

## T.A.P.A.S.S. - ENABLING TECHNOLOGIES FOR SAFE AND SUSTAINABLE FOOD PRODUCTION

**Partners:** BONASSISA LAB srl, CRSFA (Center for Research, Experimentation and Training in Agriculture), FIND srl, National Council of Research, University of Bari, University of Foggia, University of Salento.

**IMAST members involved:** CNR (Intitute of Crystallography- IC).

### OBJECTIVES

The TAPASS project aims to propose technological solutions to three main issues: the conservation of biodiversity, the safety of food and the efficient use of water resources.

With reference to the **conservation of biodiversity**, TAPASS will study data for clarifying key aspects of *Xylella fastidiosa* bacterial infection, for an early detection and an appropriate control and containment strategy.



New technologies for verifying the **safety of food** will be developed in order to detect pesticides in specific food matrices (cereal, olive oil).

The **efficient use of water resources** will be approached through the development of the wash water recycling systems, the techniques of sanitation alternatives to chlorine (technologies and processes that can guarantee a safe product with high standards quality and environmentally sustainable) and technology for extending the commercial life of water.

### IMAST ACTIVITIES

For an efficient use of water resources, IMAST proposed the **development of superabsorbent hydrogels**, with high absorption capacity of aqueous solutions able to **improve the efficiency of irrigation soils** in the cultivation. The gel, mixed with the natural soil, in dry form, absorbs the irrigation water which is, then, released gradually to the plant, while maintaining wet the soil / substrate adjacent to the roots.

