



TECHNOLOGY OF POLLINATION OF INTENSIVE GARDENS AND AGRICULTURAL CROPS WITH THE HELP OF BEES

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ABSTRACT

Bees are widely used not only in the food industry, but also for pollination of plants with the help of bees. The article talks about the technology of pollination of intensive gardens and agricultural crops with the help of bees, the pollination of plant flowers and its types, the technology of attracting the bee family to agricultural crops and their organization.

Recommendations for the establishment of intensive orchards and vineyards, reconstruction of unusable orchards and vineyards, planting and care of fruit and grape seedlings. New orchards and vineyards are being established on a very large area in our republic, and old orchards and vineyards are being renovated. It is one of our main tasks to make these new orchards and vineyards completely green. In the establishment of new orchards, it is necessary to pay special attention to the planting of fruit tree seedlings connected to dense and semi-dense grafts. In 6 years, more than 32,000 hectares of intensive seed orchards were established. The seedlings of these gardens were mainly brought from Serbia, Turkey and Poland in the early years. The advantage of intensive gardens is that these trees have small trunks, so it is easy to work with them (processing, watering, pruning, shaping, medicine). sprinkling and picking fruit). In

such orchards, the quality of the fruit is high due to good light and air circulation. There are also many conveniences in fruit picking, especially in orchards where the fruit is harvested without the use of ladders, in which the work is efficient and high, and the quality of the harvested product is also high, and the number of perishable fruits is reduced. Intensive orchard In order to ensure the high productivity of plants, it is necessary to constantly feed the soil.

For this, 30-40 t of humus, 240-260 kg of pure nitrogen, 120-150 kg of pure phosphorus and 60-70 kg of pure potassium are added annually.

There are the following ways to pollinate crops with the help of bees and increase their yield:

1. One of the methods used to ensure that bees go to the desired plant is to train them, that is, to form in them a reflex to go to a certain plant. For this, it is necessary to



add the flower from the pollen of the indicated plant to the prepared syrup (1 part of sugar, 2 parts of water) and leave it in this syrup for the whole night. In the morning, before the bees fly out, 200 g of this syrup per family is poured into the hives.

2. Teaching bees to collect honey from a certain place. In the evening, prepared honeydew is poured into the manger, in the morning, the remaining honeydew and bees inside are taken to the center of the pollination area, covered with gauze, and honeydew is poured again. When the bees return from the hive to their hive, they "tell" the people there where the hive is. If the bees are fed in the hive for several days, they will go to the trained place.

3. One interesting method is to collect dust from bees with a dust collector. At this time, the bees go to collect dust again.

4. A large number of bees per unit area of a pollinated crop.

5. Formation of steady reflex in bees to attend to plants.

6. Development of optimal periods of use of pollinating bees. Biological and physiological characteristics of plants, their cultivation techniques, growing season, temperature factor, etc. are taken into account.

7. Changing the location of pollinating bee families every 5-7 days.

The most important factor in bee pollination is the number of bee colonies needed to pollinate one hectare of plants.

The number of bee families needed for pollination of agricultural crops with the help of bees (based on 1 hectare of land).

The plant world is full of amazing processes and strategies. A good example is the different types of pollination available, which we will discuss in this section. We

can distinguish this process by the way it is implemented. This would be the following classification:

Wind Pollination: It is done by wind.

Hydrophilic Pollination: It takes place through water.

Zoophilic pollination: This is done by animals.

In this last group, zoophilic pollination, a specific subgroup is distinguished, which may be the most famous: entomophilous pollination, which is carried out by insects. There are thousands of insects that participate in the pollination process of the millions of different plants found in countless ecosystems on our planet.

Plant type Bee colonies required for pollination Increase in yield after pollination by pollinators, %1 Alfalfa, hemp, wild alfalfa 2-3 180-2002

Cotton 2-4 30-353

Orchard 2-4 40-504

Polyz Crops 1 30-405

Vegetable, grapevine, rapeseed and rape crops 1-2 35-456

Legumes 2 25-307

Sunflower 1 40-508

Strawberry, monkey 4 20-259

1-2 40-50 under greenhouse conditions

There are a total of 143 thousand bee families in our republic, which includes 1.5 million hectares of cultivated cotton, 540 thousand hectares of alfalfa, 482 thousand hectares of orchards, fields, vegetables, 387 thousand hectares of corn and not enough to pollinate the flowers of other crops. In order to pollinate the flowers of the crops in this area, it is necessary to organize another 1.5-2 million bee families. According to experts, 2-3 bee families are enough to pollinate one hectare of beech blossoms. 2-4 bee families are required for 1 hectare of cotton area, 2-4 bees for



orchards, 0.5-1 bees for sugar crops, 1-2 bees for crops such as vegetables, vineyards, perga, rape. Currently, with the existing bee family, it is possible to pollinate more than 200 thousand hectares of cotton fields. Good pollination at the right time is of great importance in increasing productivity. This is especially noticeable when increasing the yield of alfalfa seeds. Another way to develop beekeeping in our republic and provide it with food is to plant servitamin crops such as autumn rapeseed and perga, which are considered nutritious crops for livestock breeding, together with rye. is to organize planting on vacant land in the fields. These nutritious crops are a very nutritious and juicy fodder for livestock in the spring, and are considered to be excellent flower and pollen plants for the spring development of bees. Also, planting three-month-old varieties of sunflower plants on the land freed from wheat will provide the bee family with a lot of pollen and flower nectar at the end of summer, and will make a significant contribution to their development. There are the following ways to pollinate crops with the help of bees and increase their productivity: One of the methods used to ensure that bees go to the desired plant is to train them, that is, to form a reflex in them to go to a certain plant.

For this, it is necessary to put the flower from the dust of the specified plant into the prepared syrup (1 part of sugar, 2 parts of water) and leave the entire rune in this syrup. In the morning, before the bees fly out, 200 g of this syrup per family is poured into the hives. To teach the bees to collect honey from a certain place. In the evening, prepared honey is poured into the manger, the remaining honey and the bees inside

are taken to the center of the area designated for pollination, covered with gauze, and the honey is poured again. If you keep feeding with this honey for several days in the hive, the bees will go to the trained place.

One interesting method is to collect bee dust with a dust collector. At this time, the bees go to collect dust again.

A large number of bees per unit area of a pollinated crop.

Formation of a permanent reflex in bees to attend to plants.

Development of optimal periods of use of pollinating bees. Biological and physiological characteristics of plants, growing techniques, growing season, temperature factor, etc. are taken into account.

Changing the location of pollinating bee families every 5-7 days.

The most important factor in bee pollination is the number of bee families needed to pollinate one hectare of plants. This is of great importance. There are a total of 143,000 bee families in our republic, which covers 1.5 million hectares of cotton fields, 540,000 hectares of alfalfa, 482,000 hectares of orchards, rice, vegetables, and 387,000 hectares of corn. It is not enough to pollinate the flowers of sorghum and other crops. In order to pollinate the flowers of the crops in this area, it is necessary to organize another 1.5-2 million bee families. According to expert scientists, 2-3 bee families are enough to pollinate one hectare of alfalfa flowers. 2-4 families of wasps are required for 1 hectare of cotton area, 2-4 for orchards, 0.5-1 for sugar crops, 1-2 for crops such as vegetables, vineyards, perga, rape. Currently, more than 200,000



hectares of cotton fields can be pollinated with the existing bee family alone.

Bees help to pollinate more than ten cotton flowers per minute, and about 72,000 per day. Good pollination at the right time is of great importance in increasing productivity. This is especially noticeable when increasing the yield of alfalfa seeds. Another way to develop beekeeping in our republic and provide it with food is to plant servitamin crops such as autumn rape and perga, which are considered nutritious crops for livestock breeding, together with rye. is to organize planting on vacant land in the fields. These nutritious crops are very nutritious and juicy fodder for livestock in the spring, and they are also considered to be a good source of flowers and pollen for the spring development of bees. Also, planting three-month-old varieties of sunflower plants on the land freed from wheat will provide the bee family with a lot of pollen and flower nectar at the end of summer, making a significant contribution to their development. It is of great importance in the development of cultivation. In order for the plants in the garden to bear fruit, the pollen from one plant's flower must pass to another plant's flower. This task is performed by various insects, especially bees. When crops are in bloom, bees are brought closer to them. Otherwise, you will not be able to get a good harvest from them, because 70% of flowering plants are pollinated by bees. Bees land on various flowers in search of food and at the same time pollinate these flowers. The body of the bees is sufficiently hairy, and a large amount of pollen sticks to these hairs. To pollinate plants, bees are given training juice. If a manger with food smelling of a flower is placed in the apiary, the bees will

take this food and bring it to their hives. After finding this food, the bees, after returning to their cages, often start walking in a circle like carpenter bees who have found a food source in the field, that is, they try to attract other bees to bring this food. Some of the bees bring food from the hive into the hive, forcing other bees to fly out of the hive in search of similar food sources. If bees are given sugar syrup with the smell of cotton flowers, they will fly to find the cotton plant. Bees find these plants by the smell of their nectar. So, it is possible to pollinate the desired plant by feeding the bees with food that has the smell of the flower of the plant. To pollinate plants, prepare a juice of 1/1 hot water, and after this juice cools, the flowers of the intended plant are dipped and kept for two hours. The amount of flower should be equal to a quarter of the volume of juice. In order for the transplanted flowers to be fresh, they should be wrapped with gauze a few days before and placed in a place where insects cannot land. The training juice should be given in the morning before the bees start to fly. Increasing the cotton yield is the first issue before the agricultural workers. Based on a large number of investigations, it has been confirmed that external pollination of plants with the help of bees is of great importance. Interest in bees as a pollinator of cotton began at the beginning of the century, because the increased demand for cotton products in the international market forced to look for ways to increase the productivity of this plant. According to data, 2.6 s more cotton per hectare was harvested from cotton pollinated with the help of bees than in areas without bees. Many scientists have included cotton among the best pollen-rich plants and determined that bees willingly



participate in it. the method of pollination of plants is widely used. Conditions for successful use of bees for pollination: 12 days before taking a healthy, strong bee family to the place where pollination is needed, the family has a frame with 5-6 bees, enough bees to feed the bees in it should be. For high pollination, it is best to place the hive close to the pollination area and have fewer obstacles in the way of the bees flying there. In the conditions of Uzbekistan, the pollinator field is divided into smaller parts (from 40-50 families) in the fields of cotton, rice crops, and rice, and they are placed at a distance of 500 m from each other.

In intensive gardens, this distance is reduced to 200 m. If the pollination area is rectangular or circular, it is better to place the seeds in the center of the crops. If it is long, the fields are placed one after the other with an interval of 1000 m. It should be taken into account that there should not be plants around pollinated crops that attract the attention of bees, otherwise some of the bees will remain in them. One way to get bees to go to the plants they want is to give them training juice.

When cucumbers and other plants are grown in greenhouses, bees greatly reduce the burden of ash. Until recently, cucumbers grown in greenhouses were pollinated by hand; for this, they plucked

the male flowers of cucumbers and transferred their pollen to the female flower. This work required a lot of work. Now they use bees for pollination. Due to bee pollination, the yield of cucumbers increases by 10%. To pollinate cucumbers and other plants in a greenhouse, it is necessary to first bring a colony of bees into another greenhouse and allow them to fly out and clean their insides. If this is not done, the bees will pollute the cucumbers with their droppings.

While the bee family is in the greenhouse, two additional frames of perma need to be poured into them.

Conclusion:

Another way to develop beekeeping in our republic and to provide it with food is to organize the planting of autumn rape and servitain crops, which are considered as nutritious crops for animal husbandry, along with rye, on vacant lands on farms. These nutritious crops are a very nutritious and juicy fodder for livestock in the spring, and are considered to be excellent flower and pollen plants for the spring development of bees. Also, planting three-month-old varieties of sunflower on the land freed from wheat will provide the bee family with a lot of pollen and flower nectar at the end of the summer, making a significant contribution to their development.

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