PROVIDING TRAINING TO UNEMPLOYED OR OTHERWISE DISADVANTAGED RURAL YOUTH IN WESTERN ROMANIA

CRISTINA DENISA BABCSANYI[1], GEORGETA RATA[2], IASMINA IOSIM*[1], DANIELA DRAGHICESCU[3]

[1]***Banat University of Agricultural Sciences and Veterinary Medicine, "King Michael I of Romania", Faculty of Management and Rural Tourism, Timisoara, Romania***

[2]***CPIP Timisoara***

[3]***Politehnica University Timisoara***

*Corresponding author's e-mail: iasminaiosim@yahoo.com

Abstract: *The high rate of school dropout (high schools, vocational schools), the increasing number of people at risk of poverty or social exclusion, and the low participation rate of rural residents to training programmes in agricultural activities are among the most relevant specific agricultural issues at Romanian level. Though unemployment in Romania in the population aged 15-29 is rather low (4.96%), Romania needs to help young unemployed or otherwise disadvantaged adults in rural areas find employment or develop their own businesses in agriculture-related fields. One way to do so is to train rural youth in agriculture-related fields suitable for their area. A study was conducted to identify the most suitable agriculture-related topics to teach to young unemployed or otherwise disadvantaged adults in Western Banat, Romania. Both the quantitative research (online survey) involving employers in agriculture and educators from prisons and the qualitative research (in-depth interview) involving academics from the BUASVM from Timisoara, Romania, identified the same topics – Apiculture, Horticulture and Organic agriculture – but ranging them differently for different reasons. The study shows the importance of proper analysis of data before deciding the topics to teach and the field in which to train young unemployed or otherwise disadvantaged adults in rural areas.*

Key words*: training, agriculture-related topics, unemployed rural youth, disadvantaged rural youth, Western Romania*

INTRODUCTION

The most relevant specific agricultural issues at Romanian level are bureaucracy, degradation of traditional cultural value settlements and historic monuments, environmental issues, high costs of crediting products, high rate of school dropout (high schools and vocational schools), increasing number of people at risk of poverty / social exclusion (particularly among Roma), land fragmentation, limited connection to broadband Internet and AGU, low access to financial resources for small entrepreneurs and new business initiatives, low level of ICTs knowledge, low level of income per household, low level of instruction, low level of labour productivity, low participation rate of rural residents to training programmes in non-agricultural activities, negative demographic trend (ageing population), poor ability of LAGs to reach the objectives of local development strategies, poor access to water supply and sewage systems, poor basic infrastructure (including in the mountain area), poor basic rural services (including in the mountain area), poor development of non-agricultural activities and jobs (hence subsistence agriculture), poor entrepreneurial culture (lack of basic management knowledge and skills), poor rural tourism services, poor tourism infrastructure, regional disparities, rural development, and unbalance between agricultural imports and exports [8].

Romania has an area of 238.397 km², a population of 19,530,631 people (2018) [10], and a percentage of population aged 15-29 of 10.6% (2018) [7]. In 2017, in Romania, there were [5]: 15,027,000 persons aged 15-74; 9,120,000 economically active persons;

5,907,000 economically inactive persons; 8,671,000 employed persons; 6,390,000 employees; 1,573 self-employed persons; 708,000 family workers; and 449,000 unemployed persons (2.98%). According to the EU Labour Force Survey, unemployment in Romania in 2018 was low (2.5%) compared to overall unemployment in the EU (8.6%) across all age groups, as well as unemployment in the population aged 15-29 (4.96%) [14]. Romania has an agricultural land area of 14,800,000 ha, a total number of agricultural holdings of 3,422,000), a total output value of these agricultural holdings of 128,000,000 Eur), and a total value added of agriculture to Romania Gross Domestic Product of 4.06% in 2016 [Agricultural holdings]. As for employment and entrepreneurship in agriculture in Romania, there were 158,380 (2013) persons aged < 35 leading an agricultural holding [3]; the age group of the majority of holders (and directors) of agricultural holdings (40.97%) were persons aged 65+ [3]; the total number of labourers reported to be active in agricultural holdings is 1,587,650 [4]; the number of persons employed in permanent (non-seasonal) jobs in agriculture is 6,577,930 [13]; and the number of employees aged 15-34 is 171,960 [3]. As far as training and education opportunities in agriculture in Romania are concerned, young persons can take different pathways to obtain skills and enter employment in agriculture after completing primary school and gymnasium: there are 177 degree programs offered at universities and universities of applied sciences (2019); there were 27,698 persons enrolled in agriculture-related degree programs in universities and universities of applied sciences training in ISCED-F Codes 0800 (Agriculture, silviculture, pisciculture and other disciplines than the ones mentioned under 0811-0888), 0811 (Crop production, Livestock production), 0812 (Horticulture), 0821 (Silviculture), 0831 (Pisciculture), 0841 (Veterinary medicine), 0888 (Interdisciplinary programmes and qualifications where students dedicate most of their study time to *agriculture, silviculture, pisciculture and veterinary sciences*) (2016); there were 56 agricultural high-schools with 12 specialisations in agriculture (educational institutions with agriculture-related study programmes or apprenticeships) (2010); 21.3% of persons employed in all enterprises were persons enrolled in apprenticeships in agricultural fields (2015), while "[...] the agricultural sector is characterized by the highest share of the companies that cannot identify the benefits of apprenticeship (23%)." [1]. One percent of males and 0.9% of females aged 25-64 stated having received (non-)formal education and training in the four weeks preceding the Survey [15].

In this context, the Project "Innovative Skills Transfer for the Development of Agricultural Entrepreneurs" (AgriSkills), Project Nº: 2018-1-DE02-KA204-005173, aims at developing and/or improving the level of key competencies and skills among young unemployed or otherwise disadvantaged adults aged 15-29 in rural areas and in areas with high concentrations of young, unemployed adults, with the purpose of helping them find employment or develop their own businesses in agriculture-related fields. Identifying the training needs of unemployed persons aged 15-29 willing to find employment and/or to establish his/her own business in agriculture focused on identifying the agricultural topics considered the most relevant in their area for providing training, as well as on identifying the most important entrepreneurial, social and ICT skills to be developed. This study focuses on the identification of three agricultural topics considered the most relevant for providing training to unemployed or otherwise disadvantaged persons aged 15-29 in Western Romania rural areas.

MATERIALS AND METHODS

Since the goal was to look at both breadth (causality) and width (meaning), a *mixed method design* [12] was used combining both *quantitative* (a *questionnaire*) and *qualitative* (an *in-depth interview*) methods with equal status. This choice was determined by what the

researchers wanted to find out (Question 3, *Which three agricultural topics do you think are the most relevant in your area for providing training to unemployed or otherwise disadvantaged persons aged 15-29 in rural areas?*).

In order to identify the training needs of unemployed persons aged 15-29 willing to find employment or to establish his/her own business in agriculture, an *online survey* [12] was conducted (*quantitative research*). A list of potential respondents was collected from employers in agriculture and/or agriculture-related fields and educators (mainly from prisons) from Timis County, Romania. An initial email was sent to these stakeholders to explain the goals of the project and to request participation. Upon reception of consent, another email was sent to 25 selected respondents (a sample considered representative) with a link to the online survey (a self-administered questionnaire containing 10 questions). Only responses to Question 3 are discussed in this study.

In order to validate the responses to the quantitative research, an *in-depth interview* (*focus group*) [12] was organized involving 15 participants (a sample considered representative) from the academic environment (teachers from the Faculty of Agriculture and from the Faculty of Management and Rural Tourism of the Banat University of Agricultural Science and Veterinary Medicine "King Michael I of Romania" from Timișoara, Romania) (BUASVMT) (*qualitative research*). An initial email was sent to them to explain the goals and methods of the AgriSkills Project and to request participation. Upon reception of a positive response, another email was sent to them inviting them to take part in the in-depth interview. They were presented with Question 3 and the hierarchy established by the respondents to the online stakeholder survey. In-depth interview participants were asked to validate or invalidate this hierarchy while providing scientific (specialty) arguments.

RESEARCH RESULTS

Quantitative research (online survey) and *qualitative research* (in-depth interview) produced two sets of responses.

3.1. Results of quantitative research. One of the main goals of this project output was determining the most important agricultural fields in each partner country on which to focus training materials. Towards this goal, respondents were asked to choose the three most important agricultural areas in their country from a list of seven areas identified by the project partners. Responses to Question 3 are synthesised in Table 1 and Figure 1 below.

Table 1.

Online survey respondents' views on the most relevant agricultural areas for new labour and business entrants in Timiș County, Romania

Relevant agricultural areas	n (N = 25)	Percentage
Apiculture	**18**	**72.0**
Horticulture	**16**	**64.0**
Organic Agriculture	**15**	**60.0**
Agritourism	12	48.0
Social Farming	6	24.0
Fish Farming	5	20.0
Solidarity Agriculture	3	12.0

3.2. Results of qualitative research. Seventeen academics responded to our call, but we retained only the responses of the first fifteen teachers of agriculture-related disciplines (noted from R1 to R15). R1 believes that there is no Apiculture without Agriculture, that

Horticulture is rightfully among the three most relevant agricultural topics in our area, and that Organic Agriculture is not superior to industrial agriculture. He also suggests that Agritourism and Fish Farming should be taken into account, and that Agritourism and Organic Agriculture could go hand in hand. R2 agrees with the hierarchy Apiculture, Horticulture, Organic Agriculture because they can be successfully practiced in our area. R3 does not agree with the hierarchy Apiculture, Horticulture, Organic Agriculture. She believes Agriculture should rank first, followed by Horticulture and Apiculture. R4 suggests the hierarchy Organic Agriculture (because it is profitable), Horticulture (because it is profitable due to financing lines, subsidies and high added value), Apiculture (because it is profitable and because of the European funding in the field). R5 agrees with the hierarchy Apiculture, Horticulture, Organic Agriculture because the first two topics are traditional in Romania and the last one is trendy (and profitable). R6 agrees with the hierarchy Apiculture, Horticulture,

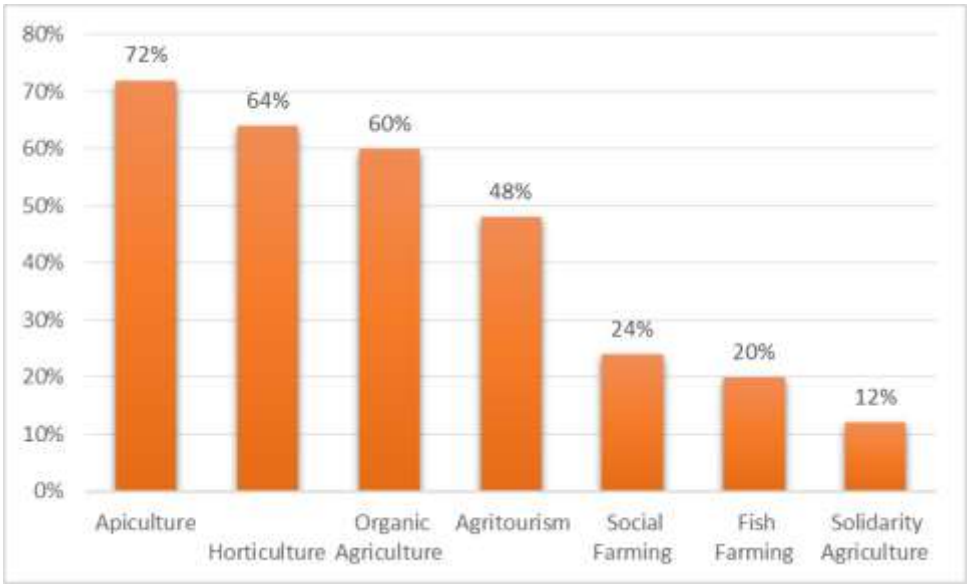

Figure 1. Online survey respondents' views on the most relevant agricultural areas for new labour and business entrants in Timiș County, Romania

Organic Agriculture because they can help young persons living in the rural area make a good living (their products are in high demand). R7 disagrees with the hierarchy Apiculture, Horticulture, Organic Agriculture: Apiculture asks for solid knowledge and skills, while Organic Agriculture is for developed, well-educated markets. Only Horticulture is well-placed here. As for Agritourism, it still needs a proper legislative framework. R8 agrees with Apiculture and Horticulture ranking first and second (because their products sell well and, thus, they can motivate the young unemployed or otherwise disadvantaged persons). As for Organic Agriculture, producing bio products needs time, which might discourage rural youth. R9 agrees with the hierarchy Apiculture, Horticulture, Organic Agriculture because: Apiculture knowledge and skills ca be acquired through short courses and its practice is supported by subsidies; Horticulture offers a wide range of opportunities and one can get funding to practice it; Organic Agriculture has a huge potential in Romania. The practice of Agritourism is limited by infrastructure, by legislation and by the lack of education in the field. For R10, the hierarchy should be Horticulture (it is profitable since it produces at the end of each production cycle), Agritourism (that could be practiced in disadvantaged areas), and Conventional agriculture (because it fits the soil and climate conditions in our area). As for Apiculture, it is risky because of adverse climate conditions in the last years. R11 believes Apiculture ranking

first is subjective: it needs less investments than Horticulture. Horticulture is rightfully placed since it involves high production costs. As for Organic Agriculture, it ranked third because it produces less than conventional agriculture. R12 agrees with the hierarchy Apiculture, Horticulture, Organic Agriculture because they can be successfully practiced in our area. R13 agrees with the hierarchy Apiculture, Horticulture, Organic Agriculture, but believes that Agritourism is over-rated. R14 agrees with the hierarchy Apiculture, Horticulture, Organic Agriculture because they produce bio products for the benefit of people's health. R15 does not agree with the hierarchy Apiculture, Horticulture, Organic Agriculture (because of the soil and climate conditions in our area) and suggests the order Organic Agriculture, Agritourism and Horticulture. Responses to the question advanced during the in-depth interview (*Which three agricultural topics do you think are the most relevant in your area for providing training to unemployed or otherwise disadvantaged persons aged 15-29 in rural areas?*) are synthesised in Table 2 and Figure 2 below.

4.1. Discussion of quantitative research results. Our respondents have chosen **Apiculture** (72%), **Horticulture** (64%) and **Organic Agriculture** (60%) as *the three most relevant agricultural topics in our area for providing training to unemployed or otherwise disadvantaged persons aged 15-29 in rural areas*. Their choices could be explained as follows:

Table 2.

In-depth interview participants' views on the most relevant agricultural areas for new labour and business entrants in Timiș County, Romania

Relevant agricultural areas	n (N = 15)	Percentage
Horticulture	**15**	**100**
Organic Agriculture	**11**	**73.3**
Apiculture	**10**	**66.6**
Agritourism	2	13.3
Fish Farming	1	6.6
Social Farming	0	0
Solidarity Agriculture	0	0

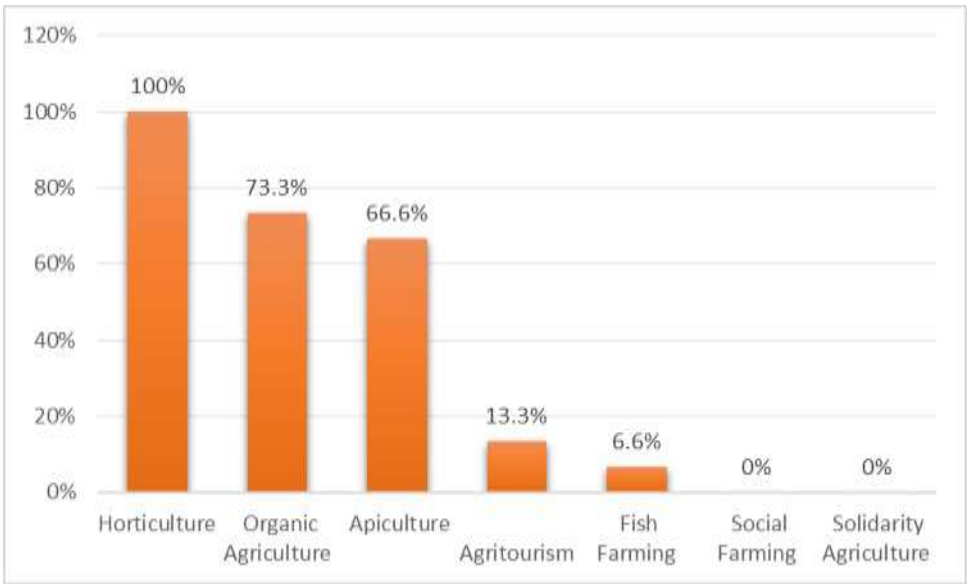

Figure 2. In-depth interview participants' views on the most relevant agricultural areas for new labour and business entrants in Timiș County, Romania

- **Apiculture (72%) is a high-income, trendy (consumers are increasingly aware of the benefits of using honey and other beehive products), traditional agricultural practice (the Dacians, Romanians' ancestors, practiced it more than 2,000 years ago) that can benefit from the relief and climate conditions of our rural area (plains and hills in a temperate-continental climate with Mediterranean influences) where they grow cereals, vegetables and fruit-trees.** In 2017, Romania ranked first in the European Union for honey production, benefiting of 10% of the EU allocated funds, according to the centralized data at European level. According to [8], beekeeping is a priority sector. There is also a National Beekeeping Programme for the 2017-2019 period [2] providing assistance measures for increasing the number of bees on the national territory, assistance measures for laboratories analysing the physical and chemical characteristics of honey, beehive purchasing, prophylactic activities and activities for combating the varroosis, technical assistance services for bee-keepers and beekeepers' groups, and transhumance rationalization.

- **Horticulture (64%) is a second high-income, trendy (consumers are increasingly aware of the benefits of eating fruits and vegetables on a daily basis) agricultural practice that can benefit from the relief and climate conditions of our rural area (plains and hills in a temperate-continental climate with Mediterranean influences)**: vegetable crop production increased from **172,600 ha (2010)** to 176,780 ha (2011) and 172,970 ha (2012), and then decreased to 168,430 ha (2013), 152,150 ha (2014), 153,130 ha (2015), 144,230 ha (2016), 141,810 ha (2017) and **140,590 ha (2019).** According to [8], horticulture also is a priority sector.

- **Organic Agriculture (60%) is a third high-income, trendy (consumers are increasingly aware of the importance of eating organic foods) agricultural practice that can benefit from the relief and climate conditions of our rural area (plains and hills in a temperate-continental climate with Mediterranean influences) where they grow both plants and animals in organic environments** [9]: unfortunately, the number of organic operators (agricultural producers) constantly decreased from **15,280 (2012)**, to 14,553 (2013), 14,151 (2014), 11,812 (2015), 10,083 (2016) and **7,908 (2017)** [6]. **Organic Agriculture** is a key measure which will directly target the protection, conservation and responsible use of biodiversity, soil and water via the maintenance of traditional extensive farming practices, greatly reduced use of agrochemical inputs and introduction / maintenance of organic farm management practices [8]. Conversion to and / or maintenance of **Organic Agriculture** benefits from compensatory payments in Romania.

- **Agritourism** (48%) ranks only fourth because persons living in the rural area are not fully aware of the benefits of practicing this type of tourism yet.

- **Social Farming** (24%) is still in its infancy – there is a very small number of social farms in our county (Timiș County) – and farmers have no knowledge about this type of farming or about its benefits.

- **Fish Farming** (20%) could be an option if rural young persons had money to buy lakes and breed carp, for instance: aquaculture production had its ups and downs – 12,496 t live weight (2008), **13,131 t live weight (2009)** (highest fish production), 8,781.43 t live weight (2010), **8,353.27 t live weight (2011)** (lowest fish production), 10,004.69 t live weight (2012), 10,146.78 t live weight (2013), 10,676.97 t live weight (2014), 11,015.77 t live weight (2015), and 12,585.48 t live weight (2016) [11].

- **Solidarity Agriculture** (SA) (12%) could be an option when designating "farmer-managed" and "shareholder/subscriber" types of SA, while, when designating "farmer cooperative and "farmer-shareholder cooperative", it would be rejected because Romanian farmers have bad memories of "cooperatives".

Though some of our respondents rated **Social Farming** and **Solidarity Agriculture**, we believe, based on surveys made for other projects, that they do not really know what these concepts mean.

4.2. Discussion of qualitative research results. Analysing the responses of the in-depth interview participants, it is obvious that **Apiculture**, **Horticulture** and **Organic Agriculture** (all accounting for shares higher than 50%) are still the three most relevant agricultural areas for new labour and business entrants in Romania, and that only the order is reversed between the two rankings: **Horticulture**, **Organic Agriculture**, **Apiculture**. The order of the other four topics is the same. To note that **Social Farming** and **Solidarity Agriculture** did not get any vote from in-depth interview participants. The reason why **Apiculture** and **Horticulture** are among *the first three most relevant agricultural topics for providing training to unemployed or otherwise disadvantaged persons aged 15-29 in rural areas* is that they are traditional agricultural occupations. **Organic Agriculture** deserves its place among the top three agriculture-related topics because it is trendy and financially advantageous (low inputs and high outputs, if practiced properly).

4.3. Comparison of quantitative and qualitative research results. The goal of the in-depth interview was to validate the results of the online survey. Table 3 presents the scores of the seven agriculture-related topics (in alphabetical order) in both *online survey* and *in-depth interview*.

Table 3.

Respondents views on the most relevant agricultural areas for new labour and business entrants in Timiș County, Romania (online survey + in-depth interview)

Relevant agricultural areas	Online survey		In-depth interview	
	n (N = 25)	Percentage	n (N = 15)	Percentage
Agritourism	12	48.0	2	13.3
Apiculture	**18**	**72.0**	**10**	**66.6**
Fish Farming	5	20.0	1	6.6
Horticulture	**16**	**64.0**	**15**	**100**
Organic Agriculture	**15**	**60.0**	**11**	**73.3**
Social Farming	6	24.0	0	0
Solidarity Agriculture	3	12.0	0	0

The topics that were designated by the respondents in both online survey and in-depth interview as the *three most relevant agricultural topics for providing training to unemployed or otherwise disadvantaged persons aged 15-29 in rural areas* in Western Romania are **Apiculture**, **Horticulture** and **Organic Agriculture**. The only noticeable difference in ranking is in **Horticulture**, for which voted 64% of respondents to the online survey and all respondents to the in-depth interview (100%). This means that academics are better informed not only on the soil and climate conditions in the research area, but also on business specifics in agriculture-related fields. The shares of **Apiculture** (72% and 66.6%) and **Organic Agriculture** (60% and 73.3%), respectively, are pretty close and, therefore, should not be subjected to discussion. The in-depth interview validated the responses (agriculture-related topics) to the online survey, but not the topic order.

CONCLUSIONS

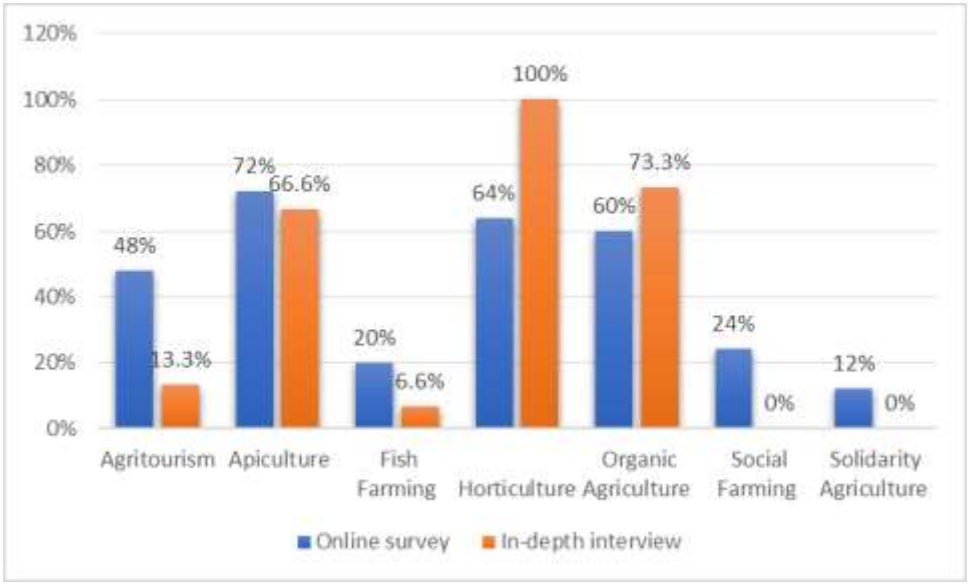

Figure 3. Respondents views on the most relevant agricultural areas for new labour and business entrants in Timiș County, Romania (online survey + in-depth interview)

Apiculture, **Horticulture** and **Organic Agriculture**, no matter the order, should be among *the first three most relevant agricultural topics for providing training to unemployed or otherwise disadvantaged persons aged 15-29 in rural areas* in Western Romania.

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