

ITALY

Renewable sources and waste management

Location

Coenzo

Programming period

2014 – 2020

Priority

P3 – Food chain & risk management, P5 – Resource efficiency & climate

Measure

M04 - Investments in physical assets & M06 – Farm & business development

Funding (EUR)

Total budget 880 000
EAFRD 122 461
National/Regional 161 539
Private 596 000

Project duration

2017 – 2017

Project promoter

Società agricola BASSO
Fratelli ss

Contact

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Website

n/a

A family farm invested in a biogas plant to produce renewable energy while also purchasing a new tomato harvester to improve the farm's overall income.

Summary

The project consisted of two major investments in a large farm of around 350 ha of the Po plain in the Emilia-Romagna region. The beneficiary set up a 1 MW biogas plant and purchased equipment to automatically select and pick organic tomatoes grown on 70 ha of the farm.



Both investments would improve the income of the farm by diversifying its energy sources, and by improving the product quality.

Results

The biogas plant creates an additional and significant income of around 15 000 EUR per month.

The tomato picker guarantees a high-quality product and harvests some 6 500 tonnes from 70 hectares in just 50 days, operating on average 8 hours per day.

Lessons & Recommendations

- ❑ The project shows that even middle-range-to-large investments can make great economic and environmental returns for a farm.
- ❑ In-depth analysis of alternative solutions in terms of equipment also helped to make the right choice.

Context

The Basso family (three brothers in their 40s) manages a large farm near Parma, and has a mixed pattern of activities: they grow cereals, have some 570 cows providing milk for the valuable PDO Parmigiano-Reggiano cheese, and they also produce fodder crops and tomatoes. Due to their concerns about the negative environmental and health impact deriving from conventional farming, they chose to convert to organic farming in 2015. Within this trend, they also decided to address the problem of sludge management by purchasing a small biogas plant. In addition, they needed to replace their automatic tomato picker they were using for the past 17 years with a new one.

Objectives

The main objective of this investment was to increase the farm's overall income and therefore increase its competitiveness.

Activities

The project financed the setting up of a 99.99 kW/h biogas plant. The plant will transform the sludge produced by the 570 cows into methane that can be converted to energy. The energy produced is sold to the national energy grid. The plants consists of a 2 077 m³ digester, which is 6 m high and has a 21 m radius, and which uses acidic bacteria to degrade the sludge. Around 11% of the produced energy is re-used to operate the plant.

A tomatoe picking machine was purchased by an Italian firm, Corima. The machine includes a sensor that assess the tomato's ripeness and suitability to be picked.



Main results

The project has been successfully completed, achieving all of its planned objectives. Revenues have increased, thus supporting the overall viability of the farm.

The biogas plant creates an additional and significant income of around 15 000 EUR per month.

The tomato picker guarantees a high-quality product and harvests some 6 500 tonnes from 70 ha in just 50 days, operating on average 8 hours/day.

Investing in the new automatic tomato picker enabled the farm to sell their quality organic vegetables for a price twice as high as that for conventional tomatoes.

Additional environmental benefits from a circular economy point of view are:

- The dry material resulting from the biogas plant is spread over the fields as fertiliser;
- The tomato picker finely chops the green parts of the plants, which are later dug in the soil.

In both cases a positive contribution to soil fertility is achieved, as shown by recent analysis.

Key lessons

The project shows that even middle-range-to-large investments can make great economic and environmental returns for a farm.

In-depth analysis of alternative solutions in terms of equipment also helped to make the right choice.

The positive impact of these innovations has attracted the interest of neighbouring farmers in the area.



Additional sources of information

n/a