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Title: **THE EFFECT OF FRAME ON THE EXTENSION OF BEE FAMILY AT THE WINTER IN THE CONDITIONS OF OUR REPUBLIC.**

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THE EFFECT OF FRAME ON THE EXTENSION OF BEE FAMILY AT THE WINTER IN THE CONDITIONS OF OUR REPUBLIC.

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ABSTRACT: the article discusses the methods of overwintering of bee colonies without loss in the winter period, the influence of the new framework on the wintering of bee colonies is studied

Keywords: bees, loss of bees, wintering, frame, exterior, family, population, nosematosis.

INTRODUCTION

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 harvest. In fact in the world many countries have researched beekeeping since long time to elaboration of bee populations. Bee populations include of several process that it directly depends to natural environment and climate. Do not forget that beekiping requirer warm climate and the more sanny day it the better for bees. In this regard, in order to increase the resistance of local bees to low temperatures during the winter, to develop

modern innovative technologies, radically improve the quality of bees, increase their number, feeding them with natural nutrients, remove them from the winter and produce natural ecologically pure honey products development is important. The biggest expense in beekeeping is spent on strengthening the bee family, so it is important to get the bee family out of the winter without losses.

Literature review. According to research that two different bee frames were used in the Norwegian country to conduct bee family wintering, which provided information on bee wintering in new bee frames built from wax curtains along with old frames. Experts used old bee frames in the control groups and new bee

frames in the experimental groups. In the experimental groups, up to roughly 6 kg were fed with sugar syrup. In the research experiments, there was almost no difference in the sugars which given to both groups in the bee hive, only due to the absence of pollen in the bee frames in the experimental groups, they had early spring development, and some delays in the daily laying of queens. At the same time, there were also no cases of bee colony in the experimental groups. however, this indicates that control groups with older frames are more likely to develop nazematosis. Therefore, it is recommended to use fresh bee frames, which have a lot of pollen, when preparing bees for the winter. (Villumshtadt Ye. 1989).

In the climatic conditions of the Republic of Chuvashia, bees hibernate in two different ways: in the open air and in separate huts. Hibernates were dug 2 meters underground and covered with another 1 meter of sand. As a result, the height of the room was 3 meters. The floor under the room is concrete and its walls are covered with special boards. At the top there are special pipes for air purification and air circulation. During in the winter time, beehives are placed on top of 4 rows of beehive (Skrebsov V. 2007).

L.Ye.Jellinsky and his team researched bees families and their studies showed that when the bee family spends the winter outdoors, they pay attention to the presence of an open area on the frames of the beehive. Their research took into account the open space above the frames of the beehive, which is the size of the area, in order to exemplify bee wintering in the rainy and cold climate of Russia. In the beehive, the bees that consume the feed honey in the frames move slowly, upwards. The presence of an open space above the frames allows them to move from one frame to another with honeycomb frames, and their benefits are enormous.

In our country also lots of science work has been done to study the local population of bees. One of the factors that characterizes wintering is that the bees of the local population, which have adapted for centuries to the rapidly changing climatic conditions of the republic, differ sharply from other bees in their winter hardiness. Many years of research have shown that it is particularly resistant to extreme cold in mountainous and foothill areas (Kraxotin N.F. 1991).

V.G.Javrov studied the swarm of bees gathered in the hive during the winter and the fluctuations in air temperature around it. at the same time in his research, during the winter, the temperature of the hive was changed during the winter by installing thermometers that measured the temperature of the hive covering the beehive and the frames under the hinge cloth and between the frames around the swarm of bees measured its position. As a result, it was concluded that even if the outside air temperature changes under any conditions, the temperature on and under the cover fabric will also vary depending on it, and that the temperature between the frames where the main bee hive is collected will always retain heat provided.

During the winter, the bee family developed methods to reduce the temperature, humidity and water vapor in the hive by aeration. Furthermore the wintertime, it has been shown that by keeping the temperature in the hive constant, it is possible to reduce the humidity and water vapor in the hive. When the bee colony is +100 C, it is recommended to change the air in the hive frequently so that condensation of water vapor from the honey consumed by the bees does not accumulate in the frames and walls of the hive (Kichigin Ye.K., Kichigin A.Ye., 2006).

The purpose of the research. In the conditions of the republic, beekeeping families

should be brought out of the winter without losses and increase family productivity.

The methods of research: Our research was conducted at the Tashkent Bee Agro beekeeping farm, which located in Parkent district of Tashkent region. All bee colonies on the bee farm were inspected and researchers for experiments choose some of the bee families. Sample wintering was supervised by control and experimental groups assigned to conduct scientific work on the bee farm.

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. Kosovo's Guide to Assessing Bee Families was used.

Results of studies. A number of indicators, such as the number of frames in the beehive and wear and tear, have also been studied to ensure that bee colonies survive during the wintertime. The main indicators such as the amount of honey in the family of bees preparing for the winter, the structure of the frames, their color, the number of years of use were studied. For this purpose, two groups have established which were controlled and experimental. The control group was prepared for the winter using the farm method, and the experimental group was prepared for the winter in new wax cage frames. Ten bee families were formed in each of the control and experimental groups. The experimental groups were selected yellowish-white frames with nutritious honey. In the control group, the frames were selected, consisting of old frames with nutritious honey. No special feeding was performed on the bee families in the experimental groups.

The effects of old and new frames on beehives have been studied to ensure that bees spend period the wintertime without losses and increase bee resilience. Using more comparative methods in the study, the results of each group were analyzed and scientifically based

conclusions were drawn. At the same time, we studied four factors what are feed consumption, losses of bees, and durability of diseases and the cleanliness of the hives. All factors have deeply studied that how they influence for bees and we were able to get much science information to developed beekeeping. In our opinion, it is advisable to conduct similar studies in all regions to get clearly knowledge.

Table 1

The effect of the quality of the hive frames on the survival of bees. (X±Sx)

Groups	n	Feed consumption, kg	Consumption of bees, gr	durability of diseases (nosomatosis) %	cleanliness of the hives, score
Control	10	12,1±3,41	245,9±12,3	3,5	8,5
Experiment	10	9,4±3,8	114,5±9,2	1,5	9,4

The data from Table 1 show that in bee families that overwinter in light-colored, clean bee frames in the experimental groups, feed consumption during the winter was 9.4 kg, while in the control groups it was 12.1 kg or an average of 77.6% less food consumption was observed. During the winter, bee consumption in bee colonies in control groups hibernating in old black bee frames was 245.9 grams, while in experimental groups, it was 114.5 grams, or 131.4 grams or 46.5% of the ratio in control groups was found to be low.

Similarly, the control group had a 3.5% higher incidence of nosomatosis in bee families that overwintered in old, darkened frames. As a result, it was found that during the winter the bee frames and box walls were significantly

contaminated with signs of disease, resulting in a score of 8.5 points on the quality of nest cleanliness.

Conclusion. In order to ensure that the bees take their families out of the winter without loss, it is advisable to overwinter in new frames that are not obsolete. Our experiments have shown that the new frames are free of various infectious diseases, germs and viruses, and that bee colonies survive the wintertime without any damage. In addition, it has been found that using this method to care for bee colonies can significantly increase annual honey production and reduce winter costs. In our opinion, all beekeeping farms will get much efficiency if using these methods in their activities.

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