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## Resources for Apitourism in Bulgaria

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*Abstract. The report includes an analysis of the current situation, trends and prospects of the resource base for the development of apitourism as an unconventional attractive and specialized type of supporting farmers through agricultural practices. The report presents the resource base (traditions, state, production and marketing of honey). For the aim of the analysis has been used data from the National Statistics Institute, Ministry of Agriculture, Food beekeepers' associations, processors and traders of honey and bee products, the Ministry of Tourism and tourism industry organizations. The main purpose of the study is to assist companies and individuals in the field of agribusiness and apitourism for the realization of bee products and services.*

**Keywords:** apitourism – honey tourism, honey and bee products, resource base and attractions.

**Jel Codes:** L83, O13

### 1. Introduction

The tourism industry is a major one for Bulgaria within the EU. It is a source of employment and an important tool for the fight against unemployment at regional and local level. Thorough research of the impact of the tourism industry shows a number of economic, cultural and environmental impacts (investment mistakes, hidden costs associated with mass tourism, wrong tourist policies and strategies). Excessive concentration in touristic areas can destroy local communities and local cultures, ecosystems and landscapes. Sustainable tourism practices developed as an alternative to traditional mass tourism are now trying to prevent degradation of the environment caused by mass tourism and provide greater competitiveness of Bulgaria as a tourist destination and also for sustainable development of the tourism industry<sup>4</sup>.

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<sup>4</sup> Ministry of Tourism of the Republic of Bulgaria: <http://www.tourism.government.bg/>.



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Specialized types of tourism (cultural, health, spa and wellness, eco, rural, api, wine etc.) have the ability to promote new tourist services specific and typical for rural areas. They offer products from local producers and create new jobs, as well as diversifying the range of services in tourism and support the functioning of modern holiday resorts.

Sustainable tourism, which essentially seeks to preserve and develop natural and cultural resources is the new face of alternative tourism. The main purpose of sustainable tourism development is to create harmony between the social and cultural environment, and maintaining a balance between ecology and economy in the long run. Alternative tourism or specialized tourism<sup>5</sup> is a collection of sustainable tourism forms and practices, which are aimed both at satisfying the individual interests and needs of tourists and the conservation of nature and culture<sup>6</sup>. The emphasis here is so far on a preserved environment, an authentic atmosphere and preserved traditions. This unusual and original alternative type of tourism is honey tourism or apitourism - the name of honey (home) bee - *Apis mellifera*, a Latin: *apis* - bee; *meli* - honey; *ferre* - wear whip.

Apitourism is becoming more popular internationally and internally. It is a niche that if used properly, can be a powerful catalyst for beekeeping in the country. The aim of the report is to examine the resource base for development of apitourism in the country and best practices between farmers, organic farming, local food banks and rural and ecological tourism. This will highlight the perspectives and trends in apitourism as a secure market for the excellent realization of the production of beekeeping and an additional source of income. The study aims to assist companies and individuals in the field of agribusiness and apitourism for the realization of honey and bee products, as well as to enrich the specialized types of tourism and tourist services at local and regional level.

## 2. Methods

The study has been performed based on combined methodology, including collection, processing and analysis of information on the development of beekeeping and apitourism in Bulgaria. Specific methods include research, collection and systematization of literature and Internet sources to the resource data base of bee products.

The interviewing method, interviews, analysis and synthesis of database parameters of available resources are attached. The purpose of the survey was to determine the number of apiaries of bee colonies and honey production in the country and its supply and demand. Classifications used in the survey are similar to those defined in Regulation 797/2004 / EC and Regulation 917/2004 / EC and supplemented with NSI data.

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<sup>5</sup> Tourism Law of the Republic of Bulgaria /Zakon za turizma/:  
<http://www.tourism.government.bg/bg/kategorii/zakoni/zakon-za-turizma/>.

<sup>6</sup> Levkov, K., Alternative forms of tourism. Artgraf, S., 2013.



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The study has been conducted in the summer of 2014. For purposes of the analysis has been used data from the European Commission, NSI, Ministry of Agriculture, Food beekeepers' associations, processors and traders of honey and products, the Ministry of Tourism and tourism industry organizations.

### 3. Results and Discussion

Bees are among the most perfect creations of nature. In a royal family there is a lean organization of life and work, order and cleanliness. An interesting fact is that bees recognize only three colors: blue, white and yellow (for this reason hives are painted in those colors). They are cultivated by man since ancient times. People are harvesting honey from 10,000 years. In China and India beekeeping was well developed 4,000 years ago. Indians have used honey in medicine as an antidote for plant, animal and mineral poisoning and believed that this is one of the five elixirs of immortality. In China 2,000 years B.C. people recommended the use of honey as a universal remedy. Honey, beeswax and propolis are used for conservation and embalming - the body of Alexander the Great was transferred from Asia at sarcophagus filled with honey, and the pyramids near Giza found preserved children's body, placed in a bowl of honey. Pliny the Elder (77 a.d.) devotes considerable space in his book "Natural History" of bees, honey and its applications.

Undeniable fact is that all countries with a highly developed and intensive agriculture today are experiencing acute shortage of pollinators of agricultural crops. The dependence on honeybees for pollination of the agricultural production is very strong. Bees pollinate 80% of flowering plants on earth, and with their help produce a third of the food, the value of which exceeds the cost of all bee products 15-20 times. Evaluation of the International Association for the Study of bees (IVRA), shows that this is 10% of the production value of the agricultural sector. The global contribution of bees to agricultural production in the preceding decade is estimated at 153 billion USD. The US share is about 15-18 billion USD, while in Europe - 14.5 billion<sup>7</sup> EUR and world production of honey is about 1.4 million tons per year, as the global market traded nearly 400,000 tons. The producers of honey in Bulgaria varies between 8,000 and 10,000 tons, which enables us to assess the market potential of pollination of about 1 billion EUR.

According to the FAO in 2011 the world production of honey amounted to 1.636 million tons<sup>8</sup>. Over the last decade, production has increased slowly but regularly, with two exceptions - in 2007 and 2009. China is the largest producer of honey with production of 446,000 tons, representing 27.3% of total world production. Second ranks the EU with 217,000 tons (13.3%). Other major honey producers are Turkey, whose production is constantly increasing, Ukraine and the United States. The share of South and Central America decreased due to a significant decline in production in Argentina since 2005 (Fig. 1)

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<sup>7</sup> Current positive effects on pollination - <http://m.greenpeace.org/>.

<sup>8</sup> REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT on the implementation of Articles 105 et seq. of Council Regulation (EC) No 1234/2007 on measures improving the general conditions for the production and marketing of apiculture products SEC(2010)655:  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0267:FIN:EN:PDF>.

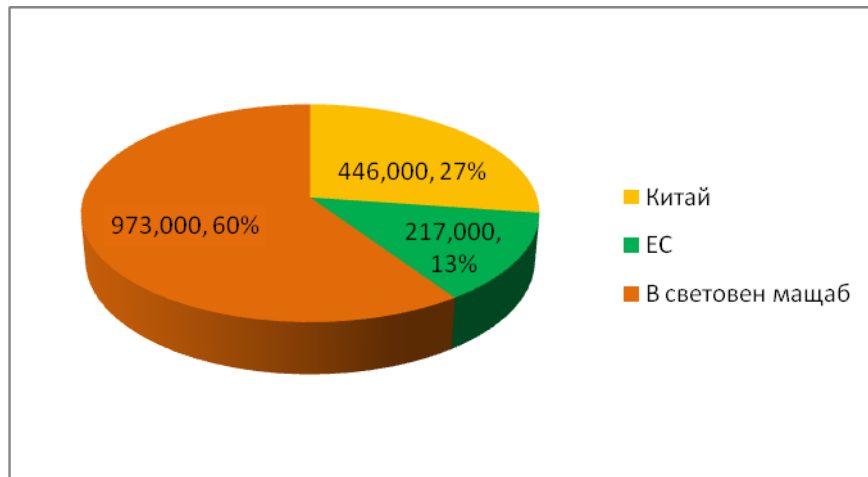


Fig. 1. Production of honey in the world

According to Eurostat, the production of honey in the EU was around 217,366 tons in 2011. Production in the EU slightly increased in the last five years (+ 6% since 2010) with negative and positive yearly fluctuations depending on weather conditions.

The EU is a net importer of honey, as honey production in the EU covers only 61.6 percent of its consumption. The level of consumption is stable over the years; its average value is about 0,70 kg for each person<sup>9</sup>.

Most major countries producing honey in the European Union in 2011 are as showed below (Fig. 2.)

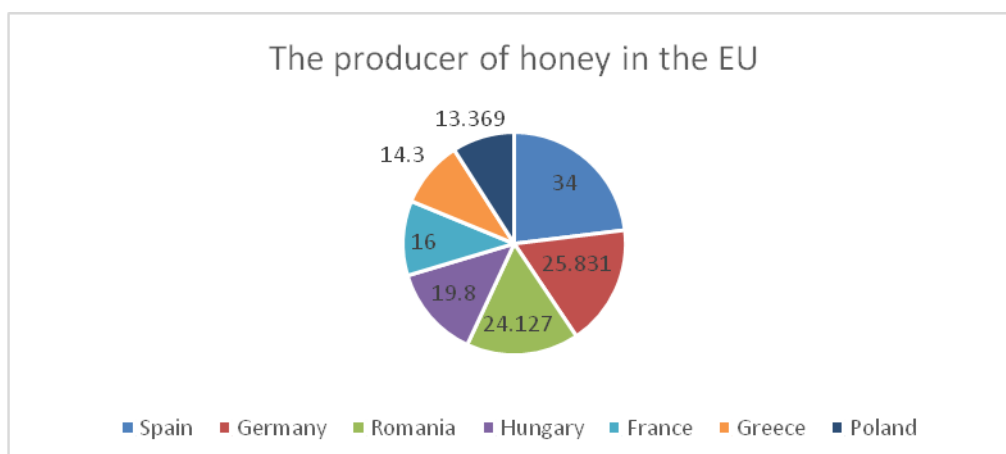


Fig.2 The producer of honey in the EU

In accordance with Regulation (EC) № 917/2004 Member States shall provide information for the structure of the apiculture sector in the context of development programs. Under these programs, the total

<sup>9</sup> The platform for EU Interparliamentary Exchange: <http://www.ipex.eu/IPEXL-WEB/>.



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number of beekeepers in the Union, in 2010, was 506,038, of which only 5.2% are considered to be professional beekeepers (over 150 hives). In 2010, the total number of hives in the EU was approximately 14 million, with about six million of them belong to professional beekeepers, i.e. 40% of the hives<sup>10</sup>. Professionalization is generally low in the EU, but can vary significantly across Member States (in Germany, for example over 99% of beekeepers are unprofessional, while in Spain 23% of beekeepers are professional).

Countries with the largest number of hives are not always the highest producers of honey - this is due to differences in environment (type climate, grazing bees, quantity of nectar density swarms, etc.) And the lack of a harmonized method in EU for monitoring the number of hives, leading to dramatic differences in the yield of the hive between Member States (between 9 and 51 kg. in the EU).

### **3.1 Conditions and Resources for the Development of Apitourism in Bulgaria**

The development of beekeeping in Bulgarian lands dates back to ancient times - Thracians, Slavs and Bulgars mastered to perfection the art of honeybee's nurturing. With the formation of the Bulgarian state for centuries our country was famous with large honey production and high-quality wax. After the liberation in 1878, beekeeping in the country began to modernize. Primitive, woven from twigs hives called "travni" gradually replaced by modern "parsing hives", but the traditions in beekeeping and honey production and bee products are preserved.

Honeybee has been formed under the influence of specific conditions and is spread throughout the country since time immemorial. Beekeepers grown mainly local Bulgarian honeybee *Apis mellifera macedonica* (*Apis mellifera rodopica*) type "Carnica"<sup>11</sup> in a broad sense. It is part of the biodiversity of the Republic of Bulgaria and the importation of foreign bee's species is prohibited. The characteristic dark color of chitin cover is typical for worker bees - on the dorsal side of the abdomen without large yellow spots and stripes. In a country of Bulgarian families, honeybees thrive and show no greater tendency to swarming – bees, swarm builds nurseries only when the nest completely absents empty cells. Bulgarian bee tends to "quiet" shifts of queen bees. With good care and the availability of grazing she was able to develop strong families and is highly productive, and in the absence of grazing - economically consumes its food stocks. Local bee is well adapted and resistant to diseases. It can withstand both high and low temperatures and overwinters well, which makes it desirable breed in organic beekeeping. National Breeding Association Beekeeping<sup>12</sup> guarded gene pool (search, reproduction and dispersal) of Bulgarian honey bee - restores and maintains its pure populations, improves biological and productive qualities of bee colonies.

Although the traditions and natural resources in the XXI century the beekeeping in Bulgaria remains mostly a hobby. Few are those who have made beekeeping a profession because still it is not an attractive

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<sup>10</sup> There is no legal obligation at EU level for registration of hives and collecting data on the total number of hives is not harmonized between Member States, so the information is not accurate.

<sup>11</sup> Stavrov, S. Porodi, rasi, pcheli: <http://pchelari.com/forum/archive/index.php?t-140.html/>.

<sup>12</sup> National Beekeeping and Breeding Association: <http://www.nrap-bg.org/main.php/>.



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sector, although the programs of the Fund "Agriculture", aiming to increase bee colonies. The natural resources of the country and especially honey vegetation make it possible to yield clean, high-quality honey, royal jelly, pollen, propolis, beeswax, bee venom and other bee products.

Bulgarian honey is exported successfully to EU countries and especially in Germany, which is one of the largest consumers of honey in the EU. The development of this subsector of livestock is favored by appropriate natural and climatic conditions. Our country is on one of the first places in Europe by diversity of vegetation. Much of the topography of the country allows for breeding colonies, but it is relatively low compared to other EU countries. Today, beekeeping represents alternative employment for the population of the less developed rural areas, providing additional income<sup>13</sup>.

Along with the above mentioned options should be noted that beekeeping can and should be used as a resource for development of apitourism. For this purpose, were studied apiaries as potential bases for apitourism, bee colonies and honey production for the past seven years - Table 1

Table 1. Main indicators of beekeeping in Bulgaria<sup>14</sup>

Indicators	2009	2010	2011	2012	2013	2014	2015
Number of bee farms	29 097	27477	21882	19283	17185	16143	17969
Number of bee families	617 420	613262	547676	529117	541564	577304	747434
Average production	16.2	19	20	20	21.1	18.1	19.2
Production of honey	9441	10595	9592	9186	10065	9268	11388

We observed that in recent years the number of farms breeding bee families is very dynamic, shown at Figure. 3.

<sup>13</sup> National Apiculture Programme 2014-2016: <http://www.dfv.bg/bg/selskostopanski-pazarni-mehanizmi/meso-i-pchelarstvo/-2014---2016/>.

<sup>14</sup> Ministry of agriculture and food of the Republic of Bulgaria: <http://www.mzh.government.bg/>.



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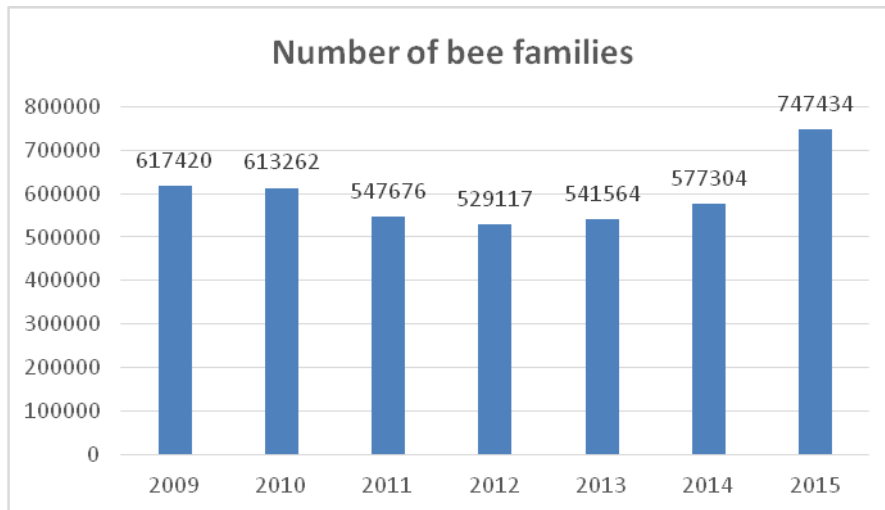


Figure 3. Number of bee families

The number of apiaries decreased almost twice in the period 2004 - 2009 and triple by 2014, but for the same period, there is resistance in the number of bee colonies, which is an indicator of the consolidation of the apiaries.

A characteristic feature of the sector is the large number of small producers (about 18,000), while the number of professional beekeepers, growers and more than 150 colonies (in Eurostandards) is very small. Beekeeping in Bulgaria still has extensive and fragmented nature. For most of the farms breeding colonies, beekeeping is still not a major source of income, but rather a complementary activity.

According to "Agrostatistics and Strategies" - MAF in the last seven years existing colonies in the country are between 550 and 750,000 pieces - Figure 4.

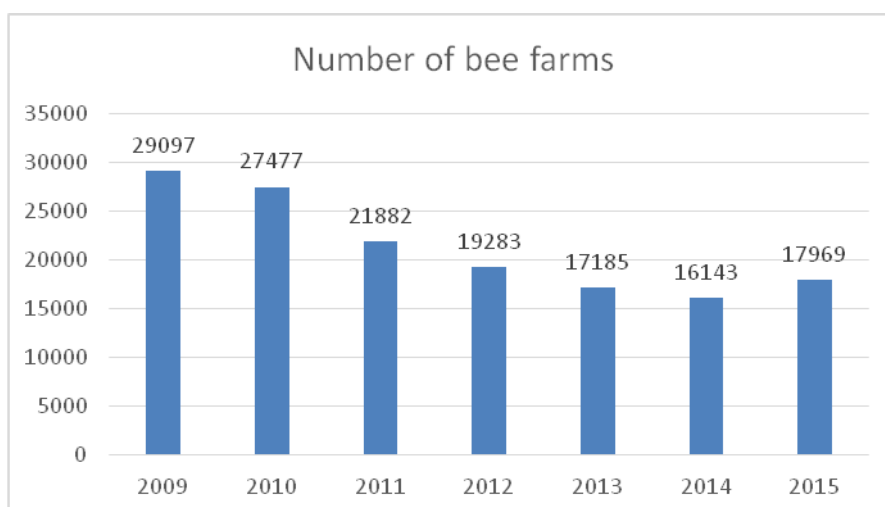


Figure 4. Number of bee farms



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The amount of honey varies from 9 to 11 tons per year. During the period, the average yield per colony amounts to 19 kg. - Fig. 5.

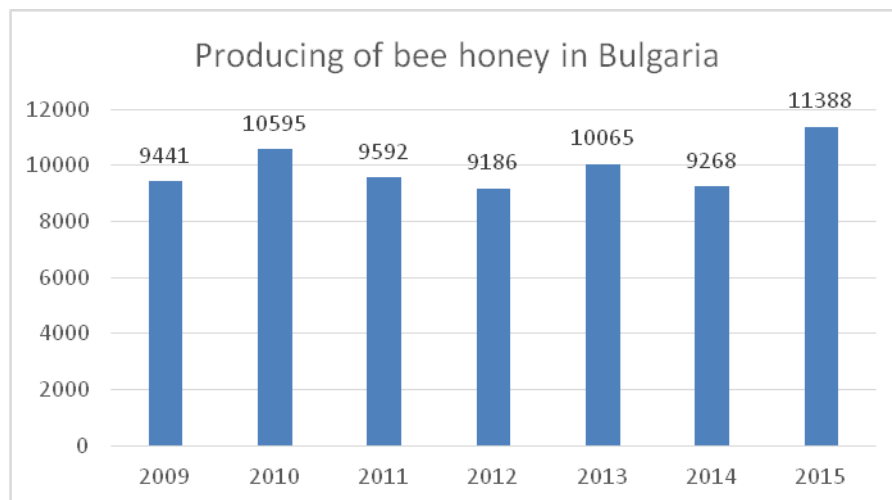


Figure 5. Producing of bee honey in Bulgaria

Honey is one of the agricultural products with a strong export orientation. In tough competition, Bulgaria has conquered foreign markets, especially in EU countries. According to the National Institute of Statistics, exports of honey has increased significantly compared to the previous period - about 80%. Traditional partners of our country for this product are EU countries. In previous years, the main export markets were Germany, Greece, and smaller amounts directed to Italy, Belgium, Austria and others.

In Bulgaria, domestic production can support the market year-round, so there is no need to import large quantities of honey. According to NSI data, imports of honey amounted to about 200 tons. As a whole, the sector needs introduction of new technologies, better control of the health status of colonies and measures to promote the realization of bee products, and these can be found in the field of tourism industry through apitourism and rural tourism and promoting production and sale of eco and bio products.

There is a need to better organize marketing of apiculture products. Commodity exchanges, auctions and markets, producers have not established themselves as traditional in the implementation of conventional or organic honey. In Bulgaria widely used are the unorganized markets in the form of individual negotiations between producers and wholesalers of honey - conventional and organic. In these cases, honey is traded as raw material and the price is formed mainly by organizational markets - large wholesalers. In consumer retail markets, the bulk of our market is dominated by retail chains that seek to mass sales and lower prices, and this affects the quality of the product due to the use of additives increasing quantity.

EU through its Common Agricultural Policy (CAP) encourages short supply chains of agricultural products, development of broadband internet and IT technologies in rural areas in the new reference





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period 2014-2020<sup>15</sup>. New opportunities for quality bee products through direct contact with customers rapidly growing social media sites of travel agencies, online bookings close to apiaries hotels and guest houses, as well as direct meeting with the tourists in realized apitours. It is in apitourism that producers of bee products have the ability to directly sell their products, and tourists have the right of informed choice about bee products specific to certain regions in the implementation of strict control and quality assurance<sup>16</sup>. From 2010 it has been given the right to farmers to sell milk, honey, poultry, rabbits and sausages from own production. Before this, Bulgaria was the only EU country in which direct sales from the farm to the consumer were not allowed.

Generally, direct sales can take place in the apiary and/or outside. International experience shows that direct sales from the manufacturer of bee products are well developed and spread in rural and ecological tourism apitours and routes.

Rural and various new specialized types of tourism provide good buying opportunities, tasting and consumption of these products directly from the manufacturer. Direct sales outside the apiary can be made by opening a stand on different markets of end users - municipal, farming, local and others. After more than six years since the direct sales permit, the greatest interest in direct sales is shown by producers of honey and bee products - from 456 farmers signed up for the implementation of direct sales - over 70% of them are producers of honey and other bee products that have the right to offer their products<sup>17</sup>.

New opportunities for realization of bee products provides direct marketing, through which besides beekeeper and the user can also take the initiative and offer to purchase using information from the media. For sending messages and receiving feedback can be used both traditional and online channels for direct marketing, mail, fax, telephone, SMS, email and internet. Direct marketing and personal sales enable manufacturers of bee products to establish new, healthy and effective relationships with consumers and attract them to apitours and visits to apiaries. Thus, they can lay the foundation for building a long lasting relationship with tourists, in non-mass markets. In this case, a favorable factor is the Internet, which allows a wide range of affordable procedures, even for small producers of honey products. They can turn their apiary into a tourist attraction, generating additional income from apitourism.

The interest in beekeeping today is growing rapidly because of the aspirations of contemporary society living environment, providing to eat clean foods and consume organic products. Besides honey and wax, our beekeepers began to collect and produce and other products such as royal jelly, pollen and propolis. A prerequisite for this are mainly two factors. On the one hand, the biological value of honey and bee products, due to the bouquet of nutrients:

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<sup>15</sup> Lyubenov, L., Hristakov, I. (2014). Markets and implementation of organic bee products. Scientific works of the University of Rousse, 2014, Volume 53, series 5.1., p. 50-55.

<sup>16</sup> Decree № 26 from 14.10. 2010 for specific requirements for direct supply of small quantities of raw materials and foodstuffs of animal origin Prom. SG. no. 84 / 26.10.2010.

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- enzymes / diastase, invertase, amylase /;
- amino acids - 18 type / lysine, proline, methionine, tryptophan, arginine, leucine and the like. /;
- vitamins / A, C, E, K, and group B - B1, B2, B3, B5, B6, B7 and B9 /;
- minerals / calcium; sodium; potassium; phosphorus; sulfur; magnesium; iron; chrome; zinc; manganese and the like. /;
- natural antibiotic substances.

This bouquet of beneficial nutrients is to be used not only as food for humans, but is widely used in medicine and tourism through apitherapy in the spa, spa and wellness tourism. Most of these components are taken by bees from the spontaneous flora, especially from medicinal plants. They are used in the preparation of "balm" for wounds; to boost immunity in children and the elderly; in the treatment of lung and gastrointestinal diseases and others.

#### 4. Conclusion

In ancient times the traders traveled the oceans and seas in search of new food products. Wine, honey, wax, oil, salt, furs and spices were a precious gift and exotic goods. In fact, things have not changed much today. The difference is that now tourists travel to find interesting places and to experience the unfamiliar tastes and cultures.

In apitourism tourists have the opportunity to taste the finished honey and purchase of elixir, which comes in a variety of options - clean, with nuts, with tahini, even with pieces of honeycomb homemade honey wine and brandy.

In Bulgaria, there is an excellent resource base for apitourism. This untapped tourism potential has sustainability and ensures good environmental and cumulative effects if developed. Insufficient knowledge, skills and competencies of honey producers and bee products severely restrict the sustainable use of these resources. They discourage innovation and limit the overall potential of the country for sustainable use of nature, development and management.

Adequate, but also advanced, territorial differentiated product policy in apitourism is needed and can be achieved through the elaboration of new strategies for development.

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