

Basic Information:

Installation Name:	PIANTA
Installation Location:	San Giuliano Terme, ITALY
Installation location MAP	https://www.google.com/maps/d/edit?mid=13hasa5ACAj6v93l5ltAywK8AJCz8ivv0&usp=sharing
Installation Category:	Growth Chamber, Metabolomics, Ionomics , Plant phenotyping
Traits analysed	Above ground, Below ground
Environmental Manipulation:	Temperature, Water, Nutrients concentration, Light quality
Stress applicable	Drought, Light, Biotic stress, Pollutants
Capacity	
Status	Operational
Trait Measurements:	Growth, Canopy, Stress indices, Analysis of Mineral elements and organic compounds
Equipment and sensors available (in particular for field activities)	RGB camera, Thermal camera, UHPLC-MS-MS and MP-AES

References:

URL

Contact person:

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Description of the infrastructure:

The Institute of Life Sciences (ILS) facilities are endowed with analytical tools regularly employed to perform environmental investigations, such as studies on soil, water and air analyses to characterize their physico-chemical composition and to trace the possible presence of pollutants of different nature (e.g. heavy metals, pesticides, herbicides) or substances and/or microorganisms exerting positive actions on the metabolism of edible plants that can ultimately affect consumers' health (e.g. iodine, mycorrhizal fungi). Using this equipment, ILS is involved in basic and applied research of plant-derived and agro-food products of plant origin applying physiological, metabolic and molecular analyses for phenotype characterization. Trials are performed to study the physiology and the molecular aspects of plant species in response to environmental stresses, to characterize and ameliorate the nutritional/nutraceutical quality of agri-food products and to characterize the volatile organic compounds involved in the relationship between plants and insects.