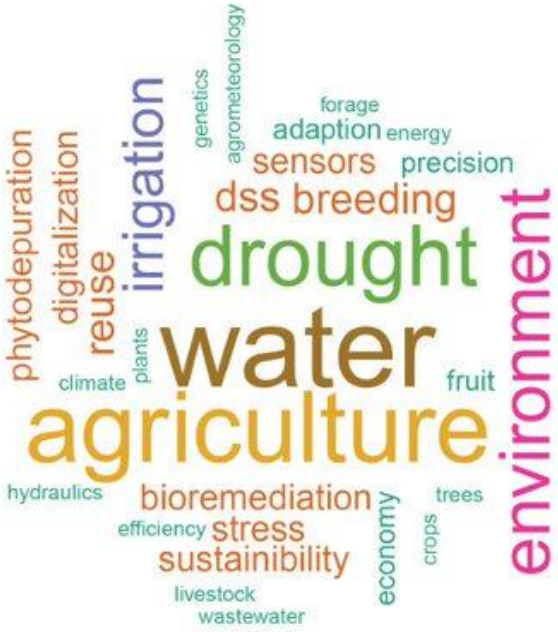
Research activities of the Department address a variety of hydraulic, technological, economic, agronomic, genomic and environmental aspects to make agricultural water use and reuse more sustainable and efficient.



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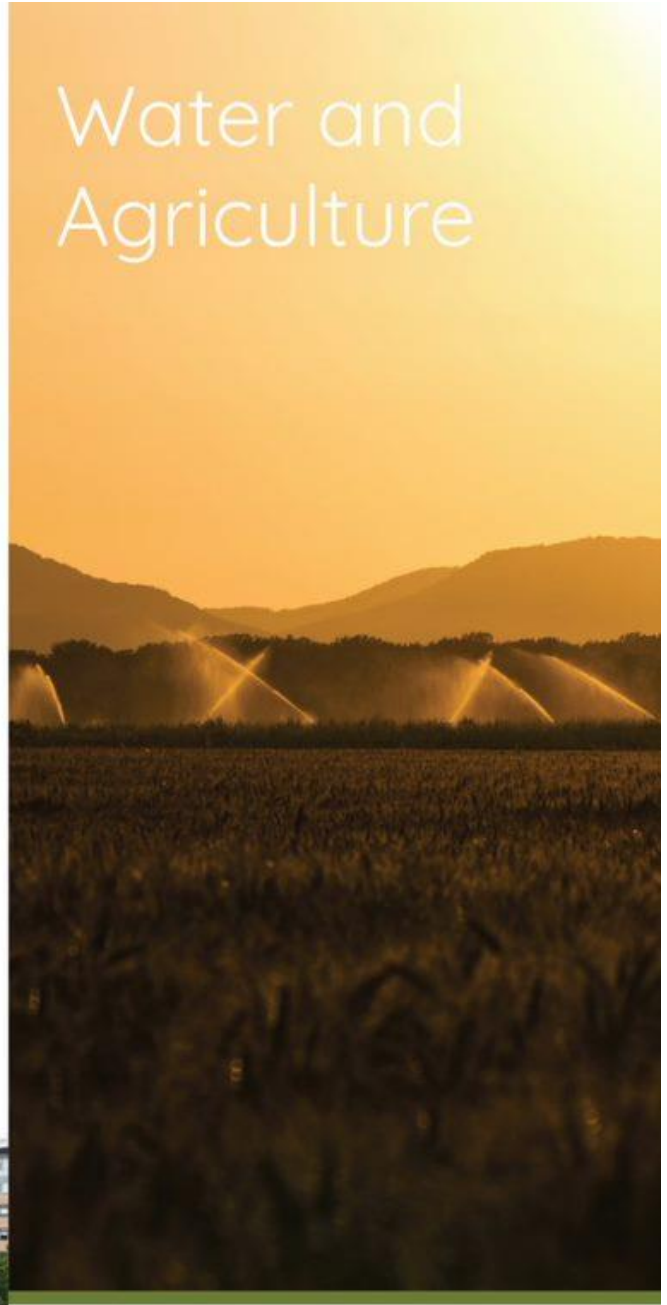
Water and Agriculture



Department of Agricultural and Food Sciences - DISTAL

Adaptation strategies to climate change

Agrometeorology and agroclimatology

Effects of climate change on **soil-plant-atmosphere relations** and **crop water balance**

Drought stress effects and strategies to improve **water use efficiency**

Identification of drought **tolerance** and **adaptation** traits through **genomic** and **phenotipical** studies

Sustainable water use in **agro-industry plants**

Economic assessment of the impact of climate change on agriculture

Digitalization and precision irrigation

Georeferenced maps and **variable rate irrigation**

Monitoring water status through **soil and plant based sensors**

Decision Support Systems (DSS) for irrigation scheduling

Strategies to reduce crop water use: application of **Regulated Deficit Irrigation (RDI)**

Economic assessment of new technologies and new policies analysis

Environmental aspects and water reuse

Monitoring the **chemical** and **physical** water quality

Developing wastewater **depuration strategies** and new solutions for organic and inorganic pollutants abatements

Nature based solutions

Developing new **phyto-** and **bio-remediation** strategies

Agronomical effects deriving from the use of wastewater for irrigation

Microbiological risks deriving from the use of wastewater

Hydraulic and **environmental** aspects related to the water management at regional level