



Interactions of organic agriculture, rural development and environment protection

Z. Szakály, Cs. Sarudi, A. Máthé, V. Szente, A. Budvig

University of Kaposvár, Faculty of Animal Science, Institute of Economics and Organizations
Kaposvár, H-7400 Guba Sándor u. 40., Hungary

ABSTRACT

Rural development has recently been placed in focus in economic policy of developed countries. Rural development itself is considered as an answer to a circle of problems that covers economics with low income level, lack of alternative employment capabilities and migration from rural areas. Within national economy sectors it is ag economy that has the strongest connection with rural areas mainly because the rural area itself delivers the operation field and labour base of ag economy (especially of agriculture and forestry). Agriculture and forestry is the user and partially the producer of renewable resources, in other words they offer special environment economic services. In Hungary the biomass can be taken the most important renewable resource. Organic farming has a special place within food economy and this speciality can be connected to any function of the rural area. Rate of organic lands remarkably increased in recent years because not only of state subsidies but also of increasing demands and the ever growing sense for environment. This overall development reached Hungary, too. In December 2001 the estimations showed 79,187 ha and within this 49,490 ha had been registered as approved organic area. It means 1.3% of total agricultural land. Organic farming - as producers say - contributes to conserving the environment and the rural land. The same is stated by those consumers who decided to buy organic foods.

(Keywords: rural development, organic agriculture, environment protection, eco-tourism)

INTRODUCTION

Rural development has recently been placed in focus in economic policy of developed countries. Rural development itself is considered as an answer to a circle of problems that covers economics with low income level, lack of alternative employment capabilities and migration from rural areas.

Rural politics turned to be in foreground in the 80s and during 90s it was integrated into common agricultural and structural politics. It is well traceable that agricultural, rural and environment policies are more and more harmonised and its key point is the realisation the requirements of sustainable development. New tendency is that rural areas are gaining in value. It is an accelerating process originating on one hand from the need for the most complex manifestation of rural functions (economic, ecological, community as well as cultural and social functions). On the other it comes from the idea stating that rural areas are forming not only living space for the local inhabitants but offer necessary services for the whole society, therefore accepting and developing rural values is an interest of the society.

According to Buckwell's approach *rural environment* covers every aspect of natural environment (biodiversity, living spot and resources protection but also landscape protection) as well as of artificial environment (conserving traditional architecture, archaeological sites and other elements of historical heritage). *Rural development* includes local population, its way of life, employment characteristics, income structure, dwelling conditions, service levels as well as cultural aspects just as traditional handicrafts, dishes, language, clothing and habits. Since agriculture is a historically determining economic activity in rural areas its effects primarily determines the rural ways of life (Buckwell, 1997).

New rural development policy of EU can be featured by *multisectoral and integrated approach*. It can be clearly seen that agriculture plays an important role in conserving heritages of rural areas and creating alternative income resources is an integrated element of rural development politics. Rural development steps and measures are handled as complex "packages" by EU that can shape the *five main directions* of supporting rural areas:

- Strengthening agricultural and forestry sectors.
- Forestry is officially accepted as a key element of rural development.
- Improving competitiveness of rural areas.
- Conserving environment and European rural heritage.
- Environment friendly ag systems are supported through agri-environmental regulations.

AGRICULTURAL ECONOMY IN RURAL DEVELOPMENT

Within national economy sectors it is ag economy that has the strongest connection with rural areas mainly because the rural area itself delivers the operation field and labour base of ag economy (especially of agriculture and forestry). Ag economy ultimately determines the income positions not only of agricultural and forestry employees but of rural families and communities, therefore it is also a *settlement forming factor*. During production processes it has strong and direct connections with living environment, renewable natural resources, so it has an effect on natural environment (primarily on soil, surface waters, flora and fauna). Hence ag economy is multilateral, multifunctional social factor and its role seems to be a long term one.

Ag economy - in most countries - is the biggest land consuming sector. In Hungary the proportion of ploughland is 51%, forest 19%, vineyard and orchard 3%, grassland 12%. The sector practically covers as much as 85% of the country and it is an outstanding value in Europe. Perspectives of intensive land utilisation are excellent and this alone - in comparison with EU countries - can *strengthen the importance* of agriculture and forestry within rural development.

Ag economy has also an important role in employing the rural population, however the number of people employed in agriculture shows a constant decrease. Despite this decrease the number of ag employees is still twice as much than that of the countries with developed agriculture mostly because of the high ratio of agricultural area and high proportion of labour intensive branches as well as of high population density. An important aim of rural development to avoid the decrease the employment capacity of agriculture and forestry because during recent years only a small part of labour capacity released by this two branches was taken over by other economic sectors growing this way the number of unemployed people.

Agriculture and forestry mean *target markets* for other rural enterprises. Overall decline in agrarian sector, lack of capital, dramatic drop in level of investments, however, cut back the demand for industrial inputs and certain services. Shifting the sector into a growing line, in the same time, means additional markets for other sectors of national economy.

Agriculture and forestry is the *user and partially the producer of renewable resources*, in other words they offer special environment economic services. In Hungary the biomass can be taken the most important renewable resource.

The above mentioned special services include the conservation of natural environment as well as providing capacities for human recreation. Both activities are connected to the ecological function of rural areas and this way they ensure complex manifestation of other functions, the harmony with economic functions and through the latter they form the base of sustainable development.

Agricultural economy, however in a limited range, area and time, can fulfil certain *social functions* especially in areas where severe and long lasting employment problems occur, maintaining agricultural production seems to be unnecessary from economic points of view but from social political aspects - being no other chance of employment - still remains justifiable. Financial and moral consequences of taking up excessive and long lasting unemployment is definitely more severe than maintaining labour intensive and supported agricultural production. In this range one can found social land granting programs, raising the substantial level of poor population segments, forest cultivation, reculturing wasted grass- and arable lands (even in the form of public purpose employment) etc.

CONNECTIONS BETWEEN ORGANIC FARMING AND RURAL DEVELOPMENT

Organic farming has a special place within food economy and this specialty can be connected to any function of the rural area:

- Its economic role is represented by widening the range of employment, creating new workplaces, improving the population keeping ability of the area.
- Its ecological function is well connectable to environment- and landscape conservation and hence in an indirect way to maintaining biodiversity.
- Social and cultural functions mean in this context the revitalising and developing of traditional farming methods.

Organic (eco-) farming delivers an ever growing domestic and international market background for producers in rural areas covering the whole production chain from raw material to selling end products. It is important, however that organic farming has to be concerned as a complex and integrated system. It means on one hand that the shift to organic farming should include not only the production of organic raw materials but also the processing, packaging and marketing of them. On the other hand it is important to establish the organisational and interest forms and systems which cover the production itself, the equipment and genetic base supply, small and medium size processing facilities, packaging, advisory and marketing management. Regarding growing domestic and foreign consumption trends, good price positions, lack of export restrictions organic farming can turn itself into a new "alternative" employment segment in many areas of the country. In this way the previously ignored factor of rural development can potentially turn into a dinamising engine of regional development.

BACKGROUNDS OF ORGANIC FARMING

When *Rudolf Steiner*, the father of antroposophy, kept his first lecture on biodynamic agriculture in 1924 he couldn't even guess that 70-80 years later massive thousands of people would refer to his opinions. His method turned the interest toward the protection of environment and highlighted the importance that man should live *with* the environment instead of simply living *in* it. The new movement suffered a drop back during the war and the following years and not sooner than the 80s it began to emerge again and spread over first in developed countries (U.S.A., West-Europe) where population recognised the importance of environment protection mainly driven by oil crisis, acid rains, damaging ozone shield and the Chernobyl catastrophe in 1986. Spreading of this environment friendly farming method was effected (beyond ideology) by economic factors, namely the overproduction. By this method, even with smaller yields more healthy and better selling goods can be produced even for domestic markets. As a result the social acceptance of organic farming improved and the size of registered organic areas grew year by year.

Organic farming is based on the definition of ecology as former namings just as "ecological", "biological" represent it. Its basic aim is ensuring sustainable development whereas it uses again, from time to time to locally available reserves. Among basic principles of organic farming can be found the protection of soil and environment and this implies the usage of natural capacities of plants, animals and the landscape and willingly tries to improve the quality of the environment. Artificial add-on products are only limitedly used, synthetic fertilisers, herbicides and medicines are fully avoided (*Yuseffi and Willer, 2002*).

In Hungary, similarly to other countries the phrase of multifunctional agriculture came into foreground stating that yield level, production costs are no longer taken as primary indices but environmental effects, health effects, aspects of landscape value and employment issues get higher priorities. Organic farming as the most important breakthrough point has its potential for further development since more and more countries separate remarkable amounts of money for environment saving eco-producers for whom the obtained subsidies can cover the income gap caused by lower yield levels.

ORGANIC AREAS IN HUNGARY AND IN THE WORLD

Rate of organic lands remarkably increased in recent years because not only of state subsidies but also of increasing demands and the ever growing sense for environment. According to estimations organic area size is expected to dynamically grow in the near future. *Table 1* shows the changes in organic areas on continents between 2000 and 2002.

Table 1

Organic land size in the world, tsd ha

| Continent | January 2000 | January 2002 |
|----------------------------|--------------|--------------|
| Australia | 1,850 | 7,700 |
| Europe | 3,200 | 4,200 |
| North-America | 1,130 | 1,300 |
| Central- and South-America | 550 | 3,700 |
| Asia | 45 | 90 |
| Africa | 25 | 60 |
| Total | 6,800 | 17,050 |

Source: own calculation after M.Yussefi, H. Willer, 2002 and SÖL, 2000.

Beside Australia and South-America it is Europe where remarkable area increase can be observed. It can be stated that market demand for organic products is the strongest in Europe, as much as 46% of the world's organic product output is sold in this continent which possibly can be explained by its economic development level. As for production area size Italy has to be highlighted where the area size reaches 1,04 million hectares and in the last two years showed an increase of 32% (Yussefi and Willer, 2002).

This overall development reached Hungary, too. In December 2001 the estimations showed 79,187 ha and within this 49,490 ha had been registered as approved organic area. It means 1.3% of total agricultural land (SÖL, 2000). Table 2 shows the changes of registered and pre-registered organic area sizes in Hungary along with the number of producers from 1996 to 2001.

Table 2

Organic area size and number of producers in Hungary

| Item | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---------------------|-------|-------|-------|-------|-------|-------|
| Organic area (ha) | 11390 | 15772 | 21565 | 32609 | 47221 | 79178 |
| Number of producers | 127 | 161 | 330 | 327 | 471 | 764 |

Source: Biokontroll Hungaria Plc., 2002.

In recent years a remarkable growth in organic area sizes could be observed which potentially follows the tendencies mainly due to the National Agricultural Environment Protection Program. According to estimation within short time it can reach 300,000 ha and that is significant even in European scale.

TURNOVER OF ORGANIC PRODUCT AND CONSUMER PREFERENCES

Development can be understood in a wider aspect than simply explained by production size and producer number. Turnover on organic products increased also significantly reaching world-wide 26 billion USD in 2001. It means a 23% increase in market potentials when compared to previous year. Organic foods share on average 1.9% of total food consumption. The numbers indicate the growth of consumer number but also the

ever widening organic product choice. According to optimistic forecasts, by 2010 cca. 10-25% of total agricultural area will be turned into organic farming through the world (Yuseffi and Willer, 2002).

Organic farming - as producers say - contributes to conserving the environment and the rural land. The same is stated by those consumers who decided to buy organic foods.

In Germany (Hinderer, 1996) several market surveys were conducted in past years analysing the buying motivation factors in case of organic foods. While only healthiness had been placed first before 1996, in the same year highest rank was awarded to the following motives:

- 53% Ecology, ecological product
- 20% Healthy lifestyle
- 19% Rejecting industrialised agricultural production

According to a Dutch study about 50% of answers stated *healthiness* and 30% referred to *environment friendly production* as highest rank motive (ZMP, 1999).

In Hungary a market survey was designed and set by Székely in 1993 involving 713 organic food consumers and 1,000 control consumers. Highest motivation factors in buying organic foods were *health* (92.3%), *environment protection* (48.3%), *better flavour* (36.3%), *lower processing level* (23.7%) and *less packaging* (4.5%).

A year later organic product retail units and consumption were investigated by Bódi (1994) who conducted the survey in Budapest and in Szeged and asked 200 consumers and 16 retail handler. The consumers were exclusively organic product buyers. Their motivation rank showed *conserving health, improving wellness, environment protection*.

Mokry and Frühwald in 1999 found that on organic food market the best part (80%) of consumers decided to buy organic products because of the healthiness, 18% said that environment protection is the main aspect and only 2% explained the decision by the tastiness of the product.

Our survey involved 423 people and 87% of them thought the organic products to be more healthy than the traditional ones mainly because of reduced quantities of chemical residues (Szente, 2001).

After getting acquainted with buying preferences of consumers it seems to be worthy observing the special possibilities in marketing of organic foods.

ORGANIC FARMING, ECO-TOURISM AND ENVIRONMENT PROTECTION

European Union is supporting the development of rural areas, environment protection and conservation and maintaining landscape capacities. From 2002. the official channel of this support is the SAPARD frame program where one of the target activities is organic farming in a wider context, that means production, processing and marketing. Eco-tourism is also supported which serves for the environment in different aspects:

- *Recreation in rural environment*: contributes to development of rural infrastructure, improves the population keeping ability of the area and offers work places.
- *Offering organic foods*: Producer offers and sells locally grown organic foods for the guest.
- *Fairs, exhibitions, local eco-markets*: Displaying, offering and selling eco-products by regional or micro regional producers.
- *Organising programs*: traditional pig slaughtering or a simple animal fair can attract a number of visitors.

- *(Re)Forming architecture style*: traditional building materials and styles that reflect a certain nature based sense.
- *Innovation, offering high quality services*: targeting on conscious and self defining market segments.

In West-European countries a well proved method is to open up eco-restaurants and hotels, where the foods and dishes are prepared from controlled organic materials but even the architectural issues reflect the closeness to nature.

It can be concluded that organic farming respects the nature- and environment protection in multiple ways:

- First, the producer who fulfils the requirements of organic farming, regardless whether he decided by his own individual values or by economic interests.
- Second, the consumer, who serves for the environment when buying organic foods.
- Third, both of them since one of the crucial point of organic farming is optimising, and that is when both the producer and the consumer tends to achieve the highest available quality through the least minimal costs. Best alternative for it is the local selling of goods since in this way there is no pollution by transport emissions, no need for long term storage etc. Beside these factors the eco-tourism means another effective marketing channel.

REFERENCES

- BIOKONTROLL Hungária Kht.(2002). Éves jelentés. (Annually Report.) Budapest.
- Bódi, A. (1994). A biotermékek kiskereskedelmének és fogyasztásának analízisa hazánkban. (The analysis of retailing and consumption of organic products in Hungary.) Hallgatói szakdolgozat, KÉE, Budapest, 1-82.
- Buckwell, A. (1997). Towards a Common Agricultural and Rural Policy for Europe. In: European Economy, European Commission Directorate – General for Economic and Financial Affairs, Reports and Studies, No 5, Luxembourg.
- Frühwald, F., Mokry, T. (1999). Biotermékek belföldi piaca. (The domestic market of organic products.) Biokultúra, 6. 16-17.
- Hinderer, R. (1996). Átalakulóban a biotermékpia. (The organic product market in transition.) Biokultúra, 7. 4-5.
- SÖL (2000). Ökolandbau –weltweit auf dem Vormarsch. Ökologie und Landbau, 3. 2.
- Szente, V. (2001). Fogyasztói preferenciák a bioélelmiszerek piacán Magyarországon és Ausztriában. (Consumer preferences on the market of organic products in Hungary and Austria.) Hallgatói szakdolgozat, Kaposvári Egyetem, Kaposvár, 1-59.
- Yuseffi, M., Willer, H. (2002). Ökologische Agrarkultur Weltweit 2002-Statistiken und Perspektiven. SÖL, Nürnberg, Sonderausgabe, 74. 21-25. 86.
- ZMP (1999). Biotermékek piaca Hollandiában. (The market of organic products in the Netherlands.) 25. 1-25.

Corresponding author:

Zoltán Szakály

University of Kaposvár, Faculty of Animal Science

H-7401 Kaposvár, P.O.Box 16., Hungary

Tel.: 36 82 314 155, Fax: 36 82 316 705

e-mail: szakaly@mail.atk.u-kaposvar.hu