



PRODER:

PROFRUTA - Characterization of Portuguese Propolis and Evaluation of its Potential in the Control of Plant Diseases



Practical problem

Proliferation of plant diseases occurs due to climate changes and microbial resistance to phytopharmaceutical products. Increasing dose or variety of pesticides used may affect the plant homeostasis. Natural fungicides and bactericides could be an alternative or complement to traditional treatments.

Partners

Type:

Agri Enterprise
Others Associations
Research/Teaching

Research

Name:

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Project

Objectives:

Chemical and functional characterization of Portuguese propolis extracts; development of formulation appropriate for plant treatment; "In vitro" and "in vivo" evaluation of propolis fungicide and bactericide activity; sensorial and functional characterization of fruits treated with propolis.

Expected results:

Standardization of propolis extracts relatively to their fungicide action;
development of formulations appropriate for fruit treatment and determination of inhibitory doses;
evaluation of the effect of propolis application in the physiology, sensorial attributes and functional properties of treated fruits.
Validation of laboratory results in field tests

Results so far/first lessons:

In vitro assays showed that propolis extracts were able to inhibit the growth of *Penicillium expansum*, *Botrytis cinerea*, *Alternaria alternata*, *Colletotrichum gleosporioides*, *Stemphylium vesicarium*. Pears treated with propolis and pears treated with commercial fungicides did not show marked differences in what concerns fruit rot.

Who will benefit:

Fruit producers (alternatives for fruit protection), Propolis Producers (increasing the market for propolis)

Start: April / 2014
End: December/ 2017

Budget: 311 409 €



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