



eip-agri  
AGRICULTURE & INNOVATION

Measure: Cooperation from the Rural Development Program of the Republic of Slovenia for the period 2014-2020  
Submeasure: 16.5 Support for joint action to mitigate or adapt to climate change and for common approaches to environmental projects and ongoing environmental practice  
Topic: Efficient and sustainable use of water on the farm

Implementation period 12/2018 – 12/2021

# PRO-PRODUCTION

Increasing productivity of agricultural production by increasing water use efficiency and sustainability

## Project presentation

### Keywords

Irrigation  
Increase in production  
Decision support  
Sustainable water use

### Informations

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### Partners

- University of Ljubljana, Bio-technical Faculty
- Geological Survey of Slovenia
- Slovenian Institute of Hop Research and Brewing
- Chamber of Agriculture and Forestry—Unit Novo mesto
- BO - MO d.o.o.
- Evrosad d.o.o.
- Panvita d.d.
- Farm Aleš Turk
- Farm Jožef Ribič
- Farm Purgaj Ivan
- Farm Karlovček, Andraž Rumpret

### In cooperation with

Slovenian Environmental Agency

### Objectives of the project

The EIP project aims to adapt technologies to climate change related to the efficient use of water in agriculture. Reducing water consumption under changed climate conditions is an appropriate and necessary measure of adaptation to climate change. 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 established Irrigation Decision Support System (SPON). After testing DSS SPON will be transferred to national Slovenian Environmental Agency. Experiences with new irrigation scheduling will be disseminated to other interested 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 irrigation DSS SPON in cooperation with Slovenian Environmental Agency
- raising awareness of different stakeholders (students, experts, decision-makers, the

general public) about the irrigation decision support systems, it's 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 fertilizer 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 just started. Most of the current activities are concentrated on characterisation of soil and plant properties included in the DSS SPON testing and implementation. All field equipment was installed and is in testing phase. Test phase of SPON will start in 03/2020. The SPON will be fully operational for farmers in the project from 06/2020. and for entire Slovenia from 12/2021.

### Who will benefit from the project?

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 and different regions of Slovenia (maize, vegetable, cherries, apples, vineyards, hops). The PRO-PRODUCTION project will improve the technical equipment of farms and increase the level of applicative knowledge of farmers in the area of professionally justified water use for irrigation.



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Evropski kmetijski sklad za razvoj podeželja:  
Evropa investira v podeželje

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