

**SALON
AGRICOLE
INTERNATIONAL**



tech & bio

Une initiative des Chambres d'agriculture

VIVEZ DE NOUVELLES EXPÉRIENCES AGRICOLES



Avec
la contribution
financière du compte
d'affectation spéciale
développement
agricole et rural
CASDAR



**MINISTÈRE
DE L'AGRICULTURE,
DE L'AGRO-ALIMENTAIRE
ET DE LA SOUVERAINETÉ
ALIMENTAIRE**

*Liberté
Égalité
Fraternité*

SALON
AGRICOLE
INTERNATIONAL



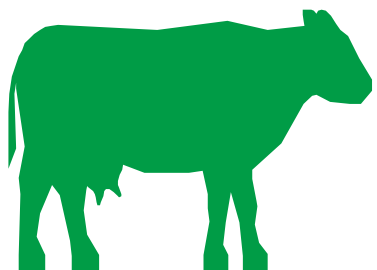
tech & bio
Une initiative des Chambres d'agriculture

Tour d'horizon de la robotique agricole

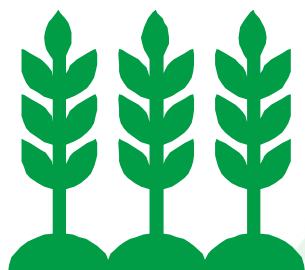
Nicolas WALTER
Chargé de mission agroéquipement Chambre d'Agriculture France

Robots en 2024

18 000



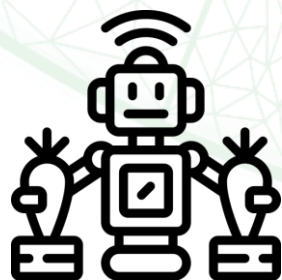
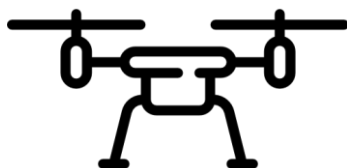
600



Pourquoi un robot ?



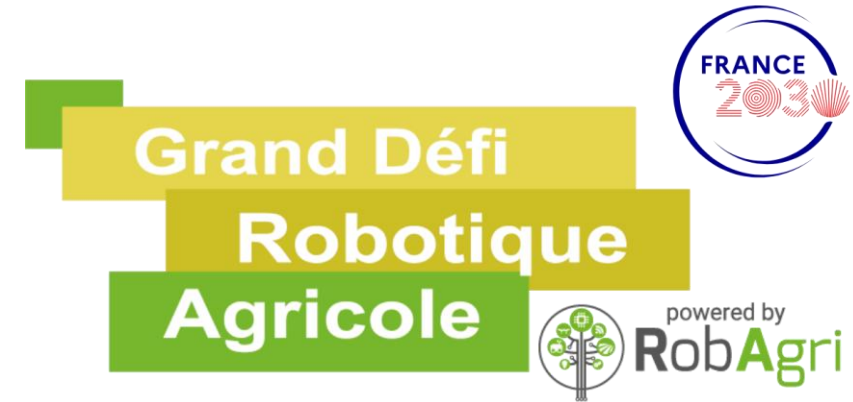
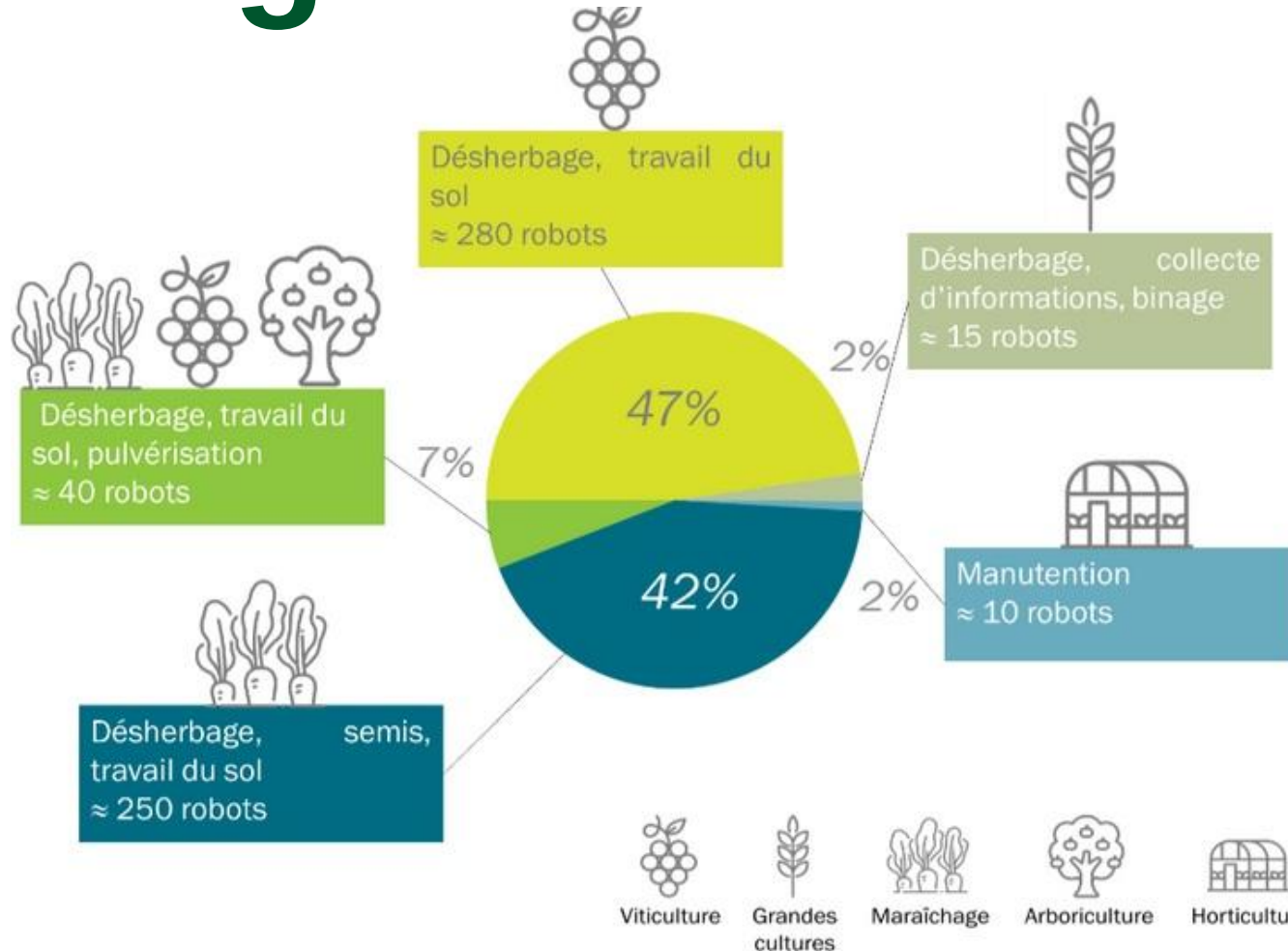
DEMAIN



Freins



Les robots dans les filières végétales en 2024



Aider au déploiement des solutions robotiques au service des transitions agricoles en France

SALON
AGRICOLE
INTERNATIONAL



tech & bio

Une initiative des Chambres d'agriculture

VIVEZ DE NOUVELLES EXPÉRIENCES AGRICOLES



SALON
AGRICOLE
INTERNATIONAL



tech&bio
Une initiative des Chambres d'agriculture

Robotics and AI in vineyards



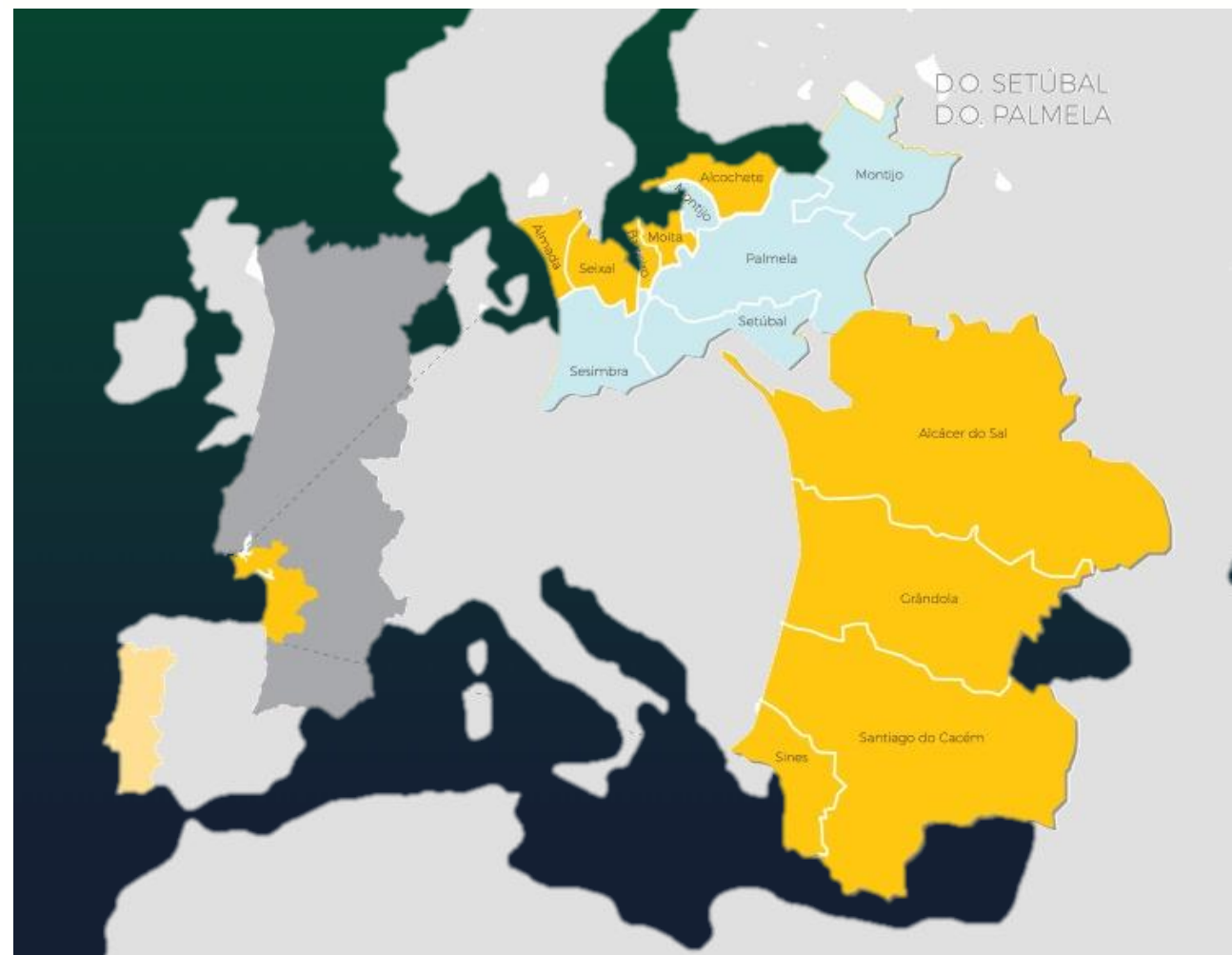
Technicien en viticulture : Sérgio Pinto



10^e
ÉDITION
T&B



Associação de Viticultores do Concelho de Palmela



AVIPE

Technical assistance for $\approx$ 5000 ha
350 associat winegrowers

- Rural extension;
- Training courses;
- Workshops;
- Investment projects;
- Common Agricultural Policy;
- Sustainable use of pesticides;
- Eco-friendly practices;
- Field trials;
- Microvinifications
- Benchmarks / Certifications.

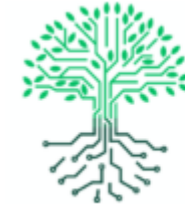


Why Robotic and IA ?

AVIPE works vineyards from less than 1Ha to more than 200Ha from a single farmers. The ability to perform a good consultancy comes by collecting, analysing and a good use of the data. Using these technologies, producers increase efficiency and reduce the consumption of production factors.

All with the aim of increasing the resilience and sustainability of the sector.

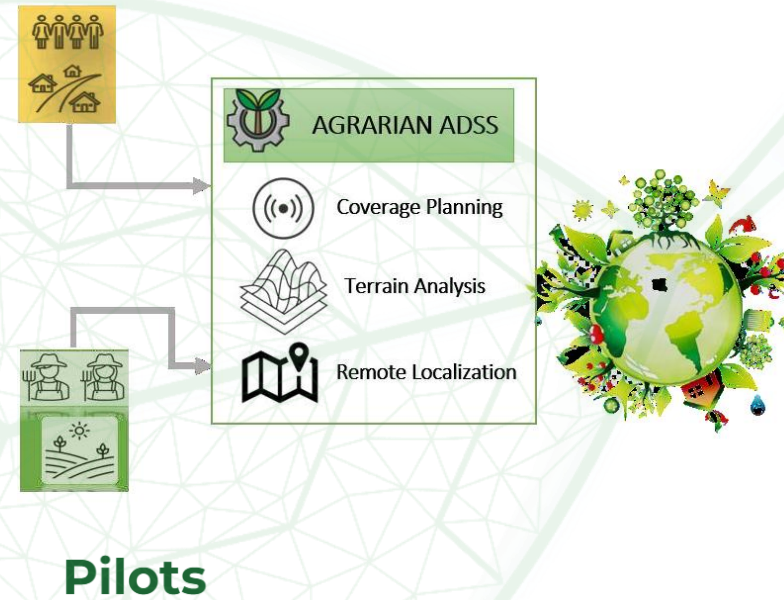
AGRARIAN

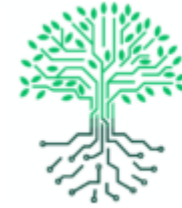


Agrarian
Farming on the Edge

The AGRARIAN project aims to develop open-source digital solutions, focusing on creating an open and dynamic environment.

- Agile and secure Hybrid Communication Emulated infrastructure;
- Agricultural Decision Support System (ADSS);
- Through open calls, provide financial support, encouraging the development and validation of applications and tools within the AGRICULTURAL framework and promoting a new dynamic ecosystem.





Vineyard pilot GAMAYA technology

Yield Estimation

Develop an AI-based model for crop yield prediction using machine learning and remote sensing. By combining satellite data, weather, soil properties, and historical harvests.

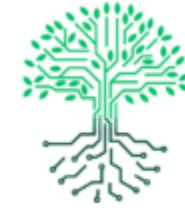
Soil Moisture Monitoring and Forecasting

Enable accurate soil moisture monitoring and forecasting through AI and time-series analysis. Integrating past moisture data, weather, and soil characteristics.

Disease Detection and Forecasting

Develop an AI-powered system for early disease detection and forecasting using onsite data (e.g., photographs, weather) and remote sensing. By analyzing visual symptoms, environmental conditions, and satellite indicators.

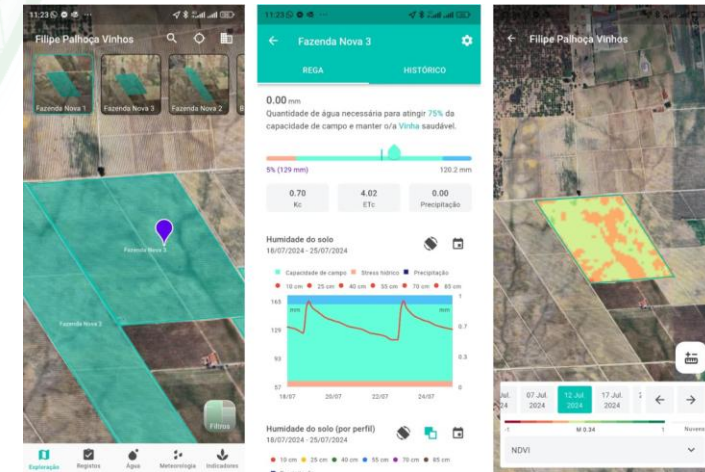
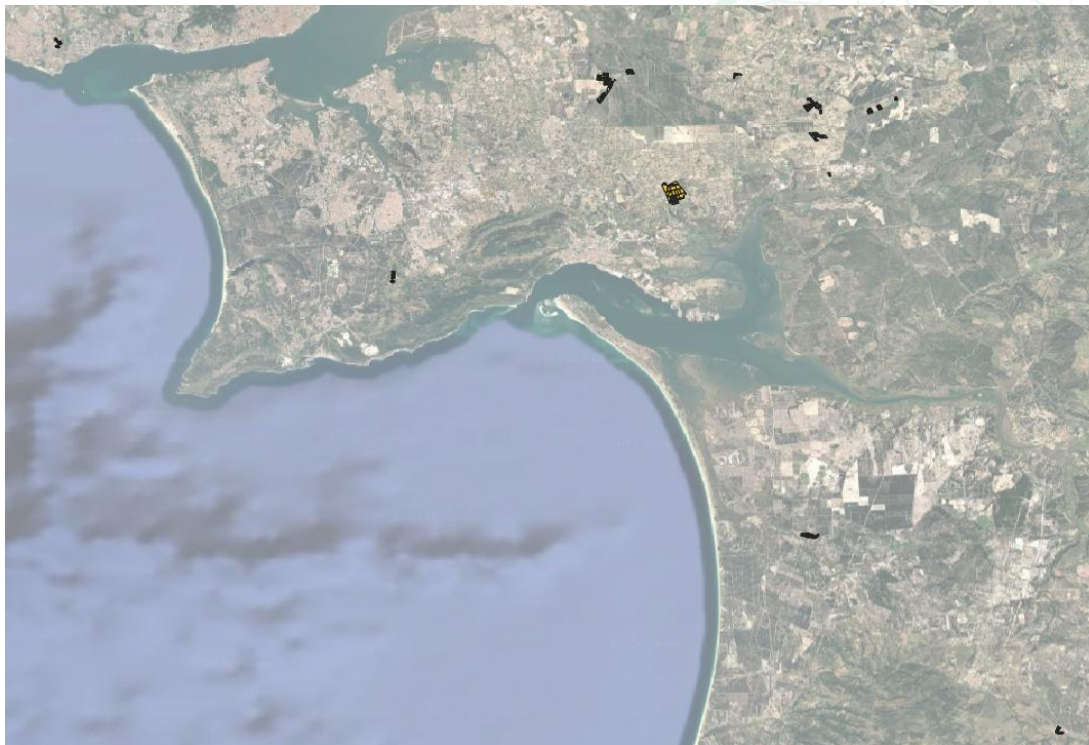
AGRARIAN



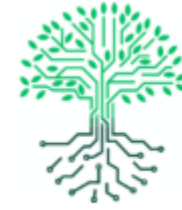
Agrarian
Farming on the Edge

Vineyard pilot GAMAYA technology

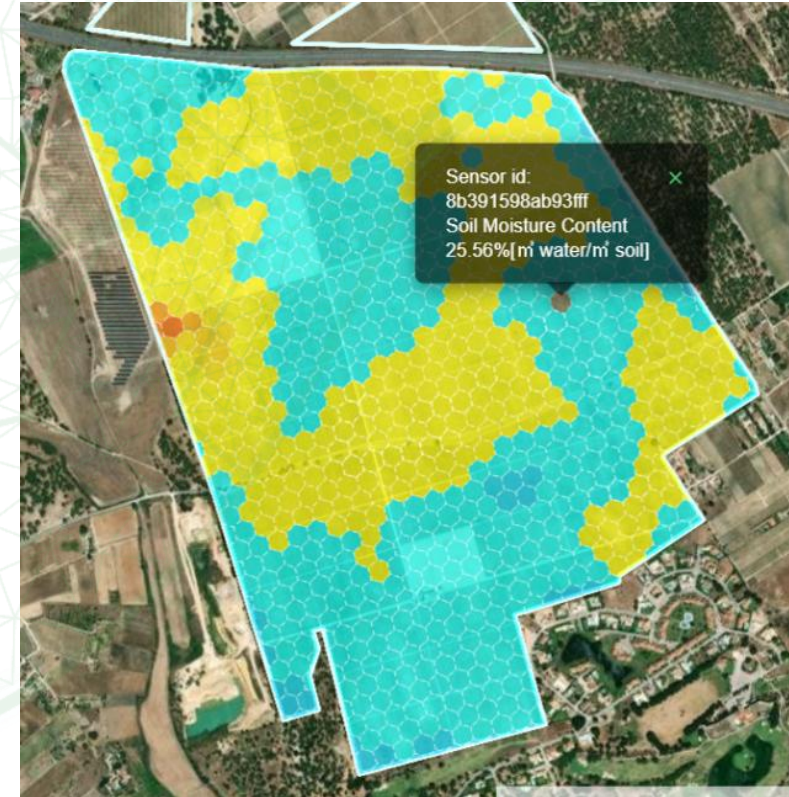
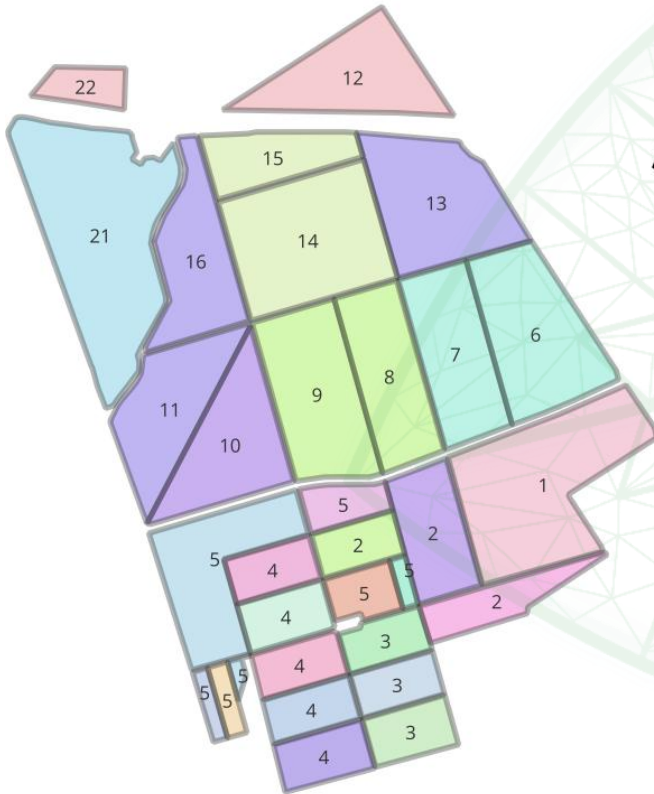
- 470 Ha from 10 grapevine growers
- Plots by grapevine variety
- Yield historical data provided
- Water status field measurements since June
- Access to weather stations and soil humidity sensors



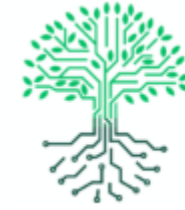
AGRARIAN



Agrarian
Farming on the Edge

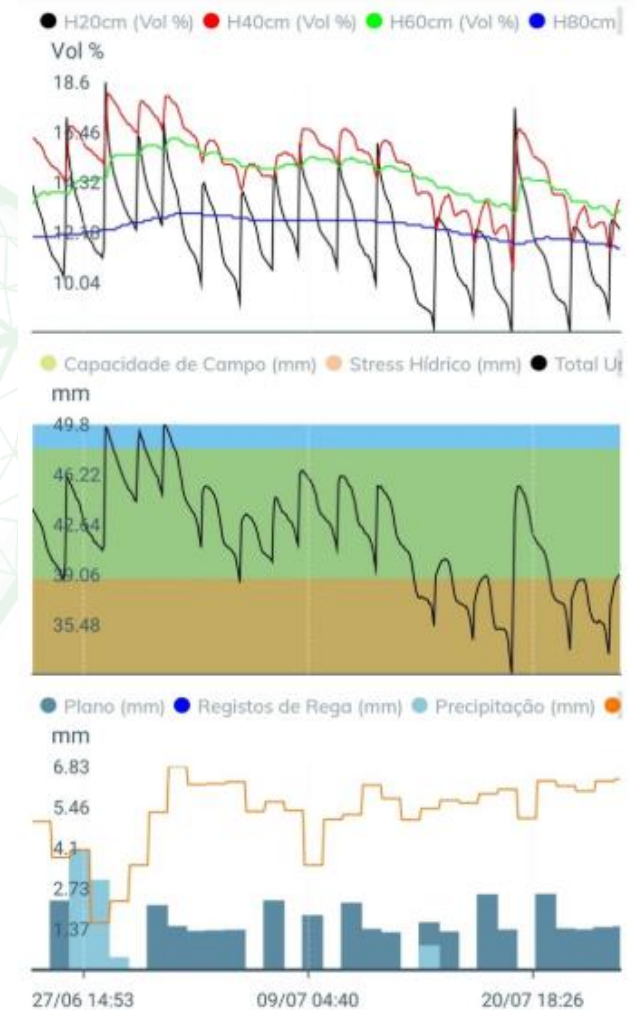
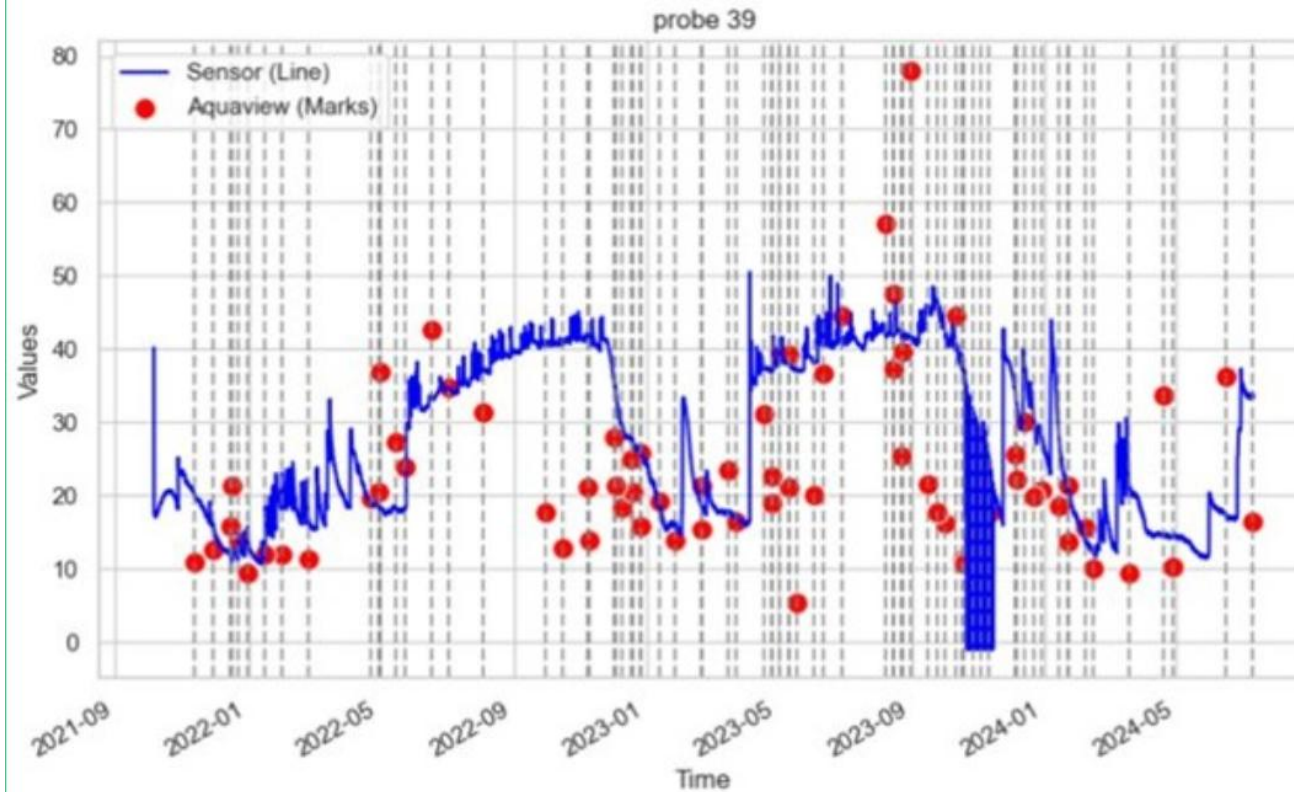


AGRARIAN

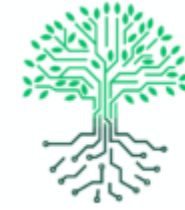


Agrarian
Farming on the Edge

Data validation

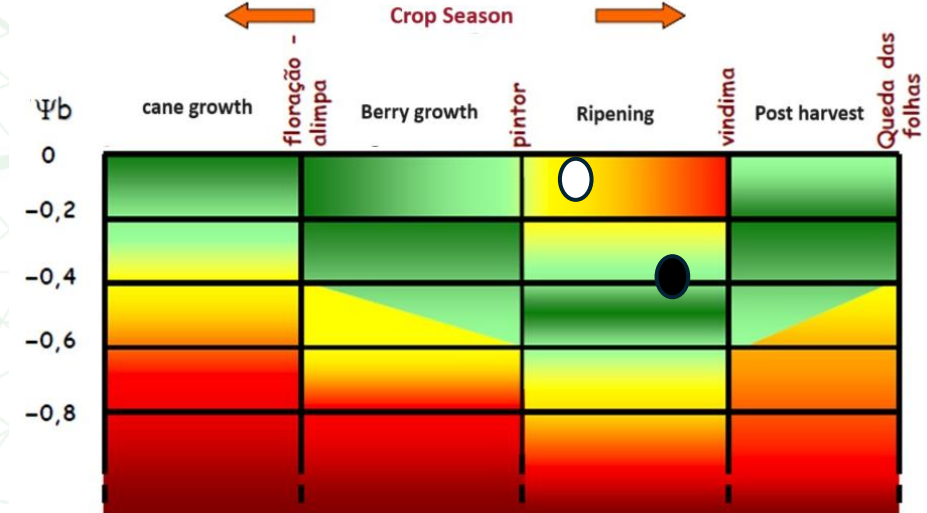
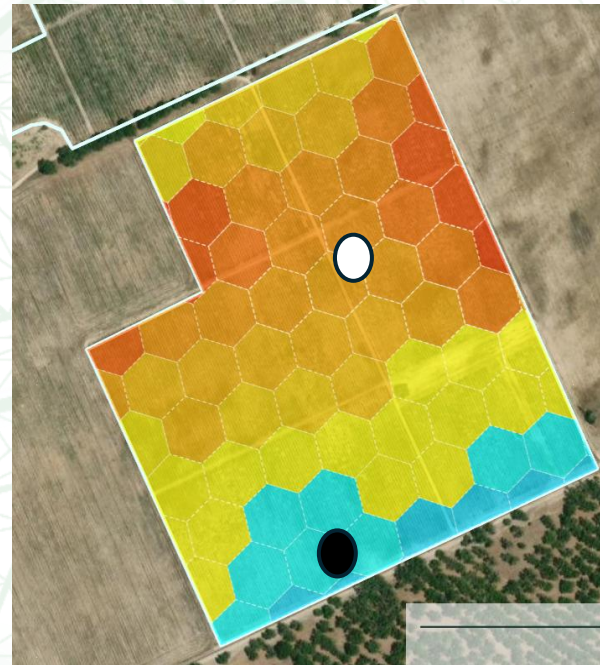


AGRARIAN



Agrarian
Farming on the Edge

Data validation

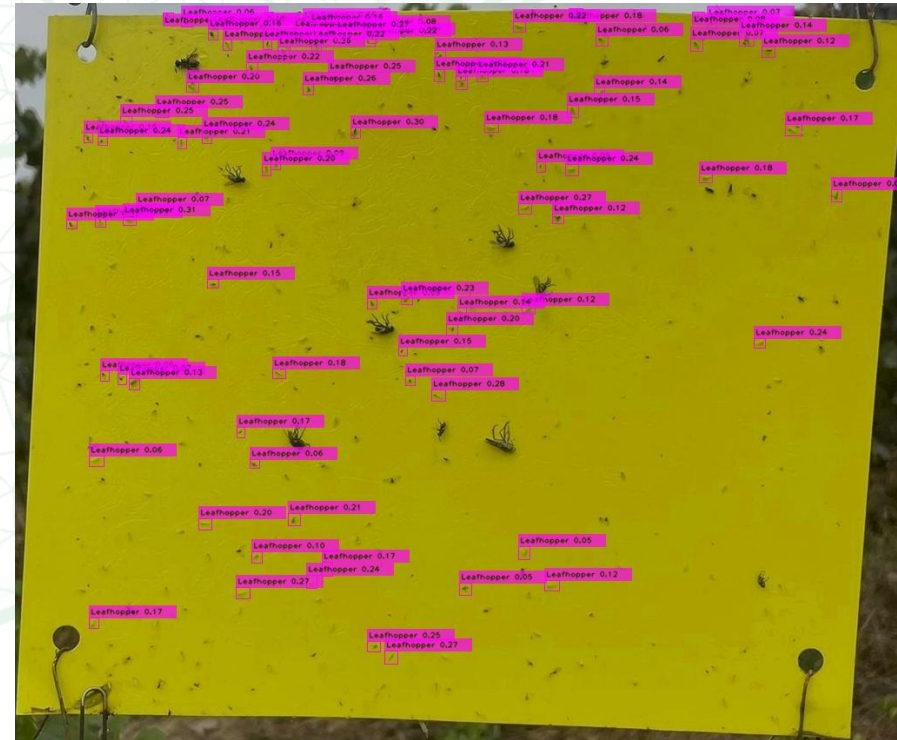
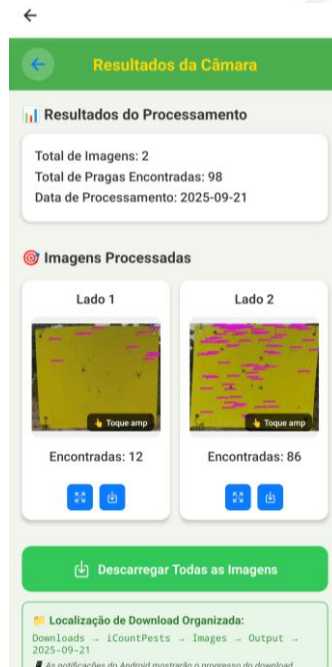


ICOUNTPESTS app

Developed by innovplantprotect

WORK IN PROGRESS

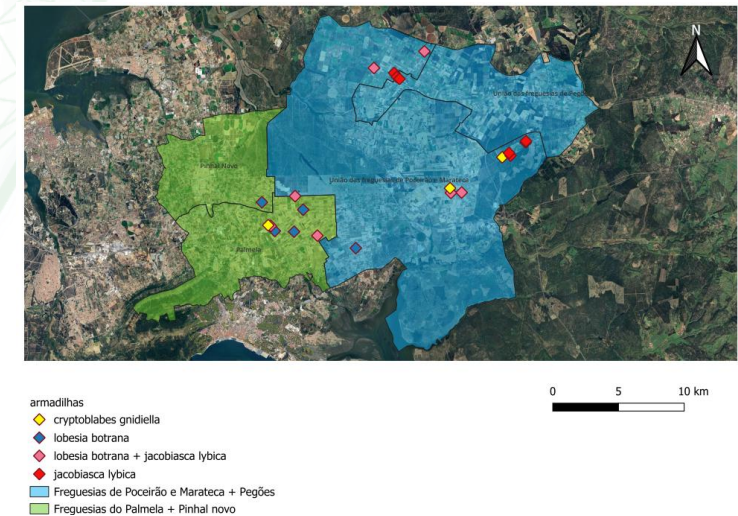
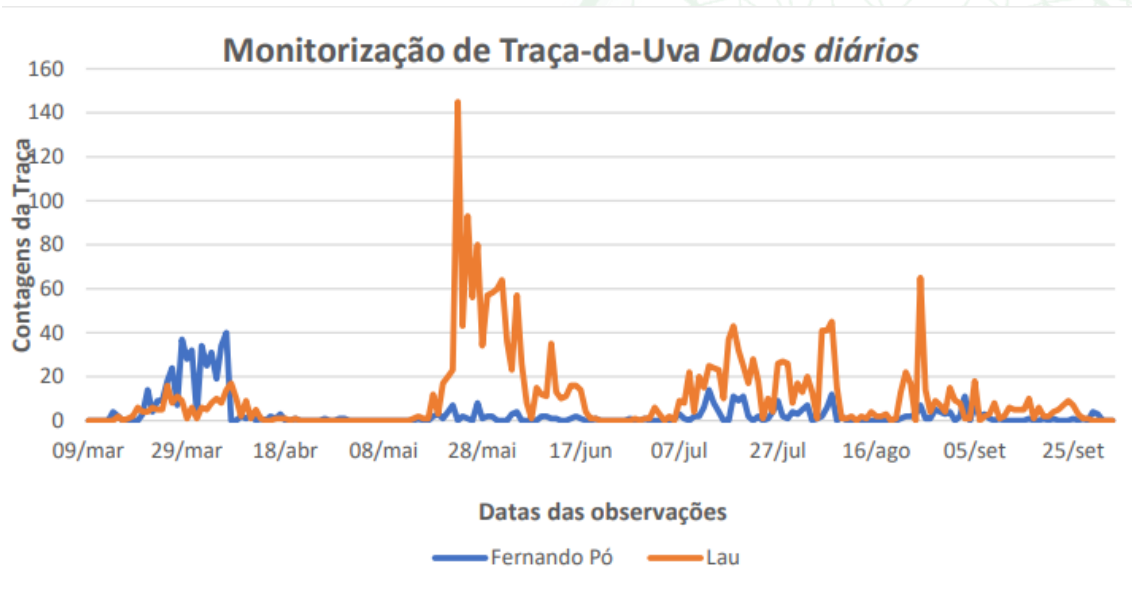
Counting green leafhoppers stuck in chromotropic traps using artificial intelligence.
Provide pest dynamics in each plot.



Grape Moth Remote traps

Network of traps where we can understand the dynamics across the entire region.

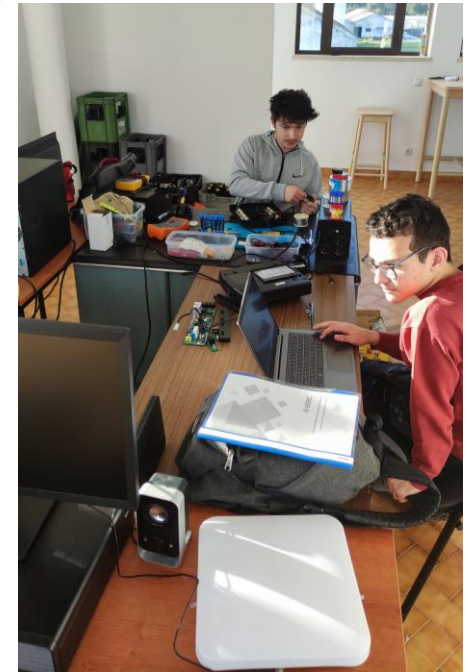
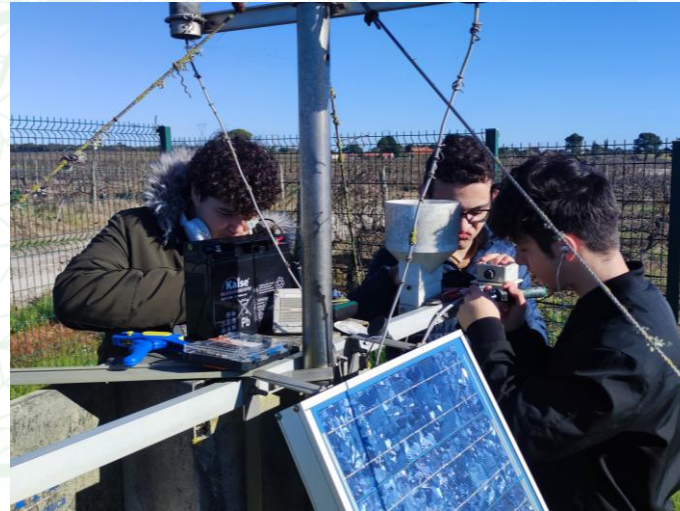
- Daily images;
- Artificial intelligence can identify and count grape moth's *Lobesia Botrana* and *cryptoblabes gnidiella*;
- Humidity and temperature sensors attached;
- Automatic glue base replacement;



Partnership with schools

AVIPE has established partnerships with schools in the region. One example is the work carried out over three years with ATEC.

We welcome electronics and programming students and carry out maintenance work on weather stations, development of remote traps and low-cost soil probes.



ROBOTS

Developed in Portugal.

INESCTEC technology

Practical robots that seek to provide solutions for the sector (ex: labor)





SALON
AGRICOLE
INTERNATIONAL



tech & bio

Une initiative des Chambres d'agriculture

À BIENTÔT

Sergio.pinto@avipe.pt