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**INNOVATION AND RURAL DEVELOPMENT: THE SOLUTION
FOR THE HUNGARIAN BEE-KEEPING SECTOR**

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Abstract

Rural development has become more and more important issue in Hungary since rural areas also contribute to the efficiency of the national economy. Development of rural areas also very important issue in the European Union, which could contribute to the improvement of profitability of small family businesses, higher employment rate in rural areas as well as slow down the migration of people from rural into urban areas.

Nowadays the bee-keeping - as one of the activities can provide alternative income for small businesses in rural areas – has become more and more important topic in Hungary. Bee-keeping sector provides income roughly 15 thousands families in Hungary. At the same time it takes important role in the preservation of rural landscape, traditions and their regional values. However, the sector has serious problems, as well (for instance quality issues, competitors on the market, etc.). It can be stated that the market position of Hungarian honey can be preserved through the improvement of quality assurance and product development. These developments can be carried out by the utilization of national and European Union funds.

Key words: honey production, EU funds, product innovation, rural development

Objectives

This paper's objective is to analyze how the bee-keeping sector could contribute to the development of rural areas and provide income for people living there. The paper analyzes regarding the world and European Union trends of honey production and consumption, but draws the conclusions regarding the living conditions of Hungarian rural population.

Honey production in the European Union

Worldwide production of honey amounts to around 1.4 million tonnes. The EU is an important producer of honey, in terms of production volume. In 2006, EU production of honey amounted to almost 200 thousand tonnes, accounting for approximately 14% of the global production. Other leading producers according to their production shares are China (22%), the USA (6%), Argentina (6%) and Turkey (5%).

The EU is accounting for around 14% of the global honey production. A large part of this growth was realized in Eastern Europe, notably in Hungary and Poland. The new member states of Romania and Bulgaria also significantly increased their honey production. Due to the accession of these countries to the EU, the self-sufficiency rate of the EU increased by almost 10%, to approximately 60%.

The EU27 imported honey worth Euro 348 million in 2006. Developing countries together supply almost half of the EU's total honey imports. Imports fluctuated significantly between 2002 and 2006. This was due to large price increases as a result of import bans on honey from several countries, such as China and Brazil. These bans have been lifted again, because the worldwide supply of honey is decreasing and is resulting in high price increases.

The EU produces mainly polyfloral honey. The main monofloral honey that is produced in the EU is Acacia honey, as the black locust tree from which it is obtained is widely planted in Europe. The main producers of Acacia honey in Europe are Hungary, Bulgaria and Romania, although it is also produced in other EU countries. Other types are: linden blossom, heather, lavender, rosemary, orange blossom and sunflower honey. In Table 1 is presented the honey production of the individual EU member states.

The leading EU honey producers are Spain, Germany and Hungary. Production in Germany decreased by 5 per cent annually on average between 2002 and 2006, which was caused by a decreasing number of beekeepers and bee colonies. On the other hand, the production in Hungary increased in the same period. Overall, East European countries show a large average annual increase between 2002 and 2006. South European countries also show some surplus in production, for example Italy and Portugal. The Baltic States as well as the Nordic countries are very small honey producers, due to the cold climate. Although it does not yet appear from the statistics, the global honey production is currently decreasing because of the collapsing bee colonies, the so-called Colony Collapse Disorder. All big honey producers have been affected. This honey shortage resulted in an increasing honey price, and major importers are looking for other sources, such as Africa. Therefore, the future honey production in the EU is difficult to predict.

Table 1 - Honey production in the EU-27, 2002-2006, in thousand tonnes

	2002.	2004.	2006.	Annual change
Spain	32.0	32.0	n.a.	0 %
Germany	26.0	24.0	21.0	-5 %
Hungary	13.0	22.0	20.0	11 %
Romania	13.0	17.0	18.0	8 %
Poland	9.0	12.0	16.0	15 %
Greece	14.0	15.0	n.a.	7 %
France	16.0	14.0	n.a.	- 12.5 %
Italy	10.0	7.0	13.0	7 %
Bulgaria	7.0	11.0	n.a.	57 %
Austria	8.0	7.0	6.0	-7 %
Portugal	4.0	7.0	6.0	11 %
Czech Republic	6.0	n.a.	n.a.	n.a.
Slovakia	3.0	3.0	4.0	7 %
United Kingdom	3.0	8.0	4.0	7 %
Sweden	3.0	3.0	3.0	0 %
Denmark	2.0	3.0	n.a.	50 %
Finland	2.0	2.0	n.a.	0 %
Belgium	2.0	2.0	n.a.	0 %
Lithuania	1.0	1.2	1.3	7 %
Latvia	1.0	0.6	0.9	-3 %
Estonia	0.0	0.5	0.6	60 %
Luxembourg	0.1	0.1	n.a.	0 %
Ireland	0.1	0.1	n.a.	0 %
Netherlands	0.1	n.a.	n.a.	n.a.
Malta	0.1	0.0	0.0	-100 %
Slovenia	n.a.	n.a.	n.a.	n.a.
Cyprus	n.a.	n.a.	n.a.	n.a.

Source: CBI, 2008.

The 1221/97 EU regulation, which lays down rules for the implementation of measures to improve the conditions for the production and marketing of honey in the European Union. This objective is achieved through national programmes, which include measures in the field of technical assistance, control of varroasis,

rationalisation of transhumance, restocking hives and applied research in the field of beekeeping and apiculture products (CBI, 2008)

Honey production in Hungary

Hungary is one of the largest EU producers of natural honey, with production amounting to 19.7 thousand tonnes in 2006. A comparable producer is Romania, with a production of 17.7 thousand tonnes. Between 2002 and 2006, production in Hungary increased by 11 per cent annually on average. Hungary has around 15 thousand beekeepers, of which 5 thousand are hobbyists. Together they produce 15-20 per cent of the honey in Europe. The largest part of it is exported, mostly to West European countries. Only around 5 thousand tonnes is produced for domestic consumption. The most famous honey in Hungary is Acacia flower honey, of which Hungary produces around 10 thousand tonnes a year. About two thirds of the acacia trees in Europe grow in Hungary. Another Hungarian specialty is silkweed honey, which has a strong and spicy perfume and flavour. Other Hungarian honey comes from sunflowers, fruit trees, and rape. EU countries are losing honey bees at high rates. The bee losses in Hungary are small at the moment compared to other EU countries, amounting to 10-15 per cent of the total honey bees.

Hungary produces far more honey than it consumes, and is therefore able to supply its own market. Moreover, Hungary is only a small consumer of honey and the consumption decreased during the review period. - As Hungary is the largest EU producer of honey, supplying the West European market, Hungary is a strong competitor to developing country exporters. The production of beet sugar in Hungary also fulfils the domestic market demand. The Hungarian sugar refineries are owned by large international sugar companies. However, as in many other EU countries, the sugar production is decreasing due to the sugar regime reform, which could provide some opportunities for exporting cane sugar to Hungary in the coming years. Moreover, as no cane sugar is produced in Hungary, this niche market could be addressed, although the current market is expected to be small (CBI, 2008).

EU funds for rural development in Hungary

Experts' opinion is that agriculture will play important role even in the future in providing income for people living in rural areas as well as in solving social problems. Generally it can be stated that smaller the village, the importance of agriculture for people living there is more important. That is why the importance of agriculture in the economy and its increasing strategic role (such as healthy food production, landscape management, agricultural environmental protection) is quite evident (CSETE-LÁNG, 1999). The New Hungary Rural Development Programme set up four priorities that can be supported from the European Agricultural and Rural Development Fund.

These priorities are, as follows:

- Improving the competitiveness of the agricultural and forestry sector
- Improving the environment and the countryside
- Quality of life in rural areas and diversification of the rural economy
- LEADER programme, (Source: I3)

The ongoing financial period of the European Union (2007-2013) provides 5 billion EUR, roughly 1300 billion HUF EU support for the development of agriculture, rural environment, and regional development. The aim of the New Hungary Rural Development Programme is the creation of an agriculture that is competitive as well as ensures sustainable development in addition to strengthening market approach (I2).

Support to the bee keeping sector

Allocation of EU funds for investment in the bee-keeping sector is not as prominent as in other sectors such as cattle, pig and poultry sectors that are in compliance with the EU meeting standard measure. The bee keeping sector aims at focusing on supporting the establishment and operation of producer groups, as eligibility criteria of this measure are identical for all sectors.

Bee-keeping is significant in the following priorities:

- National Agri-environment program
- Alternative land use
- Production of bee pasture plants
- Rules of ecological animal keeping
- Bee-keeping
- Afforestation of agricultural lands
- Additional clauses eligible for support
- Establishing of subsidiary bee-keeping development forests

The Hungarian Bee-Keeping National Programme supports the sector to utilize the favourable conditions of the country thus improves its competitiveness and development. It results in economic benefits on the one hand, while on the other hand it is important in the maintenance of ecological balance and variability. Strengthening the social role of Hungarian apiary is very important, since it contributes to the economic development of rural areas, provides healthy and excellence quality apiary products for the population, and also ensures pollination by honey-bees. It would be very important to strengthen the cooperation within the apiary society and to implement new methods and tools, which contributes to business oriented farming of these people (I1).

Utilisation of the supports for bee keeping sector in 2008/2009 provided by the Hungarian Bee-Keeping National Programme can be seen in Table 2. Total sum of the subsidisation in 2009 is 3.940.000 EUR (1.051.073.800 HUF).

Table 2 - Utilisation of the supports for bee keeping sector in 2008/2009

Identification of support	Utilisation (in %)
National coordination of beekeeping training	77,01
Regional events, international seminars, conferences	74,54
Extension service	78,09
Practical training	65,35
Purchase of equipment regarding honey production	109,69
Purchase of new equipment	2,00
Medical protection against varroa acarus	71,85
Alternative protection against varroa acarus	97,88
Identification of hives and beekeeping accessories	100,83
Rationalization of migrant bee keeping, utilization of bee pastures according to seasons	81,21
Analysis of honey	112,62
Keeping numbers of bee colonies	0,00
Studying nosema disease	18,13
Building up meteorological bee observation network	100,00
Monitoring of the health of bees and environmental impact	87,63
Total:	92,00

Source: Kristóf, 2009.

As it can be seen, most of the funds have already been utilised as the average of all supports form is 92 per cent. However most of “keeping up the number of the bee colonies” has not been utilised at all. It predicts that most families do not want to deal with bee keeping in the long run, which will be one of the biggest problems of the sector.

Conclusions

The excellent Hungarian natural conditions provide the basis of high quality honey production. This high quality product has a stabile export market. Looking the trends of the international honey market the former Hungarian export markets are being influenced by South American and Asian producers. These products are cheaper, although the quality is lower. That is why the Hungarian bee keeping sector needs restructuring especially in the field of product development. These developments could be carried out by the utilisation of European Agricultural and Rural Development funds.

Based on the initiation of the EU Euroterroirs programme Hungary developed the so-called “Traditions, flavours, regions programme” (AMC, 2002). One of the main results of this programme was that all regions in Hungary could mark honey produced in the given region which would be very important for the potential consumers to identify the honey. This could serve also quality assurance issues.

Nowadays honey is not only a product but mostly to connect to healthy life style. From a research made by questionnaires in the North Great Plain region in Hungary turned out that emphasising that honey is a healthy product would increase the consumption (Arvane-Csapo, 2009).

Conditions of sales should be further improved. That means that a so-called “product” should be created from Hungarian honey. Unfortunately, currently Hungarian honey is exported in bulk. That is why the final packaging is done abroad so the foreign consumer does not meet it as Hungarian honey. Another issue is that the excellent quality Hungarian honey is often used for improving poorer quality Asian and South American honeys. Besides the market problems honey production is connected to rural development issues as well. Since bee keeping is one of the solutions to earn money in rural areas support to the sector is essential.

The 15 thousand families (about 60 thousand people) give 1.5 per cent of the total number of people living in rural areas. As it was mentioned before, the total subsidisation for this sector is almost 4 million EUR, which gives about 40 per cent of these families’ income. In this way this subsidisation has a so-called multiplicative effect, because without this subsidisation the government should “subsidize” these families. Based on our previous researches we think that the biggest problem in this sector is not the lack of the supporting system, but the cooperation between the actors. This could be eliminated through the creation of marketing strategy for the sector.

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