

EXOVIEWER. Prototype for monitoring and controlling exotic species.

Abstract

The project aims to **create a prototype station that detects invasive exotic species from abroad**, so we can begin to understand which ones are arriving, even if they are not successful. **The goal is to install multicapture insect traps in the prototype (in the form of a trailer)**, get **photographs** of the capture sheets using **cameras** and **send them** to be identified and later classified.

Objectives

SECTION 1: QUEST FOR TECHNOLOGIES AND DEFINITION OF SPECIFICATIONS

SECTION 2: CONCEPTUALISATION OF THE SOLUTION

SECTION 3: PILOT PROTOTYPE AND PROOF OF CONCEPT

SECTION 4. MONITORING INVASIVE EXOTIC SPECIES

SECTION 5. DISSEMINATION PLAN AND TRANSFER OF RESULTS

Description of the actions planned in the project

SECTION 1: QUEST FOR TECHNOLOGIES AND DEFINITION OF SPECIFICATIONS

Task 1A / Definition of the list of conditions of the project

Task 1B / Benchmarking

Task 1C / Search for technologies

SECTION 2: CONCEPTUALISATION OF THE SOLUTION

Task 2A / Aesthetic design of the structural subsystem

Task 2B / Mechanical design of the structural subsystem

Task 2C / Development of the basic image capture system (functional system)

Task 2D / Development of the basic control for operating the image capture (functional system)

SECTION 3: PILOT PROTOTYPE AND PROOF OF CONCEPT

Task 3A / Integrated design

Task 3B / Prototype of the solution

Task 3C / Support for field tests

SECTION 4. MONITORING INVASIVE EXOTIC SPECIES

Task 4A / Monitoring Port of Barcelona

Task 4B / Monitoring feed factory

SECTION 5. DISSEMINATION PLAN AND TRANSFER OF RESULTS

Task 5A / Dissemination

Expected results and practical recommendations

Broadly speaking, the project brings value in four quite different aspects:

- 1) **THE PROTOTYPE ITSELF:** Multiple capture prototype to monitor critical entry spaces.
- 2) **REAL-TIME TECHNOLOGY:** Elements that enable us to determine the time of entry will be incorporated to learn what day and time the specimens were captured by recording the images in the traps. This should make it possible to trace the days prior to the capture and to cross this data with information on the arrivals of maritime containers (in the Port of Barcelona) or lorries (in the feed factory).
- 3) **NETWORK OF EXPERTS:** A network of experts in different taxonomic groups of insects will be created who will be in charge of quickly identifying the different species. Creating a protocol with online

support on how to coordinate, identify samples and other areas will be the first step in developing a very specific, accurate tool for future interests.

- 4) **MULTI-SPECIES LURES:** Testing different multi-species lures in the prototype will help us to improve and fine-tune those that may have a greater interest at points where the entry of a specific species is expected. Often, it is not worthwhile to have very specific lures for a specific species until they have the purpose (and the economic return) of capturing and controlling the species. Here is where multi-species lures, whose impact must still be defined and assessed, can play a very important role. They could serve as a generic product in the step prior to detection and then disappear and give way to 100% specific lures if the goal is to control a specific species.

Leader of the Operation Group

ORGANISATION: GRUP GEPORK SA

Coordinator of the Operation Group

ORGANISATION: INNOVACC

Other members of the Operating Group (grant recipients)

ORGANISATION: SELECCIÓN BATALLÉ SA

Other members of the Operating Group (not grant recipients)

ORGANISATION: FUNDACIO EURECAT

Thematic area(s) of application

- Agrarian production system
- Agrarian practice
- Agrarian equipment and machinery
- Livestock and animal wellbeing
- Vegetable production and gardening
- Landscape / Land management
- Control of pests and diseases
- Fertilisation and nutrient management
- Soil management
- Genetic resources
- Forestry
- Water management
- Climate and climate change
- Energy management
- Waste management and by-products
- Management of biodiversity and the environment
- Food quality / processing and nutrition
- Supply chain, marketing and consumption
- Agrarian and forest competitiveness and diversification
- General

Geographic area(s) of application

PROVINCE(S)

COUNTY(S)

BARCELONA GIRONA BARCELONA GIRONA	OSONA LA SELVA VALLÈS OCCIDENTAL GARROTXA
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Project dissemination (publications, workshops, multimedia, etc.)

- Publication of the news item on the INNOVACC website on 30 August 2021, of the projects of the 2021 Operating Groups requested by cluster:
https://www.innovacc.cat/2021/08/30/_trashed/
- Publication of the news item on the INNOVACC website on 19 May 2023, of the projects of the 2023 Operating Groups approved by cluster:
<https://www.innovacc.cat/2023/05/19/shan-aprovat-2-dels-projectes-presentats-a-la-linia-grups-operatius-2021/>

Project website

<https://www.innovacc.cat/2023/05/19/shan-aprovat-2-dels-projectes-presentats-a-la-linia-grups-operatius-2021/>

Other information on the project

PROJECT DATES	TOTAL BUDGET
Start date: July 2021	Total budget: €83,595.84
Current status: In execution	DACC funding: €38,659.13
	EU funding: €29,163.91
	Own funding: €15,772.80

With funding from:

Project funded via Operation 16.01.01 (Cooperation for innovation) via the 2014-2022 Rural Development Programme of Catalonia.

Order ARP/113/2021, dated 20 May 2021, approving the conditions regulating the cooperation for innovation grants fostering the creation of European Association for Innovation operating groups on matters of agricultural productivity and sustainability and conducting innovative pilot projects by these groups, and Resolution ACC/1660/2021, dated 27 May 2021, calling for applications for this grant.

