



## **BREEDING AND ITS SELECTION IN BEEKEEPING.**

**R. Q. Jamolov**-Fergana State University teacher.

**R.R.Nabiev** - Student of Fergana State University.

**R.O.Azizov**- Student of Fergana State University.

<b>Article history:</b>	<b>Abstract:</b>
<b>Received:</b> 6 <sup>th</sup> November 2023 <b>Accepted:</b> 3 <sup>rd</sup> December 2023 <b>Published:</b> 4 <sup>th</sup> January 2024	In the article, selection in beekeeping is one of the independent factors of heredity work, which ends with grouping and exclusion from the family in breeding and commodity farms, as well as in beekeeping colonies. Also, phenotypic mass selection - this mass selection is mainly aimed at improving the zoning issues of bees. Individual genotypic selection or selection by origin (estimation). The essence of this type of selection is that, using any high-performance family for future breeding, information is provided to obtain a single indicator that is useful for this particular farm.
<b>Keywords:</b> selection, phenotypic, heredity, breeding, genotypic selection, evaluation, breed, breeder, group, breeding, prolific, hybridization, gentle, purebred, crossbreeding, feed rate, larva, breeding group	

### **INTRODUCTION:**

Selection is one of the independent factors of genetic work in beekeeping, and it ends with grouping and removal from the family in breeding and commodity farms, as well as in beekeeping apiaries.

Phenotypic mass selection - this mass selection is aimed mainly at improving the issues of bee zoning. Individual genotypic selection or selection by descent (estimation). The essence of this type of selection is that, using any family of records for further reproduction, one gets one indicator useful for a particular farm. Choice by quality of children. According to some geneticists, this assessment is the highest form of evaluation of genetic work. In beekeeping, the following main types of selection are distinguished: hybridization, purebred selection and crossing.

Hybridization is the crossing of two species of animals. Purebred crossbreeding is one of the most common crossbreeding methods, in which two animals of the same breed are crossed. All high quality bees are created through clean breeding. There are two types of inbreeding: closely related bees are called "inbreeding" and unrelated bees are called "outbreeding."

Methods of crossing - crossbreeding, crossbreeding, crossbreeding, industrial crossing, factory crossing, crossbreeding.

### **RESEARCH METHODOLOGY:**

There are two ways to artificially breed queen bees:

1. Preparation of a foster family (a family in which a young mother bee is being raised);
2. This can be done by raising the larvae in the queen's nest.

To prepare a breeding family, it is necessary to obtain a family of bees with the best genetic characteristics. 3-4 days before the bee larvae hatch and daily before the queen leaves, the bee colony is given 0.5 liters of bulk sugar syrup or honey bee bread mixture. All frames in the colony are shortened to accommodate the bees, the hives are heated, and heating pads are placed on the diaphragm and under the roof.

Methods of preparing a foster family:

1. The simplest and most common way to prepare a foster family by removing the old queen bee from the foster family and raising a young queen bee with a closed offspring is to leave the family completely orphaned. In this case, the queen is found in the colony and placed in a separate compartment, then all the larvae lying between the open and sealed brood are removed by spilling water or using a match. Frames with pressed offspring are placed in the center of the nest, and frames with food are placed at the edges. 12 hours after colony preparation, the queen bee is selected and raised from larvae in a grafted frame in the middle of the frames with sealed brood. The advantage of this method is that you can get a lot of queen bees, but the breeding colony becomes much weaker.
2. The method of rearing young queen bees by removing the old queen in the breeding family with open breeding allows obtaining the highest quality queen bees. In this case, only the old mother bee is removed from the family, leaving open offspring. Honey-poor and empty frames are removed from the hive. After four hours, larvae are placed in a plate for rearing the mother bee on a welded frame in the center of the hive. The next day, after looking at all the offspring in the family, the hole is removed if there are queen bee larvae.

### **RESEARCH RESULTS:**

When rearing a young queen in a family with an old queen bee, the queen and all the offspring are placed in the lower layer of the hive, and the honey combs are placed on the edges of the upper layer. The upper and lower floors are

separated by a special mesh (cage), from which worker bees can freely enter and exit, but the queen bee cannot lay eggs. The next day, the larvae in the grafted frame are placed in the center of the mated brood frames on the upper floor to raise the queen bee. With this method, a small but high-quality queen bee is obtained, and the family does not lose the status of a small worker. If the nests in the farm are not nested, but there are bunk nests, then each nest is divided into two children with special frames. If it is necessary to obtain high quality and large number of queens, a different method of preparing queens with open brood and removing old queens is used. In this case, after the mother bee is removed from the hive, open and sealed frames are temporarily transferred to another frame. But before that, all the bees in the frames are shaken out, leaving only the bees in the two sealed and honeyed frames. The removed frames are replaced with empty rubber-inch frames. After 3-4 hours, the bees are placed between the two frames in the center of the hive for a dense settlement, where the larvae in the grafted frame are raised by the queen bee. The next day, it is checked that the larvae have been adopted by the mother, all open and sealed brood frames are returned to the nest, and the wax heads are removed. Also, as mentioned above, the frames in the family are laid so that the bees are densely settled. After two days, all frames with open brood are examined, and the opening of the queen bee's cocoons is removed. In this way, the worms are well received for raising the queen bee. Preparation of larvae for mother bee education. Larvae are prepared for mother bee education: transfer to artificial trays and without hatching. In the southern districts of Uzbekistan, the climatic conditions are mild and warm, and because of the long development period of bee families in early spring, one small family can be raised from each main bee family in spring. But due to the fact that there are few plants that secrete juice, taking into account that it is impossible to collect honey by developing them, the bees in the box are sent to the Far East and northern regions, which are rich in serasal plants with strong ability to secrete juice. Their power is used to collect a lot of honey. To implement the above, it is necessary to develop box beekeeping, the meaning of box beekeeping is to send bees grown in southern regions in plywood boxes to places rich in sap-producing plants. The bees brought there are developed, honey is collected, and after the total honey is collected, bee venom is extracted to remain in the medical industry, and then they are sent away.

Box beekeeping can be highly profitable only if the bee family in the box is brought to the right places to collect honey on 10-12 days of May. For this, the bee families in the box should be fertilized on the third day of April or at the beginning of May. As a result of early spring, long fall, and mild winter, bees become weak during hibernation due to frequent flight and disturbance. Therefore, taking into account that it is impossible to strengthen bee families early, it is necessary to winterize a strong bee family with a large number of young bees in the last year's season. Next year, in the spring of next year, if you take 2 closed larval frames from the main colony with a bee and add them to a small young colony, then the young colony will grow faster (in a small young colony, the mother bee is temporarily closed under a round wire cage so that the bees not killed). Thus, in the spring, two families simultaneously develop in the nest - the main family and a small young family, and after 4-5 weeks the strength of the small family fills seven to eight frames. Knowing in advance the timing of the reproduction of the boxwood family, taking into account the flowering of gardens and shrubs in the southern regions and the production of male bees in late March-April, they begin to breed queen bees. Before the formation of the box bee family, the mother bee should be cocooned, because the beehives of the well-developed young bee families are transferred to a plywood box and placed in the necessary places to establish the box bee family. In order to get more young bees into the plywood box, bees and soft frames are moved to the box during the day when the bees are flying well. When 1.1 kg of bees are transferred to plywood boxes to form a colony of bees in a young colony, some more bees and larvae remain in the colony. The bees in the remaining young family are given a mold of a queen bee or a stung queen and are thoroughly wrapped and warmed with a pillow; In the future, in order to increase the number of bees in collecting juice from the summer flowering orchard, the auxiliary queen bee is used as the head of the family. Before the flowering of the main nectar plants, the auxiliary queen bee is separated from the family with 2 soft frame larvae and the queen bee, moved to a pocket on the side of the hive separated by a plywood barrier, and the main part of the bees is added to the main family for use in collecting honey. After the end of the main honey bee period, the separated small family is strengthened by placing larvae from the main family, providing food, and leaving for the winter as a family with an additional queen bee. Purebred bees are not very tolerant of our hot climate, so it is necessary to put a canopy over the hives and pay attention to keeping the bees more ventilated. The demand for Carpathian bee families will be strong when exporting bee packages. In the following years, 80-85 percent of all bee packages of our republic will be produced and exported. Carpathianization of bee families in valley regions is more than 90 percent.

### **CONCLUSION:**

On October 16, 2017, in accordance with the Decree of the President of the Republic of Uzbekistan No. PQ-3327 "On measures for the further development of the beekeeping industry in the republic," separate breeding centers for breeding carniki were created and Carpathian queen bees were established in some regions of our republic. The Fergonia region is one of the breeders of such breeds. Every year more than 30-35 thousand queen bees of Karnika and Carpathian urchimags and cones of queen bees, as well as more than 3000 thousand fertilized queen bees are brought here. In 2011, bee samples were taken from 6 farms belonging to the association of beekeepers in the Fergana region and sent to the Russian Research Institute of Beekeeping. As a result of studying the cubital and tarsal indices and comparing them with the Carpathian race, the sum of their indicators corresponded to the Carpathian race.

**REFERENCES:**

1. Asalarichilikda tajriba ishlari. V.Bravarskiy. Sh. Suyarqulov. Ya. Brindza. V. Otchenashko. Toshkent- "Print. Media" bosmaxonasi. 2021 yil.
2. Gulov A.N., Borodachev A.V., Beryozin A.S. Vozrast trutney i kachestvo trutney. "Pchelovodstvo", 2015, №4, str. 44-46 b.
3. Jamolov, R. Q., Xatamova, D. M., Xolmatova, M. A. (2022). Asalarilar oilasining yashash tarzi. Oriental renaissance: Innovative, educational, natural and social sciences, 2(10-2), 666-671b
4. R.Jamolov., O.To'rayev, D.Xatamova. " Asalarichilik asoslari" , Farg'ona " Classik" , 2022.
5. R.K.Jamolov, "Ona asalarining eksterer va interver ko`rsatkichlari", Proceedings of International Conference on Modern Science and Scientific. 2023 yil
6. R Jamolov, H Raximov, A Tojaliyev. Asalarining harakatlanuvchi aqzolari.Journal of Science-Innovative Research in Uzbekistan 1 (7), 282-287 b
7. R.Jamolov. O`zbekistonda asalari zotlarini tanlash va parvarishlanayotgan asalarilar irqi tarkibi. (Science and innovation 2 (Special Issue 8), 630-634 b)
8. R.Q. Jamolov, G.H. Sharofiddinova. "Honeycomb, structure and reproduction of inches in the frame". Образование наука и инновационные идеи в мире 18 (1), 57-61b
9. 9. Jamolov R.Q, Raximov H, Tojaliyev A.Asalarilarning g`umbak oldi va g`umbaklik davri. Journal of Science-Innovative Research in Uzbekistan. 2023/10/30.
10. R Jamolov, R Azizov, Z. Oktamova Peaceful replacement of queen bees by honey bee colonies and factors affecting queen quality Science and innovation 1, 229-233 b.
11. R Jamolov, I Ergashyeva, D Rustamova
12. R Jamolov, I Ergashyeva, D Rustamova. Asalarining nasl etishtirishi. Journal of Science-Innovative Research in Uzbekistan 1 (9), 255-262.