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REPRODUCTION AND DEVELOPMENT OF BEES

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Abstract

Bees belong to the class of insects and live as a family. Their reproduction and development are varied and complex, including sexual reproduction and parthenogenesis. It is fully developed and multiplies to form a fungus. This article discusses the reproduction and development of bees, ways of artificial technologies for their reproduction will be covered.

Keywords: mother bee, male bee (drones), worker bee, sperm, reproductive period, fungus, larva, embryonic period, postembryonic period.

АННОТАЦИЯ

Пчелы относятся к классу насекомых и живут семьей. Их размножение и развитие разнообразны и сложны, включая половое размножение и партеногенез.Он полностью развит и размножается, образуя грибок. В данной статье описаны размножение и развитие пчел, способы искусственного осеменения и технология их воспроизводства.

Ключевые слова: пчелиная мать, пчелиный самец (трутни), трудоспособный возраст, сперматозоиды, репродуктивный период, грибной период, личинка, эмбриональное развитие, постэмбриональное развитие.

Introduction

Bees thrive in the wild. The queen lays eggs, the fertilized eggs produce worker bees and young females, and the drones give birth to unfertilized eggs, whose sole function is to reproduce. Bee breeding is the only way to maintain and increase the number of insects, not only in beekeeping, but also in nature. Bees create families in which the functional loads are strictly distributed among individuals. There are three types of insects in a herd: workers, queens and drones. The responsibilities of worker bees include collecting honey, caring for the offspring, and feeding the queens. Drones (males) are responsible for fertilizing the queen. Their only goal is to multiply. The queen lays eggs and is the basis of the number of bees, but she is not responsible for feeding the offspring.

The program of the Cabinet of Ministers of the Republic of Uzbekistan "On the development of cattle breeding, poultry, fisheries and beekeeping in the Republic, increasing livestock productivity and increasing production" was developed on May 18, 2016 [1] It also talks about the development of beekeeping and technologies for obtaining artificial bees.

LITERATURE ANALYSIS AND METHODOLOGY

Bees are fed to obtain honey, propolis, beeswax, queen's milk, bee venom, etc., which have long been valuable products, as well as to pollinate agricultural crops and orchards (see beekeeping). A family of bees collects 683,140-150 kg of honey per season, of which 100 kg is used for beekeeping, and 40-50 kg of honey is extracted. A. None of the family members can live independently on their own due to the interdependence of service activities. Breed: Central Russian forest (dark) belongs to the most common breeds. Arila-ri is large, high in honey, cold-resistant, up to 100 kg of honey can be obtained from each family. Caucasus (Georgia) Mountain-brown bee breed (Bees cavcasica) - mainly distributed in the Caucasus and Central Asia. The Carpathian bee breed is found in the mountainous regions of western Ukraine and beyond the Carpathians. The color is dark, the nature is soft, the trunk is long. Origin of Italian yellow bees (Bees ligustuca) Australia. It was later brought to Finland, Japan, China and India. It was brought to Uzbekistan in 1964-70 and tested. High yields have also been achieved in cotton fields. Far Eastern bee breed is widespread in the Far East (Pri-more, Khabarovsk). It is bred with bees from Ukraine, Central Russia, Italy and the Caucasus, and its productivity is average. Kraina gray A. breed (Asalari carnica) - common in the mountains of Yugoslavia, Austria. In appearance, it resembles the Caucasian brown bee, its productivity is average. In the Uzbek Institute of Animal Husbandry. scientific research on bees is being conducted. [4]

DISCUSSION AND RESULTS

During all reproduction, the uterine canal remains open. When the paired egg tracts are filled with the drones ’biological material, it squeezes the canal, the last male’s copulation organ comes out and closes the path, and the drone dies. The arrival of a female in the hive with a white film near the abdomen indicates that fertilization is over. After a few hours, the colony leaves.

Fertilization process:

1. The man's semen is forced into the ejaculatory duct.
2. After the sperm is secreted from the accessory glands that stimulate the release of semen. Sperm are sent to a woman's ovaries. Some of the fluid leaks out and a large mass enters the seminal vesicles.
3. Sperm is sent to a woman's ovaries.
4.A part of the fluid flows out, a large mass enters the seminal vessel.

One tablespoon at bedtime: if the recipient is full of minus 27 kg per month, it will collect up to 6 million sperm. In bad weather, the queen's departure is delayed. A woman’s reproductive period lasts about 1 month. If it cannot be fertilized during this period, only drones will be removed from the clutch. [2:20]

Attention! Bees do not leave drones in the family; they are killed or expelled from the hive.

The process of fertilizing an egg and mating differs in time. When a queen bee lays an egg, she fertilizes the egg, and this is done throughout her reproductive life. Worming takes place in empty cells, which vary in size (drone cells are larger). When an egg is laid, the female sends semen from the semen to the ovary. An egg laid in a drone cell is left unfertilized. The fertility

of the uterus per day is about 2,000 eggs. Bedding begins in February, after the insects overwinter. Under favorable conditions in the hive (+350 C) in the spring the breed bees are observed. Maintaining the microclimate in the hive is the responsibility of the workers.
There are 4 stages in the process of becoming bees:
-Egg (embryonic stage);
-Lichinka;
-Mushroom
-Maturity (adult individual).
Their development is illustrated in a table, and experiments have shown that the queen matures earlier than other bees.

Table 1

Stages of development	Mother bee	Worker bee	Male bee
Egg period	3	3	3
Larval period	5.5-6 days	6 days	7 days
The Mushroom Age	7.5-8 days	12 days	14 days
General development period	16-17 days	21 days	24 days

The embryonic stage lasts for 3 days, the nucleus divides into an egg, and during the division the cells that make up the insect's wings, body, and genitals are formed. The inner shell of the egg is torn and the larva emerges. Postembryonic development takes place in several stages lasting up to 3 weeks. The larva is equipped with special glands that secrete the secretion of cocoon formation. On the outside, it doesn't look like an adult insect, and immediately after it emerges, it looks like a 1.5mm round fat body. The baby is fed a special substance produced by adult bees. At three days, the size of the larva reaches 6 mm. In one week, the initial weight of the offspring will increase by 1,500 times. [3:17]

CONCLUSION

Honey products produced by bees for human health are widely used not only in the food industry, but also in the pharmaceutical and other industries. The growth and development of our people show significant positive results in farming and industry, food production.

List of Used Literature:

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