It is difficult to talk about any regularity (table-3.) by the width of the curl of each wool type of all colors, it is essentially absent, and the differences are statistically unreliable.

The data on the length of the curl (valka) to some extent confirm the results of other studies on Karakul black lambs. Relatively long curls are characteristic of animals of jugate and flat types, short ones are characteristic for lambs of the Caucasian wool type, individuals of a jacket type have an average size.

In general, no significant differences were observed in terms of the size (width, length) of the curl between the lambs of the studied colors of the Karakalpak sura. They are more characteristic of the average (width) size (8.9-10.4 mm.) of the curl, short and medium in length of the roller. The obtained measured indicators of curls confirm the distribution of the experimental groups of lambs of the studied colors.

Conclusions. Thus, analyzing the research results, it should be noted that the darker the karakul fur, the greater the number of valuable wool types. The results of the study show that, excessive lengthening of the hair length of the hair loses the quality of wool.

It is necessary to pay attention in the breeding process to the length and width of the size of the curls in the lambs, the coloring of the Kara-Kalpak type suras.

Reference:

1. Валиев У. В. Каракулеводство в Афганистане. Колос: Москва, 1980, 13-20.

2. Гигинейшвили Н.С. Племенная работа в цветном каракулеводстве. Москва: Колос, 1976, с.48-50.

3.Джуманиязов Ю.Д. Каракалпакский сур и методы его разведения. Материалы и рекомендации на улучшение племенного дела в животноводстве. Москва: Колос, 1966, 417-420.

4. Плохинский Н.А, Руководство по биометрии для зоотехников Изд.: «Колос», 1969, 7-45.

5. Турганбаев Р.У Каракалпаксий породный тип каракульских овец окраска сур. //Монография.- Тошкент, 2012,-Б.164.

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CHANGES IN THE BODY OF WORKING HONEY BEES PREPARING TO MIGRATE

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Abstract: The article describes the presence of various physiological changes in the body of bees before migration in the family of bees in the local population, and on the basis of which migration can be prevented.

Keywords: egg tube, air sac, migration, population, physiological, larynx, energy, wax, cup.

Relevance of the topic: If you look at the honey bee family, you can be sure that it has a single queen bee, more than fifty or seventy thousand worker bees and from two hundred to two thousand male bees. At the time of migration, their number may increase slightly. The productivity of the bee family is directly related to the amount of serous plants around it and the strength of the family. However, in the spring and summer, some bee families tend to migrate more quickly. As worker bees emerge as migratory queens in the hive, they do not work in the hive and start to live off. During this period, the bees completely stop building new hives from the wax in the hive, the collection of nectar and pollen from the field slows down, and the worker bees stop feeding the queen bee. As a result, the queen loses weight, her weight becomes much lighter, the size of the fallopian tubes in the ovary decreases and the air sac in the abdomen becomes more flat, saturated with air, and the queen is able to fly.

In addition, as a result of the reduction in the size of the ovaries in queen, the ability of queens to make various "sounds" is restored. This further exacerbates the migration status of bees in the family. During this period, as the queen's egg laying decreases, the size of the eggs they lay also increases and the weight increases.

References: Honey bee learner scientists have observed that 6 out of 10 migratory worker bees have physiological changes in their egg tubes. [3] It is also necessary to take measures to encourage the collection of nectar and to build new frames in order to prevent migration of migratory bee families, to increase the size of the hive and increase the activity of worker bees in the hive. [1: 4].

Before winter, it was found that the amount of water and fat in the body of bees fluctuates, the amount of water in the body of bees decreases, and the amount of fat increases. [2] During the pre-migration period, the number of unemployed bees in the bee family increases slightly. As a result, the body of such unemployed bees has a large amount of food reserves. This food

supply will help bees to fly long distances in the future, move to new places and build new hives, feed their family members, work intensively.

But if migration is not prevented in the bee family, such families will be allowed to migrate several times, which will continue for another 10-15 days and until there are no migratory mothers left in the family, and finally one of them will rule, and the last queen will destroy all others. In order to prevent such a situation, it is advisable to take a whole set of precautionary measures against migration.

The bee family, which tends to migrate, works very little, so they cause a lot of trouble to the beekeeper, and they also cause a lot of economic damage. The number of males in the bee family will also increase. This sign also indicates that the bee family is preparing for migration.

Method of study: Physiological changes in the body of bees during the study period, changes in the amount of fat in their bodies 35 days before migration, 30 and 20 days before migration, and changes in the weight of worker bees during this period were studied. It was studied in the chemistry laboratory of the Research Institute of Animal Husbandry and Poultry.

The research was conducted at the beekeeping farm "Gulomkhoja" in Kibray district of Tashkent region. The farm has 250 bee families, in which experimental and control groups have been established on an equal basis. In control groups, the level of propensity to migrate was studied 35 days before migration and in experimental groups 30-20 days before migration.

Results of the study: In order to determine the physiological status of worker bees, samples were taken from local bee families, young bees roaming around the open hive in the nest. Such young worker bees were studied throughout the year in the chemistry laboratory of the institute, the amount of water, nitrogen, fat in their body and their weight were studied. Table 1 shows the fluctuating amount of fat from the body of migratory bees.

Table 1

The fluctuating amount of fat in the body of bees prone to migration

Seasons	n	Lim	M±m	Cv, %
Spring	12	2,1-3,6	2,71 ± 0,19	0,47
Summer	10	2,7-3,4	3,06 ± 0,07	0,25
Autumn	12	3,0-4,1	3,68 ± 0,05	0,18

Table 1, the results of which show that with the development of adipose tissue of working bees in the local population, they were found to change throughout all months of the year. In the spring and summer of the year, their growth was small, averaging 2.8 and 3.3%, respectively. The most developed period of adipose tissue of migratory bees was autumn, which was 3.7 and 3.1%, or 1.0% more than in spring.

This suggests that migratory worker bees spend a lot of energy and power to move to a new place, to build their new hive, they also accumulate food for living and process it, to feed and nurture a new generation. As the physiological state of the worker bees increases in the autumn, they spend a lot of energy before wintering, devoting young worker bees to wintering and rearing them, and caring for many young bees until the spring when the older worker bees are replaced.

Thus, in the local population the development of fat cells and laryngeal salivary glands in the body of migratory bees and autumn worker bees differs sharply from each other. The energy reserves in the bodies of worker bees, which are prone to spring and summer migration, are small, which they spend on feeding the young offspring in the hive and processing the pollen brought. At the same time, the bodies of nomadic autumn bees accumulate large amounts of energy, which they spend on caring for the young, building new hives in the nest and gathering food.

Therefore, the energy reserve of autumn worker bees is of great importance in the upbringing of young bees in the bee family and their preparation for winter.

In addition, samples were taken from young worker bees in the hive 20-35 days before the bee families were prepared for migration, and various physiological changes in their bodies were studied. In the early days of migration, even when up to 1-2 thousand male bee seeds and open offspring appeared in the hive, almost 35 days before migration, almost no physiological changes were observed in the body of the hive bees.

Twenty days before the migration, abrupt physiological changes were observed in the body of bees. During this period, the laying of eggs in the hives of male bees in the hive accelerated. Worker bees began to actively breed the male bees. The number of male bees in the hive and their number increase day by day, reaching 2-3 thousand. In the frames of the hive and on their edges, wax cups, which were the basis of nomadic mothers, began to appear. The data show that the weight variation of migratory worker bees is shown in Table 2 below.

Table 2

Weight variability of migratory worker bees (mg)

Days	n	lim	M±m	Cv, %
Before 35 days	12	90,4-101,1	95,66 ± 1,20	4,19
Before 30 days	12	96,5-196,1	100,28 ± 0,87	3,02
Before 20 days	12	99,8-116,7	108,63 ± 1,35	4,68

In Table 2, 30 days before migration, worker bees in the hive gained 6.9 mg or 4.8% of their weight compared to controls. Similarly, 20 days before the same bees weight, in experimental groups 15.5 mg or 13.5% more than in the control group.

Conclusion: Before the bee family migrates and separates, it can be learned based on the physiological changes that take place in the body of worker bees 20 days before they do so. In migratory families, the size of the worker bees increases, and the amount of fat in his body increases slightly. All this is due to the migration of bees that migrate to a new place; they build a new place, raise a new generation, collect food and process them. In order to spend the winter well, it fills the hive with young bees and replenishes it with a large amount of food reserves for a successful winter.

In migratory bee families, worker bees can be identified by physiological changes in their bodies 30-20 days before the migration.

References:

1. Мажукин В.С. Борьба с роением. ж. Пчеловодство, 2011, №4, стр. 34-35.

2. Морьева Л.Я., Козуб М.А. Изменения содержания воды и жира в теле пчелы в период зимовки. Ж.Пчеловодство, 2011, №1, стр. 16-17.

3. Таранов Г.Ф. Биология пчелиной семьи. Россельхозиздат Москва, 1986.

4. Рыбальченко А.Н. Загадка пчелиного роя. Минск, «Урожай», 1982.

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CREATION OF INBRED SYSTEMS WITH A CHOICE OF PLUS AND MINUS ON THE VIABILITY OF SILKWORMS WITH THE BEST COMBINATION VALUE

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Abstract: There is no difference in performance in systems with plus and minus selection. In the F-1 and F-3 systems where viability plus selection was performed, cocoon weight values were 1.84 g and 1.85 g, and shell weights were 432 mg and 422 mg, respectively. In practice, the minus selection does not differ from those of the conducted F-2 and F-4 systems -