



ALBAMAP – PROMOTING OPTIMAL MAP CULTIVATION IN ALBANIA

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INTRODUCTION

Albania is a major producer of medicinal and aromatic plants (MAPs), particularly for therapeutic use. Among the most significant MAPs for export are sage (*Salvia Officinalis*) and lemon balm (*Melissa Officinalis*). Modern cultivation techniques of these plants are missing.

The ALBAMAP project, a collaborative Albanian-German research initiative, was established to enhance MAP cultivation in Albania. To achieve this, a science-to-field approach is being implemented.

OBJECTIVE

The science-to-field approach is based on three pillars:

Pillar 1 comprises impacts of abiotic stress parameters such as like water and nutrients on the biomass production and essential oil yield. In addition, focus will be on the crop - environment interaction in time and space.

Pillar 2 aims on the stakeholder engagement in action. From the beginning, farmers and stakeholders will be involved in all knowledge acquisition and exchange activities with respect to scientific and traditional knowledge

Pillar 3 includes the investigation and development of the site and crop adapted control and prediction system (CPS). The CPS will enable optimal automated irrigation and fertilization and in addition, by incorporating decisive site specific parameters (fertilizer status, weather, soil moisture), will allow a site specific prediction of future yield and quality. Since the relevant soils in Albania often have a spatially varying skeleton content, an irrigation stop sensor will additionally be developed to avoid deep percolation and thus water and nutrient losses.



Figure 1. Installation of Irrigation and monitoring system in the field



Figure 2. Tensiometers installation

CURRENT PROJECT STATUS

Experiments were started in greenhouse and field to investigate optimal fertilization and irrigation of sage and lemon balm.

A first version of the CPS was developed and implemented in the field. The irrigation can be controlled (climate water balance, soil moisture sensor) and the growth of the plants (surface coverage) detected.

A first Workshop entitled ‘Optimal Production of Medicinal and Aromatic Plants in Albania’ organized by the project participants was hold.

Local farmers and Universities academic staffs and researchers participated at the event to present and promote the automated irrigation system .



Figure 2. CPS system presentation during the Workshop

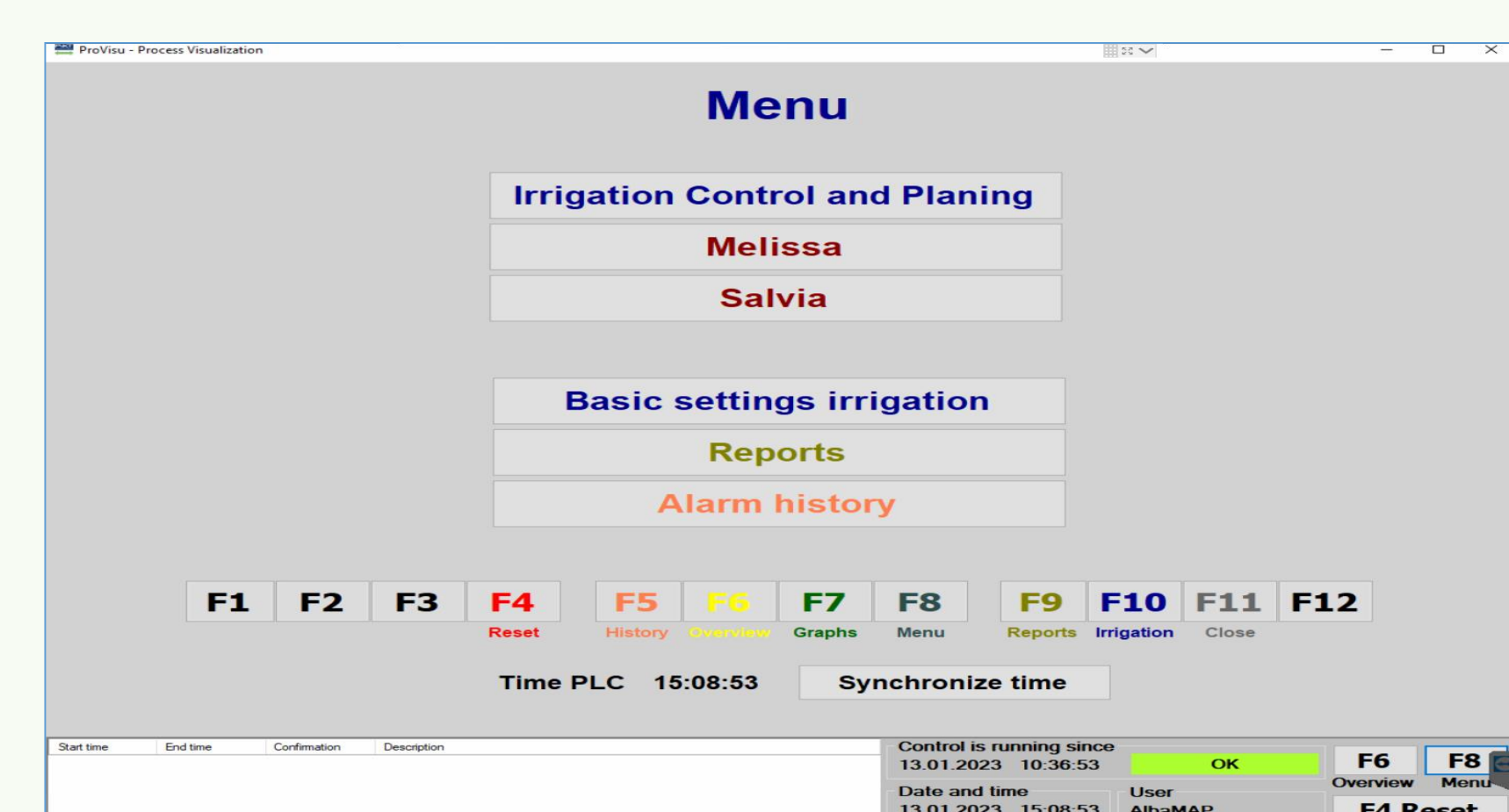


Figure 4. Layout page of the CPS system



Figure 5. Irrigation running through CPS system

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