APITHERAPY

SURVEY REPORT

Increased Opportunities for Professional Development in Apitherapy Sector
2014-1-RO01-KA204-002705

BEEKEEPING IN HUNGARY

When people who are working in the honey or beekeeping sector hear the name of Hungary, automatically think to acacia honey. The cause of this is the fact that Hungary produces the greatest quantity in Europe of one of the most known and appreciated monofloral honey – acacia. Hungary owns the 2/3 of the acacia forests of Europe and has an annual acacia honey production of 10-13 thousand tonnes. This light coloured, mild aromatic honey deservedly made Hungary famous. Or is it Hungary who made the acacia honey famous?

A little country – a great beekeeper nation! Argentina, who is the organiser of the 2011 Apimondia congress, is a 30 times bigger country then Hungary and produces only three times more honey then our country. The surface of Hungary is just 0,9% of Europe's but we give 10% of the annual total honey production of the continent. Hungary gives his contribution (5%) to the 500 thousand tonnes of the world's honey trade. In Europe the bee density is 7 times higher then in the other parts of the world. Our country is on the second place concerning the bee colony density in Europe. These numbers speak for themselves.

The annual honey production is 25-30,000 tonnes. 80% of this production goes to export. The average annual internal honey consumption is 600 grams per head. This increases continually: 20 years ago was only 200 grams, 10 years ago 400 grams.

Besides the above mentioned numbers we can serve with several professional facts and points of interest which can be an example to be followed by the beekeepers of the rest of the world.

- An advisory network which is coordinated by the Hungarian Beekeepers Federation. In each county (there are 19 and the capital) a full time beekeeping advisor helps beekeepers in their everyday work and gives them support in order to be successful in applications.
- For more than 50 years a bee health network was established. Charged by the veterinary authority these beekeepers control all the bee colonies in their district, in order to screen the health situation. In our country American Foul Brood (AFB) is a disease which has to be reported to the authority. When AFB cases are observed, local quarantines are ordered, and samples are sent to specialized laboratories. In case when AFB is proven, beekeepers are compensated and their affected bee colonies are destroyed by fire in order to eliminate further contaminations. These strict rules had as a result the successful disease control in our country.
- Each beehive is equipped with an RFID (Radio Frequency Identification) tag which encodes an identification number. These tags which are hidden in beehives can help in protection and food safety matters as well.
- The beekeeping monitor network started his activity in 1959. In the past four decades in cooperation with the Research Institute for Animal Breeding and Nutrition (Research Group for Honeybee Breeding and Biology) in Gödöllő almost 100 beekeepers collected data about the climatic factors, blooming time and honey harvest results. This network is coordinated by the Hungarian Beekeepers Federation. In 2008 we started the reorganisation of this network by equipping the members of the network with meteorological data collectors. These climatic data appear online on the website of our association providing important information to beekeepers especially during blooming time of acacia. This can help to better organise the transport of beehives, and in long terms

may provide precious information for researchers in order to make useful forecasts about blooming periods and expected outputs.

- In order to popularize the honey consumption in 2004 the first Honey Knights Order was established. These days 6 of them are functioning in different places of the country. They appear in the honey fairs which are normally organized in autumn or winter, and they talk about the positive effects of honey on human health. For 16 years at the end of the beekeeping season an other important event is organised: on the first weekend of August a Honey Queen is elected. This should be a young lady who can speak foreign languages; and she has to have some connections to apiculture. Her duty is to promote Hungarian honey on TV, in newspapers, in schools and kindergartens.

In Hungary there are 15,000 beekeepers. According to statistical data 960,000 bee colonies are kept. The number of bee yards is decreasing contrarily the number of bee colonies shows a slight increase. There are more and more beekeepers with several hundreds of colonies. One of the biggest private beekeeping business of Europe (6500 hives) is situated in Hungary. The means of production are varied there's no uniform beehive or frame size. The most popular hive is the so called Nagyboczonádi which was first used in 1913 with 24 frames (size of the frame is 42 × 36 cms). The purpose of this hive is acacia honey production. In the hive beside the acacia blooming time two queens are working in the opposite side of the hive. Two weeks before the starting of the blooming (usually middle of May the acacia blooming time) the beekeeper removes from the hive the older queen and excludes the other one only for 3 frames. So the colony is becomes unnatural huge size. In the next two weeks 90% of the open brood are disappears. So when its blooming time, most of the worker bees are gathering acacia nectar (they do not have any job –like nursing). This is the most effect way to harvest the largest crop from the short blooming time of acacia.
Besides acacia Hungary has other important plants which are considerable in honey production: sunflower, rape and lime tree. The Carpathian Basin is rich in rivers and good quality soils, so the vegetation is more than sufficient for the high number of bee colonies. The beekeeping season starts in middle of April and lasts until the end of September. The honey producing months are May, June and July. In this short period most of the beekeepers are moving their colonies. Hungary is a relatively small country so bee hives transport takes only a few hours. Containers (moveable bee-house) are very popular is our country. These are special vans which can carry 40-60 beehives. This system can be very interesting for foreign beekeepers: hives are kept in three floors and an open corridor, which can be moved up or down, helps the work with bees.

The native bee variety is the Carniolan bee. This type which developed its characteristics during millions of years is well known by the beekeepers of the world. Its breeding is strictly controlled and only state approved queen breeders are allowed to carry out this work. There are 46 places in the country when Carniolan queen breeding is done.

This little country in the middle of Central-Europe by all means is worth to be seen by the beekeepers from the other parts of the world; here everyone can see interesting things and gain experience.

Figure 1: Honey production in the world

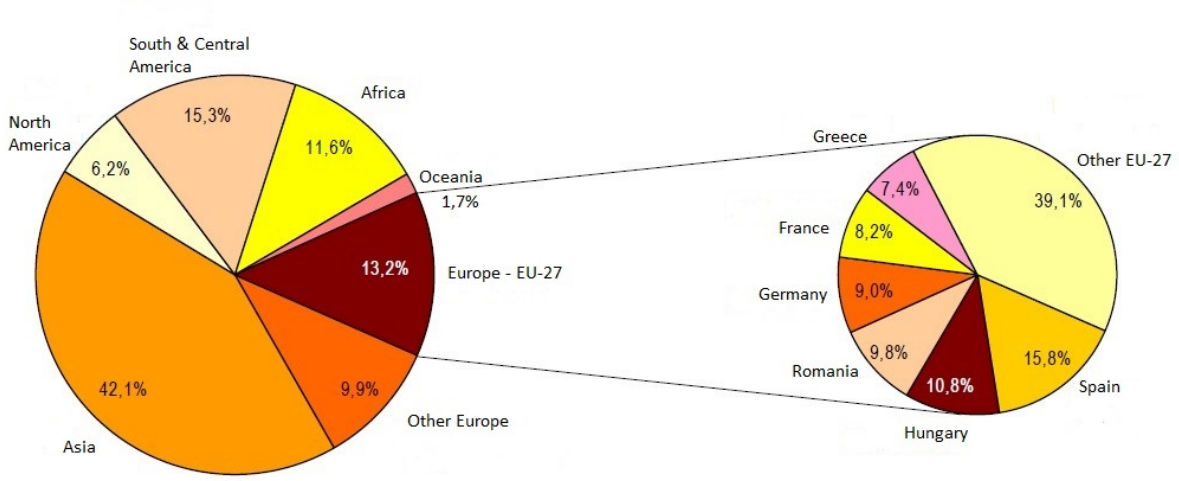
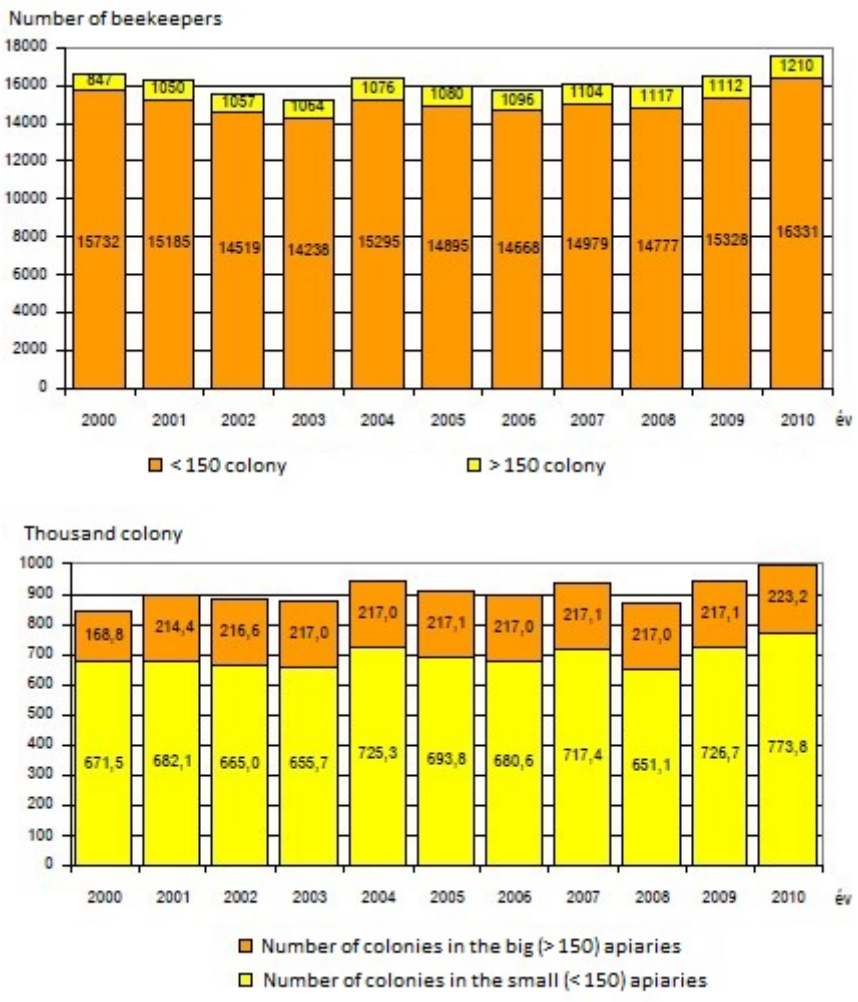


Figure 2: Beekeepers and colonies in Hungary



Sources:

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1. METHODOLOGY

In Hungary, the survey started on the 26th January, 2015 and ended on the 3rd February, 2015, by contacting various beekeeping associations via email and by giving the need analysis questionnaires to the beekeepers in person. 25 representative beekeepers is the total of people who participated at the APITHERAPY project's survey.

2. DEMOGRAPHICS

In Hungary, the respondents were 25 males, and their education level was mainly vocational education (40% – 10 people), primary and secondary school are the next frequent level of education (20% – 5-5 people), BSc degree (12% – 3 people), Msc (8% – 2 people) and PhD none. All respondents are the owners of a beekeeping farm (100% – 25 respondents). The most beekeepers have experience in beekeeping 6-10 years (10 respondents, 40%).

Demographics of respondents	
Age of participant	42 (avarage)
Gender	
– Male	25
– Female	0
– Total	25
Education	
– Primary	5
– Middle	10
– Higher	5
– BSc	3
– MSc	2
– PhD	0
Position	
– Owner of the company	25
– Employee	0
– Consultant	0
Experience in beekeeping sector (years)	
– 1-5	7
– 6-10	10
– 11-20	5
– 21 and more	3
Number of hives	62 (avarage)
Who offers you consultancy services	
– Agronomist	2
– Agricultural Engineer	2
– Veterinarian	1
– Other	20

3. A) Structural data to beekeeping farm

At the question about the number of hives the respondents have at their farm, the average number of hives used with a commercial purpose is 62, all of them have work experience in another field than beekeeping, and the majority of them have member of their families who work at their farm (20 persons – 80%), and only 3 (12%) of them have seasonal workers employed at their farm.

1. How many hives do you use as commercial in your beekeeping farm?	
The average number of hives used with a commercial purpose is	62
2. Did you come from another work experience before beekeeping?	
Yes	25
No	0
3. Have other members of your family employment on farm?	
Yes	20
No	5
4. Are there permanent (all year) workers employed on your farm?	
Yes	0
No	25
5. Are there seasonal workers employed at your beekeeping farm?	
Yes	3
No	22

4. B) On Beekeeping farm production

At question number 6, the most common answers given were honey (25 persons), propolis (15 respondents), bee pollen (4), bee wax (22), royal jelly(2), medicinal bee venom (0). All beekeepers sell the products made at their farm (25 respondents), and also they do a pre-processing of the bee products (25), packing their products at the farm (15) and in other places (10).

6. What kind of bee products produce in your farm generally?	
Honey	25
Propolis	15

Bee pollen	4
Bee wax	22
Royal Jelly	2
Medicinal bee venom	0
All	0
7. Do you sell your products from the farm?	
Yes	25
No	0
8. Do you do a pre-processing of bee products in farm?	
Yes	25
No	0
9. Where do you pack your products?	
At the farm	15
Other	10

5. C) Bee products and health sector information

10. Do you know what is Apitherapy?	
Yes, I know	15
I know partially	10
Unfortunately I do not know	0
11. What products are used in Apitherapy?	
Honey	25
Propolis	15
Bee pollen	4
Bee wax	0
Royal jelly	2
Medicinal bee venom	0
All of the above	0
12. Do you know the physiological properties of bee products?	
Yes	18
No	0
Partially	7
13. Where do you follow news about the use of these products in the health sector?	
Media	8

Scientific journals	6
Internet	11
14. Which one has more reliable information about bee products and health?	
Media	5
Scientific Journals	12
Internet	8
15. Do you feel a need for cognitive reference guide in the use of bee products in the treatment of some diseases?	
Yes, definitely	18
Rarely	7
No, I have enough information	0
16. Do you think you have enough information about using bee products in treatments?	
Yes	3
No	7
Partially	15

Based on the answers given at the need analysis questionnaire, Hungarian beekeepers consider they would benefit from learning about what apitherapy is and how they can use this knowledge in treating diseases.

17. Except for honey, which products have the greatest demand to you?	
Propolis	15
Bee pollen	4
Royal jelly	2
Medicinal bee venom	0
18. What product(s) do you need more information to bee products?	
Honey	12
Propolis	22
Bee pollen	18
Bee wax	24
Royal jelly	8
Medicinal bee venom	3
All of the above	0
19. Do you need to have more skills and knowledge related to apiteraphy, health protection and treatment of diseases?	
Yes	23

No	2
20. Bee products have been used in the treatment of diseases below. What are these diseases?	
Multiple Sclerosis	19
Treatment of infectious auto-immune	11
Cardiovascular, pulmonary, and gastrointestinal disease	24
Neuropathic pain and other chronic pain conditions	13
All of the above	6
21. Do you think that you need a special training of bee products in the marketing health sector ?	
Yes	20
No	5