Smart farming innovation training
SmartROOT
SmartROOT - Smart faRming innoVatiOn Training

KA203 - Strategic Partnerships for higher education

Start Date: 01/09/2020
End Date: 31/8/2023
Project Total Duration: 36 months

National agency of the Application Organization: EL01 Greek State Scholarship’s Foundation (IKY)
SmartROOT - Partners

3 HEIS and 4 SMEs from 5 European countries

- University of Western Macedonia (UOWM)
- International Hellenic University (IHU)
- SIDROCO Holdings Limited (SIDROCO)
- Spanish Food and Drink Federation (FIAB)
- INFALIA P.C. (INFALIA)
- Swedish University of Agricultural Sciences (SLU)
- AGRIVI D.O.O. (AGRIVI)
SmartROOT - Summary

• Preparation of a new Joint Master Degree program in MFS by introducing ICT tools.
• Involve students in the preparation and assessment process
• A ready-to-run Joint Master Degree program
SmartROOT - Aim

• Join the knowledge of different groups:
  • Agronomists
  • Veterinarians
  • Computer engineers
  • Producers
• Delivery of a **knowledge framework**
• Preparation of **future professionals** in the agricultural sector
• **Benefits of technologies** brought to farms
• **Familiarization** of farmers with digital technologies
SmartROOT - Objectives

Introduction of CSA and MFS to HEIs co-design their curricula

Education of students to solutions for CSA

Development of a CSA platform to foster MFS

Development of a continuous training platform

Foster a European network between academia, experienced farmers and stakeholders.
SmartROOT - Outputs

SmartROOT’s results will be achieved through the following outputs:

• O1 MFS e-book
• O2 Open Hub for Knowledge Exchange
• O3 SmartROOT Virtual Farm Hub
• O4 MFS Educational Management Platform
• O5 Augmented Reality Learning Environment
• O6 SmartROOT Assessment Toolkit and Curriculum preparation
O1 - MFS e-book

• Analyze, model and evaluate **best practices** in Mixed Farming Systems.

• Define a list of **technical and soft skills** essential for stakeholders to ensure efficient and sustainable agriculture.
O2 - Open Hub for Knowledge Exchange

• Development of a web-based platform for **knowledge exchange**
• Support of tools such as **live chat, forum, wikis**
• Promote the **open dialogue** and experience sharing between experts from different scientific areas
O3 - SmartROOT Virtual Farm Hub

• Development of a web-based application representing a **virtual farm** for educational purposes
• Inclusive of **configuration** options
• **Experimental data** are available from previous projects
• Offer a **knowledge ecosystem** around MFS
O4 - MFS Educational Management Platform

- **Virtual training environment** where students can configure parameters related to large MFS
- Sections for crop management, financial management, employee management, machinery management, and a [decision support system](#)
- Will offer **post-graduate students** the opportunity to improve their knowledge according to the [market needs](#)
O5 - Augmented Reality Learning Environment

- **Augmented reality** educational environment
  - Implemented with ARTutor from IHU
- **Holistic teaching** approach
  - serious games
  - mobile applications
  - data analysis
  - AR
- **End-users** to be involved in training activities
O6 - SmartROOT Assessment Toolkit and Curriculum preparation

- Assessment
  - Completed tasks
  - Achievements
  - Evaluation reports

- Curriculum finalization for the Joint Master Degree program in MFS
SmartROOT Impact

Higher Education Institutions
Skills, curricula, opportunities

Companies & Professionals
Participatory society

Students
Broaden students’ knowledge

Environment & Society
Attract young people to the agricultural sector

New trends, experiences and opportunities

FOOD TECHNOLOGY INTERNATIONAL SYMPOSIUM

MURCIA FOOD’21
SmartROOT Impact: Higher Education Institutions

- Equipment of students and teaching staff with **skills**:  
  - Academic  
  - Professional  
  - Social  
  - Intercultural  
- Reform existing **curricula** with new teaching approaches
SmartROOT Impact: Higher Education Institutions

• Provide education in:
  • ICT
  • Climate Change
  • Mixed Farming Systems

• Synergy opportunities between academic and market partners
SmartROOT Impact: Students

• **Active participation** in the design and assessment of a master degree program
  • Skills development in farming approaches with IT tools
  • Farming, IT, and climate change mitigation
• **Delivery of services** attuned to the stakeholders’ needs
• International cooperation, intercultural education, foreign language skills enhancement
SmartROOT Impact: Agriculture Companies & Professionals

- **Collaboration** among agriculture stakeholders

- **Adoptable outputs in daily operations**, leading to increased
  - Sustainability
  - Effectiveness
  - Financial Viability

- Agronomists can employ the tools to provide **added-value services**
SmartROOT Impact: Environment & Society

• **Attract** young people to the agriculture sector
• **Reduce** unemployment
• Ensure **environmental sustainability** as young farmers feel responsible for:
  • Guaranteeing a sustainable agricultural sector
  • Protecting the environment and the biodiversity
SmartROOT Impact Levels

**European**
The project aspires to contribute to the Europe 2020 Strategy for a smart and sustainable growth

**National**
Contribute towards the building of effective policies

**Local**
Empower local farmers & associations to introduce innovations in farms, invest in digital tools, and promote agricultural digitization
THANK YOU
FOR YOUR ATTENTION

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