



EU CAP Network workshop ‘Sensing the future: practical applications of proximal and remote sensing for farmers and advisors’

Valencia, Spain
27-28 January 2026



Funded by
the European Union



Applications of Proximal and Remote Sensing in Valencian Agriculture

Alejandro Tena
Institut Valencià d'Investigacions Agràries (IVIA)

AGRICULTURE IN VALENCIA

- › **Tree fruits. Main producer of citrus and persimmon in Europe.**
- › **Small family plots** define its traditional structure and management.



AGRICULTURE IN VALENCIA

- › **Tree fruits. Main producer of citrus and persimmon in Europe.**
- › **Small family plots** define its traditional structure and management.



AGRICULTURE IN VALENCIA

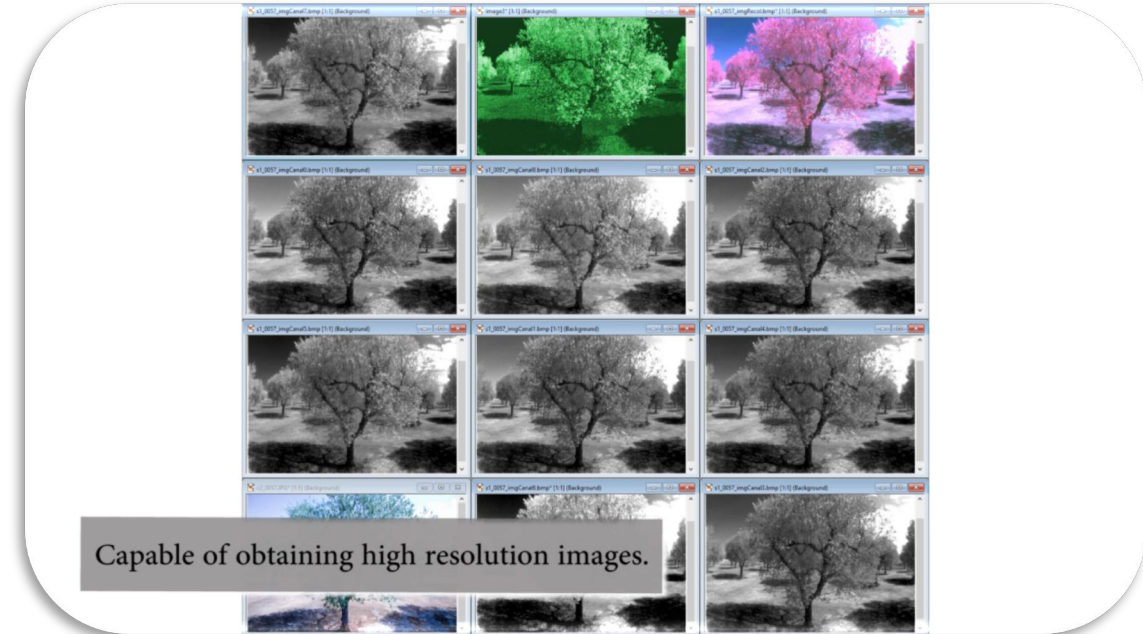
- › **Tree fruits. Main producer of citrus and persimmon in Europe.**
- › **Small family plots** define its traditional structure and management.
- › **Water scarcity:** highly sophisticated water management.
- › **High number of invasive pests and diseases** (Rosace et al., 2025).





Early detection of pests

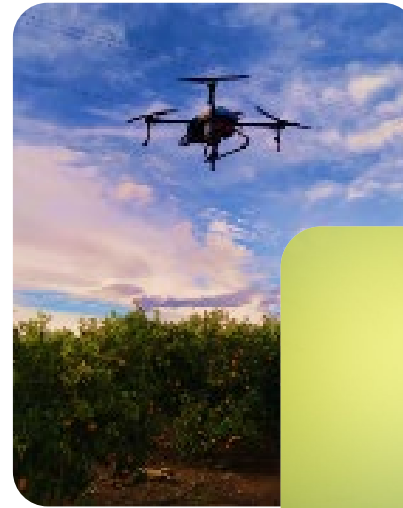
- › Developed robots for the **early detection of plant diseases.**
- › Design of hardware and software to **detect and count arthropod pests in sticky traps:**
 - › Invasive pests: HLB vectors
 - › Native pests: fruit flies





Precise application of pesticides and biological control agents.

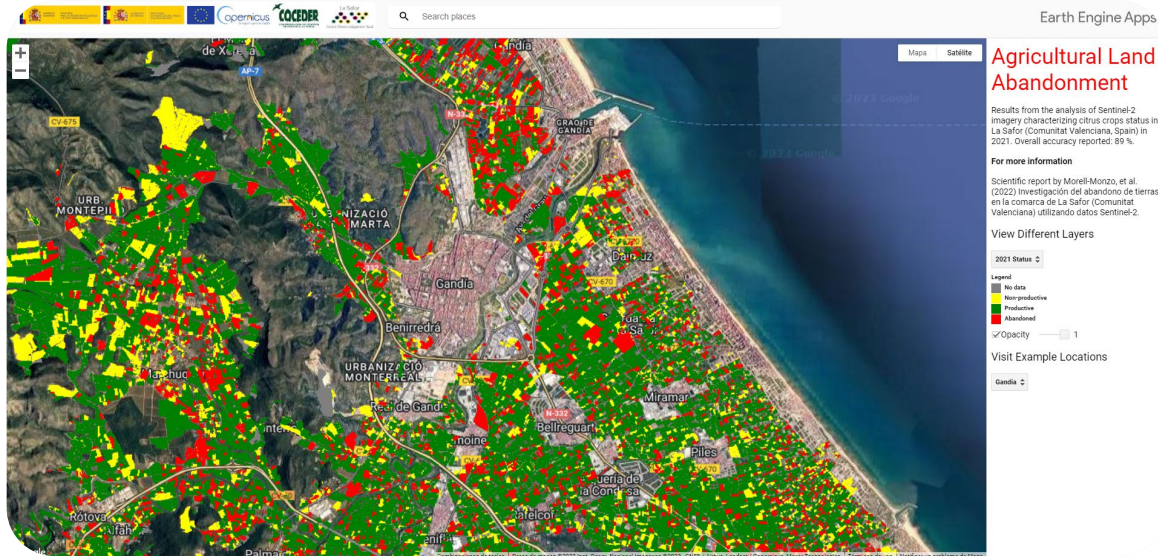
- › **Use of drones to release biological control agents** in hot spots.
- › **Precise application of pesticides** according to tree structure, pest and weather conditions and active ingredient.



al



Use of satellite images

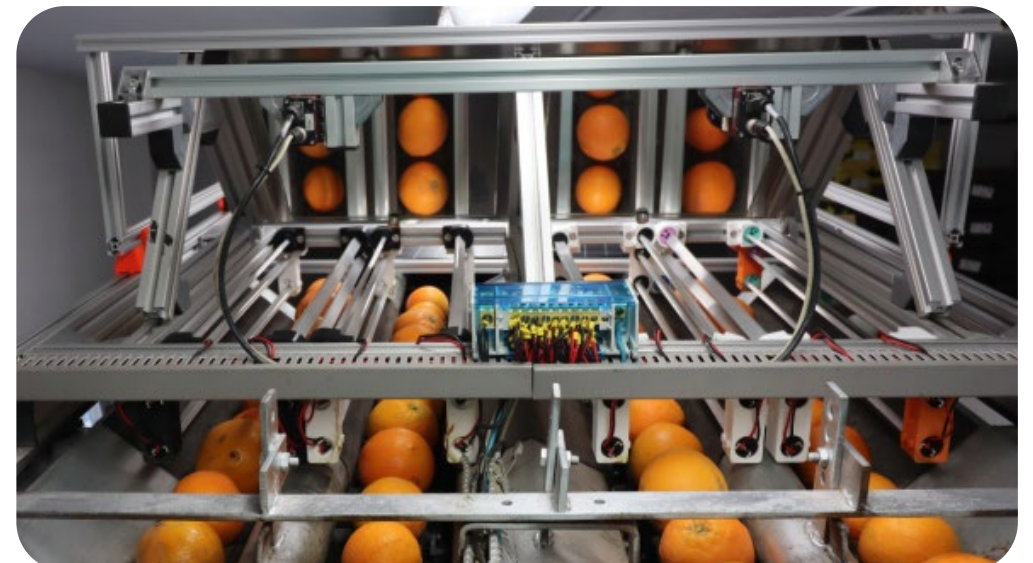


- Detection of abandoned agricultural land.
- Agronomic reasons: avoid seeds in citrus.



Use of robots, images and sensors at harvest.

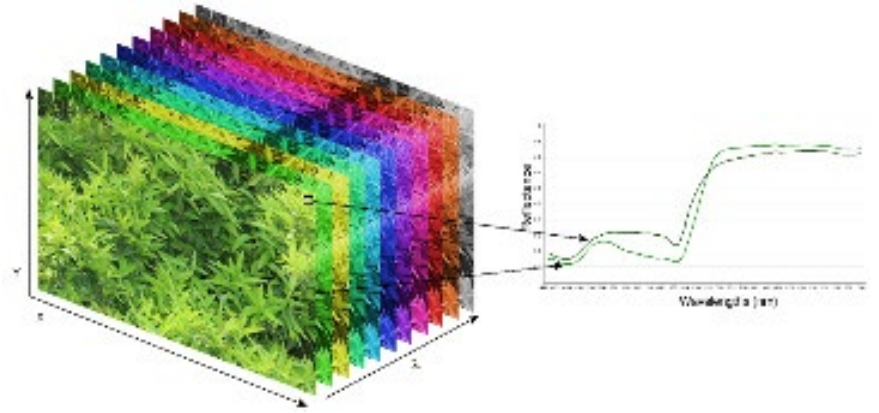
- › Reduce labor at harvest.
- › Reduce the cost of transporting tones of damaged fruit to the warehouses.





Reduce water and fertilizer necessities

- › Develop of **autonomus systems to detect the nutritional status** of crops.
- › Use of sensors and **new designs to reduce the use of water in the main and new valencian crops**: citrus, olive, persimmon and avocado.
- › Water necessities throughout the valencian region. <http://riegos.ivia.es/>



EU CAP Network workshop 'Sensing the future: practical applications of proximal and remote sensing for farmers and advisors'

**27-28 January 2026
Valencia, Spain**

All information on the workshop is available on the event webpage:

<https://eu-cap-network.ec.europa.eu/events/eu-cap-network-workshop-sensing-future-practical-applications-proximal-and-remote-sensing>

