

PORTUGAL

Agri-food chain integration and quality

Location

Sesimbra

Programming period

2014 - 2020

Priority

P3 – Food chain and risk
management

Measure

M4 – Investments in physical
assets

Funding (EUR)

Total budget 376 931

EAFRD 96 117

National/regional 16 962

Private 263 852

Project duration

2016 – 2018

Project promoter

Sociedade Agrícola e
Turística Quinta da Mó de
Cima, SA

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Installing an efficient irrigation system in a fig orchard helped to better manage water stress for the trees and increased the quality and volume of production.

Summary

The project financed the application of an efficient irrigation system on a fig farm. The new system consists of soil moisture content probes and a meteorological station for reading the temperature, recording the dew points and indicating the appropriate harvest time for the 40 ha of fig trees.



Results

This system allowed the production quantity of fruit not of commercial quality to be reduced from 20% to 10%.

The production will increase from 22 tonnes per ha to 31 tonne per ha.

The size of the figs will increase leading to a higher selling price from an average of 1.3 EUR per kg to 1.5 EUR per kg.

Lessons & Recommendations

- ❑ Fig is a very sensitive fruit that requires very careful handling from harvesting to packaging and then preservation. A possible solution, which is being tested, would be to inject gas into the fruit to delay the senescence of the fruit once packaged.
- ❑ The varieties of Portuguese fig trees are not easy to reproduce and a specialised network of nurseries is necessary to address this issue.

Context

The farm Quinta da Mó de Cima owns two different plots at Pinheiro Manso and Pinheiro Bravo. In 2012, the farm planted an area of 9 hectares of fig trees, which increased in 2013 with another 31 hectares of the same plantation.

The idea of planting fig trees came from the observation and analysis of the market, which showed that demand for figs was increasing among several operators of the Lisbon Region's Supply Market (MARL). Also the option for integrated fig production, led to an even stronger interest among these operators.

Fig is a fruit with a long tradition in Portugal. However, production has fallen from 270 000 tonnes per year in 1961, to only 2 826 tonnes in 2014. It is a highly perishable product and the small Portuguese farms did not have economies of scale to invest in post-harvest systems that were necessary to maintain the quality of the product for a longer period.

The world production of figs is led by Turkey (26%), followed by Brazil (15%), Greece (8%) and Spain (4%). Europe is the largest importer of figs, followed by Asia, which represents the potential of this crop. According to the latest trade balance data, Portugal had a negative trade balance of 2.2 million EUR in 2014.

Objectives

The objective of this project was to invest in precision agriculture and thus increase the production and quality of the fresh and dry fig. This would be achieved through a better management of water resources, thus eliminating the exposure of the plants to water stress.

Activities

The project was used to finance the application of an efficient irrigation system, which included the installation of soil moisture content probes and a meteorological station for reading the soil temperature, recording the dew points and indicating the appropriate harvest time at the 40 ha of fig trees.

The micro-sprinkler line will be complementary to the existing irrigation system that uses drippers and is insufficient.

Main results

This system reduced the production volume of fruit not of commercial quality from 20% to 10%.

The investment will significantly increase production from 22 tonnes per ha to 31 tonnes per ha.

More efficient irrigation will also translate into an increase of the size of the figs, which will be reflected in the selling price of the product, rising from an average price of 1.3 EUR per kg to 1.5 EUR per kg.

Key lessons

Fig is a very sensitive fruit that requires very careful handling from harvesting to packaging and preserving. A possible solution, which is being tested, would be to inject gas into the fruit to delay the senescence of the fruit once packaged.

The varieties of Portuguese fig trees are not easy to reproduce and a specialised network of nurseries is needed to address this issue.