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The Effect of Beehives in Preparing a Bee Family for Winter under the Stipulations of our Republic

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Abstract: *the article discusses in our country, the methods of safe removal of bee colonies from hibernation are described and the impact of beehives on hibernation is studied.*

Keywords: *Bees, spending for bees, overwintering, frame, feed, exterior, family, productive, population, nosematosis.*

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Relevance of the topic: today's people are facing many problems such as social and economically. In our point of view that the satisfying food safety is one of the most problems. In fact, currently many people are do not ensuring food safety. We are able to provide food safety that producing honey and other bee products. In addition, many development countries are already spend much investment at this sector. According to the World Food Security Organization (FAO), India, China and Turkey have been the world's leading honey producers by 2019. At the same time, the share of bee colonies was 42.4% in Asia, 21.4% in Europe and 21.2% in Africa.

In the climatic conditions of Uzbekistan, targeted measures are being taken to prepare the local population of bees for the winter and to organize its successful wintering, to obtain a more honey products.

Bees in the winter season is a time when the active period of winter reveals all the flaws, mistakes and shortcomings of the bee family. That is why it is the most important on bees to prepare for winter season and its conduction. There is several reasons to providing high efficiency. Firstly, we are able to save much time to prepare bees for works. Secondly, honey farms can take extra money to sell bee families. During the winter, the bee's body was completely rebuilt and the most important physiological changes begin. In addition, when the impact of beehives of different constructions on family hibernation was tested, it was found that bee hibernation was better wintered in beehives than in other types of beehives and consumed less food. In our experiments are showed that particular attention should be paid to the strength of the bees entering the hive, the amount of feed, and the cost of feed and beekeeping during the winter. In particular, at the end of winter, in the spring, the queens were examined for daily egg laying and indicators such as the

number of offspring in the bee family, the strength of the family and the honey in the hive. In particular, at the end of winter, in early spring, the queens were examined for daily egg laying and indicators such as the number of offspring in the bee family, the strength of the family and the honey in the hive.

Literature review: During the winter season, our experiments are indicated that the beehive should be heated on both sides, ie on the top and side, with heating pads. However, it should be noted that it is not recommended to install heating pads in special shelters, because the moist air released in the hive during the winter sticks to the pillows, which makes it easier for various microorganisms to live in the wet blankets. Therefore, it is recommended to remove the top heating pads. And when bees hibernate outdoors, these top heating pads are a must. (Kasyanov A.I. 2008).

A.A.Silayev has made a number of comments in his research on beekeeping. in particular, he noted that there are many difficulties in wintering bee colonies in the open air, and that it is possible to winter bee colonies in the Russian climate. For wintering of bees in the open air in the Moscow region, the honey left in the hive should be completely left, and if the beehives are made of thin boards, they should be covered with a special coating, the areas where bees live should be protected from strong winds. *(Silaev A.A. 2010.*

According to Kasyanov's research that in the conditions of the Ryazan region of the Russian Federation, during the wintering of bee colonies studied the temperature in the hive, which is inextricably linked with the outside air temperature. As a result, he showed that the lower and upper flight holes in the hive were interconnected, and that they played an important role in keeping the hive warm. Studies have found that in beehives with thick wooden walls, the warm temperature inside the hive is always kept the same, and as the wall size becomes thinner, the warm temperature in the hive also decreases. *(Kasyanov A.I. 2008)*

During the outdoor wintering of bee colonies, it is advisable to spend the winter in dormant hives, two of which in a single hive. Because in this case, as a result of wintering on both sides of the board in the middle of the hive, they always keep each other warm to a certain degree. As a result, such families consume less food and survive the winter without losses. Also, in such families, the queens start laying eggs earlier, and the bee family develops and grows faster. As a result, such strong families accumulate more honey, weave more new beehives, and pollinate the flowers of many agricultural crops to increase their productivity. Therefore, during the wintering of bee colonies in the open air, it is recommended to organize the winter by placing them in bed hives, placing two bee families in one hive. (Usov V. 2009).

In the Bukhara region, experiments were conducted on wintering bee colonies in two types of beehives, 16-frame and 20-frame. In the Bukhara region, experiments were conducted on wintering bee colonies in two types of beehives, 16-frame and 20-frame. As a result, due to the fact that two bee families are housed in the same hive in a 20-bed beehive, such families survived the winter without losing each other's heat. At this temperature, queens begin to lay eggs much earlier than families in other beehives. Also, after the bees spent the winter in dormant beehives, during the spring development period, when they were always strong, they fed the young offspring more in the family, which is 10.8% more than in other beehives. p, as well as the fact that the daily egg laying of mother bees was also 10.2% higher. (Turaev O.S., Turaev A.S 1997).

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many agricultural crops to increase their productivity. Therefore, during the wintering of bee colonies in the open air, it is recommended to organize the winter by placing them in bed hives, placing two bee families in one hive. (Usov V 2009).

The purpose of the study. In the conditions of the republic, beekeeping families should be brought out of the winter without losses and increase family productivity.

Object and methods of research: Our research was conducted at the Tashkent Bee Agro beekeeping farm in Parkent district of Tashkent region.

All bee colonies on the bee farm were inspected. Sample wintering was supervised by control and experimental teams set up to conduct research at the beehive. The object of the study was selected bee families of the local population, which are kept in the territory of the Republic. In research methods, N.L. Burenin, G.N. Kotova's Guide to Assessing Bee Families was used. Research results. The productivity of bee colonies that hibernate in beehives of various constructions has also been studied. For this purpose, attention was paid to the total honey received from the bee family, commercial honey, the number of newly woven frames and the yield of wax.

Table 1. Productivity of bee colonies kept in different hives (average per family, kg).

Groups	Gross honey, kg	%	Commodity honey, kg	%	Built a new frame, pcs	%	beeswax medicinal properties, kg	%
Nazorat	39,3±1,40	100	23,3±0,76	100	5,1±0,47	100	1,04±0,06	100
Experement number I 16 framesi	41,4±1,37	105,3	25,4±0,78	109,0	5,9±0,48	115,6	1,21±0,07	116,3
Experement number II, 20 frames	45,8±1,37	116,5	29,8±0,85	127,8	7,0±0,54	137,2	1,34±0,70	128,8

Table 1 shows that in the experimental group II, the bee colonies overwintered well in the hives and like these bee colonies are able to collect honey. The analysis of the results showed that due to the well-developed bee family in the 20-frame hive beehives, the honey production of the family increased by 105.0% due to an increase in daily egg laying of queens by 105.6%. In Experimental Group II, gross honey production increased by 116.5% compared to the control group, commercial honey production increased by 127.8%, new frame weaving by 137.2% and wax production by 128.8%. It should be noted that the volume of gross honey production would be much higher than the volume of commercial honey goods. In addition, several type of beehives have also researched that how they have survived in the winter. For this purpose, 16-frame beehives in the first experimental group, 20-frame beehives in the second experimental group, and 12-frame Dadan-type beehives in the control group were selected because of uniformity. The bees entering the winter should pay attention to the strength of the families, the amount of feed and consumption, and the cost of the worker bees. Because these are of the most elements that make a bee family strong. In particular, at the end of the winter, it is important for the queens to lay eggs daily and to maintain a normal number of offspring in the bee colony, the strength of the family and the amount of honey in the hive.

Table 2. Results of bee winter period on the several beehives

Types	Family power, by the aisle	%	Feed consumption the aisle, kg	%	bees output, kg	%	Nest cleanliness, score	%
Check	5,4±0,13	100	2,6±0,03	100	0,4±0,01	100	0,4±0,20	100
First experience 16 frames	5,7±0,33	105,5	2,3±0,02	88,4	0,3±0,01	75	0,5±0,40	125,0
Second experience 20 frames	5,8±0,01	107,4	2,0±0,04	76,9	0,2±0,00	50	0,4±0,20	100,0

According to the results of Table 2, the average wintering was observed in the first experimental group compared to the control campaign. In Experimental second group, winter performance was significantly better than in the control group. We can see that these families spent 0.6 kg less feed honey in the first experimental group than in the control group during the winter at the expense of each bee colony, or 0.3 kg less feed (honey) per bee colony in the second experimental group. In our study showed that the strength of the bee family was 107.4% higher in the second experimental group than in the control group, and the bee consumption during the winter was 0.2 kg or 50% less. Nest cleanliness was found to be 25.0% higher than in the first control group.

Conclusion. In order to ensure that bees get their families out of the winter safely, when the effect of beehives of different constructions on family hibernation was tested, it was found that bees hibernated better and consumed less food in 20-frame beehives than other types of hives. In particular, our experiments have shown that two bee colonies are housed in dormant beehives, which carry heat to each other, and that such families survive the winter without loss and produce large numbers of offspring in the spring. In our opinion, while this method is required less spending but its economically efficient.

In our search showed that we are able to take more products from bees, unfortunately nowadays we do not use all our opprtunities. Actually, it would be better all agricultural farms can use it as extra sector. becuse, bees not only collect honey that they adds a great share to the pollination of flowers.

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