O3-A3 Module 2: European Strategies and initiatives of e-Agriculture

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Goal of presentation

- a) Suggested modifications of the first concept (based on O1-O2)
- b) Draft syllabus, based on the template and the competence map
- First ideas about the content development, freely available learning contents (OERs)
- „The second module gives an overview of innovations in agriculture [education], European and national initiatives, and trends in the agricultural sector as outlined in ICT4Ag***[1]*** and Farming 4.0.
- The aim is to enable teachers to appreciate the **totality of these contemporary initiatives and individual agricultural ICT systems** within a holistic and wider context.”

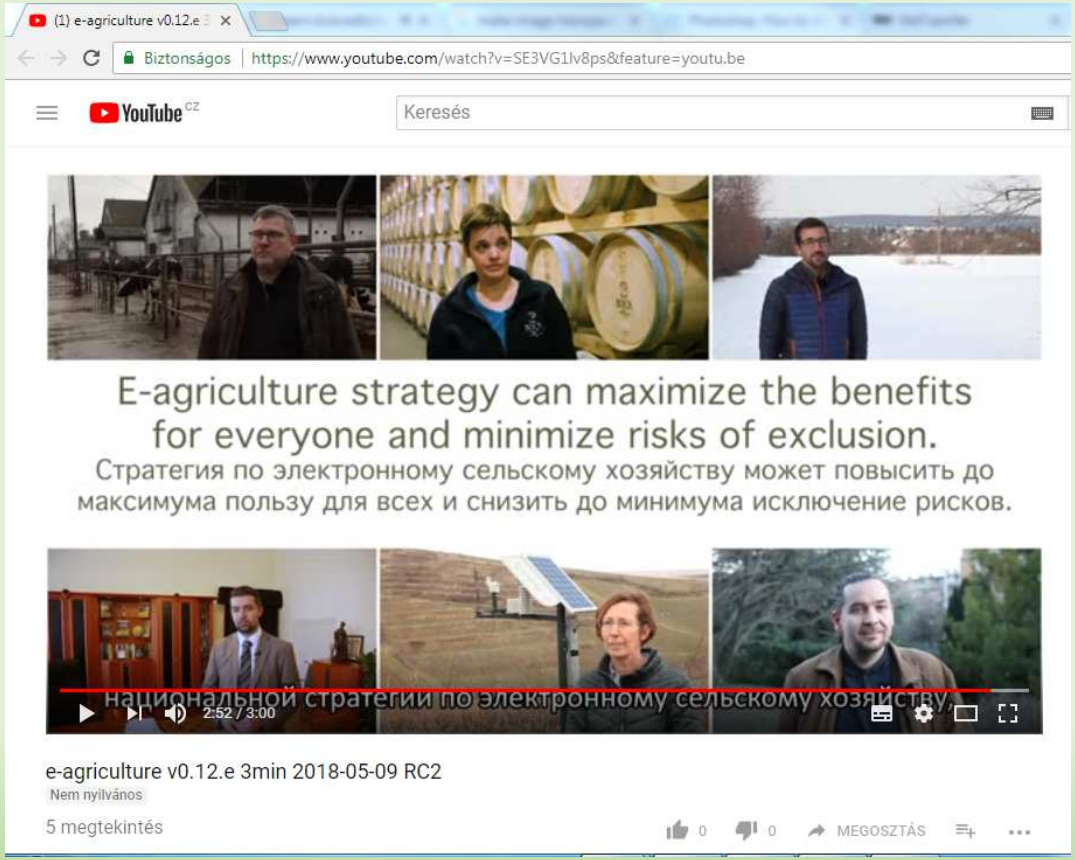
Planned topics

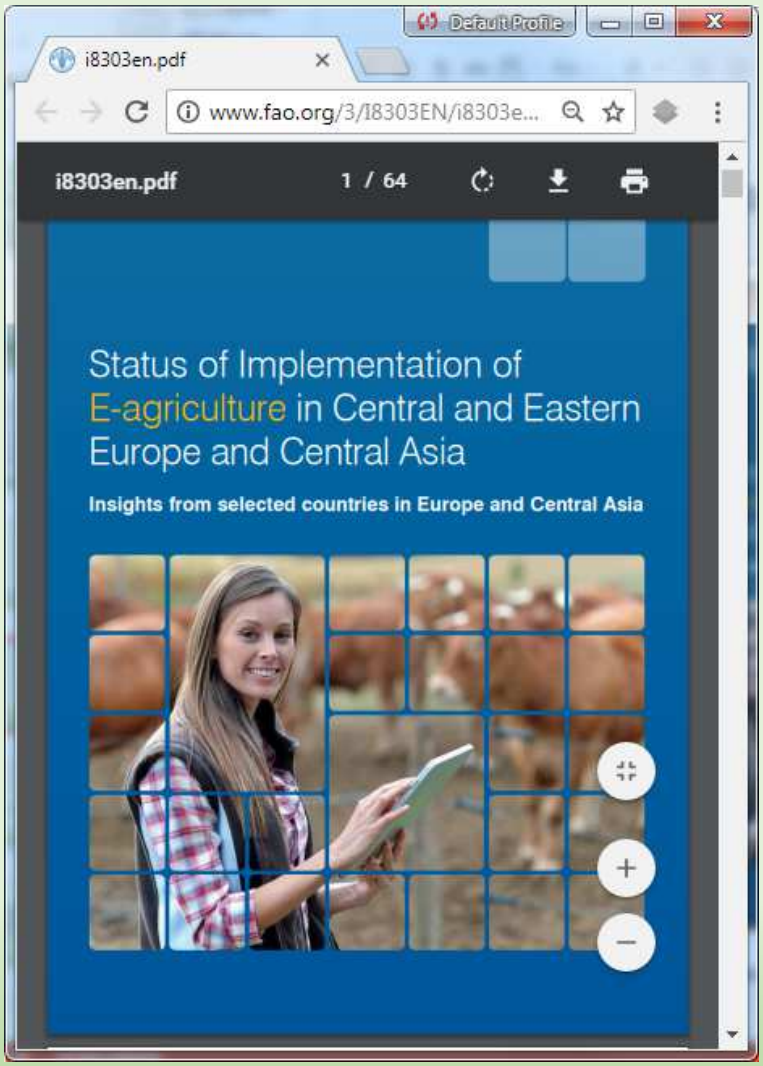
Topics: 2.1 Roles and tasks of Directorate for Agriculture and Rural Development 2.2 post-2020 EU Common Agriculture Policy 2.3 European Innovation Partnership for Agricultural Productivity and Sustainability	2.4 AKIS, Agriculture Knowledge and Information Systems 2.5 The European Commission's Digital Single Market strategy 2.6 EU 2020 strategy for smart, sustainable and inclusive growth

Indicative content per module

- Digital text: 3-4 topics, 3-5 pages/topics
- 1 motivating video (max 3 min.) – see video
- Video lectures (max 10 min.)
- (Language versions with subtitles or voice)
- Question databank 20-30 questions

E-Agriculture video, brochure





https://youtu.be/SE3VG1lv8ps

Module general structure

- Number of hours / module interval
- Ration of
  - theory / practise
  - online / physical („Training methodology: Blended learning”)
- Learning objectives – knowledge, skill and competence level
  - Teaching materials
  - Exercises

Aim of module

„The aim of this second module is to inform teachers about why the strategic approach of developing e-agriculture is important and what are the main steps and components of the process, including standards and formats. They will also understand how different policies work at the EU level, especially for innovation and agriculture, and become familiar with the usage of certain e-government services and some special ICT applications and tools related to the national implementation of the Common Agriculture Policy and AKIS.”

Module content structure

- 2/1 e-Agriculture by strategic approach
  - FAO ITU guide (L1)
  - Horizontal skills - Standards, interoperability, formats (L3)
  - General strategy development (L2)
- 2/2 EU policies related to e-Agriculture
  - Digital Agenda
  - EIP-Agri, role of innovation
  - Satellite systems
- 2/3 EU CAP
  - IACS, e-gov, grants, subsidies (L1>L3)
  - Administrative ICT tools (L1>L3)
- 2/4 National AKIS

Learning outcomes - competences

- By the end of this module the participant will:
  - recognize why strategy is needed, how to develop and what to achieve
  - become capable to use some ICT tools and solutions, such as format conversion, and e-government gateway;
  - will be informed of EU policies and strategies, especially ones related to ICTs, innovations, agriculture and rural development,
  - will understand the main components of the Integrated Administration and Control Scheme (IACS), in relation with the national implementation of the EU CAP,
  - become capable to use several IACS e-government services and some related ICT tools,
  - understand what AKIS means and what is the position of the participants in the system.

Bloom's taxonomy – learning outcomes

- Level 1: Information or knowledge: Define Describe Identify List Name Recognize
- Level 2: Comprehension: Convert Describe Differentiate Discuss Distinguish Explain Express Illustrate Review Summarize
- Level 3: Application: Apply Collect Information Demonstrate Employ Examine Find Solutions Operate Order Practice Relate Report Review Solve Use Utilize
- BT is a set of three hierarchical models used to classify educational learning objectives into levels of complexity and specificity. The three lists cover the learning objectives in cognitive, affective and sensory domains. The cognitive domain list has been the primary focus of most traditional education and is frequently used to **structure curriculum learning objectives, assessments and activities**.

National e-Agriculture Strategy

Why strategy is needed?	L1 Describe
Vision and action, needs and objectives	L1 Describe
SWOT	L3 Use
Interoperability, levels (API/WS/file), standards	L2 Demonstrate
Formats, conversion tools	L3 Use
e-Government, clients gateway	L3 Use
National initiative (Digital Agriculture Strategy in the Digital Welfare Pogramme)	L1 Describe

EU policies related to e-Agriculture

Why innovations are important for farmers	L2 Describe
About EIP Agri	L2 Describe
Operative groups, focus groups	L2 Describe
How to search, find project of interest – Smart AKIS	L2 Describe
National EIP Agri	L2 Describe
Digital Single Market Europe 2020 strategy	L2 Describe
Digital Agenda for Europe 2020	L2 Describe

EU CAP

CAP in general	L1 Describe
Subsidy and grant system	L2 Describe
Integrated Administration Control Scheme (IACS)	L2 Describe
Farmer Identification System	L3 Use
Land Parcel Information System	L3 Use
Animal Identification System	L3 Use
e-Claim system	L3 Use
Farm reports (logbook, nitrate, etc)	L3 Use
Market Price Information System	L3 Demonstrate
Farm Accountancy Data Network – farm typology, benchmarking, advisory use	L3 Demonstrate
Other main themes: climate change, organic agriculture, geographic origin, LAGs	L2 Describe

Agricultural Knowledge and Innovation System (AKIS)

Role of actors	Describe
Information flows	Define
ICT tools used in AKIS, farmers' view	List
Place and function of secondary school in AKIS	L2 Describe
National advisory system	L2 Describe
Where and how to ask for what type of advice Commercial vs neutral farm support	L3 Apply

*ICT4Ag

Over the past five years, ICT4Ag has become the most widely adopted acronym for the **use of Information and Communication Technologies (ICT) in the agricultural sector**.

The international ICT4Ag conference organized by CTA in Kigali Rwanda in 2013 settled the term ICT4Ag versus ‘e-agriculture’ which was more commonly used in earlier days (alike e-Health and e-Education).

Similar to the container-term ‘ICT4D’, ICT4Ag does encompass all ICT’s that are/can be used in the field of agriculture, and which range from older technologies like (analog) video, radio and television to computing, internet, remote sensing, mobile and digital broadcasting.

It differs from the acronym ‘mAgri’ which stands for ‘mobile technologies in/for agriculture’ and which limits its scope to the mobile ICT’s, e.g. mobile networks, (smart-) phones, tablets etc.(Source: "GIZ" the German developing agency's report).

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Small farmer smart tool – example (for M3)

@ The Poor Man's E-Weapon

Pheromone Trap Online

- **Free for farmers** - advisory service component
- Individual cost: 30 € + phone (0-80€)
- Farmer can use old android phone (good excuse to buy new one:)
- Photo of daily catch is sent to web server for online view
- In practice since 2013, 50 locations in Hungary, no problems

SMART, CHEAP & EFFICIENT

One battery charge – one season
Same looks as traditional trap – no theft
Webpage for photo browser and phone admin

Contact: lpapocsi@gak.hu Godollo St Istvan University

Community approach: with open source components and guidance on the assembly and use

Agriteach 4.0

GAK

EIP-AGRI Workshop: Enabling farmers for the digital age: the role of AKIS

- https://ec.europa.eu/eip/agriculture/event/eip-agri-workshop-enabling-farmers-digital-age

- **Precision Farming with Elements of Geoinformatics**
- **“AGRO e-learning” ACIEE - ERASMUS+**
- agroelearn.eu - www.aciee.pl - ec.europa.eu/education/erasmus-plus/national-agencies_en.htm
- POLAND
- Starting date - expected end date

  01-12-2017 – 28-02-2019