

## CURRENT SITUATION AND ESTIMATION OF THE FINANCING NEEDS TO IMPROVE AGRICULTURAL TRAINING OF THE FARM HEADS

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### Abstract

*This paper investigates the professional education of farm heads from Romania and makes a rough estimation of the basic financial resources to train them for the next twenty years. Results are mainly based on statistical data analysis. Coming out conclusions show that Romanian farm heads hold the last place in the European Union (EU) regarding professional training. To improve this situation have estimated a need of about two billion euros for the next twenty years. Based on the results, the paper proposes several main areas for upskilling.*

**Key words:** agricultural training, farm heads, Romania

### INTRODUCTION

In Romania, agriculture is an important sector of rural economy: it has vast land resources - 14.6 million hectares of agricultural land with a structure encouraging the development of diversified agriculture: arable land 64.3%, pasture and meadows 32.9%, and vineyards and orchards 2.8% [3]. According to Eurostat, farming population (2.5 million people) represent 25.6% of total employed population, 5.7 times higher than the average of EU28 (4.5%). If we compare the share of agriculture's contribution to GDP (4.7%) to the share of the agricultural employment, we conclude that labour productivity in this sector is very low [1]. In fact, from this point of view Romania ranks last but one among the UE28 countries [7]. This shows in great extent why the most rural areas of Romania falls among the poorer EU regions and why migration, mainly rural one, was so noticeable in the recent years [8].

If under socialism large farms of hundreds and thousands of hectares prevailed, after 1990 the situation changed, the land was returned to former owners and farm size was reduced considerably [4]. Romania has the most fragmented agrarian structure within the

EU, with about 3.6 million farms, representing 32.2% of total EU farms. Another feature of Romanian agriculture is it pronounced polarization. On the one hand there are farms larger than 100 ha, which although represent only 0.3% of total farms, operates 48.8% of the utilized agricultural area. On the other hand, there are small farms, below 2 hectares, which have a share of 73.3% of all farms and 13.0% of total utilized agricultural area [11]. Most of these farms are considered small subsistence and semi-subsistence farms: self-consumption of subsistence farms represent 90-92% of their production and in the case of semi-subsistence farms is 50-52% [5].

Bearing in mind this context, professional training for farm heads is of particular significance since it is known that the success of a business depends primarily on the quality of the management. This quality is determined by the skills and knowledge of the person authorized as manager. Efficient management is a model of linking innate abilities with knowledge gained through experience and training. Education and training aims to develop knowledge, abilities, and other job skills of farmers [6].

Strengthening knowledge and skills has never

been so vital to create inclusive and sustainable societies, as in the knowledge-oriented globalized world from nowadays. It is key element to eradicate poverty, promote equitable economic and social development, human rights, fighting inequality, and environmental protection [9].

**MATERIALS AND METHODS**

In this paper, in the first step, we identified who are the farm heads in Romania and what are their main characteristics/particularities. Although in the literature there are many definitions, both the farm head and classifications of the professional training system in this paper we consider the definition and classification used by EUROSTAT.

<p><b>Box 1. Types of training and farm head definition</b></p> <ul style="list-style-type: none"> <li>• <i>Farm head</i> is an individual person who, daily, has the responsibility of leading financial and production of an agricultural holding.</li> <li>• <i>Types of training-practical experience</i> - experience gained through work done in a farm;             <ul style="list-style-type: none"> <li>- <i>basic agricultural training</i> - training at a general agricultural college and / or in an institution specialized in the field of agriculture; apprenticeship in agriculture;</li> <li>- <i>full agricultural training</i> - training courses, equivalent to at least two years at a college, university or other institution of higher education in agriculture.</li> </ul> </li> </ul>
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The methodology used was based on statistical analysis of the primary data, using Excel as a tool for quantitative analysis. The statistics data that were the basis for the analysis came from the following sources: a) Eurostat; and b) National Institute of Statistics (NIS).

In the second step, there were established computation assumptions for a rough estimation of the financial support. It should be noted that there is no currently data or studies that enabled to establish accurately the parameters for calculating financial needs for professional training for farm heads in Romania.

Estimation of the necessary financial resources for farm heads training was based on the following assumptions (Table 1):

- it was established the targets of the farm

heads, with full and basic agricultural training, to be reached on the timeframes expected (2018- 2025- 2035); it was considered the Polish model;

- it were established the average annual cost per student / trainee on two types of training (basic and full agricultural training); (in the full case it was considered a training course of at least two years). For the 2015-2018 period, it was started from the amount allocated by Romania to general training process (no data specific to agricultural training); in the second period (2018-2025) was considered that these allocations will represent 70% of the amounts allocated by Poland; and for the last period (2025-2035) were used allocations that Poland currently does;

- it was calculated the average annual number of farm heads which will leave farming, taking into account trends recorded in age groups; structure of farm in Romania is dominated, primarily, by older people who naturally will leave the system;

- the calculations watched not only to reduce the number of farms and increase in average agricultural area; it is considered that the utilized agricultural area will remain constant throughout the period.

Table 1. Working assumptions necessary for assessment of the basic financial support for farm heads training

Indicator	Benchmark (2013)	SHORT TIME 2018	MEDIUM TIME 2025	LONG TIME 2035
Targets				
Farm heads with full agricultural training (%)	0.47	5	14	28
Farm heads with basic agricultural training (%)	3.13	5	11	22
Working assumptions				
Utilized Agricultural Area (mil. ha)	13.056	13.056	13.056	13.056
Farm heads number (mil.)	3.630	2.996	1.961	1.306
Average agricultural area (ha)	3,60	4.36	6.66	10.00
Average expenditures per student for full agricultural training (euro)	1873	1873	2600	3714
Average expenditures per student for basic agricultural training (euro)	821	821	1797	2567

Proposed targets should close Romania as much as possible on the level of Poland, a

country that is on a top position among the EU Member States as regards agricultural training of farm heads.

## RESULTS AND DISCUSSIONS

Among European Union Countries, Romania has the largest number of farm heads - 3.62966 million (approximately 30% of total EU farm heads) but which is characterized by

the lowest level of training: 96.40% have only practical experience, 3.13% basic agricultural training and 0.47% full agricultural training (Fig. 1).

If we analyse the farm heads according to the age group it is noted that the largest number locates in the group over 65 years (1.459 million), followed by the 55-64 age group (820 000).

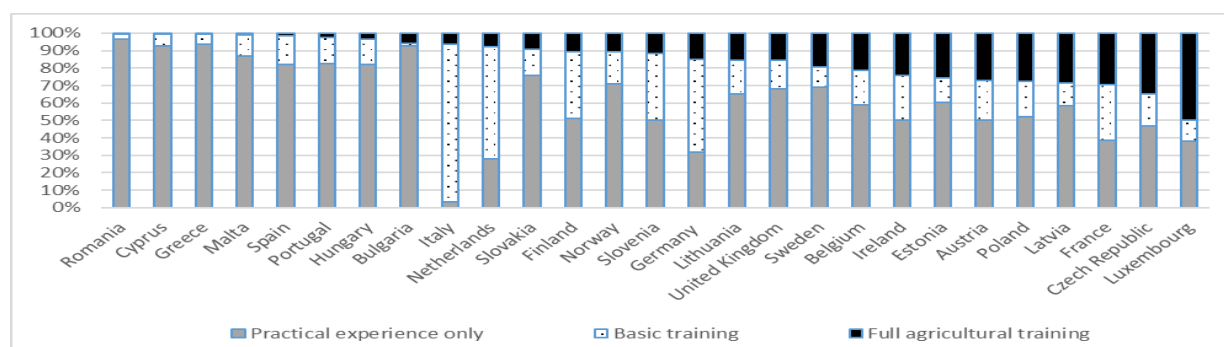


Fig. 1. Distribution of farm heads according to agricultural training in the EU Member States, in 2013 (Source: authors' processing by Eurostat, 2016)

Together, these two groups, totalling 62.79% of the number of farm heads in Romania. On the other hand, young farm heads have a low

number – 171,960 of the total farm heads (4.73%) (Fig. 2).

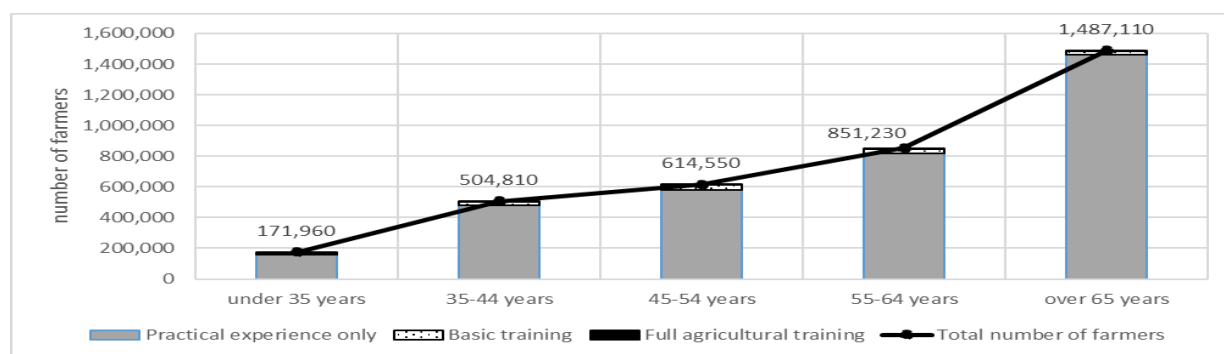


Fig. 2. Number of farm heads according to agricultural training and age group, in Romania, in 2013 (Source: authors' processing by Eurostat, 2016)

Analysis of agricultural training, by age group indicates that regardless of age professional training is extremely low, with small differences. Thus, the full agricultural training has very small share: from a minimum of 0.23% in the case of farm heads aged over 65 years and a maximum of 2.24% in the case of farm heads belonging to the age group under 35 years. The majority of farm heads have only practical experience.

The analysis of utilized agricultural area, however, shows a different picture: the largest

area, about 30% of the total UAA, is worked by young farm heads aged under 35 years (about 4 million hectares, of which 1.8 million ha operated by the farm heads with full agricultural training), while the those of belonging to the age group over 65 years work only 21% of the total UAA, and most of them have only practical experience (Fig. 3).

In Figure 4, we can see that young farm heads, regardless of type of agricultural training, works most large farms, while the group over 65 years operates small-scale

farms. In addition, it can be observed the upward trend of the average size of the farm

according as increase the training of farm heads.

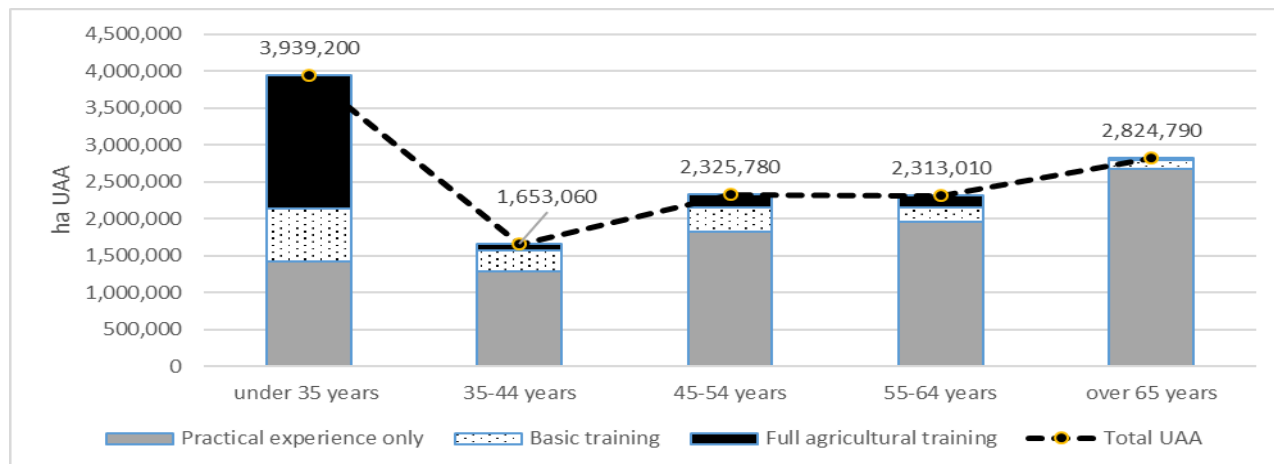


Fig. 3. The utilized agricultural area according to farm heads agricultural training and age group, 2013 (Source: authors' processing by Eurostat, 2016)

Young farmers have been identified as an important group to boost the technological advances in this sector and to rapidly meet the social, economic and environmental changes. However, recent research has revealed why agriculture has proven to be an economic

sector increasingly unattractive for young farmers: severe challenges in terms of climate change, decline in soil fertility, changing markets, social structures and land ownership patterns changes, etc.[12].

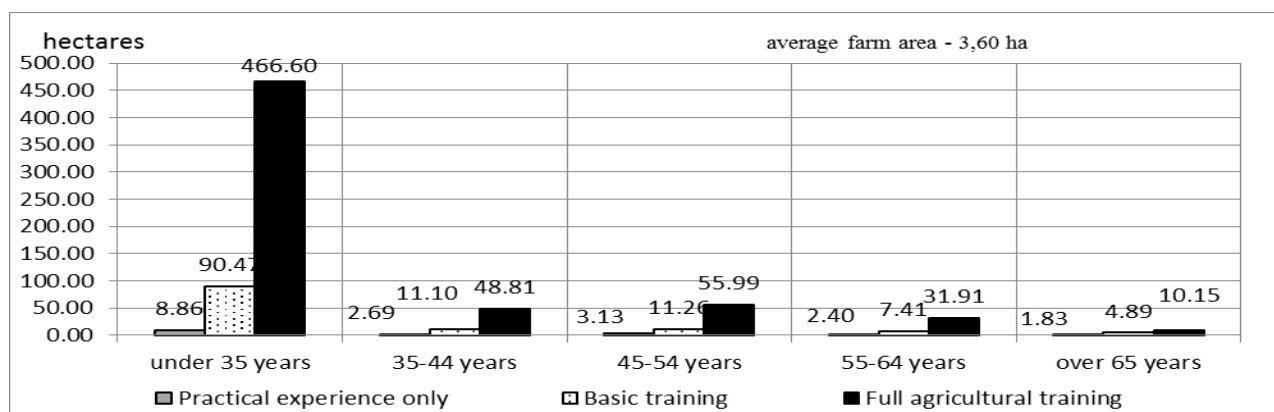


Fig. 4. Average area by age group and agricultural training of farm heads, 2013 (Source: authors' processing by Eurostat, 2016)

Although some specialists have seen small farms as the key to sustainable and equitable development of rural areas, many developing countries have experienced the emergence of "super farms" and increased opportunities for governments to sell or lease large areas of farmland to foreign investors [2].

Analysis of used agricultural area by economic size of the farm and the professional training of farm heads indicates a direct connection between these two dimensions (Figure 5).

The same pattern is observed for the distribution of the number of farm heads by economic size of farm and level of agricultural training: there is a concentration of small farms, under 8000 euros, where the farm heads have only practical experience. Large farms (especially those over 100,000 euro) are small in number but their farm heads, with basic or full agricultural training, are in a significant proportion.

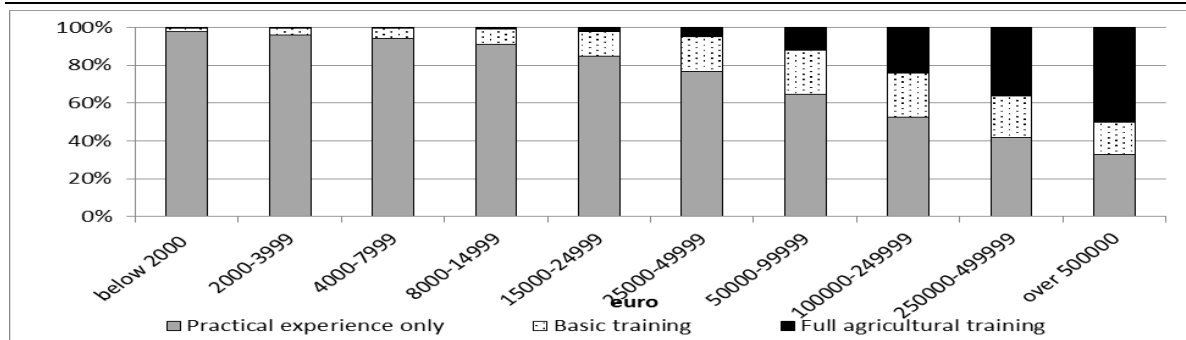


Fig.5. Distribution of used agricultural area by economic size of the farm and agricultural training of farm heads, 2013 (% of total economic size class) (Source: authors' processing by Eurostat, 2016)

As a result of this brief analysis, the question arises is how we can improve the situation and with what resources? Assessment of financial support for agricultural training programs was made considering the results presented above. Financial funds should support the quantity and quality of agricultural training so that it can be offset by productivity differences between farms managed by trained farm heads and those who have only practical experience. According to calculations presented in Table 2, for the period under review is estimated 2.154 billion Euros necessary for both basic and full agricultural training. Improving education and training of farmers is a dimension without which progress can not be achieved in the agricultural sector.

Table 2. Result indicators on improving agricultural training programs of farm heads in 2018-2035

Indicator	Period 2018-2035
<b>Full agricultural training</b>	
Estimated amount for full agricultural training programs (mil. euro)	1822.25
Number of farm heads beneficiaries of full agricultural training programs	365,564
Total number of farm heads with full agricultural training at the end of the period	384,524
<b>Basic agricultural training</b>	
Estimated amount for basic agricultural training programs (mil. euro)	331.67
Number of farm heads beneficiaries of basic agricultural training programs	173,479
Total number of farm heads with basic agricultural training at the end of the period	287,229

Source: authors' own estimation

Thus, the proposal of agricultural training programs is an undeniable necessity. Agricultural training programs should be relevant, qualitative, inclusive, flexible, innovative, consultative, collaborative and transparent.

## CONCLUSIONS

Agricultural training of farm heads should occur simultaneously with the adjustment of agricultural structures, and in particular with the farm structures. In addition, this process should be accompanied by agricultural and rural policy aimed, primarily, attracting young farmers trained in agriculture. In the training field, it needs to perform a detailed assessment of the needs and requirements for the training of human resources, for supporting, the development of agricultural practical programs and training in agricultural education institutions and not least by encouraging and promoting appropriate forms to facilitate continues learning. It is noteworthy that many programs for the training of farmers has not increased farmers' incomes and not created new jobs in rural areas because they had a needs – based approach rather than asset-based approach [10].

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