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## CONDITIONS FOR BEEKEEPING IN UZBEKISTAN

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### Abstract

From our monographic observation, we see that in the field of beekeeping, which is one of the branches of agriculture, the number of families engaged in beekeeping is increasing. Today, the high demand for bees and their processed products is explained by the presence of medicinal and microelements in them. This, in turn, allows the production of honey and other products (wax, propolis, pollen, beebread, royal jelly and nectar). We can ensure that the income of our independent family farms increases day by day by increasing the production of bee products. Beekeeping is an additional source of income to increase family income and serves to increase the yield of agricultural crops on a personal plot. The article highlights the task of promoting interest among the population in the selection of honey and beekeeping products and conducting independent work to study the industry by increasing the productivity of the bee colony.

**Keywords:** Branches of agriculture, beekeeping, bee family, bee products, boxwood bees, worker bees working in the hive, worker bees flying in the field, wax, propolis, pollen, beebread, bee milk, bee venom, queen bee, male bee.

### Introduction

In scientific research conducted worldwide in the field of ensuring food security and keeping bees, feeding them, and growing honey products, special attention is paid to the issue of daily healthy nutrition for humanity. In such conditions, expanding the production of nutritious products that provide the human body with essential nutrients is one of the important tasks for science and practice. At the



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same time, the importance of stimulating the increase in the scale of honey and its products is important.

Honey has been found to contain high amounts of easily digestible fruit and grape sugar, which are essential for the human body. In addition to these sugars, there are small amounts of protein, iron, phosphorus, and other substances. These substances are necessary for bone growth and normal blood flow. Honey strengthens the body. Especially useful for young children. Honey contains very small amounts of acids, dyes, minerals, and aromatic substances that give honey a special aroma.

Beekeeping is an important branch of agriculture in the Republic of Uzbekistan. Beekeeping is recognized not only for its honey products, but also for its role in increasing crop yields and maintaining environmental balance. Today, for the further development of beekeeping and increasing its efficiency, the need to study world experience and its implementation in local conditions is relevant.

Currently, in the conditions of Uzbekistan, there are all opportunities for engaging in beekeeping. Proper use of these conditions will make it possible to include the beekeeping industry among the leading countries in the world. A large part (about 4/5 of the territory of Uzbekistan) is occupied by lowlands.

The most important of these is the Turan lowland. In the east and northeast of the country are the Tian Shan and Pamir mountain ranges (the highest point of the country (4643 m). In the center of Uzbekistan lies one of the endless deserts of the world - the Kyzylkum Desert.

Mountains and foothills constitute 1/5 of the republic's territory. The eastern territory consists of medium and high-mountain relief. The territory of the country includes the slopes of the Western Tien Shan (Ugom, Pskem, Chatkal, and Kurama mountain ranges) and the Pamir-Alai (Zarafshan, Turkestan, Hissar, Kokhitangtau, and Baysuntau mountain ranges).

From south to west, they slope downwards and merge into a lowland. Between these mountains stretch the vast oases of Kashkadarya, Surkhandarya, Zarafshan, and Samarkand. The largest of these is the Fergana Valley - 370 kilometers long and 190 kilometers wide. It is surrounded on three sides by a high mountain, and



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only the western side is a plain. The Amu Darya delta stretches along the border with Afghanistan [1].

As can be seen from the above information, the geographical location of our country creates favorable conditions for the development of the beekeeping industry. The natural climatic conditions of countries play an important role in the development of beekeeping. The climate of Uzbekistan is continental. The beekeeping industry is seasonal, and the season in our country begins in March and ends in October. Beekeeping in Uzbekistan is developing year by year, which can be seen in the dynamics of honey production.

### **Literature review**

This dissertation research, to a certain extent, serves the fulfillment of the tasks stipulated in the Decree of the President of the Republic of Uzbekistan No. UP-60 of January 28, 2022 "On the Development Strategy of New Uzbekistan for 2022-2026," Resolutions of the President of the Republic of Uzbekistan No. PP-4243 of March 18, 2019 "On Measures for the Further Development and Support of the Livestock Industry," No. PP-3327 of October 16, 2017 "On Measures for the Further Development of the Beekeeping Industry in the Republic," Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 239 of June 12, 2023 "On Additional Measures to Support the Beekeeping Industry and Pollination of Agricultural Crops with Bees," as well as in other regulatory legal documents adopted in this area.

### **Research Methodology**

In the research process, first of all, dialectics as a general methodological basis; scientific thinking, analysis and synthesis, induction and deduction, inductive-deductive, abstract-logical methods, comparison were used. From the general scientific empirical methods, methods of interpretation, observation, and retrospective analysis of scientific and encyclopedic sources were used.



Table 1 [1] Indicators of honey production in the Republic of Uzbekistan for  
2010-2024 (in tons)

№	Indicators	2010 y	2011 y	2012 y	2013 y	2014 y	2015 y	2016 y	2017 y	2018 y	2019 y	2020 y	2021 y	2022 y	2023 y	2024 y
Republic of Uzbekistan		3171,9	3795,1	4887,5	7196	8750,7	10157	12050	11737,6	12578,4	13001,7	13357,8	14066,9	14700,4	15835,1	16631,6
1	Republic of Karakalpakstan	95	124	171,7	291,9	335	364	472	505,2	581,8	730,9	753	799,3	833,3	877,2	906,9
2	Andijan region	407	447	579	702	949	1203	1505	1074,7	1054,9	1132,3	1182,5	1204,5	1229,6	1312	1362,1
3	Bukhara region	405	464	680	917	1118,1	1233	1693	1747,2	1787,8	1907,3	1946,3	2160,8	2292,8	2484,6	2582,8
4	Jizzakh region	242	332	472	648,3	810,1	999	1148	1043,6	1087,5	1128,7	1145,1	1157,7	1202,2	1300,1	1375,6
5	Kashkadarya region	152	253	316	631	796	916	1032	1049,5	1144,2	1219,6	1239	1244,4	1350,3	1465,6	1606,4
6	Navoi region	248	308	368,8	605,4	708,1	870	890	929,3	1027,5	1035,4	1072,4	1108,8	1129,4	1184,8	1214,9
7	Namangan Region	281	307	384	521	643,2	783	902	1197,4	986,9	1054,4	1073,4	1076,8	1119,3	1289,3	1375,3
8	Samarkand region	182	210	331	604	758	943	1287	1008,7	1213,5	1001,2	1049,3	1141,5	1221,2	1288,1	1359,5
9	Surkhandarya region	197,5	230,7	292	406	466,7	493	505	512,5	704,9	737,4	802,4	877,4	906,2	976,2	1035,7
10	Syrdarya region	86	123,4	163	173	192,3	213	236	209,3	262,7	267,5	274,5	347,9	371,6	395,2	409,3
11	Tashkent region	126,4	171	237	288,2	355	384	406	418,3	496,1	457,4	458,4	508,9	548,3	594,7	598,1
12	Fergana region	362	409	434	707,2	904,2	1005	1174	1240,1	1274,5	1320,5	1337,7	1413,2	1375,2	1459,1	1552,9
13	Khorezm region	388	416	459	701	715	751	800	801,8	955,8	1009,1	1023,8	1025,7	1120,5	1208,2	1252,1
14	Tashkent city	0	0	0	0	0	0	0	0	0,3	0	0	0	0,5	0	0

## Analysis and discussion of the results

In Uzbekistan, great attention is paid to the development of beekeeping as one of the promising areas for the development of the agricultural sector. It has been scientifically proven that the yield of agricultural crops pollinated with bees is 1.5-2.0 and even 2.5 times higher than usual. Based on this, the technological modernization of the industry, the improvement of honey and beekeeping production technology, and the implementation of a technological policy that meets modern requirements in the industry are of great importance. The establishment of breeding work, provision of medicines, meeting the industry's need for personnel, scientific support of the industry and organization of research work within the framework of state programs, attracting foreign investment in the industry, processing of honey and beekeeping products based on marketing research are not exempt from this. It is necessary to introduce tax benefits in the sphere, taking into account its importance for human health, the economy, agriculture, and the environment. Currently, conducting scientific research aimed at developing recommendations for improving the financing system, the



mechanism for allocating concessional loans and subsidies is one of the pressing issues.

Through our monographic observations, we determined that high efficiency can be achieved as a result of the development of the beekeeping industry at the "Bakir bolari" family enterprise. Because bees do not choose land, they do not require the organization of separate fields. With a little attention and effort, we can obtain several types of products.

High results can be achieved through the development of beekeeping, which is one of the main incomes of the household. In one season, one bee colony can produce 20-30 kilograms of honey, 3-5 kilograms of pollen, 2-3 kilograms of perga, 200-300 grams of propolis, 300-500 grams of bee milk, 4-6 grams of bee venom, and 3-4 kilograms of wax. The data are presented in Table 1.

Table 1 Economic indicators of products obtained from one bee colony in one season in the family

<b>№</b>	<b>Indicators</b>	<b>Unit of measurement</b>	<b>Miqdori</b>	<b>Market price of honey and flour products, sum</b>	<b>Average cost of products from one family, sum</b>
1.	Honey	kg	10-15	250 000	3 750 000
2.	Pollen	kg	3-5	250 000	1 250 000
3.	Perga	kg	1-2	500 000	1 000 000
4.	Propolis	gr	100-200	1 000	200 000
5.	Bee's milk	gr	30-50	12 000	600 000
6.	Wax	kg	3-4	10 000	40 000
7.	Bee venom treatment (bee count)	piece	54-75	6 000	450 000
<b>Total</b>				<b>x</b>	<b>5 040 000</b>

If we pay attention to the results of our monographic observations, the total income from each bee colony is 5040 thousand soums. By applying the opportunities provided to the beekeeping sector in each household, it is possible to obtain additional high income. Using the experience of highly experienced specialists in the study of beekeeping, we will be able to further develop the industry by implementing a mentor-student system.



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Currently, we can see from statistical data that Bukhara, Kashkadarya, and Fergana regions are leading in this area.

Bees play a crucial role in the reproduction of many plants, including food crops. These insects participate in the reproduction of more than 75 percent of crops, increase yields, improve the quality and diversity of products, preserve biodiversity, ensure soil fertility, clean air and water, and enhance the natural control of pests.

According to the Customs Committee, Uzbekistan is exporting more bees than honey. It is noted that in 2024 and during the 4 months of 2025, almost 64 tons of honey worth more than \$206 thousand were exported from Uzbekistan. 92% of the honey was sold to the USA, and 7% to Afghanistan. This year, honey was also exported to China for the first time.

Significant growth has also been observed in the export of bee packages from our republic over the past year. For example, during the 4 months of 2024 and 2025, almost 260 thousand bee packages worth about 5 million US dollars were exported. In 2025 alone, the value of exported bee packages increased by 1.5 times compared to 2024. While bee packages were mainly exported to Russia, Kazakhstan, and Armenia, Tajikistan was added to this list this year [2].

### **Conclusion**

In the conditions of Uzbekistan, the development of beekeeping and increasing its economic efficiency, along with strengthening export potential, serve to improve the standard of living in rural areas. In this regard, cooperation between the state, scientific institutions, and entrepreneurs is of great importance. By further developing this sector based on modern approaches, Uzbekistan can become one of the leading beekeeping centers in the region.

### **Recommendations**

**Initial preparation:** starting with 2-3 bee colonies and gaining experience in feeding them.

**Special equipment:** Honey extractor, box and purchase of clothing.





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Choosing a bee-breeding area: Areas close to water, with flower beds rich in vegetation.

Establishing beekeeping on household plots serves not only as a source of additional income, but also as an environmental activity.

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