



**Climate resilient farming  
and forestry systems  
and water management**



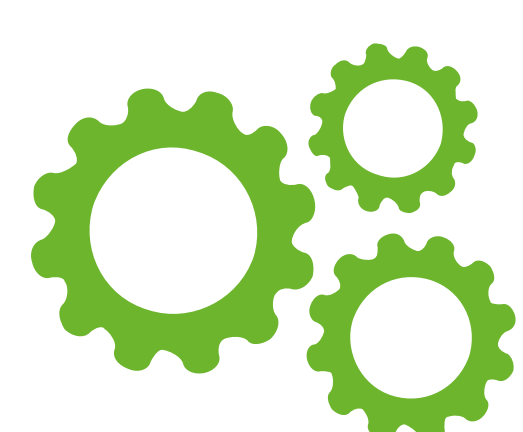
**AGRI  
Innovation** summit 2019



## Operational Group

### Increasing productivity of agricultural production by increasing water use efficiency and sustainability (PRO-PRODUCTION)

Povečanje produktivnosti kmetijske pridelave z učinkovito  
in trajnostno rabo vode (PRO-PRIDELAVA)



## Practical problem

Project EIP PRO-PRIDELAVA will increase water use  
productivity at farm level with irrigation decision  
support system (SPON)



## Partners

University of Ljubljana, Geological Survey of Slovenia,  
Institute of Hop Research and Brewing, Chamber  
of Agriculture and Forestry, BO – MO, 6 farms



## Calendar

Start: 14/12/2018  
End: 13/12/2021



## Budget

Total amount:  
€249,940

## Objectives of the project

Real-time soil water content monitoring (TDR probes) at the farm level will be established. A system for monitoring and reporting plant development phases at the farm level will be implemented. Irrigation requirements (mm of water per day) will be proposed at farm level, based on a five-day weather forecast model via the established Irrigation Decision Support System (SPON). After testing, the DSS SPON will be transferred to the national Slovenian Environmental Agency. Experiences with new irrigation scheduling will be disseminated to other farmers indirectly through workshops at demonstration farms, public lectures and conferences, with the help of multi-media tools.

## Main activities

Definition of essential soil and plant properties to be taken into account in calculating the requirements for irrigation with irrigation DSS SPON; Setting up and maintaining an infrastructure for measuring soil water content and transfer of data into the Irrigation DSS SPON in cooperation with Slovenian Environmental Agency; Raising awareness of different stakeholders (students, experts, decision-makers, the general public) about irrigation decision support systems, their importance for agriculture and use of SPON; Feasibility analysis of SPON implementation; Support material for multimedia (video), printed brochure, publications, expert events.

## Expected results

- Reduced water consumption for irrigation,
- Prevention of drought water stress,
- Reduced fertiliser consumption,
- Better quality of crops,
- Less pollution,
- A decrease in emissions of greenhouse gases,
- Lower production costs,
- Increased competitiveness of farmers.

## Results so far/first lessons

The project started end of 2018. Most of the current activities are concentrated on the characterisation of soil and plant properties included in the DSS SPON testing and implementation.

## Who will benefit

Use of irrigation DSS SPON, which aims to improve the management of irrigation on the agricultural holding, taking into account the actual soil water content and the short-term weather forecast, will significantly improve the preparedness and resilience of agricultural holdings to climate change in various agrarian production sectors (maize, vegetable, cherries, apples, vineyards, hops) and in different regions of Slovenia. The PRO-PRODUCTION project will not only improve the technical equipment of farms but will significantly increase the level of applicable knowledge of farmers in the area of professionally justified water-use for irrigation.

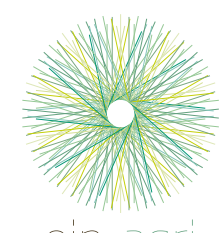
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