

CHALLENGES AND OPPORTUNITIES OF THE BEEKEEPING FAMILY FARMS MEASURED BY THE IDEA MODEL

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Abstract

Since composing the report of Brundtland (November 1987) several sustainability models and theories have been published which analyse the economic branches in detail from ecological, economic and social perspectives. More methods analyse the agriculture as a system but it shows a lack of micro-level analysis of farms and modelling of their sustainability. The French IDEA method was a response for this demand which means Farm Sustainability Indicators (*Indicateurs de Durabilité des Exploitations Agricoles*).

After the detailed examination of the foreign researches and the applied methods, our goal was to prove the applicability of the model in Hungarian relationships. For this objective we chose a small sector, the apiary, where we could collect exact data about the methodology of the management, sustainability and the realization. The results could answer the question if this model is adoptable in the research methods of the Hungarian farms and how sustainable the Hungarian apiaries are. It can show where the outstanding results and bottlenecks are.

Keywords: sustainable farm, indicators of sustainability, apiary, family farm

INTRODUCTION

One of the opposite effects of the spread of workshop sized farmyards and the rise of competitiveness is the fact that the need of environmental resources plays a bigger and bigger role. Having examined the rise of industrialized agriculture and the results of organic concentration, brings up the significance and sustainability of the livable and environmental model. The role of bee-keeping excels among the small, family-like homestead entrepreneurs, which can properly balance out the negative effects of industrial production and helps on the more and more popular and expected environmental thinking. The incessantly changing climatic conditions and the volatile market permanently challenge the people of bee-keeping sector. The Hungarian bee-keeping belongs to the very few agricultural sectors, which can achieve outstanding results under appropriate environmental conditions. In Hungary 88 percents of honey producers keep bees as a hobby or as a part time job and they are helped in physical work by their family members in 93 percent. (ÁRVÁNÉ, 2011)

During our research, we were curious if the homestead apiaries of Western Transdanubian region meet the criteria of integrated sustainability. (Ecologically, socially and economically) During our study made by the so-called French IDEA Model (*Indicateurs de la Durabilité des Exploitations Agricoles*), which is the abbreviation of the Indicators of Sustainable Agricultural Entrepreneurship we were looking for the answers to the following hypotheses:

Hypothesis 1: The beekeepers use developed technology that is why their production is economic

Hypothesis 2: The self-employed beekeepers generally use family workforce, which contributes the inheritance of the apiaries between generations, so the apiary branch socially sustainable.

Hypothesis 3: Thanks for the closeness of the Austrian border the honey in barrels is well realizable for export sale that is why direct sale is not used. The farmers do not take part in farm tourism, and do not contribute to the development of rural regions.

Hypothesis 4: The examined apiaries are ecologically sustainable, because they comply with the regulations and possess the tool, which are capable of conducting bee migration.

MATERIAL AND METHOD

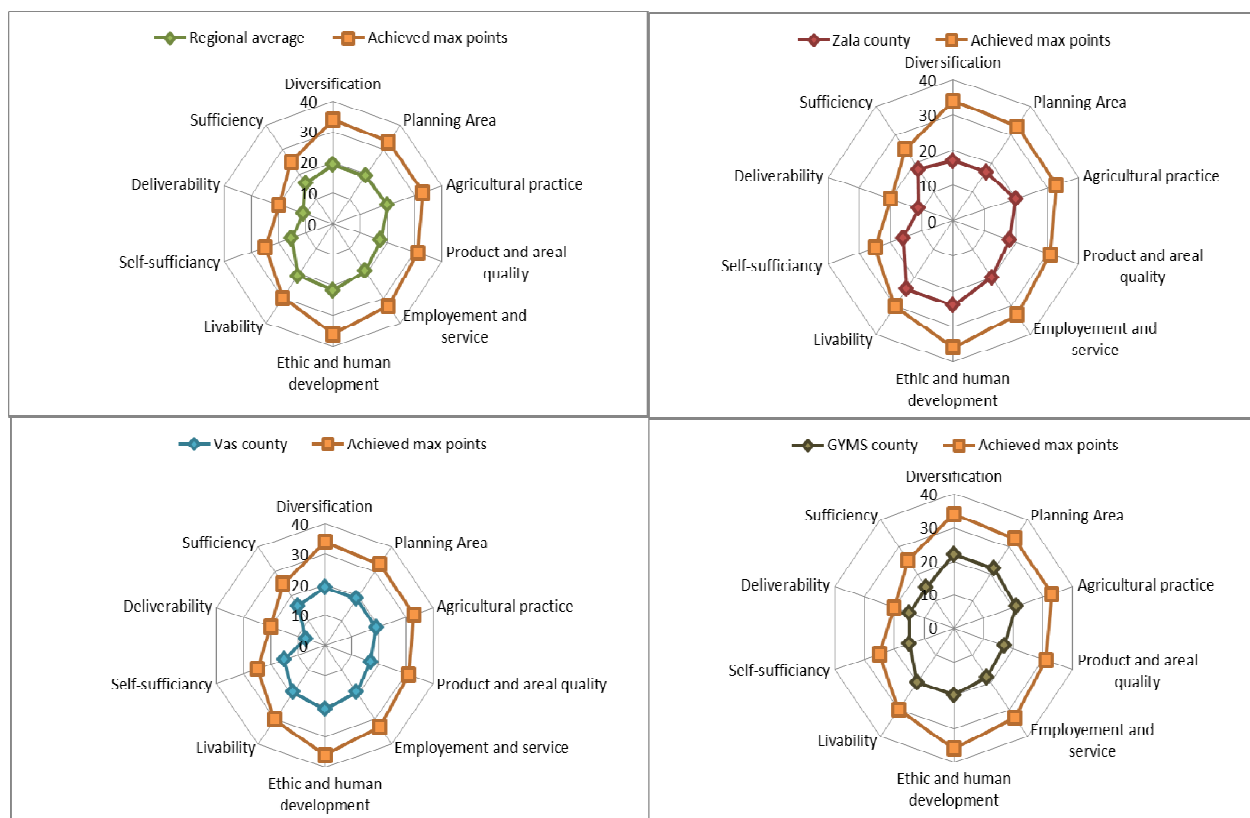
1. table: Scheme Adaptation of IDEA model in specific of the bee-keeping branch

| Factor | Indicators | Points |
|--------------------------------------|--|---------------|
| Diversification | Migration | 8 |
| | Permanent Premises | 7 |
| | Annual diversity of culture | 5 |
| | Preservation of ecological habitats by pollination | 8 |
| | Preservation and protection of genetically diversity | 6 |
| | <i>Subtotal:</i> | <i>34</i> |
| Planning area | Method of farming | 8 |
| | Using up organic materials | 6 |
| | Protection of Nature Reserve | 6 |
| | Planning the bee-keeping year | 8 |
| | Number of families | 5 |
| | <i>Subtotal</i> | <i>33</i> |
| Agricultural practice | Type of hive | 7 |
| | Frame size | 4 |
| | Acaricides and materials used in veterinary | 9 |
| | Nutrition supply (of the bees) | 5 |
| | Energy dependency (independency) | 8 |
| | <i>subtotal:</i> | <i>33</i> |
| Quality of areas and products | Quality of produced food | 12 |
| | Local evaluation | 6 |
| | Productivity of bee families | 12 |
| | Social mobility | 1 |
| | <i>Subtotal:</i> | <i>31</i> |
| Employment and services | Retail | 5 |
| | Services and pluriactivity | 5 |
| | Promoting employment | 11 |
| | Age | 3 |
| | Long-term planning | 9 |
| | <i>Subtotal:</i> | <i>33</i> |
| Ethic and human development | Co-operative sale | 1 |
| | Qualification and experience | 7 |
| | Work intensity | 7 |
| | Life quality | 6 |
| | Being informed | 9 |
| | Developing opportunities | 6 |
| | <i>Subtotal</i> | <i>36</i> |

| | | |
|-------------------------|--|----|
| Livability | Profitability | 20 |
| | Forms of Economic (additional costs) | 10 |
| | <i>Subtotal:</i> | 30 |
| Self-sufficiency | Economic self-sufficiency | 15 |
| | Reducing the sensitivity of direct subsidies | 10 |
| | <i>Subtotal:</i> | 25 |
| Deliverability | Deliverability | 20 |
| Efficiency | Efficiency of producing processes | 25 |

Source: Based on Villain, own edit

RESULTS



1. picture: Average regional and the averages of counties by the IDEA method (Source: Based on Villain, own edit)

We examined the results of IDEA in division of counties (see the 1. picture). The results are well explained in a cobweb diagram, which helps recognizing the strengths and weaknesses of the given farmyards.

As for Győr-Moson-Sopron county, it is shown that the deliverability is high, which means that bee-keeping is dealt with family farms, in which the young have high hopes for farming. The well-developed direct selling can raise the independency, hereby the economic sustainability. The developed infrastructure of the bee-keeping families contributes to process of migration that promotes the diversity and the ecological sustainability. As for Vas County,

the average points of deliverability differ from the regional average, which is explained by the farmers' ageing, and the lack of investments. After all the livability and the social approaches are acceptable thanks to the good market possibilities. These farmers are mainly "hobby bee-keepers". These people typically work or own only a few hives. Their main attraction is an interest in ecology and natural science.

In Zala county, the bee-keepers are generally the big farmers who have numerous territories for pasture lands. Their income are higher because of the cooperation's' realization. The infrastructure is well-developed so they are able to produce in volume of barrels.

CONCLUSION AND SUGGESTIONS

According to the results of the research the first hypothesis is partly acceptable, that the Western Danubian apiaries' production is economical, but it is not thanked just for the investments but for the bee meadows as well.

The second hypothesis can be accepted only in the case of Győr-Moson-Sopron County. In the case of the other counties we are talking about more the 50 year old farmer who are pursuing this bee-keeping as an additional one that way they are unable to hand the farmyards over the young.

The third hypothesis is acceptable, that the bee-keepers mostly producer for export, which means of the challenges of the family farms. In some cases the production of apiaries are not so varied, this way they are exposed to the international market's versatility. In order to decrease this threat it would be recommended producing other products and their processing, which could be done by the bees' productivity.

In ecological view (fourth hypothesis) the problems of the branch requires bigger attention. Although the indicators are considered to be average and good, still in some cases (for example in Vas county) the lack of technological development is detected. Besides, it is turned out from the questionnaires that so many bee family destructions happened, which can be due to the lack of information and weak expert opinions.

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