

**STRATEGIES AND FUTURE PLANS
OF WBC EDUECO PARTNER ORGANIZATIONS
REGARDING ORGANIC FARMING**

based on the institutional and personal development plans of partner institutions

Version August, 2014

EDUCATION OF TEACHERS IN THE FIELD OF ECOLOGICAL FOOD PRODUCTION AND MANAGEMENT

The project EDUECO (Education of Teachers in the Field of Ecological Food Production and Management, TEMPUS Project No 516964) aims at building up educational capacities in educational institutions in Serbia, Bosnia Herzegovina and Montenegro to support sustainable economic development of food production based on ecological principles. The idea of EDUECO project is developed to meet the expected increase of consumer demands on food produced on ecological principles through improved teaching and knowledge transfer, knowledge development and networking.

The project addresses the 'Europe 2020' program priorities, particularly the 'Smart growth' (develop educational systems), 'Sustainable growth' (ecological food production) and 'Inclusive growth' (develop strong connection between job market demands and education).

This document presents institutional development strategies directed towards knowledge system development in ecological food production and organic farming in particular.

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EDUCATION OF TEACHERS IN THE FIELD OF ECOLOGICAL FOOD PRODUCTION AND MANAGEMENT

I. UNIVERSITY STRATEGIC DEVELOPMENT PLAN REGARDING ORGANIC FARMING

A. Strategy of the universities regarding role in national and international knowledge development and knowledge transfer in organic farming

Visoka Poljoprivredna Škola Strukovnih Studija Šabac, Šabac (RS)

Regardless of the good environmental conditions for the development of organic agriculture that exist in the Republic of Serbia, the limiting factor is the lack of knowledge of how to move on from conventional to organic production methods. VPSS from Sabac wants to give its contribution to the national rural development policy **offering training to young people in organic agriculture** providing future and conditions for survival of the villages.

University of Sarajevo, Sarajevo (BA)

University of Sarajevo, Faculty of Agriculture and Food Science during this year was a leader in writing the Agricultural Strategy for Federation of Bosnia and Herzegovina. Organic farming is one of the main goals.

Our EDUECO group (Mirha Đikić, Drena Gadžo, Pakeza Drkenda and Senada Čengić-Džomba) participated in it. Drena Gadžo was a leader for the group of Crop production where she emphasis organic agriculture and especially education and role of our university and faculty.

Besides that, during this year Faculty of Agriculture made the Operative program for plant genetic resources for Federation of BH where organic production plays a significant role. Mirha Đikić, Drena Gadžo and Pakeza Drkenda participated in that as the leaders of three groups (cereals, industrial plants and fruit).

Introduction of Master study of Organic agriculture is our goal and in the next period we will make a significant contribution in achieving it.

Preparation of Operational guidelines of agricultural extension services in Federation of Bosnia and Herzegovina (one part is oriented to special extension services in organic farming) will be another contribution in the field.

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B. Involvement in development of national policy and action plans**Visoka Poljoprivredna Škola Strukovnih Studija Šabac, Šabac (RS)**

Together with other partners from Serbia in the EDUECO project we will offer **accredited course for the professors in middle agricultural schools.**

University of Sarajevo, Sarajevo (BA)

These days the Law of organic agriculture for Federation of B&H is actual. We hope that during this year we will have a Law of organic agriculture and after that **Action plan** will be done.

Till now Faculty of Agriculture and Food Science was included in five domestic and six **international projects** closely regarding organic agriculture. Some of them are in progress:

- Advancing training and teaching on organic agriculture in South-East Europe: Development of B.Sc. and M.A teaching curriculum and teaching material for Universities in Bulgaria, Albania, Kosova, BiH, 2012-2014, Implemented by FIBL, Swiss and Faculty of Agriculture and FoodSciences, University of Sarajevo, BiH
- Lifelong learning for sustainable agriculture in Alps- Danube- Adriatic Region, 544595-TEMPUS-1-2013-1-HR-TEMPUS-JPHES, 2013-2016.
- Environment friendly, New and Organic approach to Agriculture in the cross border region of Serbia and Bosnia and Herzegovina – ENO Agri, European Union 2014-2015.

Establishing of a Centre for Research and Development in Agriculture as the organizational unit of the Faculty (including action plan for organic farming).

II. STRATEGIC PLAN NON-UNIVERSITY PARTNER ORGANIZATIONS REGARDING ORGANIC FARMING

A. Present courses offered and supporting activities in knowledge transfer

Zelena mreza Vojvodine/Green Network of Vojvodine, Novi Sad (RS)

For over a decade, **Green Network of Vojvodina** has been working in the field of non-formal education, primarily with farmers, as well as anyone who was interested in starting their own organic agricultural production. The differences and needs of the learners have influenced the development of two models of informal education within the scope of Green Network's activities.

"From education to market" model:

This model educates the learners on the topic of organic production via lectures, workshops and field work. Its goal is to increase expert knowledge, strengthen the ethical standards and improve skills of the learners. The intention is to continually track the learner's work, allowing for a faster development of their own organic production as well as better product placement. During the lectures, the emphasis is on the ecological principles of multifunctional organic agricultural production. The education includes general knowledge from ecology and agronomy, as well as the economic aspects of production and placement of organic products. The comprehensiveness of the model enables the producer to find the way to the consumer, after finishing their education and starting their own production, and become recognizable on the market.

This model is made of two modules:

1. **Modul I – Basic Education – Basics of organic farming:** This module helps the learner adopt the knowledge of agro-ecology and bio-agro-technology, with complete understanding of ecological principles, as a system of control in organic farming, the result of which is healthy, safe food of high quality. This program provides knowledge on control and certification of organic farming (based on the existing Laws and Regulations). Basic Education can be attended by anyone interested in organic production; learners can be those that have no clear attitude on what they want to produce or even those that have no knowledge of organic farming. Learners can be farmers with various previous education backgrounds.

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2. **Modul II – Education Plus – Specifics of organic farming:** Education Plus builds on the knowledge from Basic Education. It is a set of specific and various areas of organic and multifunctional farming (vegetable growing, arable farming, fruit growing, cattle raising, etc.) in connection with the preservation of biodiversity, genetic and agro-genetic resources, traditional and autochthonous species, sorts and breeds, along with the preservation of soil fertility and characteristic phyto-communities by way of agronomic, horticultural and ecological arrangement of an agricultural landscape (in the function of bio-tourism). Education Plus is attended by those who have passed the *Basics of organic farming* module or those that possess the knowledge of organic farming basics and have a clear attitude and desire to enhance their knowledge of a certain type of organic farming.

“Branka’s school of organic farming” education model

“Branka’s school of organic farming” entails ecological, agronomical and bioethical principles of organic farming with the emphasis on bio-gardening: bio-gardens and greenhouse production. It is a type of direct learning with a small group of learners, mostly those that possess some arable land in or around the city. The module includes lectures, practical work, drawing and setting up learner’s own production, as well as field work at better known organic farmers. It is very important that ecological awareness and knowledge of organic farming is passed on to the learners in direct dialogue with the experts.

Agricultural-Veterinary School with boarding school Svilajnac, Svilajnac (RS)

In regular education through school electoral subjects:

- Organic production in farming
- Organic production in vegetable growing
- Organic production in fruit and grape growing
- Organic production in cattle breeding.

Visoka Poljoprivredna Škola Strukovnih Studija Šabac, Šabac (RS)

In Higher Agricultural school of Vocational studies (VPSSS) in addition to subject that are directly related to organic production, in several subject on the basic and specialist studies through the lessons students will learn about organic agriculture.

Seven professors from VPSSS, involved in EDUECO project, participate in writing booklets about teaching methodology in organic agriculture according to their field of expertise.

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Kalesija Poljoprivredno - veterinarska skola, Kalesija (BA)

Presentation and Establishing of activities of a Centre for knowledge transfer, creation of network of Agricultural schools Tuzla canton, Posavina canton and Brčko district BiH.

JU Srednja škola poljoprivrede, prehrane, veterine i uslužnih djelatnosti Sarajevo, Sarajevo (BA)

So far our professors mentioned organic production through other courses because the individual teacher in his lecture can include 30% new material that is not in the curriculum.

Some pupils are doing their graduation papers on this topic.

Some pupils during the project (this year) together with teacher from University of Sarajevo doing their graduate papers in Faculty experimental field.

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B. Future plans

Visoka Poljoprivredna Škola Strukovnih Studija Šabac, Šabac (RS)

In the future we plan **to offer courses in organic production** for the farmers, together with partners on the project. Before joining the EDUECO project VPSS did not have any organic farming related module, after which we have accredited a vocational module "*Environmental protection*", within which, in school year of 2014/2015. We shall include two mandatory subjects: *Organic farming of fruits and vegetables* and *Organic cattle breeding*.

In near future we will adjust our curriculum so that 30 percent of it is related to organic agriculture by introducing 5 subjects on specialized vocational study programs: *Vegetable production in the open field, Production of crops, Quality management of agricultural products, New technologies in animal husbandry and aqua economy, Quality management of agricultural products*; as well as 2 subjects on vocational study programs: *Specific phyto pharmaceuticals* and *Specific pomology*.

In future we expect **to act as an institution that will have an advisory role and provide consulting services regarding organic farming**. To achieve this we require further training of professional staff of VPSS in the field of organic farming, exchange of experiences with other EU countries which have a longer tradition in the field of education for organic farming.

Agricultural-Veterinary School with boarding school Svilajnac, Svilajnac (RS)

- Complement to existing modules with the accent on integral approach to organic production;
- Complement to the existing subject of entrepreneurship as well as the existing electoral subjects with chapters about agribusiness in organic production;
- Introduction of chapters about organic food processing in food processing technician profile;
- The use of EDUECO network for the exchange of materials and introducing the later into education process;
- The development of the course for interested producers within LLL program.

Zelena mreza Vojvodine/Green Network of Vojvodine, Novi Sad (RS)

GNV is planning to offer via web sites (www.zelenamreza.org & www.edueco.rs) GNV modules for farmers



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Kalesija Poljoprivredno - veterinarska skola, Kalesija (BA)

Together with start of courses by UT Centre for transfer of knowledge we will start contacts with schools and common activity continuation of development of EDUECO modules.

JU Srednja škola poljoprivrede, prehrane, veterine i uslužnih djelatnosti Sarajevo, Sarajevo (BA)

Four new modules have received official confirmation from Canton Sarajevo and from this academic year 2014/2015 these are in the curriculum on the basis of experience gained through this project to develop new plans and programs for formal and informal learning in the field of organic production.



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III. UNIVERSITY TEACHERS EVALUATION AND DEVELOPMENT PLANS OVERVIEW

A. Bosnia and Herzegovina

1	Role in development and offering of education in organic farming (formal, non-formal and informal education)	Formal education is on the first place, other also - non formal and informal education
2	Aspects studied and encountered with regarding the subject field during the EDUECO project	<ul style="list-style-type: none"> - Integrated approach in organic farming - Interaction between research and organic farming - making connection between research and practice in organic farming - Connection between organic agriculture with climate change, biodiversity - Applying of new teaching methodologies in education (in field organic farming) - Environmental philosophy is important part of organic farming - The way of Weed management in organic field crop production - Agricultural measures in organic field crop production (tillage, crop rotation, manure) - Adjustment of Cultivation Technology in organic farming (pest and diseases resistant cultivars, special soil cultivation-sandwich system, development of marketing strategy, discussion with other farmers, life- long learning) - The way production of organic seed - Animal behavior and welfare

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<p align="center">3</p>	<p>Aspects studied and encountered with in the methodology of education during the EDUECO project (include aspects of student oriented learning approach, competence based learning, use of integrated approach). Include examples</p>	<p>New approach to methodology of education:</p> <ul style="list-style-type: none"> - Student oriented learning approach: development of different modules of organic farming based on the needs of secondary schools teachers-interactive approach - Competence based learning: the University teacher from EU developed special teaching training courses for University staff from Bosnia etc. to developed us competence; the University staff from Bosnia developed teaching training courses for secondary schools teacher to develop their competences, the secondary school teachers develop the modules in organic farming based on competence develop of their students - Integrated approach was involved in whole training courses but also in development of modules for secondary school as well as in writing a book for university students
<p align="center">4</p>	<p>Personal action plan for further study in the subject field and/or teaching methodology in relation to organic farming</p>	<ul style="list-style-type: none"> -Applying of new teachings methodology in education (in field organic farming): students oriented approach, competence oriented approach as well as integrated approach; -Interactive learning with research activities; development of different modules of Field crop production in organic farming based on student competences (for formal-students, non-formal-teacher in basic or secondary schools, farmers as well as advisory service and informal education-consumers, hobby farmers etc.) in organic farming.

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B. Serbia

1	Role in development and offering of education in organic farming (formal, non-formal and informal education)	To develop courses in organic production and offer formal education to future students in organic production. Participation in the teacher training courses and vocational modules development.
2	Aspects studied and encountered with regarding the subject field during the EDUECO project	Aspects studied and encountered with regarding the subject field during the EDUECO project are good approach in methodology of teaching in the countries of EU partners in project.
3	Aspects studied and encountered with in the methodology of education during the EDUECO project (include aspects of student oriented learning approach, competence based learning, use of integrated approach). Include examples	Based on experience from abroad during the project, especially student oriented learning approach, the methodology of education with using more integrated approach will be improved.
4	Personal action plan for further study in the subject field and/or teaching methodology in relation to organic farming	The research and writing of scientific papers related to organic production. In teaching: encourage students to work independently during exercises in organic vegetable production and teach them how to use the obtained experimental results for further research work.

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