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## SUSTAINABLE FARM MANAGEMENT PRACTICES IN THE ENLARGED EU: A CASE STUDY OF INTEGRATED ECOFARM IN THE CENTRAL HUNGARY REGION

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### ABSTRACT

The integration to the EU markets has resulted in significant changes in production and market activities in Hungarian agriculture. Our case study found that efforts on product differentiation through quality improvement have been critical for staying competitive in the more liberalized market conditions. Diversification of farming and non-farming activities seems to be also important for farm management coping with production and price risks associated with agricultural production and marketing activities. Organic farming in Hungary is certainly one way of achieving success in competitive markets in the EU.

Lack of appropriate policy tools and shortage of new institutions to support Hungarian farms, which are in search for survival in the EU markets, obviously limit the enhancement of farming businesses in Hungary. Authors think that the Hungarian Ministry of Agriculture can do better job in informing everyone in farming businesses the available resources in the CAP framework. The delay in the payment for the tax refund is creating a serious financial problem for Hungarian agriculture. Prompt actions are required for policy decision makers in Hungary.

**Key Words:** Organic Farming, Hungary, EU, CAP, Sustainable Agriculture

Integration to the European Union (EU) has been changing agricultural activities and rural areas of Central European countries. Freer trade has created competition in agricultural product markets as well as input markets. For competitive producers, the integration has provided new opportunities for business expansion. For less competitive producers, the integration gave serious challenges, but enough chances to improve over all farm management practices.

Financial and environmental sustainability in farm management can be achieved through the practice of environmentally friendly agriculture. In Hungary, the group of farms, which is practicing environmentally friendly agriculture, is called as eco farms. Reduced use of agricultural chemicals and use of organic materials are the characteristics of eco farms. They have been able to enjoy premium prices in output markets even after the integration into the EU markets. Fertility of soils has been kept almost constant which enables eco farms to maintain certain levels of yields in the long-term. Eco farms can be considered as a model for successful farm management in the enlarged EU markets.

In this paper, we study a successful farm management case of 'Varga Eco Farm' in Hungary. Lessons learned from this case study should show the characteristics of farm management, which are necessary for farming organizations in the new members of the EU. The current situation surrounding Hungarian agriculture is explained first. Then, the case study of an eco farm located in the Central Hungary region is presented. Discussions on required characteristics for successful farm management in this region will follow.

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### Review of Environmentally Friendly Practices in EU25 and Hungary

New Common Agriculture Policy (CAP) of the EU recognizes three basic functions of agriculture: food production, environmental conservation and rural development. Organic farming has been encouraged under the CAP because of the practice of environmentally friendly agriculture and production of healthy food, and its contribution to sustainable rural development.

The production of organic products has been expanding in the EU 25 region. Table 1 shows a rapid growth in the agricultural area and the number of farms under organic farming. Especially, its land area has increase by more than 9 times in the past 10 years. 3.44 percent of the total agricultural land was under organic farming in the EU25 in 2003 (Research Institute of Organic Agriculture<sup>1</sup>, 2005).

**Table 1 Land Area (ha) and Number of Certified and Policy Supported Organic and In-conversion Farms in the Enlarged EU15**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Land Area	879,096	1,113,915	1,454,899	1,824,271	2,382,109	2,986,005	3,705,873	4,250,449	5,090,627	5,549,873
Number	36,080	48,655	60,578	75,422	95,223	115,040	136,290	147,508	162,020	160,458

Source: Research Institute of Organic Agriculture<sup>2</sup> (2005)

As for Hungary, the land area and the number of organic farms have also increased for the past ten years, especially for the past few years. 1.99 percent of the total agricultural land was under organic farming in Hungary in 2003 (Research Institute of Organic Agriculture, 2005). This ratio is not the smallest among the EU25, but is smaller than the EU25 average.

**Table 2 Land Area (ha) and Number of Certified and Policy Supported Organic and In-conversion Farms in Hungary**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Land Area	6,400	8,630	12,325	9,300	16,687	21,565	32,609	47,221	79,177	103,671
Number	50	80	105	120	137	330	451	471	1040	995

Source: Research Institute of Organic Agriculture<sup>2</sup> (2005)

In 2003, the proportion of agricultural sector (including forestry and fishery) in the total GDP was 4.0 %. In the same year the employment ratio of the sector was 6.2 %. The tendency of decreasing value added of the agricultural production resulted mainly from ongoing transition in the sector (e.g. reduced production, lack of well structured and clean market conditions, poor co-operation and integration ability of farmers, information supply among the market players and constrains in the development of agribusiness sector and food value chain etc.). The conservation of the natural environment and the protection of agro-environment have become increasingly important policy goals. The technology direction initiated by the National Agro-environment Protection Program (NAEP): "...the cultivation of premium quality, healthy, easily sellable products by means of ecological production technologies, is a contribution towards the protection of soil, water and biodiversity..." aptly expresses this tendency. It is worthwhile examining a progressive case of Hungarian organic farms in this paper in order to understand the current conditions and challenges facing the agricultural sector of the new member of the EU.

### The case of “Varga Ecofarm”

This farm is located in Pest County in the Central Hungary region, 55 km distance, north-east from Budapest between the rolling country “Gödöllő” and the mountain “Cserhát”. The role and importance of agricultural sector is well under the national average in this region either considering the contribution to the GDP or the employment share. The farm covers 65 hectares, from which arable land represents 55 hectares and pasture is 10 hectares. From the total land area 10 hectares is the owned land, the rest is rented. The crop production (maize, wheat, oats, rye, peas, Alfa Alfa etc.) is operated under low fertility soil conditions, because of poor hydrogen potential. The animal husbandry is based on varieties of native Hungarian breeding stock, which are very favourable for producing good quality bio-food products. Main farm products are different high quality organic dairy products (fresh milk, cheese, yoghurt, curds etc.), and pork products (bacon, sausage, ham, smoked chops etc). Milk processing is accomplished inside the farm, for processing of pork they hire an outside slaughterhouse near to the farm. In the central farm building there is a drink bar and a cellar restaurant, providing rural catering, agro-tourism facilities for 70 people. Tourist accommodation is not available yet. They can provide horse riding and guided tours service for tourist visitors. In 2003 there were 6 thousand visitors and the owner received domestic “young farmers grant” as well as Royal Dutch Award in organic farming.

The main branches and activities of the integrated ecofarm business include the following activities.

- Crop production activities
- Animal husbandry activities
- Dairy processing and marketing activities
- Agrotourism activities

Land use and soil conditions are as follows.

- Cultivated area is 75 ha: arable land is 58 ha and pasture is 17 ha, the total territory is under organic control
- Owned land is 10 ha, the rest 65 is rented
- Rend cost is 9000 HUF/ha = 34-35 € per ha
- Low fertility soil, poor hydrogen potential
- Crop production is focusing into the self-supporting animal feed products (maize, wheat, oats, rye, peas, Alfa Alfa etc.)

Livestock figures are as follows.

- Cattle: 32 milking cows, 12 heifers for breeding
- Pig: 60 sows, 500-600 piglets/year (1,8 litter/sow/year, 6,3 piglets/litter)
- Poultry: 300 egg-producing hen
- Horse: 6 brood-mares, 2 colts (2 year old)

Varieties of native Hungarian breeding stock in the farm are as follows.



- Hungarian „Red & White” cattle for extensive production of milk by pasture and hail (3500-4200 litres/cow/year)
- Hungarian „Mangalica”, a blond-curl pig, with slow growth and long breeding season for extensive pig production in pasture and feed (in 17-19 months 80-90 kg weight can be reached, slaughtered in 140 kg weight)
- Hungarian native „fallow,, poultry for extensive production of egg and broiler (pasture and feed)
- Hungarian „Furioso North Star” sport horse
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The present staffs of the farm are as follows.

- Top management: 3
- Technical staff: 2
- Administration, information service: 2
- Skilled workers: 9
- Not qualified workers: 9

Total number of employees: 25 people

Sales figures and farm income structure are as follows.

- Total farm income in 2004 was 60 million HUF (240 thousand € p)

Distribution of total farm income 45% dairy product 30% meat product 25% others (e.g. egg, chicken, vegetable, flour, agro-tourism etc.) The main channel in the present sales is KAISER supermarket (18 large wholesalers unit in country side) and 40 – 42 bio-product retailers and other shops in Budapest. Limited amount of the production sold for local purchasers (local buyers, visitors etc.).

Quality components of organic milk and pork are as follows.

- „Red & White” milk has a 3.8 – 4.2 % average fat content of and 3.2 – 3.6 % average protein content
- „Red & White” milk is a high quality raw material for curds and cheese
- „Mangalica” raw meat contains „fat-marble” veins and optimal fatty acid which do not increase cholesterol level of blood
- „Mangalica” provides a high quality raw material for different healthy meat product

According to the owner and general manager, Mr. Ferenc Moór, after EU accession of May 1 2004, the markets for their controlled organic products (fresh milk, plain yoghurt, yoghurt flavoured with different fruits, cottage cheese, flavoured cheese, salami, sausages, ham, bacon, bread etc.) have widened despite the general trend of the rapid increase in the availability of assortments of foreign food products imported from EU countries in the liberalized food markets of Hungary. The demand on “Varga Eco” quality products increased. Their products remained competitive receiving the same market prices even after the market liberalization. While other competitors (domestic and foreign) in the same category of products could not keep their mar-

ket shares and favourable prices, this farm was able to maintain the output prices and to expand market shares. Consumers could not accept the competitors' prices for the quality of products they offer. The strategy for product differentiation has been successful in the product markets.

Varga Eco farm was able to increase the total farm revenue from 60 million HUF (240 thousand euros) in the previous year to 65 million (260,000 euros) in 2004. The total net farm income was 6 million HUF (24,000 euros) in the same year. The source of this financial result was partly due to improved productivity and product quality. The figures such as nutritional contents of the milk, sperm index for artificial insemination and piglet per sow per year for "Hungarian Red & White" dairy cattle and "Mangalica" pigs have improved. Another important contributing factor for the improved performance is the farm's diversified production structure. Price and production risks are reduced and assets and labour on farm are more efficiently utilized through diversification of agricultural production.

Another achievement that this eco farm was able to accomplish is to develop a new market channel. A market for direct weekly sales of the farm's organic products to 170 families has been developed. Few months ago the farm also established a website ([www.vargabiogazdasag.hu](http://www.vargabiogazdasag.hu)) which can accommodate the promotion of direct sales. The owner expects that e-business tools can contribute to the enhancement of business opportunities in the future. Last but not least, as he said, 'internal employment stability' in human resource management earned through increased satisfaction of workers has been critical for improved performance. The owner has been making efforts to maintain good working conditions for the employees. The general state of health conditions of employees and workers was kept well. It has been a special advantage for the employees to eat different kinds of healthy food during the meal breaks every day. They all seem to enjoy the working atmosphere and environment. The relationship between the employer and employees has been well maintained.

The sources for the investment on farm were partly the owner's own resources and partly government sources through subsidy programs. In the total revenue of 65 million HUF in 2004, agro-tourism activities represented only 4 million HUF (16,000 Euros). Visitors paid for guided tour, organic meals served in the farm restaurant based on own gastronomy, eco-products on farm, horse riding, training for horse riding etc. The revenue generated from these activities is still small, but this creates great opportunity for the future diversification of farming activities. It would increase farm income in the future.

The negative impacts of EU integration on farm operation are originated from the changes in macroeconomic and social environment. Changes took place in the legislation and market regulations, the way agricultural administration is done, institutional conditions through the introduction of CAP regimes and the payment of subsidies. The administrative management by the Ministry of Agriculture failed to build up the proper EU conform institutional system and information system (Integrated Administrative and Control System). This has resulted in serious backlog in providing CAP payments to farmers in time. There were other problems from the mistakes of the agricultural administration, which conduced to long lasting farmer demonstrations.

Agricultural policy decision makers in Hungary should draw a lesson form the "learning process" of joining the EU in order to give the real answer for the questions: what are the major strategic and key issues in the proper preparation of CAP regulation?; what are the key factors of building an effective institutional system?; how can we improve information and knowledge provision which help producers and farmers adapt themselves to changing regulations in time?; and how can we improve capital formation ability of rural regions?

The financial administration introduced an overall audit of general sales tax system in Hun-



gary to fight against tax-frauds and postponed the payment of sales tax refunds to the designated recipients including many farms. The delay in this payment created a cash flow problem to many agricultural businesses including 'Varga Ecofarm'. For this farm, the refund of 25 million HUF was missed from the 2004 scheduled revenue. This fact formed a negative effect on the operative liquidity of the farm. Deteriorated payment reliability among contractors was also a general threat for this farm and many other farms.

In spite of this liquidity problem 'Varga Ecofarm' was able to initiate new investment projects on farm which include planning of a training centre building, establishing Internet homepage, installing animal health protection and hygienic equipment, building fence and farmyard run.

## **SUMMARY AND CONCLUSIONS**

The integration to the EU markets has resulted in significant changes in production and market activities in Hungarian agriculture. Our case study found that efforts on product differentiation through quality improvement have been critical for staying competitive in the more liberalized market conditions. Diversification of farming and non-farming activities seems to be also important for farm management coping with production and price risks associated with agricultural production and marketing activities. Organic farming in Hungary is certainly one way of achieving success in competitive markets in the EU.

The lack of appropriate policy tools and shortage of new institutions to support farms, which are in search for survival in the EU markets, obviously limits the enhancement of farming businesses in Hungary. Authors think that the Hungarian Ministry of Agriculture can do better job in informing everyone in farming businesses the available resources in the CAP framework. The delay in the payment for the tax refund is creating a serious financial problem for Hungarian agriculture. Prompt response is required for policy decision makers in Hungary.

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