

STATUS AND TRENDS IN THE DEVELOPMENT OF THE BEEKEEPING SECTOR IN BULGARIA

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Abstract

The present study is aimed at the state and trends in the development of beekeeping in Bulgaria. There are not many studies devoted to the problems in the sector, but their importance for the development of beekeeping in Bulgaria is great, therefore clarifying them will improve the development of the sector. The need for the research stems from the fact that, despite the great opportunity for the development of beekeeping available to the country in recent years, the sector is not only not developing, but is facing a catastrophe. The main hypothesis is that beekeeping in Bulgaria, despite the good natural conditions for development, is too far from its potential. This stagnation of the sector has a certain reason. This is where the main goal of the study comes from. To identify the main reason or factor stopping the development of beekeeping in Bulgaria.

For this purpose, the main indicators of the state of beekeeping were analyzed. The main channels for the sale of bee honey and the quantities of production realized through them have been tracked. The largest buyers and sellers in the country have been identified and a comparison of the prices offered by them has been made. The external factors affecting the price and demand for Bulgarian honey have been analyzed. As a result, the reasons and circumstances leading to the negative trends in the sector have been established.

From the conducted research, we have reason to claim that the most significant factor affecting the development of beekeeping is the profitability of a bee colony. As the low profitability, in this case, stems from the adoption of bad legislative policies by the State and the EU, to the detriment of beekeeping. Which have led to price and quality dumping. As a result, local production is forced to sell at unrealistically low prices and the sector finds itself in great difficulty and on the verge of bankruptcy. Interventions are proposed that would help transform the sector into an attractive and profitable business. But a decisive role for the development of beekeeping remains in the hands of the state and European administration and their legal and financial policies aimed at the sector.

Keywords: beekeeping sector, beekeeping, negative trends, honey.

JEL code: Q10, Q12

Introduction

Beekeeping has been the subject of research by various Bulgarian institutions and authors such as the Ministry of Agriculture and Food (MAZH, 2024), the Institute of Animal Breeding Sciences – Kostinbrod (Hristov, 2016) and authors such as (Lyu-benov, 2021) (Koprivlenski, 2015) and others. Their reports, opinions and views, although they are aimed at beekeeping, are in different aspects of it or quite early years. The current research is focused on the reasons for the shrinking of the beekeeping sector in the last four years and the possible solutions to overcome this problem.

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The natural features of Bulgaria are very suitable and have predisposed the development of beekeeping in these lands since ancient times. There is (Basheva-Nikolova, 2023), evidence that beekeeping was one of the well-developed crafts at the time of the First Bulgarian Kingdom, even then Bulgarian honey was export-oriented and was sold in various trading centers such as Byzantium, Genoa, etc.

The country's ecosystem is practically very well preserved from pollution, about a quarter of the country's territory is mountainous and semi-mountainous, combined with more than 1100 species of pollinating plants (Hristov, 2016), which are the source of an extremely diverse palette of pollen and nectar. Adding the specific climate of the country, Bulgaria is one of the most suitable places for the production of ecologically clean and high-quality honey. Bulgarian mulberry and nectar honey are distinguished by extremely high taste and healing properties. In addition to the incredible aroma, taste and smell, the biological value is also due to the bouquet of nutrients – 18 types of amino acids, enzymes, vitamins A, C, E, K, B1, B2, B3, B5, B6, B7, B9, trace elements (calcium, phosphorus, magnesium chromium, etc.), natural antibiotic substances (Angelov, 2017). Due to these qualities, Bulgarian honey is a symbol of Bulgaria and finds a place in the most demanding markets in the world.

Despite the good prerequisites for the development of the sector, it is too far from its potential. According to Simova, considering the ecological-geographic characteristics of the country, it is possible to increase the number of bee colonies almost twice and reach 1.3 million bee colonies (Simova, 2007). Which, in turn, would seriously affect employment and improve the socio-economic status of small settlements. The good policy of the country and the EU managed to increase bee families from 529117 in 2012 to 867571 in 2019. But in recent years, low profitability and a sustained negative turn in the number of bee farms and families have been observed. Which is the main problem facing the beekeeping sector in Bulgaria.

The purpose of the research is to identify the main reason or factor stopping the development of beekeeping in Bulgaria and to derive solutions for the optimization of the processes in the development of the sector

To achieve the goal, the following tasks are set:

- To analyze the main indicators of the state of beekeeping;
- To establish and track the main channels for the sale of bee honey, the price and the quantities of production realized through them;
- To analyze the external factors influencing the development of the sector;
- To come up with solutions to optimize the development of the beekeeping sector in Bulgaria.

Methodology

Primary and secondary sources of information were used for the purposes of the study. The primary sources are official documents, statistical and analytical materials of the MHG. Secondary sources are scientific publications and the results of

interviews conducted with beekeepers and honey traders, on site and by telephone. Traditional scientific research methods were used: generally scientific – historical and logical; logical-theoretical – comparison, analysis, synthesis, induction, deduction. The study covers the period from 2020 to 01.08.2024.

Analysis of main indicators in the beekeeping sector

In Bulgaria, beekeeping is most developed in the regions of Dobrich, Silistra, Ruse, V. Tarnovo, Pleven in northern Bulgaria and Plovdiv region in southern Bulgaria. With the exception of the Plovdiv region, these are regions with serious socio-economic problems in small settlements. Beekeeping is a form of livelihood and helps to feed and sustain the people employed in the sector and their families in the villages. In order to familiarize ourselves with the state of the sector, we will follow the main indicators related to the development of beekeeping in Bulgaria.

✓ Number of bee farms

Since the 2020s, a shrinking of the beekeeping sector has been noticed, mainly by bee farms and families. A process of losing interest in the sector, which has been on a constant rise for the past eight years, is beginning. For 2019/2020, the decrease in bee farms is 15.6%, see graph 1. for 2020/2021 the decrease is 7.1%, for 2021/2022 it is 5.3%, for 2022/2023 is 7.7%. For the considered years, 4,338 owners of bee farms gave up. About a third of the beekeepers in Bulgaria according to data from the Ministry of Agriculture and Food (MAZH) (MAZH, 2024), and the expected forecast for 2024 is a drop of another 7%. In comparison with the Czech Republic, the number of employed in the sector has reached 61,572 beekeepers, and its area is 78,864 km², significantly smaller than Bulgaria's area of 110,994 km², and the natural conditions are less favorable for beekeeping than the Bulgarian ones.

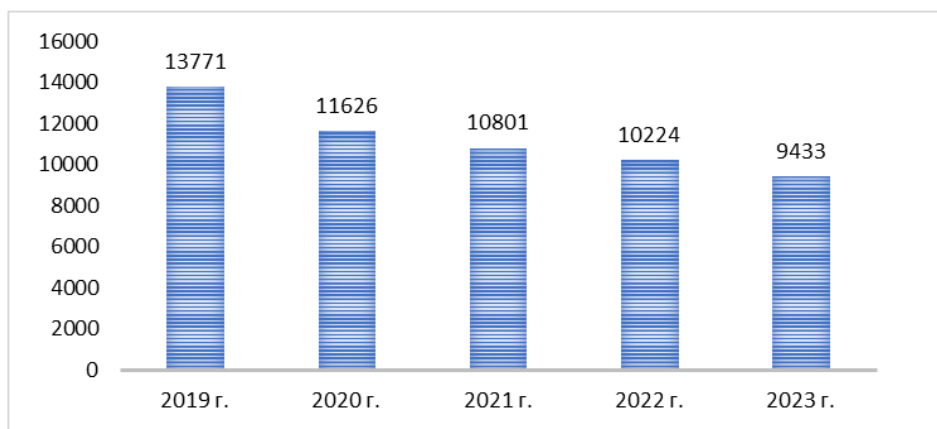


Figure 1. Number of bee farms in the last five years

Source: According to data from the Directorate of Agrostatistics at the Ministry of Agriculture

✓ Number of bee families

The situation with bee colonies is a little better than the previous indicator, for 2019/2020 the decrease of bee colonies is insignificant by 0.5% see (fig. 2.), but from 2020/2021 the decrease is already 2.9% for 2021/2022 is 1.8% for 2022/2023 is 0.8%, or by 50,888 bee families have decreased for the period under consideration. The expected forecast for 2024 is a drop of another 5%. All this speaks of a permanent negative trend in the beekeeping sector.

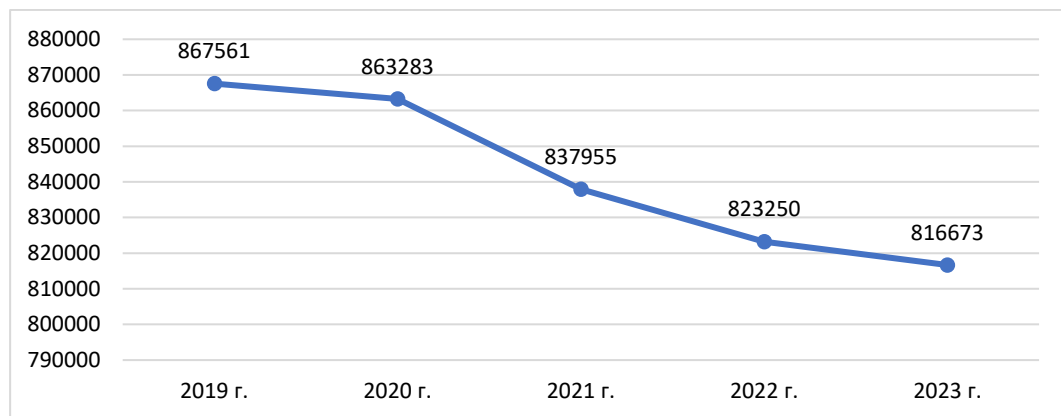


Figure 2. Number of bee colonies in the last five years

Source: According to data from the Directorate of Agrostatistics at the Ministry of Agriculture

✓ Average number of bee colonies per farm

The only indicator with a lasting positive trend is the average number of bee families per farm, for 2023 it was 86.6 hives per bee farm, compared to 2020 the average number of families per farm was 74.3, for 2021 it was 77.6 and for 2022 is 80.5. Which shows that there is a stable trend towards the consolidation of bee farms.

✓ Production of honey

With the production of honey, the sector has also been doing relatively well in recent years, for 2021 – 11638 tons, for 2022 – 11944 tons, for 2023 – 11189 tons. Average honey yield from one bee colony for 2023 g. – 17.8 kg. These are relatively good indicators, especially considering the climate changes in recent years. But in addition to the good yield, in order for the producers to be satisfied, it must also be realized at a good price for honey.

Price and realization of bee honey in Bulgaria

Since the main source of income for beekeeping farms is the sale of honey (Lyu-benov, 2020), the problems and dissatisfaction in the sector come from the low purchase prices of honey. Honey is sold in Bulgaria mainly through three channels.

- ✓ **Direct sales to the end user**, for 2023, according to the Ministry of Agriculture 2392 items were sold in this line at an average price of BGN 8.96.
- ✓ **Sales to retailers**, for 2023, 483 items were sold at an average price of BGN 7.44.
- ✓ **Wholesale sales to buyers from industry and processing enterprises**, for 2023 are 5,740 items at an average price of BGN 4.40.

The remaining amount of unsold copper of 2574 tons or about a quarter of the production for 2023. are in the warehouses of the beekeepers according to the data from the Ministry of Agriculture (MZH, 2024). This is due to the dissatisfaction of beekeepers with the low purchase price.

At first glance, the listed sales prices in the first two channels do not seem low. But let's not forget that for these sales to happen, the manufacturer must have gone through the investments/expenses not only in production, but also in processing, packaging, logistics, and trade, which costs not only funds but also time, which not everyone has available. Due to these circumstances, the main part of the produced honey goes through the wholesalers.

After the research, the following stood out as some of the most significant buyers of bee honey for Bulgaria: "YOT GI VAL BULGARIA" Ltd., Targovishte, Apimel Ltd., Rakovski, Apitreid, Plovdiv, RAM Commerce Ltd., Maslarevo. Over the years, the prices offered by these traders diverge to a certain extent with the prices indicated by the Ministry of Agriculture, in a negative direction.

Table 1. Purchase prices of bee honey in BGN

Honey wholesalers	2022 г.		2023 г.		as of 1.08.2024		changed in%	
	Conven.	Organic	Conven.	Organic	Conven.	Organic	Conven.	Organic
"YOT GI VAL BULGARIA" Ltd., town of Targovishte	BGN 5.5	BGN 6.5	BGN 4	BGN 4.5	BGN 3.8	BGN 4.5	-31%	-31%
Apimel EOOD, town of Rakovski	BGN 5.2	BGN 6.2	BGN 3.9	BGN 4.5	BGN 4	BGN 4.6	-24%	-26%
RAM Commerce Ltd. Maslarevo village	BGN 5	BGN 6	BGN 3.8	BGN 4.3	BGN 3.8	BGN 4.3	-24%	-29%
Apitrede, town of Plovdiv	BGN 5.5	BGN 6.3	BGN 3.9	BGN 4	BGN 4	BGN 4.5	-28%	-29%

As clearly seen in Table 1, prices have been going down in recent years for all four firms. As the cent drop range, between buyers for conventional and organic honey varies between 24% and 31%. The average offered price for conventional honey for

2024 is 3.9 BGN or 1.95 EUR, for organic 4.4 BGN or 2.20 EUR, close to the price of a coffee. Beekeeping companies warn that they expect multiple bankruptcies. A significant part of the beekeeper's state that they did not give up only because there are contracts concluded with the State Agricultural Fund and they are subject to sanctions in case of suspension of activity.

Analysis of the external factors for the development of the sector

Bearing in mind the serious inflation and increase in the prices of raw materials and resources in recent years caused by the Covid pandemic and the invasion of Russia in Ukraine. Even if bee honey had kept the prices of three years ago, bee farms would still have low profitability. Unlike all other goods, the price of which has risen several times. There were appeals from the sector to the Ministry of Agriculture to take adequate measures on the problems. But the intervention of the state was expressed in three compensations for two years of 6/7 BGN per beehive. It cannot be considered that we have compensated the producers' losses with these funds. That ended the state's support to the sector.

According to producers and traders, the reason for the low purchase price of honey is the import of honey from Ukraine. Taken together, the European Union (EU) countries are the second largest honey producers in the world after China. Every year, around 600,000 beekeepers and 17 million hives in the EU produce 250,000 tons of honey. But the consumption of copper in the EU cannot be covered by the production of copper in the union and imports are required. In 2023, the countries of the European Union imported 163,700 tons of honey from third countries, the value exceeding 359.2 million euros. Eurostat (Penchev, 2024) data show. This import was there in the past years as well, but it did not manage to influence the price to such an extent. The price collapse began with the opening of the EU market for honey imports from Ukraine. For 2023, Ukraine has imported 45,800 tons of copper to the EU duty-free. On the one hand, Ukrainian honey manages to undercut the price in the EU, on the other hand, significant quantities of it are brought into Bulgaria, repackaged and exported as Bulgarian. EU member states also do this practice. For 2022, according to official data, 5,000 tons were imported into Bulgaria, of which 3,000 tons came from EU countries, the main ones being Poland and Greece (Agro, 2024). According to Directive 2001/110/EC, when honey originates from more than one Member State or third country, an indication of the countries of origin may be replaced by one of the following indications, as appropriate: "mixture of types of honey originating in the EU", "mixture of types of honey originating outside the EU", "mixture of types of honey with EU and non-EU origin". considering that the above-mentioned labels are not informative enough and it is very misleading considering the different qualities of honey of each of the EU countries for the final consumer (Erdoş, 2018) The labels also lack data on pollen and other indicators that would precisely differentiate in quality honey. A large part of this so-

called honey, not only does not have its beneficial and healing properties, but also contains products such as glucose-fructose syrup, which is a prerequisite for various diseases. Bee honey is one of the most adulterated products.

Despite numerous protests by beekeepers in previous years, the import of low-quality honey from Ukraine continues to this day. All these processes had a serious impact on beekeepers in Bulgaria.

Conclusion

In summary of the results of the set tasks, it can be argued that the main reason for the negative trends in the beekeeping sector turns out to be the low profitability of the bee colonies. As the main source of income for Bulgarian beekeepers comes from the sale of honey, the reduced demand and low purchase prices on the European markets have a detrimental effect on the development of the sector. The worsening situation on the honey market in this case stems from the adoption of bad legislative policies towards beekeeping by the State and the EU, in favor of non-EU countries. Which have led to the saturation of the market with goods at prices lower than the real ones and of lower quality. As a result, local production is forced to sell at unrealistically low prices and the sector finds itself in great difficulty and on the verge of bankruptcy.

The sector alone will not be able to cope with this crisis in which it is placed. Without serious government intervention, many bankruptcies of bee farms will follow. The worsening situation in which the beekeepers are placed is caused precisely by the implemented policies of the state and the EU towards third countries, and no one other than them can correct them in the right direction. Legislative and administrative changes are needed by the state and the EU. As a result of the research, several recommendations have been made that could stabilize beekeepers financially and help the development of the sector:

- When imported from third countries, the product must undergo laboratory analysis, such as nuclear magnetic resonance tests, which detect bee-specific peptides and other bee-specific markers. In order to ensure full compliance of imported honey and other bee products with EU high quality standards and to detect cases of honey adulteration. In case of non-compliance, strict sanctions should be imposed on the violators;
- Introduce accurate and mandatory labeling of honey and bee products, as well as greater harmonization of legislation on quality and origin schemes for honey production to avoid misleading consumers and facilitate the detection of fraud. By doing so, they tackle both non-EU honey producers who use dishonest methods and EU honey packers and traders who deliberately mix adulterated imported honey with EU honey;

- The survival and stabilization of the sector requires expanding and increasing the financial support of a bee family. Like any payment, whether it is support, compensation or subsidies, it should be based on an accurate analysis of why it is of such an amount. In order to avoid imitation of concern on the part of the institutions;
- The import of bee honey should be tied to setting a minimum price for the EU, when the price falls below a certain percentage, the import should be stopped, when the price rises by the specified percentage, a certain amount of import should be allowed. In this way, beekeepers across the EU will feel much more secure and protected. Beekeeping, apart from being a sector and a livelihood for thousands of people, is also strategically important for the country and for the food security of Bulgaria and the entire EU.

References

- Agro, P. (08 2024 r.). Over 5,000 tons of honey were imported in 2022 in our country according to official data. Retrieved from AGRO PLOVDIV business, news, agriculture: <https://agroplovdiv.bg/90563/%D0%BD%D0%B0%D0%B4-5-000>
- Angelov, G. (2017). PROBLEMS IN THE PRODUCTION AND SALE OF HONEY IN BULGARIA. Annual Doctoral Research Almanac, pp. 643 – 654 p.
- Basheva-Nikolova, H. (2023). Beekeeping in Bulgaria and the Bulgarian lands until the Liberation – 103 pages. Bulgarian Science, 103 –116.
- Erdyosh, N. (08 02 2018 r.). REPORT A8-0014/2018 on the prospects and challenges facing the beekeeping sector in the EU. Retrieved from BG BG REPORT: www.europarl.europa.eu/doceo/document/A-8-2018-0014_BG.pdf
- Koprivlenski, V. (2015). Study of the economic suitability of an investment project for the construction of an apiary141. Agricultural Sciences, 141 –148.
- Lyubenov, L. L. (2021). Financing of Bulgarian beekeeping. National Economic Archive, pp. 50-65.
- Lyubenov, L. S. (2020). DEVELOPMENT OF THE BULGARIAN MARKETS OF BEE PRODUCTS. Society and Health, 92 –100.
- Agro, P. (08 2024 r.). Over 5,000 tons of honey were imported in 2022 in our country according to official data. Retrieved from AGRO PLOVDIV business, news, agriculture: <https://agroplovdiv.bg/90563/%D0%BD%D0%B0%D0%B4-5-000>
- Angelov, G. (2017). PROBLEMS IN THE PRODUCTION AND SALE OF HONEY IN BULGARIA. Annual Doctoral Research Almanac, pp. 643 –654 p.
- Basheva-Nikolova, H. (2023). Beekeeping in Bulgaria and the Bulgarian lands until the Liberation – 103 pages. Bulgarian Science, 103 –116.
- Erdyosh, N. (08 02 2018 r.). REPORT A8-0014/2018 on the prospects and challenges facing the beekeeping sector in the EU. Retrieved from BG REPORT: www.europarl.europa.eu/doceo/document/A-8-2018-0014_BG.pdf
- Koprivlenski, V. (2015). Study of the economic suitability of an investment project for the construction of an apiary .141. Agricultural Sciences, 141 –148.

- Lyubenov, L. L. (2021). Financing of Bulgarian beekeeping. National Economic Archive, pp. 50 – 65.
- Lyubenov, L. S. (2020). DEVELOPMENT OF THE BULGARIAN MARKETS OF BEE PRODUCTS. Society and Health, 92-100.
- MFA. (08 2024 r.). Beekeeping in Bulgaria in 2021. Retrieved from AGROSTATISTICS – Ministry of Agriculture: www.mzh.government.bg/media/filer_public/2022/03/14/publication_399_beeshoney_2021.pdf
- MAZH, (15 08 2024 r.). Beekeeping in Bulgaria in 2023. Retrieved from Directorate of Agrostistics Beekeeping: www.mzh.government.bg/media/filer_public/2024/03/01/ra234_beeshoney2023-29022024.pdf
- Penchev, P. (05 2024 r.). EU countries imported 163,700 tons of natural honey from third countries in 2023. Retrieved from BTA: <https://www.bta.bg/bg/news/673536-darzha-vite-ot-es-sa-vnesli-163-700-tona-naturalen-med-ot-treti-strani-prez-2023->
- Simova, A. (2007). The production of bee honey in Bulgaria – state and development prospects. Agricultural Economics and Management/52/5/, 58 –63.
- Stanev, Ya. (2018). Entrepreneurship as an opportunity for employment (self-employment) and development of small towns in Bulgaria. Dialogue, 35 –48.
- Hristov, P. &. (2016). Biological beekeeping in Bulgaria – nature, state and prospects. Agricultural Academy/ animal breeding sciences/3-6/, 20 –29.