



# IRTA

Agri-food and Technology  
Research Institute of the  
Catalan Government



**WE  
SHARE  
OUR SCIENCE  
TO FEED  
THE  
FUTURE**

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**Created in  
1985**

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**Operates under  
private law**

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**Public  
company**

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**Attached to the  
Ministry of  
Agriculture**

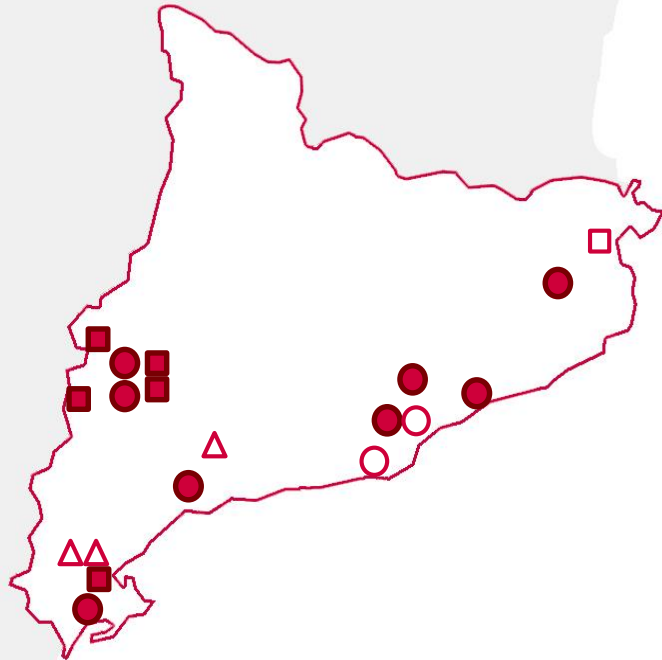
**IRTA**



Generalitat  
de Catalunya



## Centres



- IRTA work centre
- IRTA experimental stations
- Centres in partnership
- Experimental stations in partnership

**19**

Locations

**13**

IRTA centres and  
experimental stations

**6**

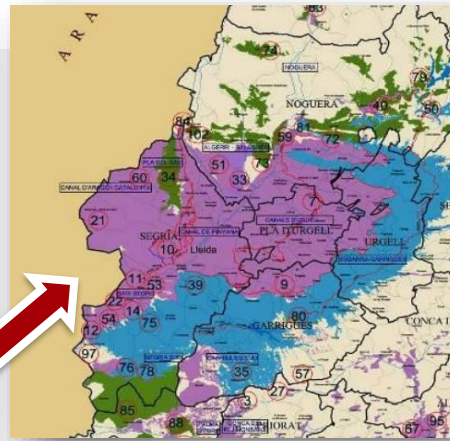
Experimental consortium  
centres and stations

△ Collaborating estates and farms



# Irrigated agriculture

## Centres



## Lleida (Segrià)



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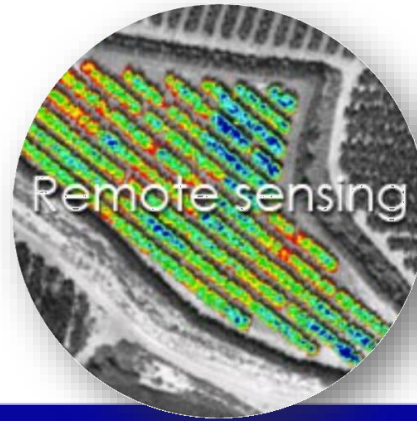
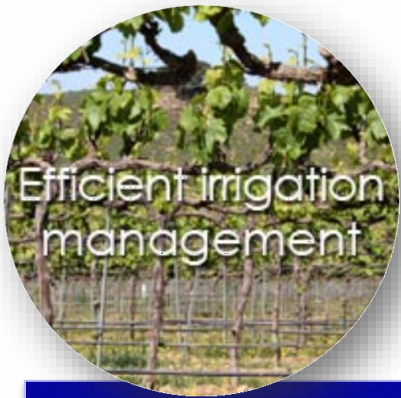
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# Efficient Use of Water in Agriculture Program

- > 35 years of experience of R+D+i on:
  - irrigation strategies
  - crop water requirements
  - efficient use of water



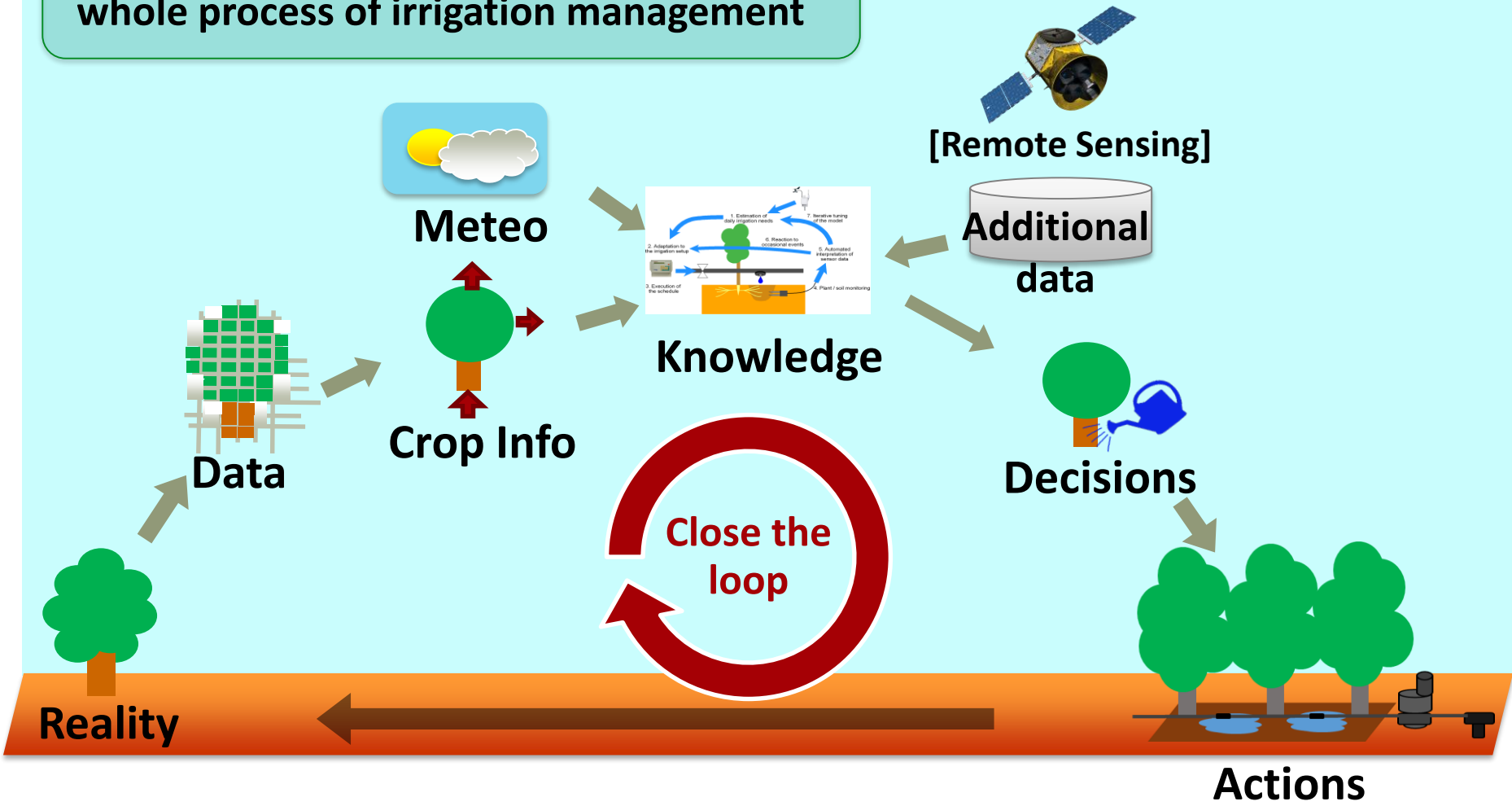
**Agronomy**

*Innovative Technologies  
around Agricultural Knowledge*





Research focused on the whole process of irrigation management





## REMOTE SENSING in the Efficient Use of Water in Agriculture Program

- ❑ Validation of ET estimates in woody crops using Surface Energy Balance models and imagery at different scales.
- ❑ To forecast crop's water consumption of irrigation districts using ET time-series.
- ❑ Irrigation type mapping using time-series of ET & soil moisture from RS
- ❑ To develop crop's water production functions ( $\text{kg/m}^3$  ET) in different crops
- ❑ Data assimilation of remote sensing into crop models -> precision irrigation
- ❑ To assess ET partitioning in woody crops using very high-resolution imagery
- ❑ To assess different methodologies to estimate fiPAR and LAI in woody crops using very high-resolution imagery

**IRTA involvement in ALTOS -> Task 1.1, Task 1.2, Task 2.1 and Task 2.2 and Task 3.1**