



THE ROLE AND SIGNIFICANCE OF BEEKEEPING IN INCREASE INCOME OF THE POPULATION

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Abstract.

Beekeeping has emerged as an important economic activity for many communities worldwide, contributing to the increase in income for populations. The practice provides multiple benefits, including honey production, the pollination of crops, and the production of by-products like beeswax, propolis, and royal jelly. Beekeeping is particularly valuable for smallholder farmers, as it requires relatively low investment and can be integrated into existing agricultural practices. Furthermore, it supports sustainable agriculture by enhancing biodiversity and boosting crop yields through pollination. As a result, beekeeping not only helps improve the livelihoods of individuals involved but also contributes to broader economic development.

Keywords: Beekeeping, Pollination, Agricultural sustainability, Smallholder farmers, Beeswax, Propolis, Royal jelly, Livelihood improvement, Biodiversity

Аннотация.

Пчеловодство стало важной экономической деятельностью для многих сообществ по всему миру, способствуя росту доходов населения. Эта практика обеспечивает множество преимуществ, включая производство меда, опыление сельскохозяйственных культур и производство побочных продуктов, таких как пчелиный воск, прополис и маточное молочко. Пчеловодство особенно ценно для мелких фермеров, поскольку оно требует относительно небольших инвестиций и может быть интегрировано в существующие сельскохозяйственные практики. Кроме того, оно поддерживает устойчивое сельское хозяйство, улучшая биоразнообразие и повышая урожайность культур за счет опыления. В результате





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пчеловодство не только помогает улучшить условия жизни отдельных лиц, вовлеченных в него, но и способствует более широкому экономическому развитию.

Ключевые слова: пчеловодство, опыление, устойчивость сельского хозяйства, мелкие фермеры, пчелиный воск, прополис, маточное молочко, улучшение условий жизни, биоразнообразие

The main sources of income for the population of the Republic of Uzbekistan are monthly wages, incomes equivalent to wages, and income from entrepreneurial activities. Today, the most numerous and widespread type of business in countries with a developed market economy is family entrepreneurship. By its nature, family entrepreneurship is a type of small business, the development of which can rightfully be considered one of the effective mechanisms for advancing the national economy. Because family entrepreneurship helps to improve the situation on the labor market, reduce and prevent unemployment by creating new jobs, and serves as an additional source of income for the population. For example, in the USA, more than 80% of all enterprises are family enterprises, they account for 60% of total employment and create about 80% of new jobs. According to the European Federation of Family Business, 65-80% of all companies in Europe are family enterprises. They create up to 50% of jobs for hired workers. It is also important that family entrepreneurship can use the labor of women, growing children and representatives of the older generation, who are among the categories of the population with limited opportunities in the field of employment, that is, they also have the opportunity to work and earn income. Family entrepreneurship also plays an important role in shaping the entrepreneurial spirit of young people. In accordance with the Law of the Republic of Uzbekistan "On Family Entrepreneurship", family entrepreneurship is an initiative activity carried out by family members at their own risk and under their own property responsibility in order to receive income (profit). Family entrepreneurship is based on the voluntariness of its 148 participants and can be carried out with or without the formation of a legal entity. The organizational and legal form of family entrepreneurship carried out with the formation of a legal entity is a family enterprise. The main characteristics of dehqan (personal assistant) farms are that their activities are organized on the basis of personal consumption, they are business entities, but they run the farm in a family manner, 149 with all the work being done by family members. Dehqan farms are also characterized by such features as the use of family property and financial



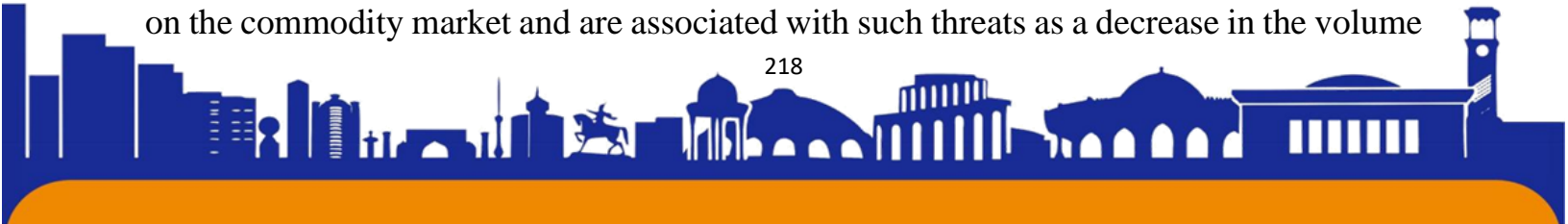


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resources as initial capital, and the attraction of debt funds secured by family property. Number of enterprises and organizations in agriculture, forestry and fisheries, in units One of the most promising and effective areas of activity of dehkan (personal assistant) farms and household landowners in our country is beekeeping. Beekeeping is an integral and important branch of agriculture. Bees play an invaluable role in increasing the productivity and quality of seed crops by pollinating agricultural plants, increasing the yield and quality of fruit and berry crops, and increasing the production of honey, wax, pollen, and other bee products. The fact that honey production can occupy a significant place in the republic is explained by the annual increase in demand for beekeeping products (honey, wax, pollen, propolis, royal jelly and venom are extremely valuable goods and are considered very rare raw materials for human health, the medical and pharmaceutical industries) and, accordingly, the increase in product prices. Indeed, beekeeping is one of the most profitable sectors of agriculture. In addition to honey, which is the main product of beekeeping, you can get a lot of income from beekeeping by raising new young colonies and collecting pollen, royal jelly, propolis and bee venom. In recent years, a number of measures have been adopted in our republic to ensure food security for the population, including increasing the volume of production of high-quality honey products. Their implementation is being effectively ensured. As a result of the measures taken, by 2022, more than 14 thousand entrepreneurs will be operating in the beekeeping sector in our republic. In order to meet the population's demand for honey products, 19.1 thousand tons of honey were produced in 2022, which is 1.6 times more than in 2020. The increase in honey exports from 2.7 tons in 2016 to 42.4 tons in 2019 also indicates the positive development of the sector (Table 1). Table 1 Main indicators of Uzbek beekeeping in 2016. 2017. 2018. 2019

Year	Beekeeping entities, units	Bee colonies, thousand units	Honey produced (tons)	Export of bee packages, thousand units	Honey export, tons	Export of bee products, thousand dollars
2016	11989	565	12069	104	2.7	395
2017	13188	674	15366	179	9.2	677
2018	14018	754	17042	207	78.4	956
2019	14412	846	19100	245	42.4	1000

However, running a beekeeping business is not an easy task; in order to effectively implement this work, it is first necessary to properly draw up a business plan and identify and assess the risks that may arise in it. The potential risks of beekeeping as a type of entrepreneurial activity can be conditionally divided into commercial, financial, production and unforeseen (force majeure) risks. Commercial risks arise in the process of selling products on the commodity market and are associated with such threats as a decrease in the volume





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and capacity of markets, a decrease in the demand for paid products, the emergence of new competitors, the possibility of a decrease in purchase prices by the main consumer, and an excess of supply of beekeeping products over demand. Measures to reduce commercial risks include a systematic study of market needs, the creation of a dealer network, an appropriate pricing policy, the development of the service sector, and advertising. Financial risks arise due to inflationary processes, late payments, and exchange rate fluctuations. These risks can be mitigated by using a financial management system and establishing prepayment agreements with dealers. Unforeseen (force majeure) risks are mainly associated with the limited ability to predict and control natural processes, which can lead to large losses in the agricultural sector and, in turn, make insurance in this sector an urgent issue. For example, prolonged spring rains can prevent honey harvesting in May, or during the cotton honey harvest period, various harmful insects can multiply in cotton fields and bees can be killed by the use of strong pesticides against them. It is advisable to carry out insurance for the following main aspects in beekeeping: bee diseases; fire; lightning strike; explosion; illegal actions of third parties; natural disaster; theft, robbery; accident; unusually low air temperatures for this region in the autumn-winter period, and high temperatures and drought in the summer; vehicle collisions, falling trees; floods, earthquakes. Production risk is determined by a decrease in production volumes due to improper maintenance of bee colonies. To prevent this, it is advisable to comply with the basic requirements for maintaining bee colonies, scientifically based maintenance and reproduction of bee colonies, improve the technology of breeding young queen bees, update the equipment, devices and devices used in beekeeping, improve the food base of bees, etc. In other words, in order to reduce production risks, it is necessary to ensure the widespread introduction of intensive and modern technologies in the production of beekeeping products, as well as to improve the technical part of the work, while minimizing the negative impact of new technologies on natural processes. One of the innovative technologies in modern beekeeping is the creation of a smart hive. The hive is equipped with sensors that transmit information to a computer or smartphone about the conditions in which the bees are kept. With the help of sensors, beekeepers can determine when to start collecting honey, what condition their colonies are in, that is, their weight, temperature, etc., and even find out where a stolen hive is located. Another new technology in beekeeping is mobile apiaries. One of the main conditions for achieving high pollination rates is to place the bee colony close to the





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pollinated area and to have fewer obstacles on the way for the bees to fly there. The fewer obstacles such as rivers, lakes, mountains, buildings, trees, toxic gases, industrial smoke, and chemical waste, the faster bees will start pollinating crops, the less energy they will spend to fly over obstacles, the safer their operation will be, and the fewer bees will be enough to pollinate a given area. For the movement of the mobile hive, a beekeeper is used to move the hive to a convenient environment during the honey collection period. Today, special attention is paid to the technology of artificial insemination of bees. In Europe, bees are 100% artificially inseminated, and regardless of weather and climate changes, this technology increases the possibility of obtaining honey several times, that is, increases productivity. In conclusion, it can be said that today, 152 farms and homesteads in the form of family entrepreneurship are operating in our republic. At the same time, in some regions, there are citizens who are engaged in illegal entrepreneurial activities (especially in the field of beekeeping) without proper registration. Such situations prevent people from taking advantage of the legal privileges and conveniences granted to family entrepreneurship. Along with its positive aspects, such as simplicity in organizing work, complete independence, freedom of movement and speed, family entrepreneurship also has negative aspects that create difficulties in conducting agriculture, which can only be mitigated or eliminated with state support. For example, one of the most pressing problems of family entrepreneurs today - the lack of funds for the material and technical support of their production and the modernization of technological processes - can be solved with the help of preferential loans, leasing, and franchising provided by the state. The allocation of grants for the retraining and advanced training of managers and employees of farmers and peasant farms, as well as household landowners in the beekeeping sector is also important and creates opportunities for the development of agribusiness. However, at the same time, the use of traditional economic methods of state regulation in some cases shows the ineffectiveness of these tools. Therefore, the development of family and other forms of entrepreneurship requires new methods, supports, and a systematic approach by the state based on public-private partnerships.

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