

Managing water resources within Mediterranean agrosystems by accounting for spatial structures and connectivities.

IRTA contribution

Task 2.2: characterization of spatial heterogeneities (leader: CESBIO).

- **Canopy scale heterogeneity induced by row and multi-strata structures and / or drip irrigation.**

- Targets: water fluxes in discontinuous canopies, subsurface hydraulic redistribution.
- Methodological innovations: joint use of sap flow sensors (installed in both tree roots and trunks), isotopic tracers, eddy-covariance devices and in-situ remote-sensing to characterize the 3D functioning.
- Partners: INAT, CESBIO, UNICA, **IRTA**.
- Study areas: Merguellil, Segre, Orroli.

- **Landscape scale heterogeneities induced by soil, topography and canopies.**

- Targets: water fluxes in heterogeneous landscapes.
- Methodological innovations: joint use of eddy covariance data at sub-catchment scales (few tenths of hectares), of scintillometry data across field transects, and of remote sensing data with embedded metric to kilometric resolutions → analysis of spatiotemporal dynamics.
- Partners: INRGREF, SUPCOM, CESBIO, LISAH, UCAM, UNICA, **IRTA**.
- Study areas: Cap Bon, Merguellil, Tensift, Segre, Orroli.

Task 2.2: characterization of spatial heterogeneities (leader: CESBIO).

IRTA Contribution



Confirmed activities : Validation of ET partitioning (T and E) in a vineyard using very high-resolution imagery & satellite data

Activities	Period	Study areas	Team
Validation of the seasonal evolution of T (TSEB) in grapevines (under different water status) with saps-flows -> very high-resolution imagery and IRT sensors	2020	Vineyard (Lleida)	C Jofre J Bellvert M Pàmies A Pelechà O García-Tejera
To evaluate the effect of the variability in soil temperature to estimate H_s	2020		
pyTSEB S2+S3 in other study sites?			