



Quality-Certified Training of Farmers on Organic Agriculture

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CerOrganic ToT Curriculum

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Lifelong Learning Programme

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Version

Version	Date	Contributor(s)	Summary of Changes
0.1	24/01/2011	Ioannis Livieratos	Final Draft
0.2	26/01/2011	Ulf Ehlers	Terminology, Criticism on the Design, Wording, overall proof reading
0.3	26/01/2011	David Smith	Contribution in the actual design, expression, presentation, proof reading
0.4	27/01/2011	Vanessa Dimoleni	Formating

List of Definitions, Acronyms and Abbreviations:

Term/Acronym/Abbreviation	Description
ECTS	European Credit Transfer System, is the credit system for higher education used in the European Higher Education Area, involving all countries engaged in the Bologna Process. ECTS is a learner-centred system for credit accumulation and transfer based on the transparency of learning outcomes and learning processes.
Workload	Workload indicates the time students typically need to complete all learning activities (such as lectures, seminars, projects, practical work, self-study and examinations) required to achieve the expected learning outcomes.
Educational Component	A self-contained and formally structured learning experience (such as: course unit, module, seminar, work placement).
Learning Outcomes	Statements of what a learner is expected to know, understand and be able to do after successful completion of a process of learning.
Assessment	The total range of methods (written, oral and practical tests/examinations, projects and portfolios) used to evaluate learners' achievement of expected learning outcomes.
Assessment criteria	Descriptions of what the learner is expected to do, in order to demonstrate that a learning outcome has been achieved.
Blended Learning	Blended learning offers teachers and learners the opportunity "to be both together and apart" (Garrison and Kanuka, 2004) and utilizes face-to-face lectures and computer-mediated instructions taking advantage of emerging educational technologies.

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1. Executive Summary

The results from WP1 (D1.2 OA Training Needs, D1.3-Literature Review on OA Competencies), WP2 (D2.1-CerOrganic Competencies) and WP5 (D5.1 EQARF requirements, D5.2-Draft for Quality Assurance of CerOrganic) have informed the development of the CerOrganic Curriculum for the Training of Trainers of farmers in Organic Agriculture.

A **Blended Learning**-type of training is being proposed, to satisfy primarily the needs in the following educational domains:

- a) Design the learning environment specifically to satisfy the different requirements of the learners involved,
- b) communication and knowledge transfer applicable theories, and
- c) technical issues regarding OA interest, problem identification and problem solving methodologies
- d) blended/e-learning design competencies
- e) gain familiarity with quality assurance in learning.

For each of these fields, **educational components (modules)** have been constructed, comprised of several **units**. Specifically, the following **modules** have been selected:

- C531. Blended & e-learning design,**
- C532. ICT technologies for OA content adaptation,**
- C533. Farmer communication & consultation approaches,**
- C534. OA topics, issues & problems – Decision making**
- C535. Quality Assurance in Learning**

All modules complement and synergistically enhance the building of the profile of the extension worker in Organic Agriculture. Assessment of acquired competencies will be performed for the former four modules.

The CerOrganic training consists of three **periods (phases)**:

- A. a 2-week (preparatory) period.** A pre-class interaction with tutors, it assists participants to reach a level of basic knowledge in multiple OA, pedagogical and ICT issues,
- B. a 1-week face-to-face learning period.** The only concrete in terms of time and location training,
- C. a 2-week (assignment & evaluation) period.** Competencies are proven through assignments that involve actual farmer consultation on existing organic farming problems

CerOrganic trainees will be involved into the following learning methods:

- lectures and presentations,
- participatory group discussions with farmers
- on-site computer training,
- practical demonstrations and field excursions,
- best-practice and case study learning scenarios

- Self-study and assignment work

In assignments and through presentation of group and project work results learners will be asked to demonstrate that they have achieved the expected learning outcomes. The 5-week training period will result in a workload of **4 ECTS (European Credit Transfer System)**, equaling about 100 study hrs.

2. Introduction

2.1 Scope

The scope of this document is to structure the informative frame of the CerOrganic ToT Curriculum, confirm that the target learning objectives and competencies are met and that the CerOrganic quality assurance requirements have been taken into consideration.

2.2 Audience

The report is addressed to all CerOrganic consortium partners, all parties interested in organizing training for trainers of farmers, and potential participants in the CerOrganic training, both tutors and trainees.

2.3 Introduction

An organic farmer's trainer/consultant is much more than a transmitter of good technical practices. S(he) is engaged in procedures that encompass a range of communication and learning activities. The targeted CerOrganic learning objectives and competencies do not aim to cover only agricultural topics and resource management. They are more broadly concerned with developing the skills required to implement suitable (e)-learning models and methodologies in a training approach/platform where communication and pedagogy is of paramount importance.

The trainer/advisor needs to be able to provide an interesting and engaging mix of different (e)-learning methodologies and strategies, have a rich portfolio of methods for course and learning design and the ability to utilise ICT technologies for OA content adaptation for problem analysis, consultation and decision making.

In terms of communication competences and pedagogical as well as training skills, the trainer/advisor should be able to communicate effectively and target group oriented and create engaging discussion scenarios with OA farmers. S/he will promote joint learning and negotiation between researchers and farmers, and will be able to co-design specific strategies together with the farmer, rather than dictate standard solutions. They will be able to read between the lines when acting as an intermediate, and have the capability to apply new approaches to address everyday challenges, to create and support networks, and to manage complexity as well conflict and unpredictability.

For technical agricultural matters, the key issue has been shown to be the ability to critically assess organic farming production systems holistically, to turn farmer's experience into knowledge and share that knowledge, identify problems and finally consult in multifactorial and dynamically interacting systems.

3 Framework of the CerOrganic ToT Curriculum

3.1 Outline of Training Curriculum

CerOrganic Consortium Members

CerOrganic-Training-of-Trainers-SS01

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CerOrganic: Quality-Certified Training of Trainers on Organic Agriculture

Course Introduction

Mode of Study: Blended Learning (preparatory online self-study, face-to-face immersive learning seminar – follow up studies online)

Number of credits for the course: 4 ECTS (A total workload of 100hrs)

Duration: 5 weeks

Schedule

- **Phase 1** (08-21 May 2011, *distance learning - tentative*)

A 2-week (preparatory) period, including instructions for access to e-content and preparation for the face-to-face lectures (phase 2). The phase allows a pre-class interaction with trainers. This flexible period in terms of workload will assist participants to attain a satisfactory level of basic knowledge in multiple OA, pedagogical and ICT topics.

- **Phase 2** (Exemplary period: 22-29 May 2011, *face-to-face learning - tentative*)

A 1-week period, restricted in place and time. It consists of a fixed schedule of training and evaluation activities.

Duration: 7 days, Exemplary location: MAICh (amphitheaters & PC rooms) and organic farms in Crete (Greece).

- **Phase 3** (Exemplary period: 30 May – 13 June 2011, *assignments & evaluation - tentative*)

A 2-week period following Phase 2. The student will visit organic cultivation sites, identify problems, and discuss and consult with the OA farmers, and propose specific strategies to address the problems identified. Assignments will be evaluated by CerOrganic OA experts.

Location

e-class: CerOrganic website, Learning Platform

Contact class (exemplary): *Mediterranean Agronomic Institute of Chania (MAICh), Greece*

Practical demonstration and field trips (exemplary): organic farms and processing facilities (Crete)

Target groups

- BSc/ MSc students or graduates of an agriculture-related discipline
- Agriculture extension workers and advisors
- Certification bodies inspectors
- Agriculture-related companies workers and advisors
- Experienced (>5 years) organic farmers
- Vocational training designers
- e-learning program coordinators of agriculture-related disciplines

Prerequisite knowledge

- Agriculture-related background acquired through Academic training (BSc/MSc) or direct practical experience (>5 years) of organic farming (required)
- Working competence of PC & ICT technology (use of computers, MS Office applications, Internet, emails (required)
- Knowledge/familiarity with farming practices associated with several cultivated crops (*an advantage*)

Experience in teaching or advising (*an advantage*)

Course Description

Agriculture represents an area where there is a need for organized information services in the form of consultation. In Organic Agriculture (OA), decision making is multi-factorial, site specific and knowledge intensive. Human interaction is essential for problem diagnosis, data analysis and solution application. Extension workers do not have the experience or training to offer advice in the form of predefined packages and step-wise instructions. Together with farmers (an essential source of knowledge) they must evaluate and provide customised decisions “on-the-spot”. The rapid development of information and communication technologies, have introduced new norms in rural areas. Modern agriculture consultants equipped with computers provide services where increasingly, applied knowledge is regarded as a marketable product and agricultural extension is regarded a professional practice that requires reinvention (Leewis, 2003).

The 2011 “Training of Advisors/Trainers on Organic Agriculture” is an innovative quality-certified training program based on the European Quality Assurance Reference Framework (EQARF). The training is a blended learning approach designed to produce qualified

consultants of organic farmers. It creates opportunities for further training and entrepreneurialism for the public and private sector.

The pilot blended learning program includes a 7-day summer school in MAICh, approved by the European Commission. Academic lectures, hands-on sessions and field trips will familiarize participants with pedagogical strategies on communication, consultation of farmers on identified OA topics of interest, and the use of ICT tools for resource applications. The preparatory phase of self-paced e-learning and material will have previously prepared participants for the summer school and the follow-up activities (e.g. field consultation on selected case studies, assignments) will maximize learning outputs.

Course Goals/Objectives

- to create skills in e- and blended learning course development,
- to familiarize students with the use of ICT technologies for OA content adaptation for teaching or/and in decision making,
- to demonstrate and give practice in various communication and consultation approaches in OA
- to present major topics, issues, and problems in OA where decision making is mostly required in the farm,
- to illustrate analytical thinking methodologies leading to decision making in OA

3.2 Training Schedule

Date/ Time	Session topic/ Description	Materials	Partner responsible
<p>Phase 1 – Week 1</p>	<p>C531. Blended & e-learning design <i>(preparation; students are provided with texts, and web links in order to read and practise)</i></p> <p>C532. ICT technologies for OA content adaptation <i>(preparation; students are provided with texts, and web links in order to read and practise)</i></p> <p>C533. Farmer communication & consultation approaches <i>(preparation; students are provided with texts, and web links in order to read and practise)</i></p> <p>C534. OA topics, issues & problems – Decision making <i>(preparation; students are provided with texts, and web links in order to read and practise)</i></p>	<ul style="list-style-type: none"> - e.lectures based on PowerPoint presentations - Web-based literature review - Textbooks, articles 	<p>All Partners</p>
<p>Phase 1 – Week 2</p>	<p>C531. Blended & e-learning design <i>(preparation; students are provided with texts, and web links in order to read and practise)</i></p> <p>C532. ICT technologies for OA content adaptation <i>(preparation; students are provided with texts, and web links in order to read and practise)</i></p> <p>C533. Farmer communication & consultation approaches <i>(preparation; students are provided with texts, and web links in order to read and practise)</i></p>	<ul style="list-style-type: none"> - e.lectures based on PowerPoint presentations - Web-based literature review - Textbooks, articles 	<p>All Partners</p>

	<p>order to read and practise)</p> <p>C534. OA topics, issues & problems – Decision making (preparation; students are provided with texts, and web links in order to read and practise)</p>		
<p>Phase 2 – Week 3 – Day 1</p>	<p><i>Participants arrive at MAICH</i></p>		
<p>Phase 2 – Week 3 – Day 2</p>	<p>Welcome and introduction to the summer school. An overview of the week will be given and the outcomes to be achieved at the end of the week.</p> <p>C531.1. Introduction to eLearning Design. This session will focus on principles of eLearning design, paying particular attention to blended learning courses.</p> <p>C531.2. Designing a blended learning course for farmers. This session will focus on customizing courses for particular clients (e.g. farmers) and adapting the course to specific needs, and in particular the educational content and the technology that will be used to communicate the learning.</p> <p>C531.3 Designing the training course. This session will provide an introduction to the concept of designing a successful training course (core ideas, course titles and aims), which it focuses on the enhancement of the trainees’ participation.</p> <p>C531.4 Implementation of Participative Techniques. This session will introduce to the participants specific teaching techniques in order to motivate the trainees’ participation and support the success of the training.</p>	<p>-Hands-on exercises</p> <ul style="list-style-type: none"> - Group interaction and discussion - Presentation - Physical presentation of the developed scenarios 	<p>BMUJKK, Agroknow</p>
<p>Phase 2 – Week 3 –</p>	<p>C532. ICT technologies for OA content adaptation</p>	<p>-PowerPoint Presentations</p>	<p>Agroknow</p>

<p>Day 3</p>	<p><i>Lectures and hands-on PC training</i></p> <p>C532.1. Introduction to Metadata. <i>This session will provide an introduction to the concept of metadata, examples of their usage and their importance in storing and retrieving digital resources.</i></p> <p>C532.2. Organic Edunet Web portal. <i>This session will include both a theoretical part, demonstrating the features of the specific web portal (www.organic-edunet.eu) and a seven-step hands-on exercise, which will help the participants familiarize with the aforementioned features.</i></p> <p>C532.3. Repository tool: e-portfolio for resources. <i>This session will introduce the participants to the concept of e-portfolios for managing their digital resources and show them how it can be used as a tool in their own training courses. The participants will be asked to annotate at least one of their digital resources using an e-portfolio platform.</i></p> <p>C532.4. Course Management Platform. <i>This session will provide an introduction to the course management platforms and an overview of the MOLE platform (www.moleportal.eu). The participants will browse through the platform and perform various tasks.</i></p> <p>C533a. Farmers communication & consultation approaches</p> <p>“Communication for Rural Innovation: Rethinking Agricultural Extension”- Keynote lecture. <i>An overview of latest theories and issues in organic agriculture extension.</i></p> <p>C533b. Preparing an Organic Farming Training Scenario. C533.b1. <i>Introduction to the training scenario concept. This session will provide an introduction to the scenario concept and how scenarios can be implemented in the training context. Participants will share</i></p>	<p>(lectures)</p> <ul style="list-style-type: none"> - hands-on exercises - group interaction and discussion (when possible)
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<p>Phase 2 – Week 3 – Day 4</p>	<p>their scenario ideas with the other participants in classroom.</p> <p>C533.b2. Working on a training scenario: Elaboration and adaptation of an OA topic & description. During this exercise, the participants will be asked to provide information about the curriculum area, the description and the activities of their scenario idea, using specific templates that will be provided to them.</p> <p>C533.b3. Using open educational resources to support scenarios. This session will provide examples of learning portals and digital repositories and show how they can be used for retrieving resources that may be used by the participants in their training scenarios.</p> <p>C533.b4. Preparation of a short presentation on a developed scenario. This session will focus on preparing short PowerPoint presentations of the training scenarios. A template will be given to the participants in order to help them focus on specific aspects of the scenarios and enrich their presentation with the available resources.</p>		
	<p>C534. OA topics, issues & problems – Decision making</p> <p>“OA consultation: problem analysis and tailor-made decisions on the spot”- Keynote lecture. An overview of latest theories and issues in organic agriculture extension.</p> <p>C534a.1. Principles of OA, Legislation & Certification. Agroecological parameters governing management of organic farms (lectures).</p> <p>C534a.2. Soil Fertility & Management. Problem identification, factors involved, and analysis methodology for decision making in soil management (lectures).</p> <p>C534a.3. Weeds Control & Agrobiodiversity. Problem</p>	<p>- Lectures, presentations of good practices and European case studies.</p> <p>- Connection with field trips (practical includes discussions and interviews)</p>	<p>MAICh, CUB, UZEI</p>

<p>Phase 2 – Week 3 – Day 5</p>	<p><i>identification, factors involved and analysis methodology for decision making in weed management (lectures).</i></p> <p>C534b.1 Practical. On-site identification of problems and analysis of different factors, communication with farmers to increase their knowledge and assist in decision making. (Field visits and farmer interviews).</p>		
<p>Phase 2 – Week 3 – Day 5</p>	<p>C534a.4. Biological Control of Pests & Diseases. <i>Problem identification, factors involved, and analysis methodology for decision making in crop protection (lectures).</i></p> <p>C534a.5. Organic Farm Management. <i>How to manage an organic farm in space & time (lectures).</i></p> <p>C534a.6. Sustainable Post-Harvest Handling. <i>Modern methods for the post-harvest handling of OA products (lecture).</i></p> <p>C534a.7. Marketing & E-Sales of OA Products. <i>Latest trends in marketing of OA products (lecture).</i></p> <p>C534b.2 Practical. On-site farm management, product handling and marketing strategies (field / enterprise visits and farmer / entrepreneur interviews).</p>	<p>- Lectures, presentations of good practices and European case studies</p> <p>- Connection with field trips (practical includes discussions and interviews)</p>	<p>MAICh, CUB, UZEI</p>
<p>Phase 2 – Week 3 – Day 6</p>	<p>C534c. Case Studies. <i>OA experts from 5 countries introduce participants to specific problems of regional interest and their analysis for decision making.</i></p>	<p>- Lectures, presentations of good practices and</p>	<p>MAICh, CUB, UZEI</p>

	<table border="1"> <tr> <td data-bbox="244 1585 357 1765">Austria</td> <td data-bbox="244 1411 357 1585">Cyprus</td> <td data-bbox="244 1234 357 1411">Czech Rep.</td> <td data-bbox="244 1059 357 1234">Greece</td> <td data-bbox="244 882 357 1059">Hungary</td> </tr> </table> <p data-bbox="416 875 571 1776">C534b.3 Practical. On-site identification of specific problems, analysis and decision making. Communication with farmers raising knowledge and assist decisions. (Field visits and farmers interviews).</p>	Austria	Cyprus	Czech Rep.	Greece	Hungary	<p data-bbox="196 658 475 860">European case studies</p> <ul data-bbox="292 591 475 860" style="list-style-type: none"> - Connection with field trips (practical includes discussions and interviews) 	
Austria	Cyprus	Czech Rep.	Greece	Hungary				
<p data-bbox="595 1787 659 2089">Phase 2 – Week 3 – Day 7</p>	<p data-bbox="595 1305 627 1776">C531. Blended & E-learning Design</p> <p data-bbox="651 882 722 1776"><i>Students will design and present blended & e-learning scenarios (groups of 4). Evaluation of presentations.</i></p>	<ul data-bbox="595 591 970 860" style="list-style-type: none"> - Hands-on exercises - Group interaction and discussion (when possible) - Physical presentation of the developed scenarios 	<p data-bbox="595 412 627 524">BMUUK</p>					
<p data-bbox="999 1787 1062 2089">Phase 2 – Week 3 – Day 7</p>	<p data-bbox="999 882 1145 1776">C535. “Quality Assurance in Learning” - Keynote lecture. An overview of latest theories and issues in organic agriculture extension. Students will follow a lecture on Quality Assurance in Learning. In this unit, NO evaluation will occur.</p>	<ul data-bbox="999 591 1230 860" style="list-style-type: none"> - Lecture - Group puzzle (Jig saw) - Group work - Presentation 	<p data-bbox="999 412 1031 524">EFQUEL</p>					
<p data-bbox="1262 1787 1326 2089">Phase 2 – Week 3 – Day 8</p>	<p data-bbox="1262 1115 1294 1541"><i>Participants depart from MAICH</i></p>							

<p>Phase 3 – Week 4</p>	<p>C532. ICT technologies for OA content adaptation. Each student needs to compile and adapt appropriate content to assist him/her in addressing specific OA issue(s).</p> <p>C533. Farmers communication & consultation approaches. Each student needs to critically assess an OA farm, identify a problem and communicate with the farmer to collect relevant information.</p> <p>C534. OA topics, issues & problems – Decision making. Each student is required to think critically, to assess information, and (together with the farmer) to propose solutions.</p>	<p>- Presentations (lectures)</p> <ul style="list-style-type: none"> - hands-on exercises - group interaction and discussion (when possible) 	<p>MAICh, CUB, UZEI & external experts</p>
<p>Phase 3 – Week 5</p>	<p>C532. ICT technologies for OA content adaptation. Each student needs to compile and adapt appropriate content to assist him/her in addressing specific OA issue(s).</p> <p>C533. Farmers communication & consultation approaches. Each student needs to critically assess an OA farm, identify a problem and communicate with the farmer to collect relevant information.</p> <p>C534. OA topics, issues & problems – Decision making. Each student needs to think critically, to assess information and (together with the farmer) propose solutions.</p> <p style="text-align: center;">REPORT ASSIGNMENT</p>	<p>- Presentations (lectures)</p> <ul style="list-style-type: none"> - hands-on exercises - group interaction and discussion (when possible) 	<p>MAICh, CUB, UZEI & external experts</p>



CerORGANIC
CORE LEARNING AREA OBJECTIVES

Course Objectives:	COMM	TECH	INFO	QUAN	THIN
C531 - to create skills in e- and blended learning course development					
C532 - to familiarize and exercise ICT technologies for OA content adaptation both for teaching and decision making					
C533 - to demonstrate and practice different communication and consultation approaches in OA					
C534a - to present the major topics, issues and problems in OA for which decision making is mostly required on the farm					
C534b - to illustrate analytical thinking methodologies leading to decision making in OA					

COMM: Effective Communication

TECH: Technology Fluency

INFO: Information Literacy/Research

QUAN: Quantitative Literacy

THIN: Critical Thinking

3.3 Grading Information

Criteria

Successful trainees are expected to receive a passing grade in each of the two examinations (presentation and assignment). The following grading system applies:

Level 4 = A or excellent (80–100%)

Level 3 = B or good (70–79%)

Level 2 = C or average (60–69%)

Level 1 = D or passing (50–59%)

Level R = F or failing (0–49%)

Presentation and Assignment Descriptions

C531. Assessment - Presentation

On the last day of the 3rd week, CerOrganic trainees (in groups of four) will be asked to develop their own blended-learning course (providing a schedule listing topics and learning activities) in order to train/advise/consult farmers. On this day, each participant will have the opportunity to develop their schedule, with the assistance of the academic personnel, into a blended-learning course outline. This outline will be submitted by the end of the following week for marking and will be used as the basis for assignment 2.

C532/ C533/ C534. Assessment – Assignment

Following the end of the summer school and for a period of two weeks, each CerOrganic student is expected to:

- a)** identify OA topics of major interest in his/her area of specialisation,
- b)** search for e-content,
- c)** proceed to communication and consultation of farmers using analytical thinking methodologies.

This series of activities takes place in his/her area of work and the CerOrganic consortium partners are expected to assist trainees in the execution of their assignments (if required) using a network of contact associations (Professional Networking). A detailed reasoning must be provided as part of the assignment to illustrate in detail the communication that took place, the methodological approach, and the decision-making process. The assignment will be submitted to the relevant CerOrganic partner or expert(s) for marking, constructive comments and further suggestions.

REQUIRED TEXTS AND MATERIALS

Blended & e-learning design

- Anderson, T., & Elloumi, F. (2004). Theory and practice of online learning. Retrieved June 21 2009, from http://cde.athabasca.ca/online_book/contents.html

ICT technologies for OA content adaptation

- Confolio Repository Tool (<http://www.confolio.org>, <http://oe.confolio.org>)
- MOLE: Course Management Platform (<http://www.moleportal.eu>)
- Organic.Edunet Web portal (<http://www.organic-edunet.eu>)
- Palavitsinis N., Manouselis N., Kastrantas K., Stoitsis J. and Tsilibaris X. (2010) "Online sharing educational content on biodiversity topics: a case study from organic agriculture and agroecology", in Proc. of the Congress on "Tools for identifying biodiversity: progress and problems", Paris, France, September 2010. Retrieved online from http://dbiodbs1.units.it/bioidentify/files/volume_bioidentify_low.pdf on January 24th, 2011.

Tzikopoulos A., Manouselis N., Costopoulou C., Yialouris C.P. and Sideridis A.B. (2005) "Investigating Digital Learning Repositories' Coverage of Agriculture-related Topics", in Proc. of the International Congress on Information Technologies in Agriculture, Food and Environment (ITAFE05), Adana, Turkey, October 2005. Information retrieved online from <http://infolab.aua.gr/files/publications/en/1170236360.pdf> on January 24th, 2011.

Farmers communication & consultation approaches

- Organic.Edunet Handbook for scenario implementation at School Level (<http://confolio.vm.grnet.gr/scam/6/resource/285>)
- Organic.Edunet Handbook for scenario implementation at University Level (<http://oe.confolio.org/scam/34/resource/296>)
- Pawlowski, J. and Richter, T (2007). Context and culture metadata: A tool for the Internationalisation of e-learning. World Conference of Educational Multimedia, Hypermedia and Telecommunications (EDMEDIA), Vancouver, Canada, AACE.
- Swanson B., Bentz R. and Sofranko A (1997) Improving agricultural extension. A reference manual. Food and Agriculture Organization of the United Nations. Rome, 1997. Retrieved online from <http://www.fao.org/docrep/w5830e/w5830e00.htm> on January 25th, 2010.

OA topics, issues & problems – Decision making

- Kristiansen, P., Taji, T., Reganold, J. (Eds) 2006. Organic Agriculture: A Global Perspective. Cornell University Press.
http://ec.europa.eu/agriculture/organic/splash_en
<http://www.ifoam.org/>

RECOMMENDED TEXTS AND MATERIALS

ICT technologies for OA content adaptation

- Confolio Repository Tool (<http://www.confolio.org>, <http://oe.confolio.org>)
- MOLE: Course Management Platform (<http://www.moleportal.eu>)
- Organic.Edunet Web portal (<http://www.organic-edunet.eu>)
- Palavitsinis N., Manouselis N., Kastrantas K., Stoitsis J. and Tsilibaris X. (2010) "Online sharing educational content on biodiversity topics: a case study from organic agriculture and agroecology", in Proc. of the Congress on "Tools for identifying biodiversity: progress and problems", Paris, France, September 2010. Retrieved online from http://dbiodbs1.units.it/bioidentify/files/volume_bioidentify_low.pdf on January 24th, 2011.
- Tzikopoulos A., Manouselis N., Costopoulou C., Yialouris C.P. and Sideridis A.B. (2005) "Investigating Digital Learning Repositories' Coverage of Agriculture-related Topics", in Proc. of the International Congress on Information Technologies in Agriculture, Food and Environment (ITAFE05), Adana, Turkey, October 2005. Information retrieved online from <http://infolab.aua.gr/files/publications/en/1170236360.pdf> on January 24th, 2011.
- Rölting, N.G. & P.G.H. Engel (1990). *IT from a knowledge systems perspective: Concepts and issues. Knowledge in Society: The International Journal of Knowledge Transfer*, 3, 6–18.

Farmer communication & consultation approaches

- Chambers, R., A. Pacey & L.A. Thrupp (Eds) (1989). *Farmer First: Farmer Innovation and Agricultural Research*. Intermediate Technology Publications, London.
 - Chambers, R. (1994a). *The origins and practice of Participatory Rural Appraisal*. World Development, 22, 953–69.
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 - Pretty, J.N. (1994). *Alternative systems of inquiry for a sustainable agriculture*. IDS bulletin 25, 39–48.
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 - Rölting, N.G. & M.A.E. Wagemakers (Eds) (1998). *Facilitating Sustainable Agriculture. Participatory Learning and Adaptive Management in Times of Environmental Uncertainty*. Cambridge University Press, Cambridge.
- Organic.Edunet Handbook for scenario implementation at School Level (<http://confolio.vm.grnet.gr/scam/6/resource/285>)
- Organic.Edunet Handbook for scenario implementation at University Level (<http://oe.confolio.org/scam/34/resource/296>)
- Organic.Edunet Web portal (<http://www.organic-edunet.eu>)

OA topics, issues & problems – Decision making

- Organic Crop Production – Ambitions and Limitations 2008, 13-37, DOI: 10.1007/978-1-4020-9316-6_2. Fundamentals of Organic Agriculture – Past and Present. Holger Kirchmann, Gudni Thorvaldsson, Lars Bergström, Martin Gerzabek, Olof Andrén, Lars-Olov Eriksson and Mikael Winninge.

Additional Reading / Material

Blended & e-learning design

- Anderson, P. (2007). What is Web 2.0? Ideas, technologies and implications for education: JISC
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ICT technologies for OA content adaptation

- Palavitsinis N., Manouselis N. and Sanchez S. (2010) "Preliminary Discussion on a Digital Curation Framework for Learning Repositories", in Massart D. & Shulman E. (Eds.), Proc. of Workshop on Search and Exchange of e-learning Materials (SE@M'10), Barcelona, Spain, CEUR 681, September 2010. Retrieved online from <http://ceur-ws.org/Vol-681/paper06.pdf> on January 24th, 2011.
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- Hayes H. (2005) Digital Repositories - Helping universities and colleges. University of Edinburgh. Retrieved online from [http://www.jisc.ac.uk/uploaded_documents/JISC-BP-Repository\(HE\)-v1-final.pdf](http://www.jisc.ac.uk/uploaded_documents/JISC-BP-Repository(HE)-v1-final.pdf) on January 13th, 2011.
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- Wikipedia article on Digital Libraries: http://en.wikipedia.org/wiki/Digital_library
- Wikipedia article on Repositories: [http://en.wikipedia.org/wiki/Repository_\(publishing\)](http://en.wikipedia.org/wiki/Repository_(publishing))

Farmers communication & consultation approaches

- Chambers, R. (1994b). *Participatory Rural Appraisal (PRA): Analysis of experience*. World Development, 22, 1253–68.
- Pretty, J.N. & R. Chambers (1994). *Towards a learning paradigm: new professionalism and institutions for agriculture*. In: I. Scoones & J. Thompson (Eds), *Beyond Farmer First. Rural People’s Knowledge, Agricultural Research and Extension Practice*, pp. 182–202. Intermediate Technology Publications, London.

OA topics, issues & problems – Decision making

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3.5 Additional Information

COLLABORATORS

Corvinus University of Budapest (Hungary) http://www.uni-corvinus.hu	European Federation for Quality in E-Learning (Belgium) http://www.efquel.org
Department of Agriculture of Cyprus (Cyprus) http://www.moa.gov.cy/da	Federal Ministry of Education, Arts and Culture (Austria) http://www.bmukk.gv.at
Agro-Know Technologies (Greece) http://www.agroknow.gr	Institute of Agricultural Economics and Information (Czech Republic) http://www.uzei.cz
DIO Inspection and Certification Organization (Greece) http://www.dionet.gr	Association for Hungarian Organic Farming (Hungary) http://www.mogert.unicorvinu.hu

TECHNICAL ASSISTANCE AND SUPPORT

The CerOrganic project will lead to community-building between teachers and students, and between students and their peers. The time, place and pace of study have been made as flexible as possible and content may be presented remotely. Interaction for the whole training period between student and tutor and between students is embedded in the CerOrganic Platform. Understanding and navigating through the learning Platform will be critical to the successful completion of the program.

- The CerOrganic learning Platform provides access and support in a 24:7 mode through the internet. Students are supplied with e-materials and instructions,

accessed throughm their own PC. In case of questions, students are asked to either inquire at the help desk (linked to organizers [Agroknow]) or at an academic-student forum.

- the use of CerOrganic support system is subjected to on-line monitoring and evaluation by the students

- Link to the training website:
- Link to the learning environment:
- Link to background readings:

FURTHER INFORMATION:

- Dr. I. Livieratos, Department of Sustainable Agriculture, Mediterranean Agronomic Institute of Chania, Gr-73100, Greece. Tel. +30 28210 35000 (x535), Email: livieratos@maich.gr ; www.maich.gr
- Dr. C. Owen, Department of Sustainable Agriculture, Mediterranean Agronomic Institute of Chania, Gr-73100, Greece. Tel. +30 28210 35000 (x533), Email: owencary@gmail.com ; www.maich.gr

4 Note Schedule (for week 3 face-to-face training)

4.1 Introduction

This section facilitates the collection of specialized information that will be requested later by tutor experts (in D2.3-ToT Session Design). Once tutors have been confirmed, they will be notified of A. The CerOrganic Curriculum Framework and , B. Note Schedule (to orientate them with regards to the material to be provided and information about the specific area to be covered). Tutors will then be asked to provide detailed information targeting contents, objectives, learning outcomes competencies etc. (an example is presented in Annex I).

4.2 Note Schedule

Sub-level training requirement	Overall responsible for content	Specific material to cover	Time Allocation (seminar)/No. of slides	Individual partner contributions
Introduction to the training	MAICH	An overview of the training will be given and most importantly the outcomes to be achieved at the end of the training.	15 minutes – 5 slides	MAICH
C531.1. Introduction to eLearning Design		The eLearning cycle	25 minutes – 10 slides	
		Input/Expectations–Development/Working/Negotiation-Output. An interaction between passive, active, showing and response	20 minutes – 10 slides 1 video	
C531.2. Designing a blended learning course for farmers.	BMUKK	The importance of planning the eLearning course	25 minutes – 10 slides 1 video	BMUKK
		The effectiveness of an eLearning course - The choice and impact of technology Possibilities	25 minutes – 10 slides	Agroknow
		Making the link to designing a blended learning course for Farmers	30 minutes - 10 slides	
		Designing the course-from a practitioner's viewpoint. Developing the content into manageable modules.	25 minutes - 10 slides	

		<p>The role of the facilitator</p>	20 minutes	
		<p>Evaluate the course</p>	10 minutes	
<p>C532. 1 ICT technologies for OA content adaptation</p>	<p>Agroknow</p>	<p>Introduction to metadata will provide an introduction to the concept of metadata, examples of their usage and their importance in storing and retrieving digital resources.</p> <p>Organic.Edunet Web Portal will be a demonstration of the specific learning portal (www.organic-edunet.eu), showing its functions, features and content. The advantages of searching for content in specialized web portals, digital repositories and libraries will be highlighted and examples will be given to the participants. After the theoretical introduction, the participants will be asked to browse through the portal and accomplish a specific hands-on exercise. There will also be a demonstration of how the metadata are used in a learning portal.</p>	45 minutes – 20 slides	
		<p>Repository tool: e-portfolio for resources Participants will be introduced to the e-portfolio concept and will be provided with the required knowledge in order to understand its functions and be able to facilitate the e-portfolio in their training courses. They will be shown how to annotate digital resources with metadata and how to store the annotated resources in the e-portfolio. The last step includes the annotation of at least one digital resource by each one of the participants.</p>	45 minutes – 20 slides	<p>Agroknow</p>
		<p>Course Management Platform will provide a short introduction to the concept of course management platforms and an overview of the MOLE platform (http://www.moleportal.eu/), demonstrating its more commonly used functions, such as storing documents and presentations, using its multimedia features and customizing the user interface. A description of how this platform can be implemented in the training context will be given to the participants who will have the chance to browse through the platform and perform different tasks.</p>	45 minutes – 20 slides	

Sub-level training requirement	Overall responsible for content	Specific material to cover	Time Allocation (seminar)/No. of slides	Individual contributions	partner
C533.1. Preparing an Organic Farming Learning Scenario	Agroknow	Introduction to the training scenario concept. Working on a training scenario: Elaboration and adaptation of an OA topic & Description. Using open educational resources to support scenarios	2 hours	Agroknow	
		Preparation of short presentation on a developed scenario During this session, the participants will be provided with a PowerPoint template that should be used for the presentation of their own scenario, at the end of the training courses. They will be advised on how to create an substantial presentation and how to make the most out of the available resources in order to enrich their presentation. Peer evaluation of training scenarios will be the final step of the training, during which the participants will be asked to present their complete scenarios in front of the class. This session includes a discussion about the presented scenarios, not only for their evaluation but for suggesting ways to further improve them as well.	2 hours	Agroknow	
Sub-level training requirement	Overall responsible for content	Specific material to cover	Time Allocation (seminar)/No. of slides	Individual contributions	partner
C534a.1. OA topics, issues & problems – Decision making	MAIch	Agroecological analysis of (organic) farming systems. How important is the interaction of organism populations in managing organic farming systems? How decisions are made in dynamic multi-component systems regarding abiotic and abiotic factors?	30 minutes – 15 slides		
		How conversion to OA occurs and how is dictated by legislation? Do certification standards cover all issues in organic farming production?	15 minutes – 7 slides		
C534a.2. Soil Fertility & Management	MAIch	What factors define soil quality and health? What are the main issues in soil management in agriculture? What are the differences between conventional and OA approach in this aspect? How soil management is connected to plant needs and environmental concerns? Nutrient availability and equilibrium for optimum plant growth. How may different farming practices assure soil quality? How management of organic	45 minutes – 20 slides		

Sub-level training requirement	Overall responsible for content	matter may occur to maintain soil fertility.	Time Allocation (seminar)/No. of slides	Individual partner contributions
C534a.3. Weeds Control and Agrobiodiversity	CUB	Specific material to cover In which cases pests need to be combated and to what extend? Problem identification and ranking. How different populations of organisms (agrobiodiversity) interact in an agroecosystem affecting pest control? Ways to control pests in OA and connection with soil management, control of weeds and product yield. Specific case studies and decision making. What are the differences between conventional and OA approach in this aspect? How may different farming practices assure weed control? The importance of prevention in OA pest and disease management, methods of prevention.	45 minutes – 20 slides	CUB
C534a.4 Pests & Diseases Management	CUB	In which cases pests need to be combated and to what extend? Problem identification and ranking. How different populations of organisms (agrobiodiversity) interact in an agroecosystem affecting pest control? Ways to control pests in OA and connection with soil management, control of weeds and product yield. Specific case studies and decision making. What are the differences between conventional and OA approach in this aspect? How may different farming practices assure weed control?	45 minutes – 20 slides	CUB
Sub-level training requirement	Overall responsible for content	Specific material to cover	Time Allocation (seminar)/No. of slides	Individual partner contributions
C534a.5 Organic Farm Management	UZEI	Supply meets demand meets quality: when I grow what and how. Animals, rotations and mix crops in time and space. How various factors of an OA enterprise interact and influence decision making?	45 minutes – 20 slides	UZEI
C534a.6 Sustainable Post-Harvest Handling Of Organic Farming	MAICH	Handling sequence for OA products. What environmental friendly methods assure quality following harvesting? Potential problems and successful case studies.	45 minutes – 20 slides	

Products	Overall responsible for content	Specific material to cover	Time Allocation (seminar)/No. of slides	Individual partner contributions
Sub-level training requirement				
C534a.7 Marketing and e-sales of OA products	UZEI	Supply meets demand meets quality: when to grow what and how. Animals, mix crops and rotations in time and space. How various factors of an OA enterprise interact and influence decision making? The use of Internet: modern product promotion and sales opportunities.	45 minutes – 20 slides	
C534c OA case studies	BMUKK, CUB, MAICH, UZEI	OA: experiences, problems and solutions of OA in CerOrganic partner countries. Successful cases of organic farms in Northern and Southern European countries.	40 minutes – 4x20 slides combination of slides and live demo as required in the field trips.	All Partners
Sub-level training requirement	Overall responsible for content	Specific material to cover	Time Allocation (seminar)/No. of slides	Individual partner contributions
C535 Quality Assurance in Learning	EFQUEL	The course will familiarise the participants with the current debate about quality assessment and quality assurance of distance education and e-learning, enable them to understand the field of quality development in its basic foundations and allow them to gain competence in using, administering and setting up quality assessment and quality assurance process both on institutional level as well as on course level.	2h/xx slides (to be defined) Combination of slides, group puzzle (Jig saw), Group work, presentation	EFQUEL

5 CerOrganic Curriculum Framework: elements for quality assurance

The information from Work Package 1 and Deliverable 2.1 (CerOrganic Competencies) in combination with critical quality assurance issues was used to compose CerOrganic Curriculum Framework. In addition, qualified CerOrganic members and external academics were consulted and provided descriptions of key components (learning objectives, competences, methodological approaches, content, assessment methods, awarded credits, practical information, technical requirements, etc.) for all complementary learning modules. This information will be made available to all potential CerOrganic trainees and other interested stakeholders.

A blend of different methodological approaches have been selected to populate five slightly different scenarios in distance and face-to-face teaching (hands-on, field trips, presentations, site-exercises), for the 5 countries from which pilot ToT trainees will originate (At, Cy, Cz, Gr, Hu). In particular, the ability to execute additional site-specific exercises (visits to organic farms) in the case that a student achieves a low score will act to aid improvement and to bridge learning deficits. Learning methodologies have been selected to promote a participatory learning approach in order to motivate learners (e.g. field visits in groups, discussions, group presentations).

During the preparatory phase, it has been envisaged that CerOrganic tutor experts and suitable personnel manage e-inquiries (technical and scientific) and provide feedback to participant trainees through the CerOrganic platform (forums, discussion boards etc.) in groups, or one-to-one.

Presentations and assignments for real case scenarios have been formulated, are reasonable in terms of time, and will allow learners to clearly understand of what is expected of them in terms of performance, and the grading process, which will follow the ECTS system.

6 Conclusions and Recommendations

Leewis (2004)¹ writes: “there is a need to reinvent agricultural extension as a professional practice: mission, rationale, mode of operation, management and organisational structure”. To address this aim, the CerOrganic Curriculum Framework is a blended-learning modular programme with clear strategic purposes and the potential to address new trainee audiences (and needs) and to improve the effectiveness and efficiency of existing teaching programmes in the field. Several critical parameters have been taken into consideration:

Knowledge and Skills

A balanced mixture of online and traditional approaches. Critical factors such as the actual distance between trainees and tutors, the nature of the learning outcomes, skills acquisition and modes of assessment. CerOrganic Curriculum integrates various forms of learning (face-to-face and "traditional" distance methods) for ALL involved components.

During the training, CerOrganic trainees will:

- a. communicate with tutors and with each other during the whole training through the CerOrganic platform,
- b. demonstrate acquired competencies in (e)-learning design module at the end of the 3rd week (at MAICh) presenting scenarios.
- c. assess CerOrganic learning outcomes and competencies in real problems and solutions. All learning outcomes have been assigned in conjunction with clear pedagogical functions, which need to be tested in real life/work conditions.

Overall, the CerOrganic curriculum covers a rich mixture of knowledge and skills within the domain of extension service in OA: effective communication, technology fluency, information literacy/research, quantitative literacy, critical thinking and analysis.

Flexibility

The CerOrganic training lasts a relatively short study period but is designed to offer considerable flexibility in time, place and, where possible, pace of study. The trainees may use the schedules to determine their own pattern of study. Schedules for course completion at a macro level are fixed but offer significant flexibility for trainees to adjust their study pattern at a micro level, especially during the preparatory and evaluation phases.

Academic community development

CerOrganic curriculum builds an academic community to:

- a. provide a framework for student-teacher and student-student interactions,

¹ Leeuwis C. (2004). *Communication for Rural Innovation. Rethinking Agricultural Extension. Third Edition, Blackwell Science Ltd, 405p.*

- b. fulfill specific academic objectives (e.g. participation in field trips and discussions in front of real scenarios),
- c. link students into broader professional communities

CerOrganic proposes a realistic level of trainee involvement within informal on-line communities. These are possible throughout the whole training and will peak during the preparatory and evaluation periods. On-line communities are populated by CerOrganic partners who have taken responsibility for each of the four modules, and expert tutors. The role of CerOrganic academic staff in the on-line activity is separated into direct interactions with individual students and on-line discussions. Both will be available in case of a student inquiry.

Professional Networks

CerOrganic will utilize the network of its partner members in order to engage trainees in the professional activity that forms part of their study. This will be particularly important to provide suitable groups of OA farmers or entrepreneurs to work with trainees in the execution of the exam assignment.

Assessment

CerOrganic curriculum contains a presentation-type assessment (**module C531**) and an assignment-type assessment (**one for modules C532, C533, C534**). Both assessments are designed to be:

- a. **multi-tasking** (learners need to think at multiple levels and utilize elements taught in different units)
- b. **flexible** (learners may approach different organic farms and problems at different times),
- c. **direct** (contact with the farmer is needed) and,
- d. **effective** (the results of Assignment 2 will become apparent to the trainee following consultation)

The consortium is aware of potential integrity problems concerning the identification of the work of individual trainees. For this issue, the assignments have been designed to be of a demanding and diverse nature requiring various types of knowledge and the acquisition of multiple skills designed to reveal the contribution of each trainee.

The structure and size of the curriculum is consistent with European norms and aligns with the credit accumulation and transfer system (4 ETCS). The actual workload is expressed in study and work time.

Annex 1 - UNIT IDENTIFICATION *(an example, to be provided by all tutors ONLY in D2.3)*

I. UNIT IDENTIFICATION DATA

Name of the Unit	C-534a2 - Soil Fertility & Management
Modality of education	Lecture presentation, practical field trips, discussions
Partner responsible	Mediterranean Agronomic Institute of Chania (MAICh)
Tutor	Prof. Dr. Ulrich Köpke Institute of Organic Agriculture, University of Bonn Katzenburgweg 3 53115 Bonn Germany +49-228-73-5616 +49-228-73-5617 Email: iol@uni-bonn.de Skype: Ulrich Koepke
Short CV	Agronomist, born 1951 in Berlin, Germany. Studied agricultural sciences, botany and philosophy at the University of Goettingen, Germany (1970 – 1974). Doctoral thesis in ‘Favabean: nitrogen fixation and precrop effect’, he accepted an appointment as professor for Organic Agriculture by the University of Bonn, where he also developed the experimental farm for Organic Agriculture ‘Wiesengut’ and founded the Institute of Organic Agriculture (IOL) in 1991 (www.iol.uni-bonn.de). Director and Head of IOL. Main research topics: crop rotation design, site-specific management, reduced tillage and direct seeding systems, nutrient management and weed control in Organic Agriculture, product and process quality as well as environmental impacts of agriculture. Head of several interdisciplinary and transdisciplinary researcher groups on national and international level (EU). More than 300 publications. He serves in several national and international organizations and boards, among others as Founding President of the International Society of Organic Agriculture Research (ISOFAR).
Start Date End Date	

II. INTRODUCTION TO THE UNIT

Soil fertility in OA consists of i. production functions, i.e. efficient sustainable net production of crops combined in diversified crop rotations, and ii. ecological functions, i.e. filter- and buffer function of the soil,, self-regulation, resilience and system stability. Soil fertility has major and measurable impacts to the environment, amongst others the quality of ground

and surface waters, landscape and biodiversity which also encompass economical, cultural and societal values, soil erosion, soil protection, etc. This unit aims to provide students with the tools to analyze the on-site given elements and responsible factors of soil fertility, as well as critically review different management approaches in OA with regards to productivity and their impact to the environment.

III. PREREQUISITES

Advanced knowledge in agriculture and agroecology OR basic level knowledge in soil chemistry/soil biology OR at least 2 years of experience in environmentally sound agriculture.

IV. FUTURE TUTORS QUALIFICATIONS

University degree OR PhD in Agronomy or related science OR relevant practice (minimum 4-year experience in the respective field and minimum 1-year experience as trainer) or being a farmer with minimally 5-year experience in OA. The trainee need to be able to communicate in English (the required level B2 according Cambridge), to use IT MS – Office (with emphasis on PowerPoint) Internet and shall be familiar with and contribute to modern teaching methods (e-learning).

V. AIMS AND OBJECTIVES

- to present components and processes related to soil fertility in OA
- to offer various e.resources as an introduction to soil fertility, its control and management in environmentally sound farming systems
- to demonstrate inter-relation of various components and effects following specific actions and farming practices to maintain and increase soil fertility
- to demonstrate problems and problem-solving approaches for specific case studies
- to offer specific consultation tools site-specific management of soil fertility for this particular domain

VI. LEARNING OUTCOMES & SKILLS

By the end of the component, the students are expected to:

- have an understanding of the complexity of the specific role of soil fertility and its maintenance in OA
- be familiar with several problems occurring in the field of soil fertility
- be able to analyze critically to develop solutions leading to decisions on increase and maintenance of soil fertility
- be competent in analyzing problems and searching for resources in the literature and the internet to solve problems and give advices
- have developed consultation skills on the broad field of soil fertility

VII. CONTENTS

Brief description of the unit and/or key concepts (theoretical and practical content).

1.1 Soil fertility: components, interactions and methods to analyze, maintain and increase (Theory/ Various components/ Resources)

1.2 Case studies and problems (Case Studies)

1.3 Analysis & options for solutions. (Case Studies)

1.4 Consultation techniques (Case Studies)

VIII. METHODOLOGY

The Unit is composed of:

(a) (e-) lectures based on PowerPoint presentations (recording site specific conditions, soil nutrient management, role of soil organic matter, nitrogen management, management of less mobile soil nutrients, crop rotation design, soil biology)

(b) textbooks, articles

(c) web-based literature review

(d) (team) field work

(e) group interaction and discussion

IX. VOLUME OF WORK

ACTIVITY	Hours
(e.)Preparative Self Study	2
Lectures	1
Field trips – Practical - Discussion	1
Self study, Field Observation, Consultation, Decision Making, Assignment Preparation	2
TOTAL VOLUME OF WORK	6

X. REFERENCES AND SUPPORTING MATERIAL

- Basic bibliography

BassiriRad, Hormoz (Ed.) (2005): Nutrient Acquisition by Plants. Ecological studies, Vol. 181. Springer, Berlin, Germany. ISBN N^o 978-3-54024-186-7.

Cooper, Julia, Urs Niggli, Carlo Leifert (Eds.) (2007): Handbook of Organic Safety and Quality. Woodhead Publishing Limited, Abington, United Kingdom. ISBN N^o 978-1-84569-010-6.

El Titi, Adel (Ed.) (2003): Soil Tillage in Agroecosystems. CRC Press, Boca Raton, USA. ISBN N^o 978-0- 84931-228-1.

- Journals

Biological Agriculture and Horticulture (BAH). A B Academic Publishers. Coventry, Great Britain. ISSN 0144-8765.

Renewable Agriculture and Food Systems (RAFS). Formerly known as American Journal of Alternative Agriculture. Cambridge University Press. Cambridge, United Kingdom. ISSN 1742-1705.

- Web pages / links

<http://europa.eu.int/>

<http://www.fao.org/organicag/>

<http://www.ifoam.org/>

www.iol.uni-bonn.de

XI. EVALUATION OF LEARNING

An assignment to include a multi-component case study

- problem identification,
- analysis of various solutions,
- decision making,
- farmer consultation

Project Information

CerOrganic is a two year Leonardo da Vinci Multilateral Project financed by the European Commission that aims to develop and test a quality assurance procedure for the vocational education/training of agricultural advisors/trainers in Organic Agriculture, based on the European Quality Assurance Reference Framework (EQARF).

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Institute of Agricultural
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tion (Czech Republic)

<http://www.uzei.cz>



European Federation
for Quality in E-Learning
(Belgium)

<http://www.efquel.org>



DIO Inspection
and Certification
Organization (Greece)

<http://www.dionet.gr>



Department of
Agriculture of Cyprus
(Cyprus)

<http://www.moa.gov.cy/da>



Education and Culture DG

Lifelong Learning Programme

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