling. The condensate flows into a florentine vessel, where the oil is separated from the water. The oil remains on the surface, while the water remains below along with a low content of hydrazoles (water-soluble fraction oils) - or the so-called floral water. The water is collected in the waste water vessels and the oil obtained at the end of the boiling process is drained off from the florentine vessel. The condensate cooling recycled and this is a technological solution that saves resources. The hot water coming out of the horizontal cooler (60 to 90 gd) is redirected to the backup water supply tank that feeds the steam boiler. Thus the steam is produced by using a portion of the hot water with less energy.

Two tanks of 10 cubic meters of fresh water are kept as a reserve, in case the water supply network stops providing water. The fresh water is driven to the boiler room, where there is water softening machinery. This installation removes the carbonate compounds from the water. Both the stored water and the boiler water are softened so as not to accumulate unwanted limestone throughout the installation. The water is kept at 27 degrees Celsius and in the summer at 20 degrees Celsius. After the softening installation there is a vessel that collects five cubic meters of softened water, i.e., there is a reserve for 2.5 hours of softened water. With this innovation, instead of going straight to the cooling towers, the hot water from cooling floats to this tank. In this way, the temperature of the stored water of 20 degrees will rise by 60 degrees, saving energy and costs. Also, the load on the cooling towers is reduced, saving energy both for cooling and for heating the boiler.

Main Results

The investment will increase the business revenues and ensure quality production through innovative technologies and strict control over the whole process.

The investment provides/guarantees a secure income for a minimum of 10 years. After 10 years and within a period up to the 25th year from the investment it is possible to have a decrease in capacity due to the depreciation of the assets.

The payback period, meaning the amount of the investment versus the expected revenue, is approximately one year and eight months from the completion of the investment itself.

The investment allowed for the development of a new organic product in response to market demand. It also contributed to the minimisation the risk of market fluctuations on major grain and other crops.

This is also an example of rational and environmentally friendly use of local resources. The technological solutions at the distillery lead to lower water and energy consumption. Moreover, it minimises the losses of input raw materials (lavender colour) resulting into a reduction of the carbon footprint.

Two new jobs were created. The new distillery contributes to the development of the rural economy through the realisation of new investments; promoted the cooperation with local farmers and a 'short chain' for lavender production in the region was established.

Another result is that it promotes the image of a high quality Bulgarian traditional bio-product and paved the way for new opportunities in the region for the cultivation of alternative crops, and diversification from the main crops.

The investment also raised the prestige of young farmers. It demonstrates the opportunities for young people/specialists to become young farmers or entrepreneurs in rural areas.

The introduction of such new bio technologies, will improve product quality and safety and their traceability, which is essential for the customers in both domestic and foreign markets.



Additional sources of information

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