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## **HONEY MARKET IN THE REPUBLIC OF CROATIA: CHALLENGES AND PERSPECTIVES OF SMALL PRODUCERS – CASE STUDY**

### **TRŽIŠTE MEDA U REPUBLICI HRVATSKOJ: IZAZOVI I PERSPEKTIVE MALIH PROIZVOĐAČA – STUDIJA SLUČAJA**

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#### **ABSTRACT**

This paper analyzes the current state of the honey market in Croatia, with an emphasis on the challenges and perspectives faced by small producers. Beekeeping stands out as an important branch of Croatian agriculture and economy, with an emphasis on honey as an important natural and ecological product with a rich tradition. The case study is based on interviews with the leaders of 8 associations, represented by 374 beekeepers from Vukovar-Srijem County, of which 262 own a registered Family Farm. The research conducted through the SWOT analysis reveals strengths such as high quality honey and biodiversity, weaknesses that include lack of finance for modernization and difficulties in product placement, while opportunities include growth in demand for organic products and export opportunities. The threats include cheap honey imports and climate change. Based on the research results, strategies are proposed to improve the position of small producers, including better organization, brand development, the use of modern technologies and marketing strategies, with the importance of state support and education for sustainable honey production.

**Keywords:** honey market, swot analysis, sustainable production, beekeeping

#### **SAŽETAK**

Ovaj rad analizira trenutno stanje tržišta meda u Hrvatskoj, s naglaskom na izazove i perspektive s kojima se suočavaju mali proizvođači. Pčelarstvo se ističe kao važna grana hrvatske poljoprivrede i gospodarstva, s naglaskom na med kao važan prirodni i ekološki proizvod bogate tradicije. Studija slučaja temelji se na intervjuima s vođama 8 udruga, koje predstavljaju 374 pčelara iz Vukovarsko-srijemske županije, od kojih 262 posjeduje registrirano Obiteljsko poljoprivredno gospodarstvo. Istraživanje provedeno kroz SWOT analizu otkriva snage poput visoke kvalitete meda i bioraznolikosti, slabosti koje uključuju nedostatak financijskih sredstava za modernizaciju i poteškoće u plasmanu proizvoda, dok

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prilike uključuju rast potražnje za organskim proizvodima i izvozne mogućnosti. Prijetnje uključuju jeftin uvoz meda i klimatske promjene. Na temelju rezultata istraživanja, predlažu se strategije za poboljšanje položaja malih proizvođača, uključujući bolju organizaciju, razvoj brenda, korištenje modernih tehnologija i marketinških strategija, uz važnost državne potpore i edukacije za održivu proizvodnju meda.

**Ključne riječi:** tržište meda, SWOT analiza, održiva proizvodnja, pčelarstvo

## INTRODUCTION

The honey market in the Republic of Croatia represents a significant segment within the complete Croatian market of agricultural products. Not only because of the economic value it represents, but also because of its irreplaceable role in preserving biological diversity and the Croatian ecosystem. Domestically produced Croatian honey is characterized by exceptional purity and variety, which is the result of rich plant life and specific microclimatic conditions. This is exactly what makes Croatian honey highly valued not only on the domestic but also on the international market. Beekeeping not only contributes to the economy through the production and sale of honey, but also plays a necessary role in pollination and the preservation of natural ecosystems, which is necessary for the sustainable development of agriculture and the preservation of the environment (Gugić et al., 2017).

The research conducted by Tomljenović et al. (2020) provides an overview of various aspects of beekeeping and the honey market in the Republic of Croatia. The research covers the topics of honey production, market trends, and challenges faced by producers, as well as the potential that the market offers. Recent authors Špiljak (2022) and Beinrauch (2023) consider and provide analyzes of the market potential of Croatian honey, identify current challenges and emphasize the importance of adopting adequate strategies to improve the competitiveness of producers, and the necessity of preserving the tradition and high quality of domestic honey. Recent literature focuses on the impact of global market trends on local honey production, emphasizing the importance of ecological production and appropriate certification. Modernization and the introduction of new technologies in honey production are necessary. Challenges such as the import of cheap, low-quality honey, climate change, and the decrease in the number of bees are emphasized. The importance of state support through the adoption of the National Beekeeping Program (Republic of Croatia Ministry of Agriculture, 2019), the strengthening of cooperation between producers, and the development of specific marketing strategies focused on the promotion of locally produced honey is also highlighted. As the topic of the honey market in the Republic of Croatia has not been sufficiently researched and analyzed by foreign economic professionals, it was imposed as an additional incentive for conducting research.

This paper analyzes the current state of the honey market in the Republic of Croatia, with special reference to the challenges and perspectives faced by small producers. By applying a detailed SWOT analysis, based on data from a case study, collected through research conducted in the area of Vukovar-Srijem County, strengths, weaknesses, opportunities and threats are considered in the context of placing Croatian honey on the market. The objectives of the research include the identification of the main factors affecting the competitiveness and sustainability of honey production, as well as proposing strategies to improve the market

position. The basic hypothesis of this paper is that there is significant potential for the growth and development of the Croatian honey market - despite challenges such as high competition and global market pressures, through focusing on ecological production, certification, and development of strong local brands, with adequate support from the state and common producer initiatives.

## 1. HONEY MARKET IN THE REPUBLIC OF CROATIA

The honey market in the Republic of Croatia consists of two basic components. The first component is domestic honey production, while the second component is imported honey. This market structure indicates the complexity of market dynamics and significant challenges faced by domestic producers. Domestic production of honey ranges from 18.1 tons per year (Hrvatski pčelarski savez, 2024), including Dalmatian honey, which in terms of its composition is among those of the highest quality in the world. Despite strong domestic production, honey imports are growing, which leads to the need to improve the quality of domestic honey, protect its authenticity and encourage domestic consumers to choose indigenous products. In Croatia, honey labeling measures have been adopted, requiring that each jar of honey be labeled with the country or all countries of origin, thus enabling consumers to have a transparent insight into the origin of the product. Beekeepers face high costs of analyzes to detect adulterated honey, for which they are reimbursed only in case of confirmation that the analyzed sample is adulterated.

It is estimated that 30 to 40 percent of honey imported into Croatia is adulterated, which indicates the need for stronger import control and better protection of market competition. Initiatives such as the reduction of VAT for honey produced in Croatia and support for beekeepers through various projects, such as the "Croatian jar of honey", aim to strengthen domestic production and ensure the sustainability of the sector. Stronger protection measures for domestic producers, promotion of high quality and establishment of reference laboratories for quality analysis are advocated. With a total of 18.2 million hives and 612,000 beekeepers in the European Union, significant number of which are Croatian beekeepers, it is clear that beekeeping plays a key role not only in the economy but also in the preservation of biological diversity. Through incentives and education, as well as promoting beekeeping through events such as international beekeeping fairs, a sustainable framework for the development of the sector is established. In order to ensure the future of beekeeping in Croatia, it is necessary to continuously work on improving production conditions, protecting the domestic market, educating consumers about the importance of choosing local honey, and strengthening cooperation between beekeepers, the local community and relevant institutions.

By analyzing the evaluation of the National Beekeeping Program for the period from 2017 to 2019, we can extract the following key information (Government of the Republic of Croatia, 2016):

- Direct sales are the dominant way of selling honey for beekeepers with a smaller number of bee colonies, comprising 74.35% of beekeepers, while wholesale sales grow with the increase in the number of bee colonies, participating with 25.65% of beekeepers.

- The import of honey into Croatia shows a worrying trend of growth. In 2014 and 2015, most of the imported honey came from China with extremely low prices, which raises the question of the position of domestic beekeepers on the market. The specific figures on the import of honey for those years are:
  - 2013: 330,429 kg of honey, with a total value of 803,432 euros, with an average price of 2.43 euros/kg.
  - 2014: 544,028 kg, 1,264,645 euros in total, with an average price of 2.32 euros/kg.
  - 2015 (1-10 months): 853,374 kg, 2,135,362 euros in total, with an average price of 2.50 euros/kg.
- Honey exports from Croatia also show significant growth, with an increase in the volume and value of exports from year to year. The data are as follows:
  - 2013: 161,996 kg of honey exported, with a total value of 849,430 euros.
  - 2014: 196,091 kg, total value 869,614 euros.
  - 2015 (1-10 months): 318,107 kg, 1,451,665 euros in total.
- Wholesale prices of polyfloral honey in bulk vary, with a price range of €240.00 to €930.00, while the median value was €350.00. The most common price was €290.00.

This data illustrates the dynamics of the honey market in Croatia over a period of time, identifying trends and providing a basis for further analysis of the market for beekeeping products, with an emphasis on honey. National beekeeping program for the period 2020-2022. (Republic of Croatia Ministry of Agriculture, 2019) and the Strategic Plan of the Common Agricultural Policy for 2023 - 2027 determine the key elements related to the sale, distribution and market position of honey in Croatia (Republic of Croatia Ministry of Agriculture, 2022). The distribution of honey depends on the size of the apiary, whereby small beekeepers mainly make sales through direct sales (at the location of production, at local markets), while a larger number of hives leads to an increase in the share of wholesale. Approximately three-quarters of beekeepers use direct sales to distribute beekeeping products, while the rest rely on wholesale. Large producers and buyers of honey distribute it indirectly through retail chains and supermarkets. The increased import of honey at extremely low prices from countries outside the EU represents a challenge for local producers (Dukić et al., 2004).

A worrying increase in honey imports was recorded between 2014 and 2018, especially with an emphasis on imports from China. For example, in the first ten months of 2018, 526,060 kg of honey were imported from China, which represents 96.32% of total imports, at a price of €1.40 per kilogram. Initiatives of incentive programs are aimed at increasing the number of beekeepers who conduct analyzes of honey and other beekeeping products, participation in quality certification programs and promotion of domestic products for better positioning on the market. Exports from Croatia include a significant part of honey sold in Bosnia and Herzegovina and Kosovo. On the EU market, Croatian honey is primarily distributed to Slovenia. The export of honey from Croatia in 2016 amounted to 506 tons, while in the first ten months of 2018 it reached 363 tons. The majority of exports are honey sent to the markets of Bosnia and Herzegovina (>70%) and Kosovo (>15%). There are significant regional differences in flower honey prices, which affects the choice of sales strategies (Aličić et al., 2018). The program also envisages support to laboratories for the analysis of beekeeping products in order to increase their market value and distribution. The goal is also to expand the

range of honey and other beekeeping products both on the domestic and international markets, with verification of quality and botanical origin. All this reflects the complexity of the honey market in Croatia and the challenges faced by domestic producers.

The price of flower honey varies depending on the region and the purchasing power of consumers. For example, honey prices at the production location vary from €5.00 to €10.00 per kilogram. In Primorje and Istria, prices range from €8.00 to €9.50, while in southern Dalmatia they reach up to €11.00. Wholesale honey prices vary from €3.00 to €5.00 per kilogram, with regional variations. For example, in Central Dalmatia, Primorje and Istria, prices reach up to €5.00. Estimates of annual honey production are based on average production per hive. Total production in 2017 was estimated at 8,128 tons, while 2018 recorded 7,440 tons. These data provide an insight into the state of the honey market in Croatia, reflecting the challenges associated with growing imports and changing prices that producers can achieve, depending on the region and method of sale.

Over the years, there has been a noticeable growth in the number of beekeepers and bee colonies, as well as an increase in honey production in the Republic of Croatia. The importance of beekeeping for pollination and food production is being emphasized more and more. The national strategic plan for the period until 2027 provides 3.8 million euros per year for beekeeping, which is a growth of 60%. They propose measures to preserve the honey potential and support associations and the beekeeping association. The sector's resilience and growth are noticeable through the increase in the number of hives and production, but there is a need for further additional education and information on the proper labeling of honey and the fight against adulteration. Bees are crucial for the ecosystem and agriculture, but the market aspect should also be continuously developed through local support and encouragement of sustainable agriculture and tourism.

## **2. RESEARCH METHODOLOGY**

The methodology applied in the research was conceived in three stages, with the aim of in-depth understanding of the honey market in the Republic of Croatia, especially analyzing the challenges and perspectives of small producers. The research was conducted during January and February 2024. The first stage included the formation of eight focus groups, composed of members of eight beekeepers' associations from the Vukovar-Srijem County, which gather a total of 374 registered beekeepers who are in the Record of Beekeepers and Apiaries for the year 2023 and who manage 19,380 hives. Of that number, there are 262 beekeepers in the Vukovar-Srijem County with their own Family Agricultural Farm (OPG). Focus groups are a qualitative research methodology that enables an in-depth understanding of the attitudes and perceptions of the participants. The discussion within the groups was conducted on the basis of precisely proposed questions, with the aim of investigating the perceptions of small honey producers about their market (Pavić and Šundalić, 2021). The leaders of the associations recorded the expressed views, which enabled a detailed insight into the specifics and challenges faced by beekeepers.

In the second stage, personal interviews were conducted with the leaders of the associations, in order to further deepen the understanding of the topic. These interviews, as a form of qualitative research, enabled the collection of detailed information about the

respondents' opinions and attitudes, continuing on the topics and questions presented in the focus groups (Pavić and Šundalić, 2021). The collected data is structured and analyzed, providing rich insights into the dynamics of the honey market. As the third stage, based on the processing and analysis of the collected data, a SWOT analysis was carried out. This strategic planning tool enabled the identification of key strengths, weaknesses, opportunities, and threats faced by small honey producers, providing a thorough overview of factors affecting their operations (Helms and Nixon, 2010).

The case study included a tested sample of 8 associations, 374 registered beekeepers from the area of Vukovar-Srijem County, of which 262 beekeepers with OPG. The representativeness of the case study as a quantitative sample of the Croatian honey market is as follows: 4.28% in terms of the total number of registered hives in the Republic of Croatia, 4.07% in terms of the total number of registered beekeepers in the Republic of Croatia and 4.27% in terms of the total number of beekeepers with OPG in the Republic of Croatia on March 1, 2024. (Croatian Beekeeping Association, 2024). This approach enabled a detailed analysis of a specific market segment as an integral part of the wider context of the Croatian honey market, identifying unique challenges and opportunities for development. According to the theoretical-methodological approach, the following basic hypothesis is set:

H0 - There is significant potential for the growth and development of the Croatian honey market - despite challenges such as high competition and global market pressures, through focusing on ecological production, certification, and the development of strong local brands, with adequate support from the state and joint initiatives of producers. Using the methodological structure and theoretical framework, the research successfully identified key aspects of the honey market in Croatia, presenting thorough insights and proposals for improving the position of small honey producers.

### 3. RESEARCH RESULTS

The following key messages were decoded through the research conducted through structured discussions, within the formed focus groups, according to pre-determined thematic units, and then personal interviews with the moderators of the focus groups, according to pre-defined questions:

- For the past few years, beekeepers have been facing significant climate changes that affect the reduction of honey production. The quantities of honey extracted per hive are decreasing. This is accompanied by the low purchase price offered to them for their honey.
- Climate changes directly determine the profitability of production and directly affect the realized added value of the production process. Profitability does not cover the high investment in production.
- Beekeepers are put in an unenviable situation by the large amount of imported honey that appears on the domestic market. The imported honey is sold at extremely low prices and is of questionable quality.
- Without realized added value, there is no room for investment in the modernization of production. No investment can be made in new vehicles and platforms to facilitate

migratory beekeeping. Beekeepers believe that due to increasingly present climate changes, migratory beekeeping will be the only sustainable form of beekeeping.

- Insufficient investment is made in branding one's own honey and marketing activities, producers have insufficient knowledge of sales techniques through online stores, social networks and the like. Most often, there are no labels that would be generally recognized on the market and that would emphasize the authenticity of the honey and guarantee a positive story that accompanies domestic production.
- Most of the beekeepers from the research sample are middle-aged and elderly, which results in insufficient knowledge of modern technologies that could be used to improve the production and sales process.
- Increasing inflation and the periodical unavailability of domestic honey on the market result in lost sales of domestic honey.

Based on the identified key messages collected through the conducted research, a SWOT analysis is carried out in order to find possible recommendations and actions for the purpose of improving the market position of domestic honey producers Figure 1. Based on the collected data and SWOT analysis, a proposal of possible strategies, measures and actions is presented with the aim of strengthening the market position of small domestic honey producers in the Republic of Croatia. The key is to focus on strategies that include branding and certification, modernization and use of technologies, digital marketing and sales, education and collaboration, and more transparent access to subsidies and financial support (Sperandio et al., 2019). The first step includes the development of recognizable brands, which would include the creation of recognizable labels that highlight the localness and high quality of domestically produced honey. Also, it is important to continuously work on obtaining a certificate for organic production and local product origin, which would further emphasize the quality and origin of the honey. Along with branding, modernization of production and migratory beekeeping are key to adapting to climate change (Karačić, Klanac and Olivari Provči, 2022). Beekeepers should be provided with the availability of modern technologies through educational workshops and courses, with a special emphasis on digital marketing and online sales, which would enable them to better position themselves on the market and sell directly to distant consumers. Promotions via the internet, launch of web stores and active use of social networks can significantly increase the visibility of local honey producers and attract a younger population of consumers.

Figure 1: SWOT analysis of the key messages of the conducted research

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Tradition and high quality of domestic honey.</li> <li>• Existence of migratory beekeeping as an adjustment to climate change.</li> <li>• Knowledge and experience of middle-aged and elderly beekeepers.</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Impact of climate change on reduction of production.</li> <li>• Low profitability and market price of honey</li> <li>• High quantity of cheap and low-quality imported honey.</li> <li>• Lack of investment in modernization and branding.</li> <li>• Insufficient knowledge of modern technologies and marketing techniques.</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Rise in consumer awareness of the importance of quality and local origin of honey.</li> <li>• Increase in demand for organic, locally produced products.</li> <li>• Opportunities created by digital marketing and internet sales.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Continuous climate change and its negative impact on production.</li> <li>• Competition of cheap imported honey.</li> <li>• Increased inflation and market unavailability of local honey.</li> </ul>

Source: Author

Educational campaigns aimed at consumers, which emphasize the importance of supporting local production, will contribute to greater demand for domestic honey. Greater cooperation with local communities, retailers and other producers can help ensure better availability and visibility of local honey in the market. Transparent information about the possibilities of financial support through subsidies or through EU funds intended for small producers is an important step in securing the necessary resources for the implementation of the aforementioned strategies.

In the context of strengthening the market position of small domestic honey producers, the issue of establishing regional honey bottling plants that would serve as key intermediaries between small producers and large retail chains is extremely important. Regional bottling plants would buy honey from local beekeepers, carry out the necessary quality control and packaging processes, and then place the products on the market in larger quantities. This would significantly facilitate distribution and access to the domestic retail market, especially for small producers who can hardly meet the requirements and standards of large retail chains on their own. The implementation of regional bottling plants would not only simplify the logistical aspects of distribution, but would also ensure that domestic honey is available to a wider population through wholesale channels, which would further promote recognition and increase the demand for quality domestic honey. In addition, the existence of a secure placement for production surpluses would be a great motivating factor for small producers to increase their production capacities, improve technological processes and devote themselves to improving the quality of their products.

Creating a sustainable infrastructure for the purchase, processing and distribution of domestic honey in this way can significantly contribute to the economic stability of the



beekeeping sector, ensuring regular income for small producers and encouraging the development of rural areas. Also, this approach supports transparency and reliability in the supply chain, which is crucial for building consumer confidence in the quality and origin of domestic honey. By implementing these strategies, significant progress can be made in strengthening the position of domestic honey producers on the market, while simultaneously promoting sustainability and ethical behavior in production and distribution processes (Karačić and Klanac, 2016). By implementing the proposed strategies, measures and actions, small domestic honey producers could significantly improve their market position, more easily overcome current challenges and take full advantage of the opportunities offered by the market, thus ensuring a long-term sustainable future of their own domestic production.

Based on the results of the conducted research, hypothesis H0 is confirmed - There is significant potential for the growth and development of the Croatian honey market - despite challenges such as high competition and global market pressures, through focusing on ecological production, certification, and the development of strong local brands, with adequate support from the state and joint initiatives of producers.

## CONCLUSION

This paper provides a comprehensive overview of the state, challenges and perspectives faced by small domestic honey producers based on the conducted research and analysis of the honey market in the Republic of Croatia. Key strengths, weaknesses, opportunities and threats were identified through a detailed SWOT analysis and based on these findings, a proposal for strategies and measures to improve the market position of domestic producers was formulated. The paper confirms the hypothesis that, despite challenges such as high competition and global market pressures, there is significant potential for the growth and development of the Croatian honey market. Based on the conducted research and analysis of the honey market in the Republic of Croatia, the paper provides a comprehensive overview of the state, challenges and perspectives faced by small domestic honey producers. Through a detailed SWOT analysis, key strengths, weaknesses, opportunities and threats were identified, and based on these findings, a proposal for strategies and measures to improve the market position of domestic producers was formulated.

This paper confirms the hypothesis that, despite challenges such as high competition and global market pressures, there is significant potential for the growth and development of the Croatian honey market. Implementation of the proposed measures requires joint effort of all stakeholders, including producers, beekeepers' associations, government institutions, educational institutions and consumers. Transparency, education and cooperation between all stakeholders are key to the success of initiatives aimed at improving the position of Croatian honey on the domestic and international markets. The sustainable future of Croatian beekeeping depends on the ability to quickly adapt to new changes, innovations in production and distribution, and on strengthening consumer awareness of the importance of choosing high-quality and domestic honey. The results of the conducted research provide clear guidelines for strategies, measures and actions that can contribute to strengthening the market position of small domestic honey producers in the Republic of Croatia. Prosperous development of

Croatian beekeeping can be ensured through the synergy of tradition and innovation, which will contribute not only to economic well-being, but also to the preservation of the country's natural ecosystem and biological diversity.

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