NECESSITY OF SUBSIDIZING ECOLOGICAL AGRICULTURE

NECESITATEA SUBVENȚIONĂRII AGRICULTURII ECOLOGICE

F. H. ARION[1], IULIA C. MURESAN[1], DIANA E. DUMITRAS[1], M. JITEA[1]

[1]University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania; felixarion@usamvcluj.ro

Abstract: *Starting from the idea that Romania has a great potential for ecological agriculture because of the technology of productions used by small producers for the last two decades, the paper tries to observe the competitiveness of ecological agriculture and of farms that are in conversion process, using as comparative indices the gross margin value. The research was conducted using a survey on a randomized sample of the ecological farmers (certified and during conversion) from Romania. Result of the research permits to affirm that there is necessary to find solutions to subsidies farmers that are facing reducing of the gross margin during the 3 years of conversion.*

Key words *– multi-functionality of rural areas, public goods, agricultural policy, food, gross margin*

INTRODUCTION

Paper starts from the wide accepted idea that rural areas have to assume a multiple role. The first recognized one is to supply agri-food products and it comes from the definition of rural areas of The Organization for Economic Co-operation and Development (OECD), which stipulate it includes all localities with a density lower that 150 inhabitants/km^2 - this embraces all the individuals living in the countryside, towns and small cities, where economy is based mainly of agriculture and forestry (du Plessis, Valerie *et al*, 2001). With not a less importance the rural areas is required to provide public goods, which are, mainly, not possible to be commensurate as easy as the agri-food products. This includes, among other, the protection of the environment and of natural resources, the

preservation of local culture and traditions, the perpetuation of peasant's households and economy.

In such conditions, using rural areas for providing a combination of as many as possible of the functions in the same time will be more desirable, and the ecological system of agricultural production is a viable alternative. Ecological farming, as an alternative to conventional agriculture, requires production technologies hand labor, and therefore, it attracts additional employee in agriculture, conserving the traditional peasants' life style.

When Romania joins the EU in 2007, it becomes the only member state which did receive neither European nor national financial support for ecological agriculture. In 2010, Romanian Government adopted the Governmental Decision no. 759/2010, which granted fixed subsidies for farmers in conversion, the total amount being 3 million Euros / year and for 2012, is provided to obtain 4 million euros from EU funds.

MATERIAL AND METHOD

Organic farming has the potential to significantly contribute to protecting water and soil, biodiversity and climate change, providing public goods and serving the European market which is also rising.

Organic farming is a dynamic system in Romania with a weighted average annual growth rate of 23%. In 2011, it was estimated that the total area cultivated by organic production was 253 thousand hectares representing an increase of 2.6 times growth compared to 2006. From the total area, around 28% is covered by cereals, 19% by oleaginous and protein cultures, 14% pasture, while the surface used for collecting plants and flowers from flora is around 30%, based on information provided by Ministry of Agriculture and Rural Development.

The animal husbandry sector registered an increase especially for sheep, goats and poultry, in 2010 including 12761 bovines, 57678 sheep and goats, 537 pigs, 23.740 poultry and 119304 bees family.

The number of operators (producers, processors and traders) in 2010 was 3160, including: 2979 agricultural producers, 83 processors, 3 aquaculture production farm and 95 traders. The number of registered operators increased almost 3 times at the end of the year 2011, as a result of support granted in this year to ecological agriculture, as, from 2011, for the

first time, certified ecological farmers benefit of a supplementary direct payment of 153-400 Euros/hectare, but it not include the farmers which are in conversion period.

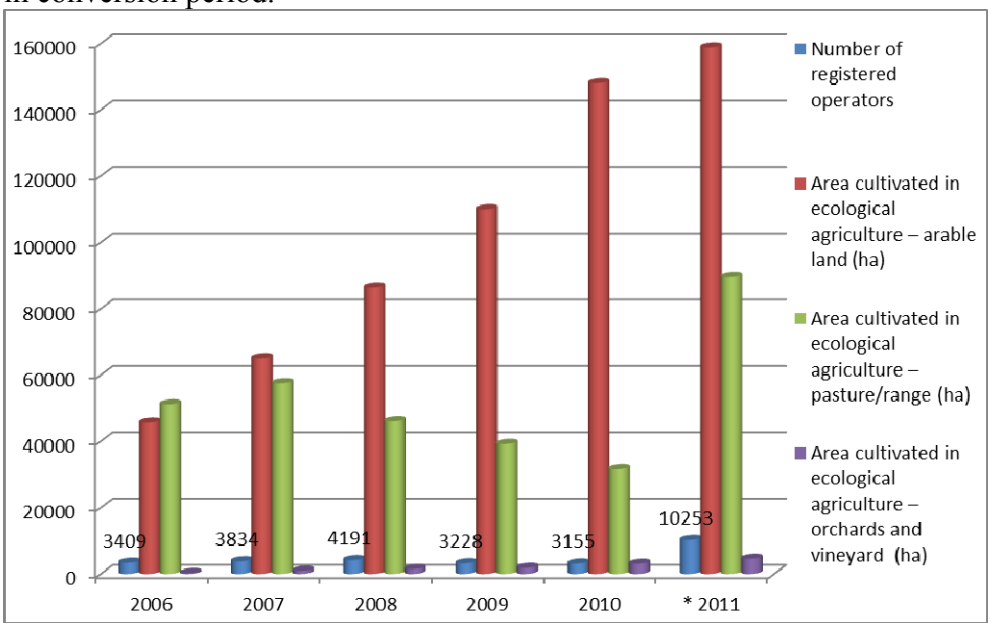


Table. 1 Arrivals and overnight stays in the establishments of tourists' reception
Source: Ministry of Agriculture and Rural Development, January 2012

The main objective of this research is to determine possible differences in gross margin per hectare recorded by an organic farmer (certified, but mostly during conversion period) against a conventional farmer. Comparative analysis of production costs and gross margin, by systematizing the results by field of activity and thus determine possible differences in these indicators for organic farmers (certified and in conversion period) and conventional in the same field, will be the basis for motivate the need to support organic farmers (certified and in conversion period) though specific measures of agricultural policy. The reasons is not to discourage ecological producers face to the competition with conventional agricultural products, being, thus, a useful information for ecological farmers, in conversion or considering conversion to organic farming system.

In order to observe the real difference of costs and gross margin of the farmers it was created and face-to-face implemented a questionnaire on two parts: firstly it observed the differences of the target group (from understanding, educational and social point of view) and secondly included contains questions that allowed to make the differences among the used technology of production of the surveyed farms, both on terms of costs and revenues.

RESULTS AND DISCUTIONS

From the total number of operators from ecological agriculture (certified and during conversion period), a number of 818 agricultural producers were included into a database of the ecological certified agricultural exploitations Priori agreed by Ministry of Agriculture and Rural Development in Romania, based on development regions of Romania, as presented in figure no. 2.

Table 1.

Distribution of farmers form database on development regions

Development Region	Farmers		
	During conversion	certified	Total
North-West	44	46	90
North-East	181	205	386
South-East	25	12	37
South-Muntenia	7	3	10
Bucharest-Ilfov	3	2	5
South -West Oltenia	12	2	14
Centre	104	150	254
West	14	8	22
Total	390	428	818

From the database it was determined a representative sample by simple random sampling method for a relative error limit of 6% at a confidence level of 95%, including 200 farmers (in fact, were surveyed 226 farmers, for a supplementary assurance that values the requirements). The sample was established by randomized selection of subjects from the total

population consisting of 818 agricultural producers included into the database and the sample has the same structure as the original population,

After the collecting process, the created database including information obtained, verified and centralized allowed to compute the differences in costs and revenues for different vegetal products (cereals, perennial crops, vineyard, orchards and pastures).

It was observed that for all analyzed cultures that the conversion period is the most difficult one in terms of gross margin, comparing both with conventional production and ecological certified agriculture. There is a system of factors that conduct to this fact: since productivity is closer to the certified one – as result of similar technology of production, the selling price is the lowest one – as result of the fact that production cannot be sell yet as being ecological certified and because the loss of economy of scale of the production and, finally, the costs of production per unit during conversion period is influenced by the costs of certification, being higher than the ones of certified farms.

Table 2.

Analysis of results

	Wheat			Corn		
	Conventional	Conversion	Certified	Conventional	Conversion	Certified
Production (kg/ha)	3,682	2,905	2,785	3,682	2,905	2,785
Price (RON/kg)	0.72	0.70	1.00	0.72	0.70	1.00
Revenue (RON/ha)*	2,651.04	2,033.5	2,785	2,651.04	2,033.5	2,785
Variable costs (RON/ha)	2,009.27	1,577	1,482.66	2,009.27	1,577	1,482.66
Gross margin (RON/ha)	641.77	456.5	1,602.34	641.77	456.5	1,602.34
Difference of Gross margin (RON/ha)	0	-185.27	+660.57	0	-185.27	+660.57

* Including subsidies

Both for corn and wheat it can be observed that gross margin has the lower values in case of farms that are during conversion period, determining a loss of 28.87% in case of wheat and of 34.46% in case of corn comparing with conventional farm, mainly because of the decrease of the production (with 22.10% for wheat and 27.99% in case of corn), but, with significant reduced values, because of slightly reduce of selling price, too. In the same time, the variable costs is reduced, as expected – because of reducing the

costs with agricultural machineries, chemical inputs, storage, (being only 78.49% for wheat and 67.85 % in case of corn from the variable costs of a conventional farm) and have a positive influence on the gross margin, but not enough to compensate the reduce of revenues as results of the above mentioned factors of influence.

But results shows that certified ecological agriculture has the potential to obtain a bigger gross margin not only comparing with farms during period of conversion, but comparing with conventional ones, especially because of the premium price obtained for certified products (38.89% higher for wheat and 73.08% higher for corn), mainly as a fact that almost 80% of production is exported and used to feed ecological certified animals husbandry production.

The social and economic impact of the activities result of the research offer the possibility to formulate some proposals, able to will lead to better results of ecological farming in Romania for the new Common Agricultural Policies past 2013:

- Establish a payment system for subsidizing products on their marketing chain from producers to consumers. At European level, subsidies are mainly the reason for ecological farming growth, considering that eco farming has a high contribution in sustainable development.
- Providing low interest loans;
- Directing funds in improving quality of researches in this domain, in order to offer producers technical solutions specific for ecological production;
- Promoting organic products within famous shopping chains. Organic products must have a significant role in supermarkets.
- Regarding exports, market niches have to be quickly exploited
- Consumers must be better informed, using specific marketing tools, considering the tags for example, and also the alignment of prices must be taken into consideration in order to increase domestic consumption.
- Coordinating and developing producers and consumers organizations and also subsidy system in order to encourage this type of activity;
- National and regional action plans have to be elaborated in order to influence organic farming development.

- Processing system requires a higher level of researching and financing. Exports nowadays are unfortunately based on raw materials.
- Encouraging marketing strategies along with delivering products right from the farm, promoting organic farming among farmers;
- Encouraging farmers to organize themselves in associative forms;
- Providing extension in marketing/distribution especially from public entities as Agriculture Chambers whose activities in this field are too little mentioned by farmers.
- Involvement of governmental/non-governmental entities in stimulation organic products consumption in public institution such as hospitals, schools, kinder gardens;
- Consumers information regarding positive effects of consuming this type of products on their health and also on the environment.

CONCLUSIONS

There are some issues that not permit a major increase share of ecological agriculture in total agriculture in Romania. It must be mention that only a limited number of producers know the real advantages of ecological agriculture and, in the same time, the process of conversion is difficult in term of money, time and human resources, as the requirements are strict and complex.

Increasing the number of agricultural based households and agricultural farms practicing ecological farming cannot be desired beyond the possibility of the market to consume the ecological productions. Knowing that ecological products are more expensive than the conventional one, it is expected that a conversion to ecological production of a share of 5% of total agricultural area is the maximum that consumers will accept to pay as agri-food premium prices products. In such conditions, the agricultural policy makers have not to promote a further development of ecological production further than those virtual limits and the subsidies for conversion must be directed to the exploitations which prove to offer, in exchange, the larger quantity of public goods - not only by protecting the resources and environment, but by maintaining the traditions and increasing the attractively of rural areas.

Acknowledgement: This study was supported by MAKIS, project no. 135135/2009 „Comparative study between production costs from ecological and conventional agriculture on vegetal production".

BIBLIOGRAFY

1. **DU PLESSIS, VALERIE; R. BESHIRI; R. D. BOLLMAN; HEATHER CLEMENSON**, 2001, Definitions of Rural, Rural and Small Town Canada Analysis Bulletin, Vol. 3, No.3 (November 2001), Canada
2. **POCOL CRISTINA BIANCA, ANCA AURORA POPA**, 2011, Perception study regarding organic beekeeping in the North West Region of Romania, Lucrări Ştiinţifice, serie Agronomie, Iaşi 54(2): 445-450
3. **EUROPEAN COMMISSION**, 2010, EUROPE 2020. A strategy for smart, sustainable and inclusive growth,
4. **ROMANIA**. National Institute of Statistics, 2011, Statistical Yearbook 2010. Romania National Institute of Statistics, Bucharest.
5. **ROMANIA**. National Institute of Statistics, 2011, Recensământul General Agricol 2010. Ministry of Agriculture and Rural Development, Bucharest.
6. **ROMANIA**. Ministry of Agriculture and Rural Development, 2011, Dinamica operatorilor şi a suprafeţelor în agricultura ecologică. Ministry of Agriculture and Rural Development, Bucharest
7. **ROMANIA**. The Romanian National Institute of Statistics, TEMPO-Online Database, www.insse.ro, January 2012
8. **ROMANIA**, 2010, Hotararea Guvernului nr. 759/2010 privind acordarea de ajutoare specifice pentru îmbunătă□irea calită□ii produselor agricole în sectorul de agricultură ecologică, Monitorul Oficial al României nr. 552 din 5 august 2010
9. **LUXEMBOURG**. Statistical Office of the European Union: EUROSTAT, http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/,January 2012