

EDUCATION AND TRAINING NEEDS IN THE FIELD OF AGRICULTURE AND RURAL DEVELOPMENT IN THE LOWER DANUBE REGION

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Abstract

Given the conditions of European Strategy for Labour which was ratified also by Romania, that states an intensifying implementation at national level of labour policies and especially those regarding young person labour market integration, and taking into consideration the great human and agricultural potential of Lower Danube Region, we consider the implementation of national and regional programmes in order to train agriculture and rural development specialists to be very necessary.

This article inquires the necessity of training agriculture and rural development specialists within Lower Danube Region in the context of cross-border cooperation between Romania and Bulgaria.

This research starts by analysing the European and national legal framework of adult training in those two fields. Subsequently, the main premises and advantages of those activities were emphasized. It is good to mention that the Academy of Economic Studies in Bucharest, Romania, and the D. Tsenov Academy of Economics in Svishtov, Bulgaria, proposed themselves to cooperate in the field of “human resources development – common development of skills and knowledge”. The legal base exists as the Romania-Bulgaria Cross-border Cooperation Programme 2007-2013 is enforced.

Furthermore, a four years comparative study of the number of persons trained for the main jobs in rural area, including farmer, in Lower Danube Region was conducted. All these led to the idea that it is necessary to continue and to stress adult training of farmers and rural specialists as a solution for rural economy development and social welfare.

Also, comparative analysis of supply and demand of professionals in the field of agriculture was elaborated. The main educational programs in training agriculture and rural development specialists were identified and some problems and perspectives were worked out.

This research can be considered as a first step of future deeper and profound collaboration of Tsenov Academy of Economics, Svishtov and the Academy of Economic Studies, Bucharest in terms of creation of common Romanian-Bulgarian Research Area, as a part of European Research Area (ERA). It includes joint knowledge and skills development

through cross-border linkages and exchanges between the universities, in accordance with Romania – Bulgaria Cross-Border Cooperation Programme 2007-2013.

Keywords: rural development, agriculture, training, cross-border cooperation, Lower Danube Region.

JEL Classification: J43, O18, R19.

Romanian Situation*

Adult training represents EU's goal. This is stated in also by member states' national policies and strategies. All these documents pursue increasing the labour force and its much higher flexibility to new economic conditions.

Training agriculture and rural development specialists is needed and EU is aware of its importance. Most of the area of 1000 km of Lower Danube is suitable for agriculture and has high productive potential. Also, there is a majority of rural communes in the area. These are reasons for training specialists that may bring real economic and social benefits.

The research intends to accentuate the necessity of training agriculture and rural; development specialists within Lower Danube Region taking into consideration the difficulty of EU integration of Romania, and the effects of world economic crisis which is multiplied by the effects of the regional economic crises.

The main objective of this research is to establish the importance of professional training of agriculture and rural development specialists for Lower Danube Region's development.

The research starts from the premise that there is an important agriculture and rural development potential within the Romanian part of the Lower Danube Region that must be utmost explored and that needs some swift actions for specialists training. All these would conduct to socio-economic development of the area and to social welfare.

Documentation, analysis, synthesis, comparative study, case studies were used as main research methods and instruments.

1. European and National legal framework for professional training of agriculture and rural development specialists

Adult training is stated at European level by European Strategy for Labour. This document appears as answer to the 70's and 90's economic recession, to unemployment and poses harmonising the labour strategies and superior labour training so that it may become better trained and more flexible to economic changes. Thus "the European Strategy for Labour was thought as main instrument for orienting and coordinating the priorities of the European Union labour policies, which was adopted by all member states. The global goals at European level are: to have 60% rates of occupation and 70% rates of women occupation" (Report – Adult training in the process of technological development of Romanian economy).

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Hence, the necessity of farmers and rural development training represents an important part of European policies and strategies, considering these affirmations and the agriculture and rural activities importance in European economies context.

Plus, the EU Strategy for Danube Region, including here Lower Danube Region, was adopted and Romania ratified it, too. As consequence, we should corroborate the goals and conditions of those two documents and we should adopt a better position for agriculture and rural development specialists training.

Romania ratified the European Strategy for Labour and established own goals in the field of adult training according to EU standards, being aware of the importance of human resources investments that increase labour productivity. “The adult training investment brings advantages both for person and Romanian economy” (Report – Adult training in the process of technological development of Romanian economy).

Around 23 laws are enforce in Romania in order to apply European Strategy, all these directly state the activities in the field of adult training, which we consider OG no 129/2000 regarding adult training and HG no 875/2005 regarding the approval of short and medium term Strategy for continuous professional training for period 2005-2010 to be the most important.

Also, the National Plan for Professional Training is enforce for agriculture, fishing, woods, agrifood and rural development and it is according to current EU rural development objectives and the requests of the training beneficiaries.

In the same time, a interministry commission was constituted for enforcing the stipulations of the European Strategy for Danube Region in order to “define the interest fields and to identify Romania’s proposals for future Strategy’ (Ministry of Rural Development and Tourism). Ministry of Agriculture and Rural Development, that is not part of this commission, must impose its foresights regarding the necessity of implementing several national programmes for agriculture and rural development specialists training in Lower Danube Region.

2. Results and discussions

- *Premises for the necessity of agriculture and rural development specialists training*

After Romania becoming an EU member state at 1st of January 2007, our rural economy has faced new challenges and must align to European standards. It has not the features of the market economy and the rural actors just cross towards market behaviour of the producer-salesman and leave behind producer-consumer behaviour.

But, Romanian agriculture has several own advantages, as follows (Figure no. 1):

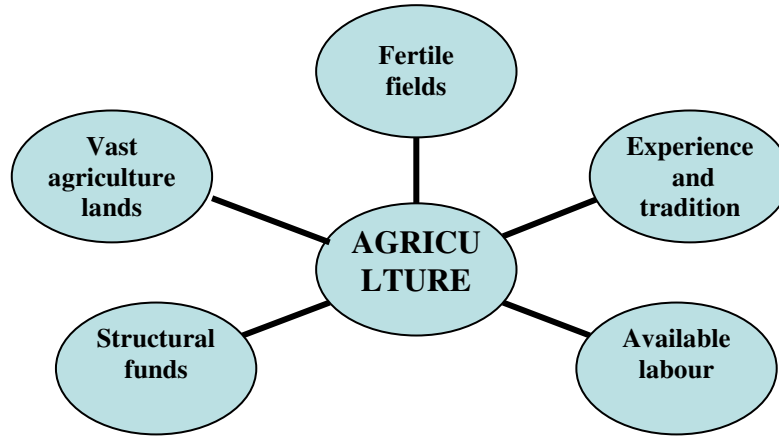


Figure no. 1: Model for Romanian agriculture potential

Romania is number seven on the EU top of agriculture land, after Spain, France, Great Britain, Italy and Poland, and number five on the EU top of arable land, after Spain, France, Germany and Poland (Ionel, 2009), it has 230 million hectares and 22 million inhabitants. Approximately 61% of Romania surface is agriculture land, and the rest is covered with woods, hay fields, constructions, roads and waters.

Romania rural area is very important for national economy, given its natural and labour resources. Natural resources were used during years, given Romania’s traditions for cereals, especially (Ionel, 2009).

The agriculture, hunting and woods’ weight within Romania’s GDP had an important fluctuation between 2001 and 2008. (Table no. 1)

Table no. 1: Agriculture, woods and hunting in Romania GDP between 2001 and 2008 (mil lei current prices)

GDP	TOTAL	Agriculture, woods and hunting	% of GDP
2001	116.768,7	15.612,9	13,4
2002	151.475,0	17.301,2	11,4
2003	197.564,8	22.835,2	11,6
2004	246.468,8	31.030,1	12,6
2005	288.047,8	24.277,9	8,4
2006	344.535,5	26.898,2	7,8
2007	503958,7	17.806,8	6,68
2008	503958,7	32566,4	6,4

Source: Ionel, R., 2009. *Performanța economică a agriculturii din Euroregiunea Giurgiu-Ruse*. Bucuresti: ASE, p. 15

The agriculture's contribution to GDP is decreasing, as mention in the table, as a natural effect of economic development so that, in year 2008 it had 6,4%. Other sectors have higher contribution, as services 50% and industry 24%, as follows in Figure no. 2.

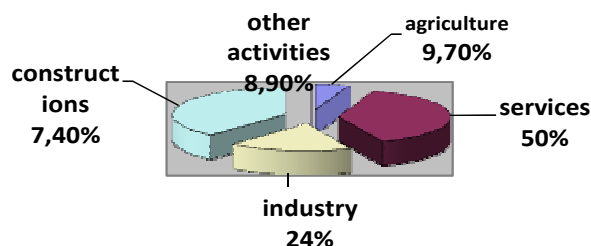


Figure no. 2: Sectors' contribution to Romania GDP, in 2008

Source: Ionel, R., 2009. *Performanța economică a agriculturii din Euroregiunea Giurgiu-Ruse*. Bucuresti: ASE, p. 15

Romania has tradition both in crops and animal husbandry. Crops have better position than animal husbandry in the total sector, around 68%. Animal husbandry has 31% and agriculture services have 1%, according to Romanian National Institute for Statistics in 2008. (Figure no. 3)

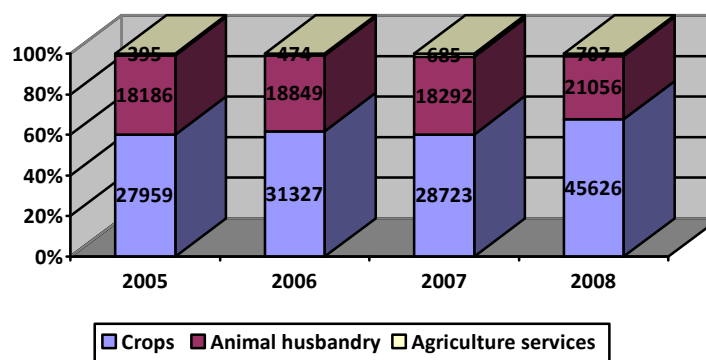


Figure no. 3: Agriculture production (mil lei current prices)

Source: Ionel, R., 2009. *Performanța economică a agriculturii din Euroregiunea Giurgiu-Ruse*. Bucuresti: ASE, p. 33

Cereals represent the main crop; other plants are limited, as technical plants, medicinal plants or aromatic plants. The annual productions differs from one year to another, as Romanian agriculture depends very much of the weather conditions.

All these features belong to Lower Danube Region, too, the existence of vast rural areas being an attribute of Romania.

- *Agriculture's potential and rural activities diversity*

One of the rural areas' advantages of Lower Danube Region and not only, from the perspective of their development, may be represented by the local population. In Romania, there is no change in rural population density over years, which is approximately 45.1 inhabitants/ km². Thus, more than 80% of the rural localities have a density rate according to EU standards for rural areas identification (Romania National Strategic Plan for Rural Development 2007-2013). Our country's natural conditions determine different densities, the areas outside Carpathians being the most populated and the mountain areas and Dobrogea region being the less populated. Our opinion, as we will demonstrate further, is that the first one are the most attractive for human, as the main occupation are in industry and crops, and the second ones are not so attractive, as the main occupations are animal husbandry and fishing.

The national economy trend determined many changes in rural areas. Hence, before 1989, an important part of rural population migrated towards towns where they found industry and better life conditions. After this year, the era of huge industrial factories ended and people returned to rural areas. This phenomenon took place also due to land laws implementation, and to universal truth: young person migrate toward towns and older person migrate toward villages, where they can meet subsistence livelihood conditions.

Supporting this affirmation, we observe that rural-urban migration decreased in 2007-2008 with 2%, and the urban-rural migration increased with 5.5% in the same period. This means that a higher number of persons leaved their rural homes towards towns, especially in 2007.

Professional training of agriculture labour is provided by high schools, vocational schools and post high schools network, with tradition in the field of agriculture and woods. Nevertheless, the number of these institutions decreased, and, between 1998 and 2005, increased the number of those that educate in woods and veterinary fields.

Agriculture is characterised by a decreasing number of occupied labour, because of the following (Ionel, 2009):

- the lack of attractiveness of agriculture activities, especially to the decant life conditions in rural area with no interest for young person;
- the natural leaving of elders.

While, the occupied labour in agriculture decreased from 40.9% in 2001, to 28.7% in 2008, this sector still remains best represented in Europe. (Figure no. 4)

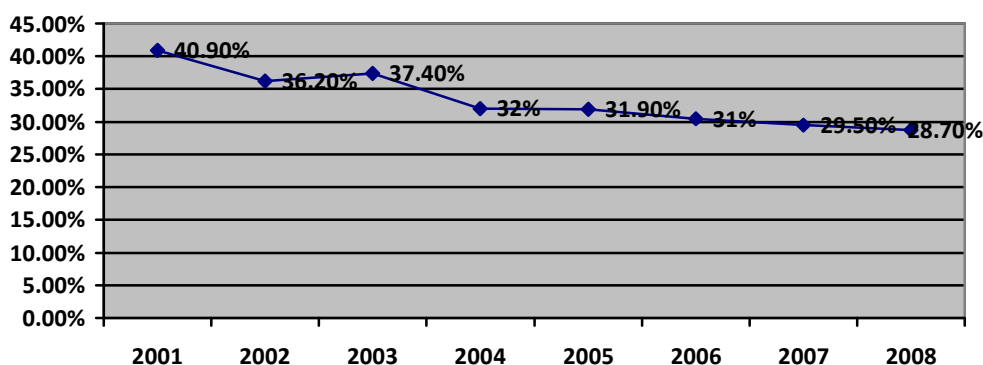


Figure no. 4: The occupied labour in Romania agriculture between 2001 and 2008

Source: Ionel, R., 2009. *Performanța economică a agriculturii din Euroregiunea Giurgiu-Ruse*. Bucuresti: ASE, p. 32

The population between 25 and 34 years old is the best represented in the total occupied labour in agriculture. As a result, the total volume of work in agricultural exploitations decreased. The annual work unit decreased with 20% from 2002 to 2007.

The rural economy is not represented exclusively by agriculture, but by different activities. Consider this economy's complexity, the needs of local inhabitants, and the future development perspectives we propose the following classification of rural activities. (Figure no. 5)

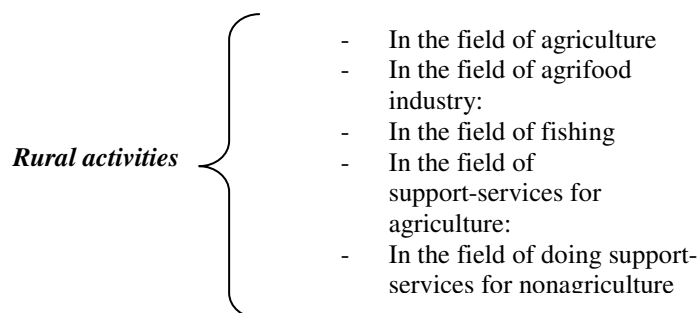


Figure no. 5: Model of rural activities

For each field we consider more than one job. But the most important fact is to find sources for financial support and organising solutions of the locals' professional training, as we will further demonstrate.

- *Structural funds for rural areas*

The impact of the rural areas financing is huge for all that country life means. The pre accession funds and especially the structural funds that may be accessed by Romania and

the counties from Lower Danube Region represent an important source for providing better life conditions.

SAPARD and PHARE Programmes were consistent sources for different actions in this field. The financial support was significant and aimed professional training of local specialists. In that sense, SAPARD allocated 2.9 million euro for increasing professional training, as follows:

- courses for professional training in agriculture;
- courses for professional training in skills development of agriculture production management
- courses for professional training in the field of crops and animal husbandry;
- courses for professional training in skills development in woods field;
- courses for professional training in the field of implementation the friendly environment agriculture practices etc.

The National Programme for Rural Development 2007-2013 is the main financial instrument for rural development's activities from Romania, including Lower Danube Region counties. It plans for rural development 8.022 billion euro to be spent, from which 119 million euro for knowledge dissemination, for the following main fields:

- superior agriculture and forests sectors' competitiveness;
- better quality of environment and rural areas;
- higher rural life conditions and rural economy diversification.

The Operational Programme for Fishing 2007-2013 represents and instrument for this sector's financing and development. The durable development of fishing areas and Technical assistance for fishing areas durable development are two of the most popular axes where the need for rural development and professional training financial support is reaffirmed.

All structural funds for Romania, as SOPHRD programmes, may be accessed for initiating and running agricultural activities and for rural development specialists' training and education in Lower Danube Region.

In addition, the national education system has elite higher education programmes in the field of agriculture and rural development. Faculty of Agrifood and Environment Economy from Bucharest Academy of Economic Studies offers bachelor, master and PhD programmes in this domain and it is organised in Giurgiu and Calarasi counties in Lower Danube Region. As well as, University of Craiova offers economic training programmes that may be accessed by locals in the counties belonging to Lower Danube Region.

3. Comparative study regarding agriculture and rural development professional training in the field in Lower Danube Region

Most part of the non-academic courses that were offered to locals were organised by the National Agency for Agriculture Consultancy (Agenția Națională pentru Consultanță Agricolă (ANCA)) and its counties offices which have the following main goals (National Agency for Agriculture Consultancy, 2009):

- organising free of charge courses for making more popular the agriculture and for consultancy, technical assistance and professional training;
- promotion and implementation of Ministry of Agriculture and Rural Development strategies and programmes, including the international cooperation programmes;
- supporting farmers to access structural funds and other domestic or foreign financing programmes;
- supporting farmers for their commune actions;
- consultancy for foreign financiers in identification of investments opportunities for Romanian agriculture.

According to law, the Department for Professional Training and Producers Associations activates inside ANCA and it represents the main department for professional training.

An analyses made upon ANCA's activities, reveals the fact that this institution organised 605 courses for professional training for 18297 persons in the following fields (National Agency for Agriculture Consultancy, 2010):

- *agriculture*: farmer, crop and animal husbandry farmer, qualified worker for crop and vegetables, cereals worker and plants worker;
- *horticulture*: horticulture grower, fruit grower, vegetable grower, flower grower, winegrower, landscape architect etc;
- *animal husbandry*: zootechnician, worker in animal husbandry, , bee-keeper, birds breeder; animal breeder etc;
- *agriculture's mechanization*: tractor driver etc;
- *food industry*: baker, butcher, distiller etc;
- *fishing*: fisherman for domestic and coast waters etc;
- *rural tourism*: worker of rural touristic house etc.

Moreover, this institution offered to rural inhabitants: a number of 25 professional improvement courses for 269 persons, a number of 2654 training courses for 65207 persons and a number of 28 trainers training courses for 279 persons.

All these show the huge training capacity of this public institution as well as the fact that the Romanian authorities in the field are aware of the long term importance of these activities.

Within the Activity Report of National Agency for Agriculture Consultancy on 2009 it is emphasized the number of the qualification courses on activities fields that were organised on 2009 (Figure no. 6) and the number of their graduates, too (Figure no. 7).

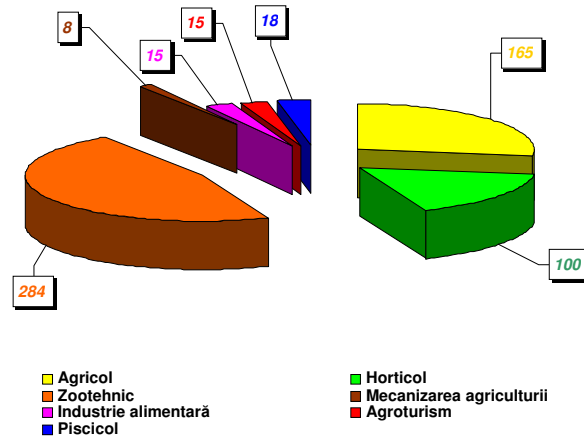


Figure no. 6: Number of qualification courses by activities, in Romania, in 2009
 Source: National Agency for Agriculture Consultancy, 2009. ANCA's activity Report for 2009. Bucharest: National Agency for Agriculture Consultancy.

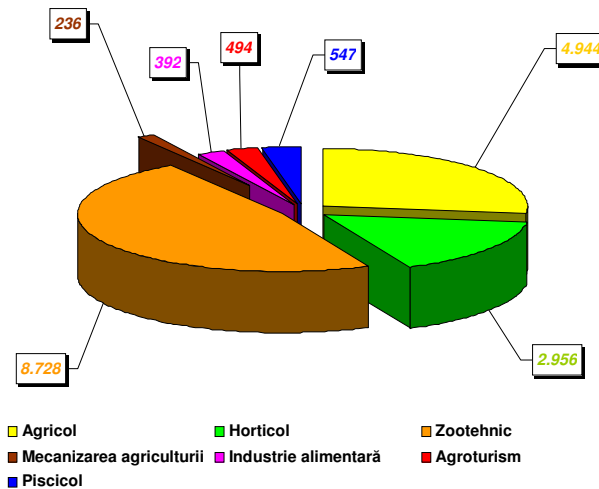


Figure no. 7: Number of qualification courses graduates by activities, in 2009
 Source: National Agency for Agriculture Consultancy, 2009. ANCA's activity Report for 2009. Bucharest: National Agency for Agriculture Consultancy.

It can be observed that the majority of the courses are for animal husbandry, agriculture, and for horticulture fields and, still, rural tourism has a good weigh in the total number of the courses. We may consider this as ANCA’s reaction to existed demand, meaning jobs diversity which is wished in the area.

The courses that ANCA offered certify the qualification of the participant in order to be able to practice that job. For this, the participants must comply different conditions and apply for certain programme.

It may be observed in Figure no. 8 that three of the counties of Lower Danube Region are in the top of the most popular ANCA’s courses, respective Olt, Dolj, Constanta. This top took into account the number of the participants to ANCA’s training courses, between 2007-2010.

Usually, the inhabitants of rural areas of Lower Danube Region accessed those training courses that may be practiced due to own region’s relief and climate, but tradition, as well (Table no. 2).

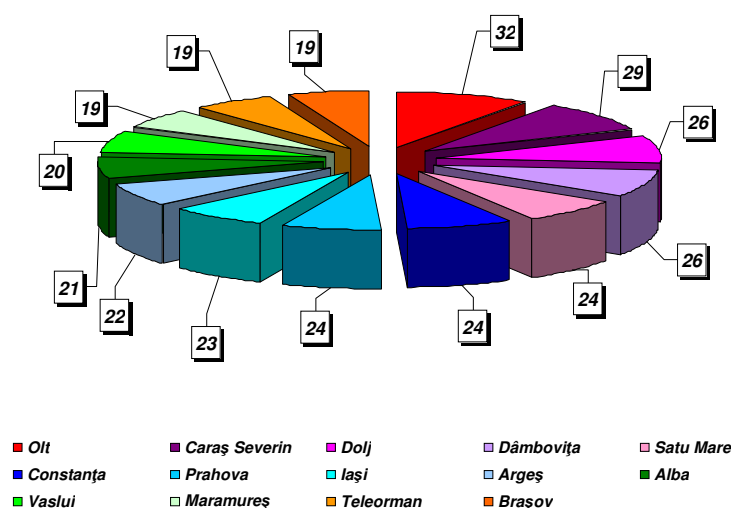


Figure no. 8: The counties that organised most of the training courses

Source National Agency for Agriculture Consultancy, 2009. *ANCA’s activity Report for 2009*. Bucharest: National Agency for Agriculture Consultancy.

Therefore, data reveals that in Dolj county the majority of the training courses were offered in order to develop agriculture skills, while in Tulcea county, the majority of the training courses were offered for those jobs that are suitable, given the Danube Delta’s conditions.

Table no. 2: Calculation of the number of participant to ANCA’s training courses in Lower Danube Region, between 2007 and 2010

No.	County	Participants (no)	Participants for farmer job (no)	Percentage (%)
1.	Mehedinți	1109	0	0
2.	Dolj	4668	469	10,05
3.	Olt	4483	0	0
4.	Teleorman	2685	431	16,05
5.	Giurgiu	1257	16	1,27
6.	Călărași	1156	335	28,98
7.	Constanța	2262	187	8,27
8.	Tulcea	817	0	0
9.	Brăila	728	196	26,92
10.	Ialomița	1825	0	0
	TOTAL	20990	1634	-

Source: National Agency for Agriculture Consultancy, 2009. *ANCA’s activity Report for 2009*. [online] Bucharest: National Agency for Agriculture Consultancy. Available at: <www.consultantaagricola.ro/info_publice.php?id_info_publice=97>, [Accessed 23 August 2010], Data processed by the authors.

Also, there are counties with important agricultural tradition, but they had no participant for the agriculture competences courses, example: Ialomita, Mehedinti and Olt. We may consider this either as a lack of demand for this training, given the tradition and the long experience of the local inhabitants, or as a reorientation of the local population towards activities that are specific to rural areas, which would create higher added value and that would have greater economic performance. In this second case, we may interpret the phenomenon as a maturation of the rural economy, although it is still early to make such an affirmation.

Considering Table no. 2, we observe that the situation in the analysed counties is not excellent for agrifood sector, as no significant percentage of participants at courses for rural activities is obtained, considering agriculture as main basic occupation. This reveals the fact that even the locals are aware of the necessity of diversification and look for other jobs as: baker, butcher and other agriculture jobs.

Gradually, once the Romania adhesion to EU took place and the structural funds for agriculture and rural development may be accessed, Romania’s economy changes its look and improves its own macroeconomic indicators. Despite all these and all the improved regulation in the field, Romanian agriculture confronts many challenges, such as (Ionel, 2009):

- the existence of a large subsistence and semi-subsistence sector made of small individual exploitations;
- the insufficient endowment with specific equipments and vehicles;
- the superior weigh of self-consume, especially within agricultural individual exploitations;

- the decline of non-commercial agricultural individual exploitations and of the commercial exploitations.

To those general aspects of Romania's agriculture, including Lower Danube Region, several inconveniences of rural areas are added: lack of attractiveness of these areas given the absence of modern life conditions that characterised urban areas, the lack of transport, communication, health and education infrastructure, the lack of village's landscape attractiveness, the existence of a majority of feminine population, the lack of other specialists education programmes, the absence of superior education occupations that may be offered to universities' graduates from urban areas which could be attracted and reintegrated in rural areas.

These are grounds for the necessity of modern professional training of rural inhabitants which should be motivating enough and finally conduct to a modern European rural economy and social welfare.

The importance of professional training is supported by the results of a study conducted by ANCA's specialists between 20th of May and 10th of June 2006, an enquiry regarding the actual conditions for professional training, education and train the trainers courses for agriculture and rural development. The study reveals that 96% from the respondents considered very important the training of agriculture and rural development (National Agency for Agriculture Consultancy, 2009).

We propose the following measurements in order to provide a qualitative professional training:

- to support professional training of agriculture and rural development specialists by improving the accessibility of structural funds designated to managing course for rural inhabitants;
- to diverse and to modernise ANCA's professional courses;
- to stimulate universities' graduates to return and reintegrate in village's life by offering scholarships to those who like studying economics or engineering for agriculture and rural development .

Furthermore, having in mind the opportunities of cross-border trade of the Lower Danube Region's counties the authorities should offer courses for qualifications in cross-border agriculture activities management. These may benefit of European financial support, considering the European Strategy for Lower Danube Region.

Conclusions

The labour stabilization in rural areas, particularly the young and educated labour, represents modern and integrated solution that may provide economic growth and social welfare not only in Lower Danube Region.

However, this is a very complex issue, and a coherent, harmonised effort of all authorities in the field may conduct to a rationale strategy for Romanian rural area and for the future of its inhabitants.

This strategy must be realistic and to start from the fact that agriculture is still the main occupation in rural areas and might be the one of the few economic sectors that may become competitive on European market. But, to endow with competitiveness the

Romanian agrifood sector on international standards, well trained specialists had to act, they must know and apply the market values and principles.

Believing the touristic and natural potential of Romanian rural area it is good to consider the development of alternative activities for these areas that may determine more benefits for locals and, as consequence, superior life conditions for rural areas.

Bulgarian Situation**

Objective of this paper is the necessity of training agriculture and rural development specialists within Lower Danube Region. The research investigates the demand and supply sides of training both on national (Bulgarian) and on regional level in context of the definition for cross-border cooperation (CBC) area. The covered zone includes 9 administrative units (NUTS 3 level), eligible in Romania-Bulgaria CBC Programme 2007-2013. The study has been granted by Scientific Research Fund of Tsenov Academy of Economics, Svishtov. This research can be considered as a first step of future deeper and profound collaboration with Bucharest Academy of Economic Studies in terms of creation of common Romanian-Bulgarian Research Area, as a part of European Research Area (ERA).

The background of the research is public policy analysis in several directions: the sectoral programming concerning the agriculture, as an instrument of EU Structural fund implementation; the LEADER+ approach of EU Community, as an instrument of supporting rural development; the CBC programming as an instrument of cross-border collaboration; the national legislation in professional education in the area of agriculture and rural development. These public policies determine the framework of the agriculture development and the supply side of training specialists.

The demand side of training is investigated by common analysis of the condition in the agricultural sector and conclusions about the key deficits of knowledge in the eligible area. Comparative analysis of supply and demand of professionals in the field of agriculture is elaborated. The main educational programs in training agriculture and rural development specialists are identified and some problems and perspectives are worked out.

The LEADER (Links between Actions for the Development of the Rural Economy) is created as an instrument for supporting the rural development by European Commission in 1991. Since then the program (now called LEADER+) has strengthened its positions and today it is a part of the common rural development policy all over Europe. The basis of the approach is the theory of endogenous development, where the emphasis is on the internal forces and partnership between the local stakeholders (Ray, 1999; van der Ploeg and Long, 1994). Key factor for success in LEADER+ approach is the active position, which depends on the motivation and competencies of the local players.

The LEADER+ approach comprises elements like: local development strategies intended for well-identified subregional rural territories; local public-private partnerships (hereinafter local action groups); bottom-up approach with a decision-making power for local action groups; implementation of innovative approaches and cooperation projects; networking of local partnerships etc. (European Council, 2005)

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As well as in other EU member states, Bulgarian agriculture is a subject of increased government interest. In the years of integration to the EU, there were elaborated several national strategic documents concerning the development of this sector. Overall, due to the insufficient productivity of the agriculture, compared with the industry and services, some interventions are necessary to be implemented.

The main strategic program document for 2007-2013 is Rural Development Program (RDP) (Ministry of Agriculture and Rural development, 2010 [2]). The amount, provided for the agriculture and rural development is 3.2 billion EUR (2.6 billion EUR from EU and 631 million is the national co-financing). Besides that for the period 2007 – 2009 there is an agreement for 1.1 billion EUR direct aids to farmers and for market support for agriculture – through export subsidies, intervention in agricultural markets and others. These funds are divided between the measures adopted under the Rural Development Program.

The most important measure in terms of training the specialists is measure 111 – Vocational training, information and dissemination of scientific knowledge. Some of the rest concern training courses, too. Many stakeholders are involved in the implementation of the RDP. There is established National Rural Network (Ministry of Agriculture and Food, 2010 [1]), which comprises all organizations and administrative bodies involved in rural development.

1. Regional scope

The regional scope of the research concerns the Bulgarian side and in particular – the region, which is eligible for cross-border cooperation.

According to Romania-Bulgaria Cross-Border Cooperation Programme 2007-2013 (European Fund for Regional Development, 2010), the eligible area for collaboration consists of seven Romanian counties and eight Bulgarian districts located directly along the national border. The 8 Bulgarian administrative units (NUTS 3 level) belong to 3 regions (NUTS 2 level), as follows:

- Districts Vidin, Montana, Vratsa and Pleven constitute the North West Planning Region of Bulgaria;
- Districts Veliko Tarnovo, Ruse and Silistra are part of the North Central Planning Region of Bulgaria;
- District Dobrich belongs to the North East Planning Region of Bulgaria.

The Bulgarian districts, eligible for CBC Cooperation with Romania are illustrated in Figure no. 9.

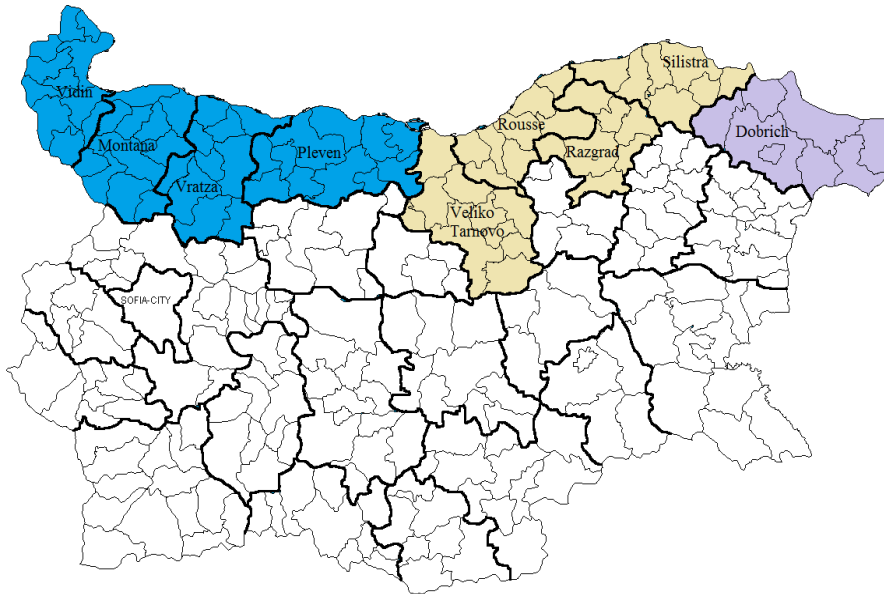


Figure no. 9: Bulgarian districts, eligible for CBC Cooperation with Romania

In addition to the above mentioned districts, Razgrad district has been included in the eligible Programme area following the flexibility rule provided by Article 21 (1) of the ERDF Regulation. Razgrad district is adjacent to the eligible NUTS 3 areas of Ruse and Silistra districts and is only 10 km away from the national border (the Danube River). (REGULATION (EC) No 1080/2006) Besides that its territory actually forms a wedge into the eligible area and the district shares the same needs, constraints and features with the cross-border area.

So the territory of the eligible for CBC actions consists of 9 districts (NUTS 3) and 83 municipalities – Local Administrative Units (LAU 1). The total surface of common Romanian-Bulgarian CBC area is 71,930 sq. km, where 45.34% of them (32,613) are Bulgarian.

According to the OECD definition, there are *predominantly rural regions*, where more than 50% of the population is living in rural communes, *intermediate regions*, where 15 to 50% of the population is living in rural local units and *predominantly urban regions*. (OECD, 2010) This classification is relevant to NUTS 3 level and most of the Bulgarian districts get into the group of predominantly rural regions. The above mentioned 9 districts are in the same group. Some authors have more broadly understanding about the region separation, but this definition is well accepted. (Huillet, 1993)

The national definition for Local Administrative Units (LAU 1) determine as rural regions these in which all local units are bellow 30 thousand people. This definition is a base for determine the SAPARD aid and it is applied to the Rural Development Programme. (Ministry of Agriculture and Food, 2010.) So, out of 264 municipalities in Bulgaria, 231 are rural. They cover 81 % of the territory and 42 % of the population.

What is the situation in Bg-Ro CBC eligible area? Figure no. 10 shows the distribution of rural and non-rural units in CBC zone.

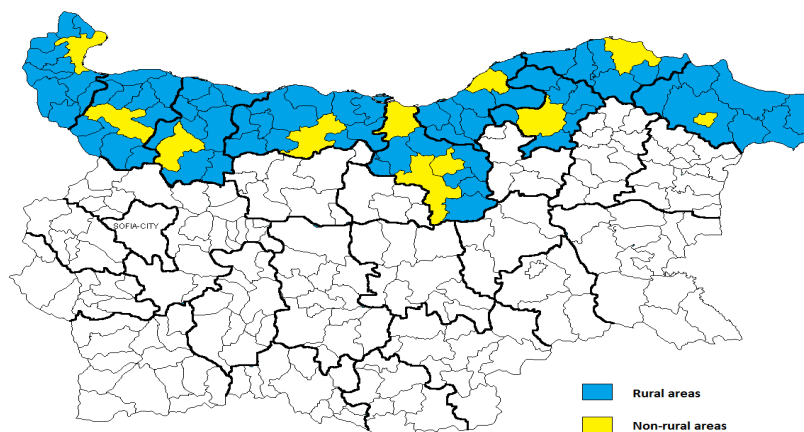


Figure no. 10: Rural municipalities in CBC area

The urban units are only a small part (11 from all 83). The rest 72 units are rural. Most of the municipalities are small and the population density is very low – 53.858 persons per km² (Bulgaria – 68.313 persons per km²; Romania – 90.046 persons per km²). Table no. 3 shows the surface and population density by districts. The density is especially low in the outlying (Northeast and Northwest) districts and these are the typical peripheral regions that are distant from the central places etc. The total surface of rural area is 81% of the whole territory. (Table no.3)

Table no. 3: Bg-Ro CBC Eligible area (Bulgarian part)

Districts (NUTS 3)	Population (2008)	Total surface (km ²)	Population density (persons per km ²)
Vidin	110,310	3,033	36,370
Montana	158,291	3,636	43,534
Vratza	199,702	3,938	50,712
Pleven	294,277	4,336	67,868
Veliko Tarnovo	277,520	4,662	59,528
Rousse	251,236	2,803	89,631
Silistra	129,121	2,846	45,369
Dobrich	201,499	4,720	42,690
Razgrad	134,485	2,640	50,941
Total	1,756,441	32,614	53,855

Source: EUROSTAT, 2010. *General and regional statistics*. [online] Available at: <<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>> [Accessed 22 August 2010].

National Statistical Institute (Bulgaria), 2008. *Regional Statistic*. [online] Available at: <<http://www.nsi.bg/regstatmap.php>> [Accessed 22 August 2010].

Table no. 4: Rural area in Bg-Ro CBC zone (Bulgarian part)

Districts (NUTS 3)	Number of municip. (LAU 1)	Rural area			
		Number of municipalities	Total surface (sq. km)	Agriculture area (sq. km)	Forest area (sq. km)
Vidin	11	10	2,532	1,659	704
Montana	11	10	2,983	2,041	733
Vratza	10	9	3,258	2,561	422
Pleven	11	10	3,526	2,877	336
V. Tarnovo	10	7	2,846	1,818	802
Rousse	8	7	2,334	1,767	378
Silistra	7	6	2,330	1,616	559
Dobrich	8	7	4,611	3,718	573
Razgrad	7	6	2,041	1,477	430
Total	83	72	26,461	19,536	4,936

Source: EUROSTAT, 2010. *General and regional statistics*. [online] Available at: <<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>> [Accessed 22 August 2010].

National Statistical Institute (Bulgaria), 2008. *Regional Statistic*. [online] Available at: <<http://www.nsi.bg/regstatmap.php>> [Accessed 22 August 2010].

The CBC districts have huge potential for agriculture and forestry development. Figure no. 11 shows the share of both types of land as percent of total area. Put together they present about 93% of the target region area.

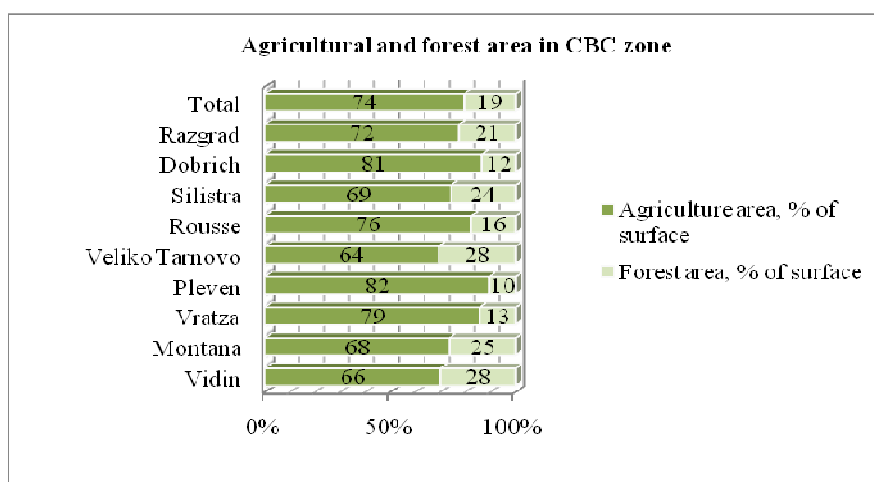


Figure no. 11: Agricultural and forest area in CBC Zone

Source: National Statistical Institute (Bulgaria), 2008. *Land Use*. [online] Available at: <<http://www.nsi.bg/index.php>> [Accessed 18 August 2010]. Data processed by the authors.

The agriculture is traditional for the local economy. The main products are cereals, vegetables, grapes and fruit production, complemented by the animal sector. The predominant farms are small and their common feature is the low labour productivity.

2. Key problems in rural regions

Since detailed studies have not been performed on regional level, part of the analysis of the rural regions are based on national data. However, they are entirely relevant to the CBC area, which shows worsen results in most of the cases, compared to the average levels for the country. The main problems in rural areas can be outlined in four directions: 1) low productivity; 2) small farms; 3) low share of young farmers; and 4) insufficient training.

2.1. Low productivity

The productivity in agriculture is the most serious problem both in Bulgaria and Romania. While in Belgium, for example, for the period 1999 – 2008, the average yields of wheat varied between 7830 and 8680 kg per hectare (783-868 kg per decare), in Bulgaria they are from 1610 to 2520 kg per hectare or 3.5 to 5 times lower. Furthermore, the lowest values are measured in the Northwest region – part of CBC area. Yields in Romania are slightly higher than those in Bulgaria, but they are still 2 to 4 times lower than those in Belgium.

Almost the same is the situation in maize production. The yields in Bulgaria are from 1900 to 5540 kg of ha, while those in Belgium – from 11100 to 12200 kg of ha. In Romania, the minimum values are higher than those in Bulgaria, but do not exceed the maximum of 5560 kg ha, which is again at least twice lower than in Belgium.

The data show a deficit of knowledge and skills related to production technology, as well as implementation of best practices in managing farms.

2.2. Small farms

The majority of farms are up to 5 hectares. In the same way, those farms with over 50 hectares land are only 1%. The largest is their number in Dobrich region, but even there the share is below 4%. For comparison, in Belgium this share is over 18%. (Figure no. 12)

The problem with the small-sized farms is a result of many factors, such as the transition to market economy, insufficient capital etc. But it also concerns the training of farmers. The issue is entirely related to a deficit of knowledge in management of small and medium enterprises.

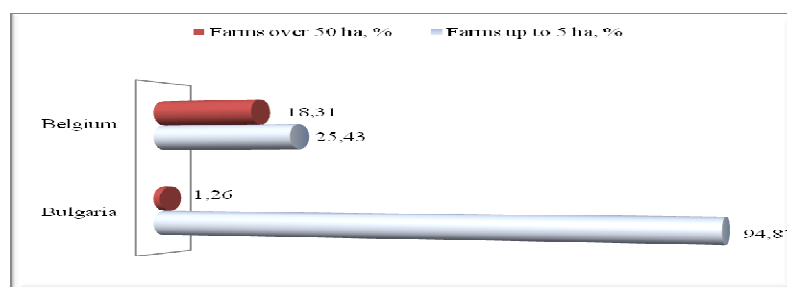


Figure no. 12: Share of small and middle sized farms in Bulgaria with comparison with Belgium (2007)

Source: EUROSTAT, 2010. *Structure of agricultural holdings*. [online] Available at: <<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>> [Accessed 4 August 2010]

2.3. Low share of young farmers

The number and proportion of young farmers in Bulgaria is very low. According to EUROSTAT, in 2003 the farmers up to 35 years old were only 5.1 percent of total employment in the sector, while those over 65 are more than 40%. In the areas of the CBC the situation is especially unfavourable in Vidin and Montana, where the older farmers are more than 50%. (Figure no. 13)

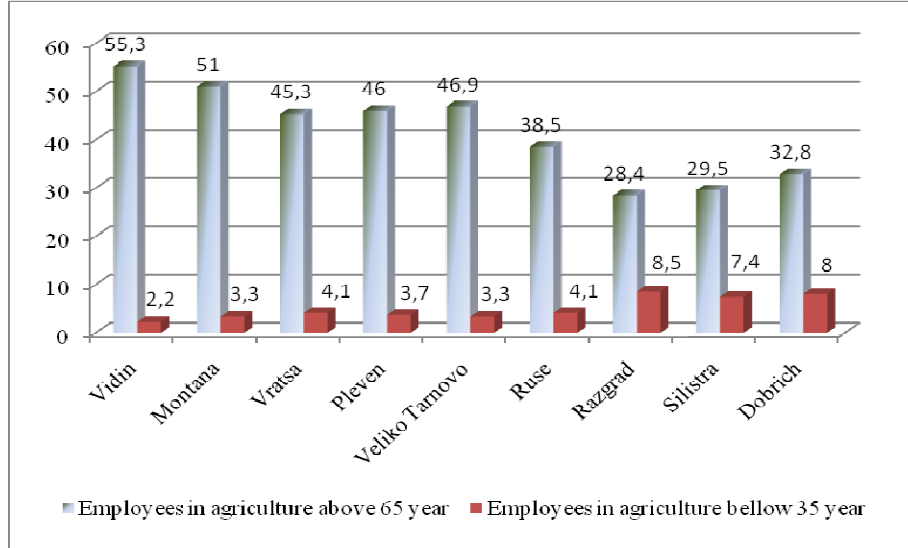


Figure no. 13: Distribution of young and old farmers in CBC Zone.

Source: EUROSTAT, 2010. *Regional agriculture statistics (reg_agr)*. [online] Available at: <<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>> [Accessed 22 August 2010]. Data processed by the authors.

2.4. Insufficient training

According to an analysis in the RDP, the majority of employees in agriculture have no specialized training or education in agriculture and in business management. Only 2.4% of farms managers have tertiary education level in the field of agriculture. The share of these with primary and secondary level in the agriculture (ISCED 0 to 2) is 57%. For comparison – in Bulgaria (all sectors) this share is 17%. (Table no. 4)

Table no. 4: Education level in agriculture compared to the national economy

	Higher education level	Primary and secondary level (ISCED 0 to 2)
Agriculture	2.4%	57%
Bulgaria (all sectors)	17%	88%

Source: Ministry of Agriculture and Food, 2010. *Rural Development Program 2007-2013*. [online] Available at: <<http://www.mzh.government.bg/article.aspx?rmid=432&id=432>> [Accessed 5 September 2010]. Data processed by the authors.

It is difficult to develop modern agriculture and to apply innovation approaches and best practices in such level of education. Therefore, the whole sector needs professional training both in technological and in economic fields.

The same is the situation in food industry and in forestry, especially in the fields of foods safety and sustainable forestry.

Special needs of training have the representatives of Local action groups (LAG), created in some municipalities under the terms of Leader+ Programme. At the time of the survey in the eligible CBC region there have been created and operate 12 LAG which cover 16 municipalities.¹ Their needs are in the field of developing regional strategies and plans, stakeholders' involvement, motivation, project development, information on good practices in rural areas - culture, community centres, ethnographic collections, museums, crafts, tourism, etc.

3. Supplying of training

The supply side of education and training is composed by bachelor and master degree programs (in agriculture sciences and economics of farm); secondary schools for agriculture, forestry and food industry; and life-long learning.

The supply of higher education programs (bachelor and master degree programs) is presented in the following table.

Table no. 5: Universities that offer bachelor and master degree programs in agriculture sciences and economics of farm

Agriculture sciences	Economics of farm
<ul style="list-style-type: none">• Agricultural University Plovdiv• Trakia University – Stara Zagora• Higher School “Agricultural college” Plovdiv• Agricultural Academy - Sofia• University of Forestry• University of Food Technology Plovdiv	<ul style="list-style-type: none">• Tsenov Academy of Economics• Varna Economic University• Sofia University of National and World Economy• Rouse University

In the secondary schools for agriculture, forestry, food industry, there are 98 professional schools in Bulgaria: 72 schools of agriculture; 14 schools of forestry; and 12 schools of food industry, wine, and tobacco.

Life-long learning is developed in universities, some of secondary professional schools, centers for professional education, private firms and National centre for agriculture. Besides training programs, some institutions offer consultations to agricultural SMEs in the field of technique, farm management, marketing, common agricultural policy (CAP) of EU

¹ LAG for Sustainable Development of the Villages of Ivanovo municipality, Nikopol, Lyaskovets – Strazhitsa, Local Action Group Eastern Danube ELIA Tutrakan – Slivo Pole, Kavarna, Gulyantsi, Elena - Zlatarishki Balkan, Biala, Kubrat, Toshevo-Shabla, Belene, Varshets

etc. The main advisor body is the National Agricultural Advisory Service, which has set up regional offices in all 28 districts in the country.

The expected educational streams are in entrepreneurship, project management, ecological agriculture and for LAG: creation and implementation of regional development plans, motivation of local stakeholders, project development, benchmarking in rural regions development etc.

In the food industry and forestry the educational streams are in EU standards on food safety and in sustainable forestry.

Conclusion

The main problem is that the training programs financed by the Structural Funds, have not started yet in the middle of the period 2007-2013. The reasons are mainly organizational, as well as the high barriers for training organizations. To be relevant to the program requirements, they have to undergo complex and burdensome procedures. Some of training centres complain about the long delay of payments, which embarrasses the cash flows and forces them to finance the cost of training for a long period.

So there are still about 20,000 people from the agriculture, whose education has to be happened in the next three years. They should receive 170,000 days of training in short-term programs, according to the RDP. Much of the future trainees are residents exactly of CBC area Romania-Bulgaria. The high schools are well qualified and can cope not only with long-term (bachelor and master degree) but also with these short-term programs.

Tsenov Academy has good experience in organizing short-term courses through its Centre for Postgraduate and Continuing Education (www.eacademy.bg). The centre is an initiator and has implemented large number of projects related to education in many professions. The courses are arranged into daily, evening, weekend, full-time, part-time and distance learning. Many multiple interactive training materials, case studies, role plays etc. are developed to help students in their tuition. Furthermore, the Centre maintains its relationships with many employers who make requests for training. This can be done in various long-term programs - bachelor, master and even doctoral.

Another guideline in which both the universities can cooperate is developing of strategic analysis for the agricultural branches – food, vegetables, wine producing; implementation and mediation of contacts between guilds on both sides of the Danube River; thematic studies on global markets; implementation of quality systems and standards of production in agriculture etc. Such analysis will support separate sub-sectors, as well as the entire CBC area.

A purposeful mirror activity of Tsenov Academy of Economics and Bucharest Academy of Economic Studies on both sides of the Danube River can contribute to the success of agriculture entrepreneurs and of rural area representatives. Both higher schools can help for the sustainable development of CBC zone and for the prosperity of the rural areas.

Final remark

Given the study's conclusion and the universities' specialization, we consider a good start for *Bucharest Academy of Economic Studies, Romania, and D. Tsenov Academy of Economics of Svishtov, Bulgaria* to apply as partners within *Romania-Bulgaria Cross-border Cooperation Programme 2007-2013* in order to research backgrounds and to organise together courses for training agriculture and rural development specialists.

The universities can cooperate in: developing of strategic analysis for the agricultural branches – food, vegetables, wine producing; implementation and mediation of contacts between guilds on both sides of the Danube River; thematic studies on global markets; implementation of quality systems and standards of production in agriculture etc.

A purposeful mirror activity of Tsenov Academy of Economics and Bucharest Academy of Economic Studies on both sides of the Danube River can contribute to the success of agriculture entrepreneurs and of rural area representatives. Both higher schools can help for the sustainable development of CBC zone and for the prosperity of the rural areas.

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