Co-funded by the European Union

BIO-Save
Competence Catalogue
Part II
career profiles

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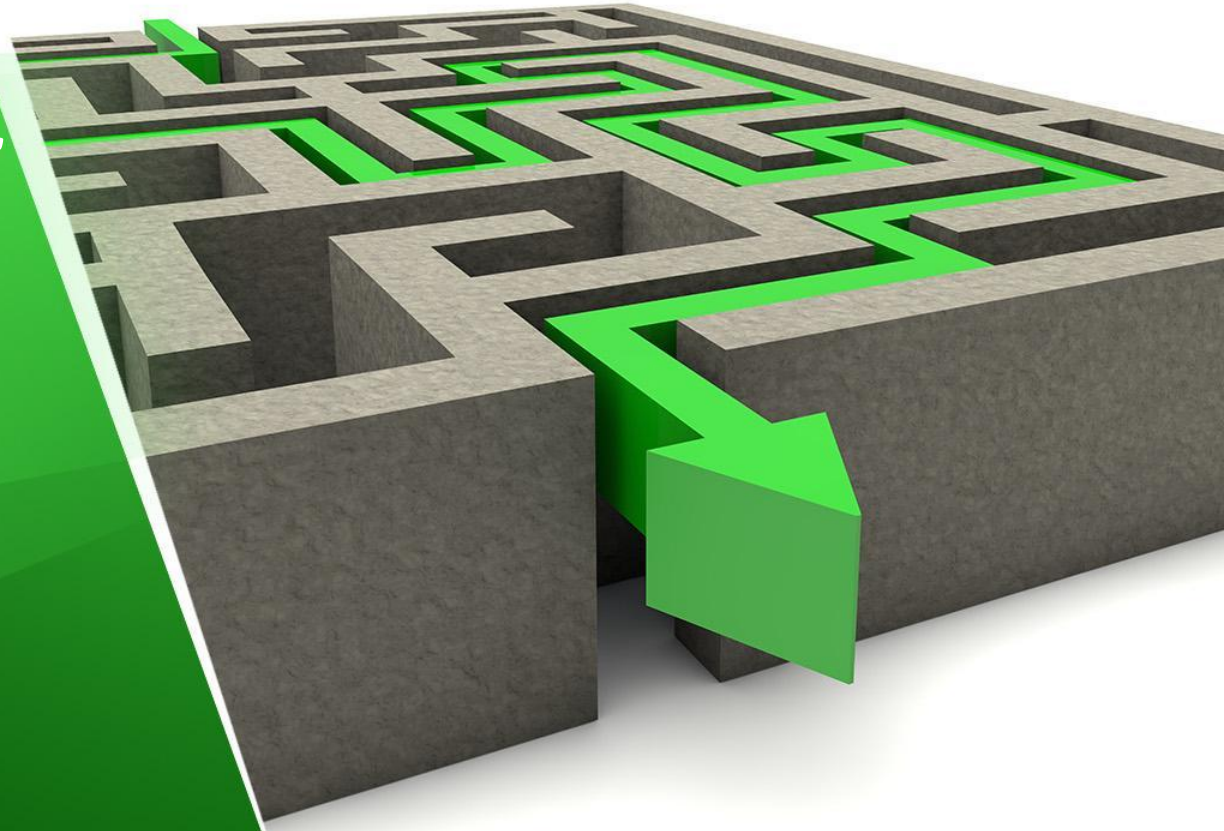
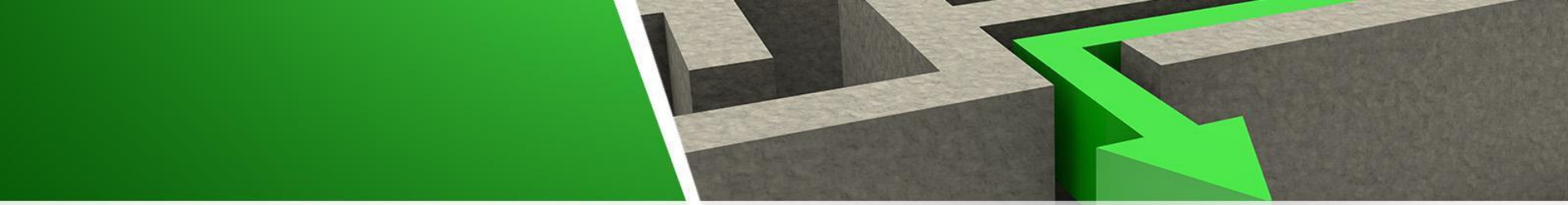
BIO-Save career profiles in Agricultural Science



Qualification Dossier of

- .....

  - Owner’s Name



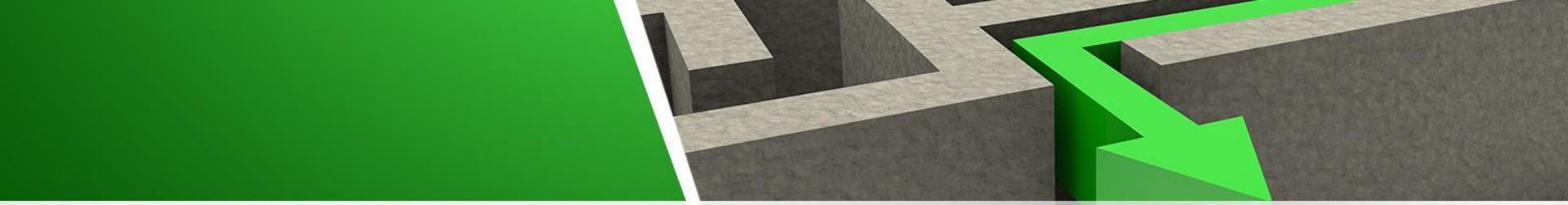
General information about the owner of the dossier

- Full name:

  ……

- Area of specialization:
- ……
  …….

- **(Selected from BIO-Save project qualification list)**

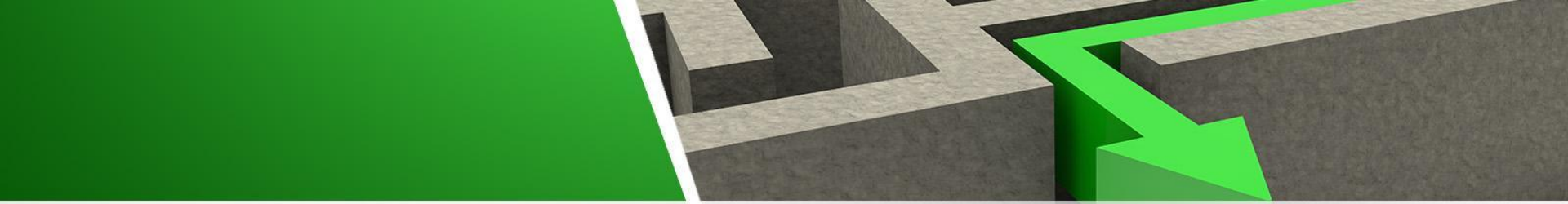


Contact information

mail address …….

telephone ……..

email address…….



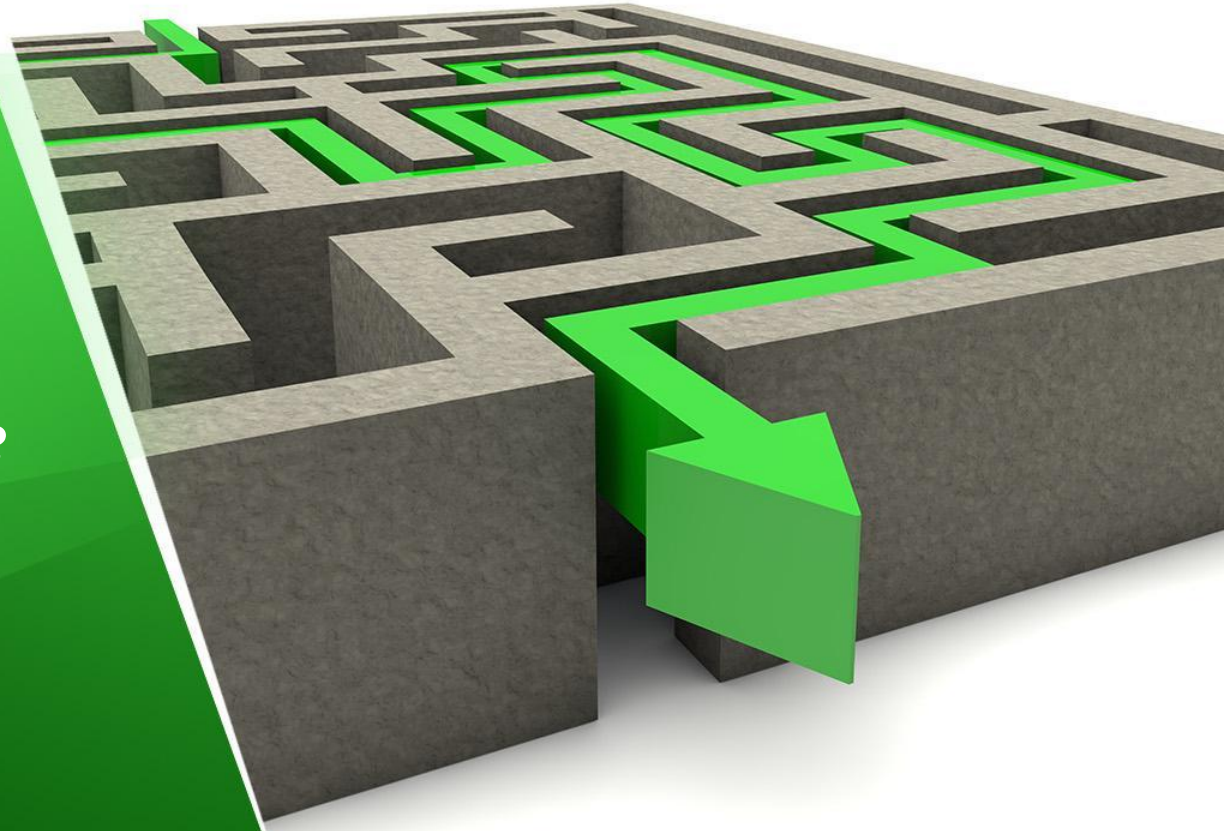
Professional CV EUROPASS

http://europass.cedefop.europa.eu/sites/default/files/cvtemplate_6.doc

Follow the instructions provided in the form above to provide information about your education completed, and work experience

BIO-Save career profiles *In Agricultural science*

For level **EQF 6**



BIO-Save Professional profiles
Agricultural science EQF 6

Knowledge

Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles

Skills

Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study

Responsibility and autonomy

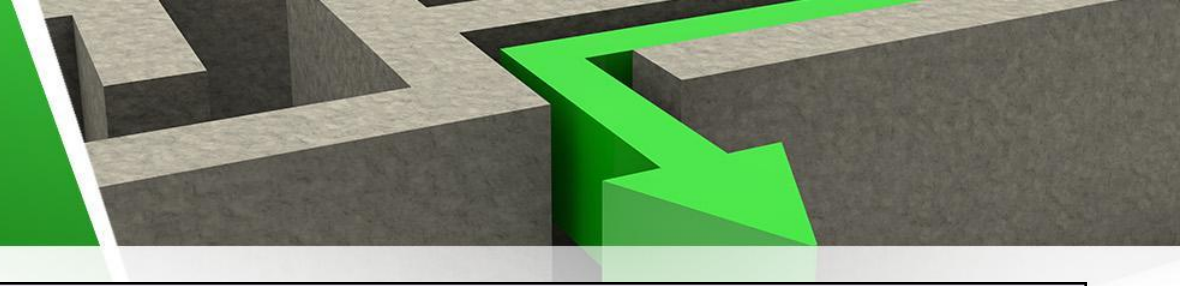
Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups

EQF 6

B.Sc. Degree Professional

Professional Profile for:	***Agronomist–*** *ESCO 2132.2*
General abilities (knowledge & skills)	Understand concepts and techniques in Agricultural science Practice and demonstrate culturing techniques Apply effectively agricultural technologies Follow accurately agricultural procedures and keep records Anticipate new knowledge Design and conduct farmers' training Possess self-motivation, determination and dedication Implement innovation activities without being supervised Maintain relationship with farmers
Green abilities (knowledge & skills)	Monitor agricultural, organic food production and livestock practices to identity bio-safe requirements. Oversees the selection, training and performance of agricultural and livestock workers to improve their knowledge and skills in usage of biotechnology farming methods Introduces technics for climate change mitigation
Digital abilities (knowledge & skills)	Utilize efficiently Office suit software Operate with Internet browser software Uses frequently electronic mail software

EQF 6
Project manager



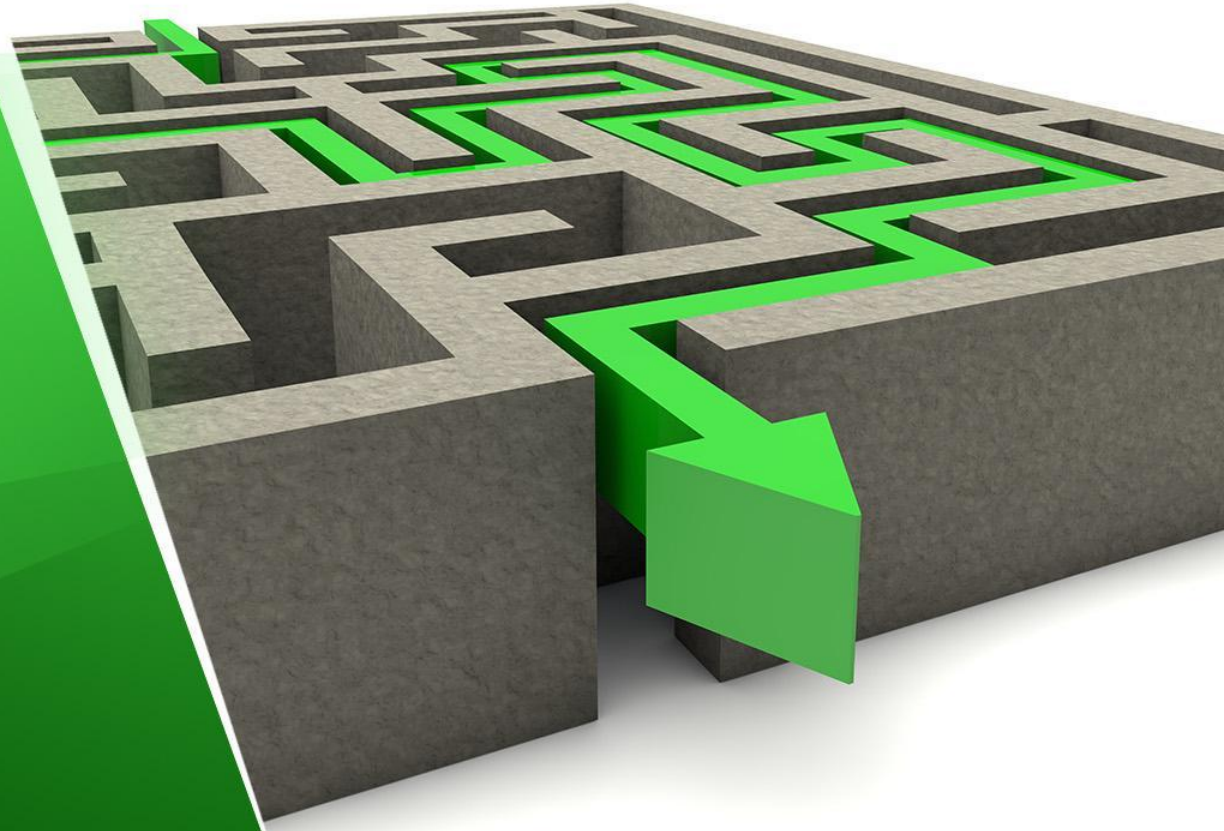
Professional Profile for:	**Research and development managers** ESCO 1223.2
General abilities (knowledge & skills)	Plan, direct and coordinate production in agricultural, aquaculture, fishery and food operations Monitor production outputs, costs, quality and quantity Develop and implement technics to improve production efficiency Connect local knowledge into policy, programme design and implementation Demonstrate understanding of quality assurance, quality control, and regulatory practices. Explain role of various regulatory agencies, and demonstrate understanding of compliance requirements related to approvals required by those agencies Find ways to encourage farmers to adopt innovations
Green abilities (knowledge & skills)	Implement good agricultural and livestock practices into facilities management plans Introduce green technologies in farming and livestock operations to increase environmental protection Implement the national and international policies and regulations for sustainable agriculture, organic food production and livestock
Digital abilities (knowledge & skills)	Utilize efficiently production planning software Introduces specific professional area software Operate calendar and scheduling software Uses staff scheduling software Practices desktop communication software

Autonomy and responsibility

- ✔ Recognize, classify recall, and put in order
- ✔ Reflecting on the impacts of science and provide examples
- ✔ Determine, implement models
- ✔ Excellent observational skills specific skills
- ✔ Asking questions based on observation
- ✔ Accuracy in following procedures and keeping records
- ✔ Work with data
- ✔ Ability to manage time and prioritize tasks
- ✔ Interpersonal skills with ability to work well with others
- ✔ Ability to continually update knowledge in the specialist area

BIO-Save career profiles In Agricultural science

For level EQF 7



BIO-Save Professional profiles
Agricultural science EQF 7

Knowledge

Highly specialized knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research Critical awareness of knowledge issues in a field and at the interface between different fields

Skills

Specialized problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields

Responsibility and autonomy

Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams

EQF 7
M.Sc. Degree professional

Professional Profile for:	***Agricultural scientist*** ESCO 2132.1
General abilities (knowledge & skills)	Knowledge in morphology, developmental biology, and environmental requirements for growing agricultural crops. Ability to organize and carry out the production of seed and seedlings material from the key agricultural plants. Knowledge on plant protection formulations and their modes of application. Knowledge on the genesis, ecology, diagnosis, classification, conservation and use of soils. Advise producers and trade organization for agricultural issues. Conduct agricultural scientific experiments and critically analyze obtained results.
Green abilities (knowledge & skills)	Knowledge for production and utilization of biofuels from crops, biogas from plant and animal biomass, and solar thermal energy. Understand general principles of agricultural sustainable development and energy eco-efficiency. Implementing into practice the appropriate agro technical measures for organic production.
Digital abilities (knowledge & skills)	Apply information technologies used in general, educational, and scientific practice – Word, Excel, PowerPoint, etc. Use, search and retrieve agricultural data from relevant database. Use of statistical tools for multivariate analysis.

Environmental Health & Safety Professional

Professional Profile for:	***Farming, Forestry and Fisheries Advisers*** ESCO 2132
General abilities (knowledge & skills)	• Knowledge of basic agroecological principles and practices. • Knowledge and skills for implementing the financing and managerial aspects of agricultural policy according to Regulation (EU) No. 1306/2013, concerning activities in crop production, related to climate change, biodiversity conservation, soils and waters protection, under the cross-compliance rules, as well as for maintaining the land in good agricultural and ecological condition. • Apply regulatory and agro-ecological aspects according to integrated plant protection legislation. • Develop or implement programs for monitoring of environmental pollution.
Green abilities (knowledge & skills)	• Knowledge on the use of novel eco-friendly methods and inputs which have zero or minimal negative impact on the environment. • Knowledge in precision and regenerative agriculture. • Implement main bioremediation approaches - air sparging, bioventing, phytoremediation, microbial bioremediation, etc. • Apply natural resources management or conservation programs.
Digital abilities (knowledge & skills)	• Using information networks and database to continuously monitor the news in the field of organic farming and agroecology and the requirements of the European agricultural market. • Utilizing geographic information system (GIS). • Use analytical or scientific software.

Biotech SME Manager

Professional Profile for:	**Agricultural and forestry production managers** ESCO 1311
General abilities (knowledge & skills)	• Collect and record growth, production, and environmental data. • Knowledge in farm management and projects development in the field of crop production. • Knowledge in European and national policy in the field of agriculture. • Application of main principles for knowledge transfer and innovation in agricultural SME organizations. • Ability to allocate resources and to respond to unanticipated problems, such as insect infestation, drought, flood and fire. • Apply business models and technologies for the development of sustainable agricultural practices.
Green abilities (knowledge & skills)	• Develops, improves, and expands the existing agricultural practices in order to reduce energy costs and adopt new technologies for energy production. • Knowledge on the sustainability, modernization, and technological renewal of agricultural SMEs including on the hydromelioration infrastructure, share of biological production, and energy efficiency. • Performance of economic and environmental analyses, regarding risk assessment and management in agricultural SMEs.
Digital abilities (knowledge & skills)	• Use of farm analytical tools and apps for collection, analysis, and visualization of farm data. • Use of accounting software. • Knowledge in map creation software - Geographic resources analysis support system GRASS; Global Mapper Software Global Mapper, etc.

In-company Training Professional

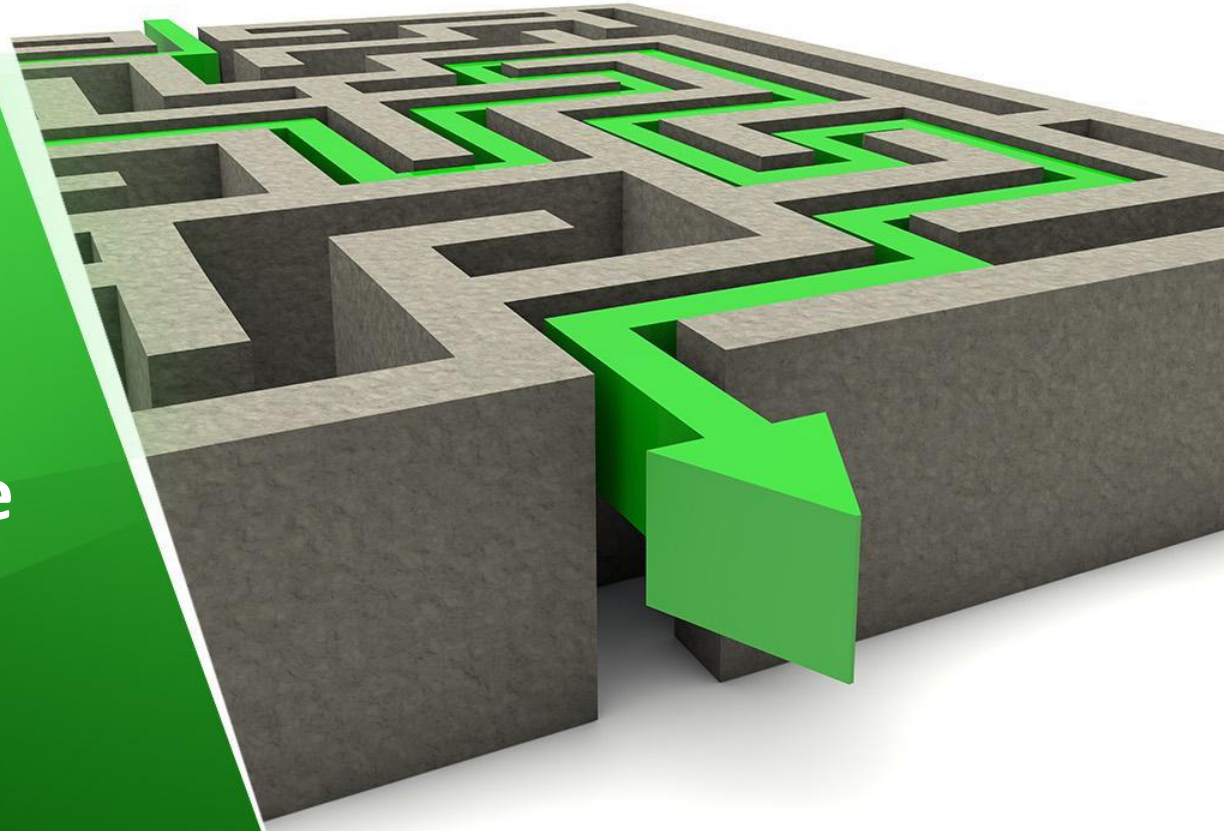
Professional Profile for:	**Agriculture, forestry and fishery vocational teachers** ESCO 2320.1.1
General abilities (knowledge & skills)	Identify the educational needs, develop agricultural training programs or classes, and teaching or instructing others. Present information with a variety of instructional techniques or formats, such as role playing, simulations, team exercises, group discussions, videos, or lectures. Interpret and enforce government acts and regulations and explain required standards to agricultural workers. Offer specific training programs to help workers maintain or improve job skills. Assess training needs through surveys, interviews with employees, focus groups, or consultation with managers. Promote and disseminate technical background information regarding the system and methods for lifelong learning and skill development in agricultural science.
Green abilities (knowledge & skills)	Teach new knowledge in relation to sustainable and eco-friendly agricultural practices, renewable energy, environmental degradation and climate change. Understand the concept for Green Training and Development. Help to introduce and manage the measurable standards for social and environmental impact of the training process.
Digital abilities (knowledge & skills)	Use of computer based training software — Blackboard Learn; Course management system software; Learning management system LMS; etc. Apply data base user interface and query software — Data management software; Database software. Use of video conferencing and presentation software.

Autonomy and responsibility

- ✔ Compare/contrast, relate, and use models
- ✔ Compute, retrieve, measure
- ✔ Processing evaluating, interpret information, and explain
- ✔ Reasoning and argument/ Inquiring and Designing
- ✔ Generating evidence
- ✔ Intellectual energy and independent thinking to address questions through research
- ✔ Thorough attention to details
- ✔ Critical-thinking and analytical skills
- ✔ Problem-solving skills
- ✔ Skills and experience to work independently and manage own workload

BIO-Save career profiles In Agricultural science

For level EQF 8



BIO-Save Professional profiles
Agricultural science EQF 8

Knowledge

Knowledge at the most advanced frontier of a field of work or study and at the interface between

Skills

The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice

Responsibility and autonomy

Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

Ph.D.Degree professional

Professional Profile for:	**Food biotechnologist** ESCO 2131.5
General abilities (knowledge & skills)	Develops technics to improve efficiency of procedures in agricultural sector Propose the type, intensity and structure of agricultural procedures Promotes the European and national policy in the field of agriculture Organize necessary equipment and supplies schemes Accomplish tests and experiments to propose adequate pest control Coordinate the control methods on environmental toxins, parasites and diseases Deliver guidance on fertilization, cultivation, harvesting and nutrition Implements techniques minimizing soil erosion
Green abilities (knowledge & skills)	Promotes main bioremediation methodologies Describes methods for sufficient use of water reserves Encourages organic farming practices Implement good agricultural practices into everyday practice
Digital abilities (knowledge & skills)	Use geographic resources analysis support system Global Mapper Software Global Mapper, etc. Use analytical or scientific software. Use of statistical tools for multivariate analysis.

Academic professional

Professional Profile for:	***University, and* Higher Education *Teachers*** ESCO 2310
General abilities (knowledge & skills)	Accomplish research to propose new fertilizers, Implement innovative techniques in broad agricultural practices Promote advanced agricultural production management plans Coordinate surveys and consultations on agricultural issues Develop studies on inventive agricultural techniques and practices Plan and direct educational programs in agricultural, and food sector Implements a variety of teaching techniques or designs, such as work simulation, group discussions, and video-lectures Contributes to the development of European and national policy in the field of agriculture
Green abilities (knowledge & skills)	Promotes sustainable use of natural resources Encourages green management plans Implement programs for reduction of agricultural environmental footprint
Digital abilities (knowledge & skills)	Implements in every day practice computer based training soft wares and presentation software Use course management system software and video conferencing Promotes contemporary learning management system (LMS)

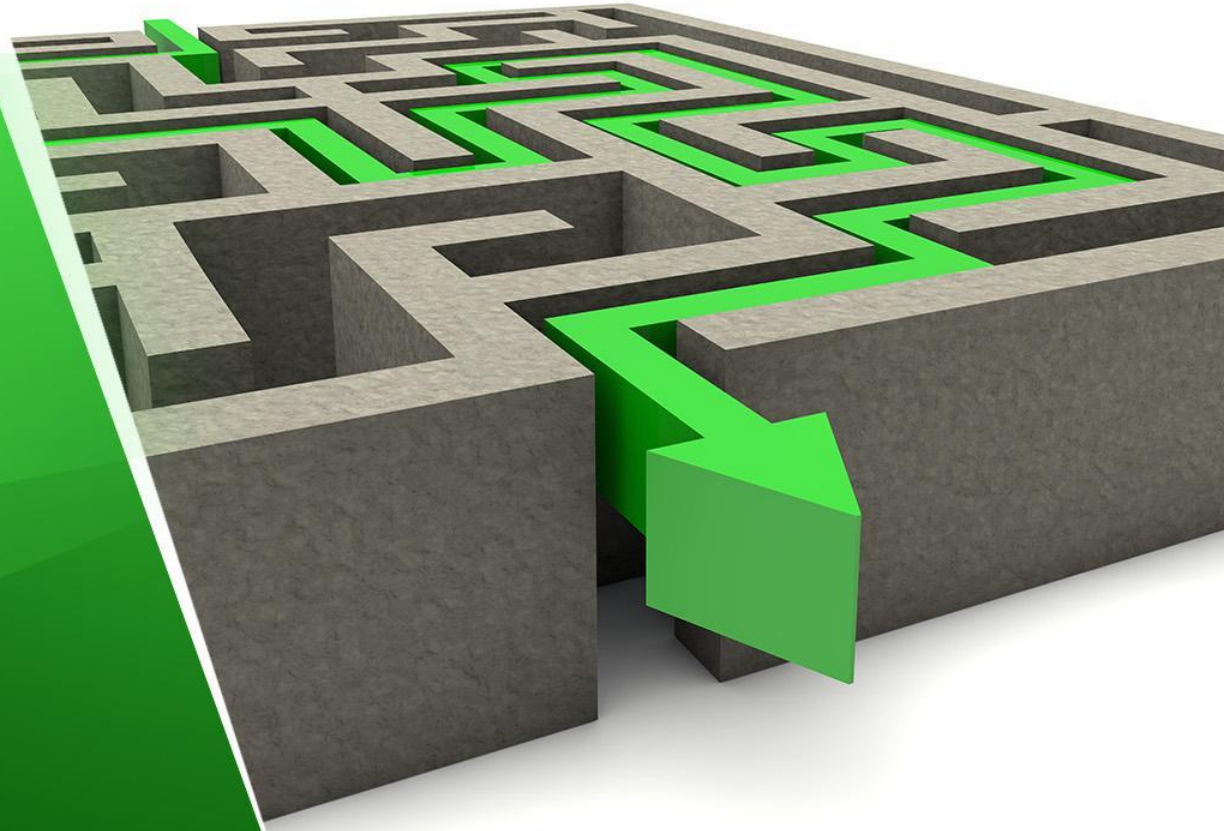
Autonomy and responsibility

- ✔ Analyze, synthetize, formulate hypothesis
- ✔ Predict, design investigation, evaluate,
- ✔ Draw conclusions, generalize, justify
- ✔ Making an argument from evidence
- ✔ Answering research questions and investigating patterns
- ✔ Explain phenomena scientifically
- ✔ Evaluate and design scientific enquiry
- ✔ Creativity and initiative to develop new ideas
- ✔ Strong written and verbal communication skills
- ✔ Seeking to foster fruitful collaborations

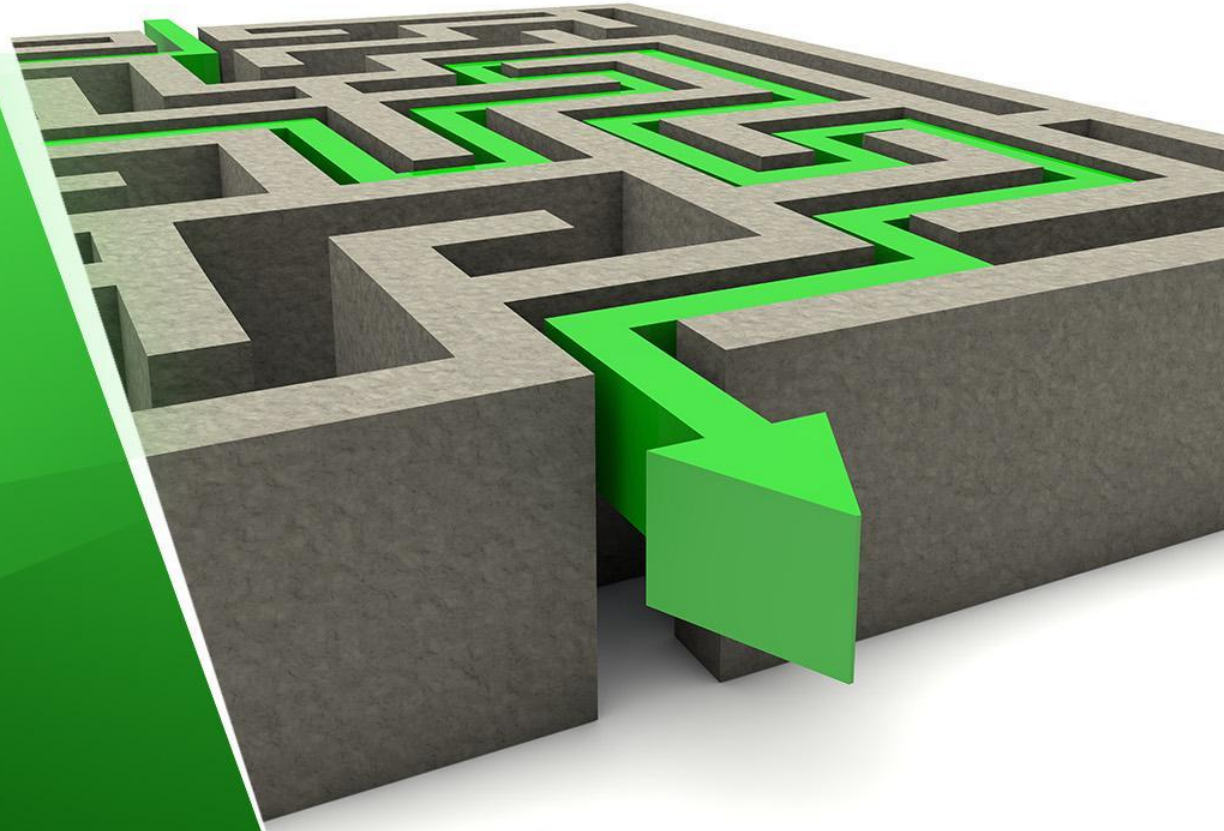
BIO-Save
Competence Catalogue
Part III

Competence records

Agricultural Science



Knowledge & skills gained through BIO-Save learning resources



Agricultural Science

Use of new technologies and practices for climate change adaptation in agriculture

Upon completion of this course the graduate will be able to:

- Recognize the main advantages & disadvantages of soil and water management
- Understand how the certain Technology Contributes to Climate Change Adaptation
- Distinguish the main Opportunities & Barriers to Implementation
- Realize the Necessity their efficient implementation
- Comprehend the main Knowledge and Organisation Requirements

Use of energy efficient farming

Upon completion of this course the graduate will be able to:

- To provide comprehensive information about the energy efficiency and energy conservation in farming and reveal its energy saving potentials;
- To discuss energy savings approaches in farming production and food processing industry;
- To present the main energy savings targets in farming and the approaches for their efficient operation;
- To support the educational concept and content with ppts, videos, and project work materials.

Reduced use of synthetic fertilizer

Upon completion of this course the graduate will be able to:

- To provide background information on the adverse effects of fertilizer production and use including variability of GHG emissions;
- To review the attempts on the synthesis and modes of action of control released fertilizers (CRFs);
- To present the important roles and applications of biofertilizers in different sectors including agriculture, bioremediation, and ecology;
- To highlight the nano-particle materials (NPs) application and point out the vital gaps in the use of nanotechnology for sustainable agriculture.
- To support the educational concept and content with ppt, videos, and project work materials.

BIO-Save
Individual profile

Create your Future here

Individual profile

- ✔ *Skills in ……..*
  ……..
  (BIO-Save Horizon)
- ✔ *Competence in ……*
  ……..
  (BIO-Save Horizon)
- ✔ *Experience in ……*
  ……..
  (BIO-Save Horizon)

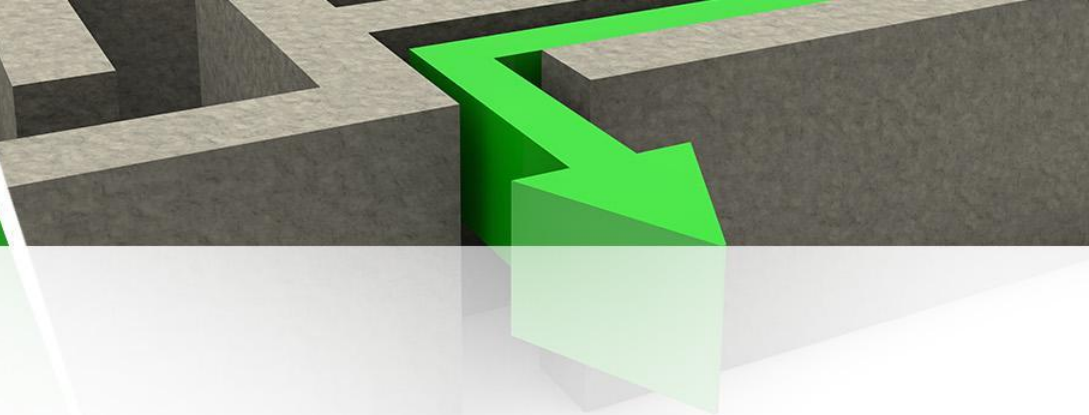
- ***Indicate***

the skills and competences you have reached in the current training

- ***Present***

the Credit Points gained

Individual profile



Individual profile :

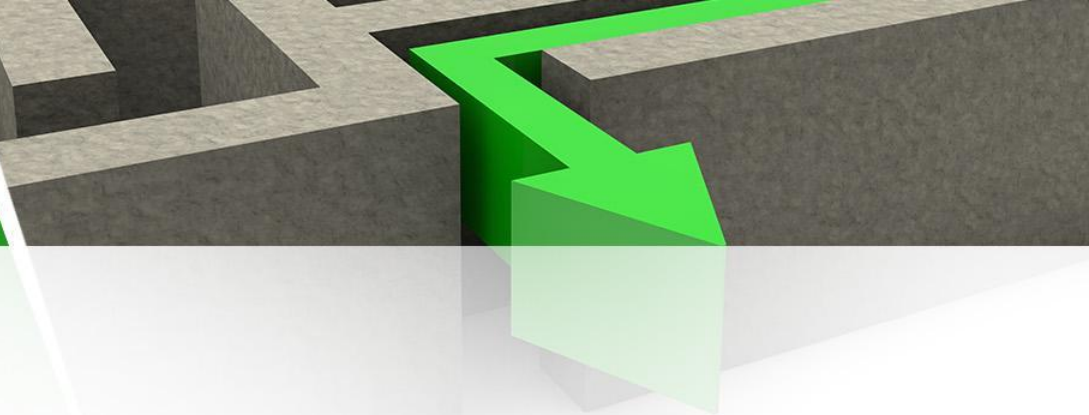
✔ *Experience in……..……..*

……..

(BIO-Save Horizon)

- *Provide any documents and evidence of experience in BIO-Save Horizon*
- *Provide a chronological list of any paid, volunteer, fieldwork, etc*

Individual profile



Individual profile :

- ✔ *Competence profile certificate (CPC)*
  (BIO-Save Horizon)

  Present the CPC you have been awarded on the basis of the individual profile(s) you have obtained upon completion of BIO-Save training programme

Digital Competence

- ✔ *Use the grid to asses your digital competence*
- ✔ *Describe your digital knowledge, skills and competence*
- ✔ *Provide Certificates that you have*

DIGCOMP self-assessment grid

https://www.reactivatejob.eu/multimedia/uploads/documents/DigitalCompetences-en.pdf

Language Competence

- ✔ *Use the grid to asses your linguistic competence*

Common European Framework of Reference for Languages – Self-assessment grid

https://www.cedefop.europa.eu/files/europass_-_european_language_levels_-_self_assessment_grid.pdf

- ✔ *Describe your language knowledge, skills and competence*
- ✔ *Provide Certificates that you have*

Individual profile

Other certificates:

- ✔ *Conferences*
- ✔ *Seminars*
- ✔ *Courses*

Provide: Honors or awards you received

Individual profile

Professional goals statement:

✔ *Describe your ideas for the tasks and mission realization and achievement of your goals*

……

……

……

(*max. one page or 500 words*)