The Efficiency of using Bees for Pollination of Crops in the Experiment

A. Dzhumamuratov
Candidate of Veterinary Sciences of the Karakalpak Institute of Agriculture and Agrotechnology

Zh. Ilyasova
Master of the II course of the Karakalpak Institute of Agriculture and Agrotechnology

Abstract:
The article provides information that one of the main conditions for achieving a high level of pollination is the placement of the apiary close to the pollination area and the reduction of obstacles in the path along which the bees fly here.

Key words: family, distance, sap, food, horsetail, offspring, apiary, pollination, flax, cell.

Introduction. As a result of negative consequences in the region in recent years, the number of bee colonies has decreased, which has limited the ability to fully utilize the genetic characteristics of the existing 7 species of bees, late the ability of bees to develop began, overwintering became difficult, and their resistance to climatic conditions and various diseases decreased.

The pollinating properties of bees are well known to all. When cotton flowers are pollinated by bees, the cotton yield increases by 27.9%, and the yield of berries and fruits - by 50-60%. Clover seeds will triple, fruit seed and cotton fiber ripening is accelerated and quality is improved.

Many scientists have dealt with the problem of plant pollination. It is proved that bees participate in pollination of melons and gourds and fruit trees, increasing their productivity by 4-5 times. With the help of bees and other complex measures, much attention is paid to the issue of increasing yields in all regions of the country. According to scientists, pollination of plants by bees increases the yield of clover by 180-250%, sunflower by 40-50%, cabbage, turnip, onion by 30-40%, flax by 27%.

For effective use of bees in pollination, a healthy, strong bee colony must have 5-6 breeding cells in the colony 12-14 days before being brought to the area where pollination is required, and there must be enough bees to feed the offspring of bees.

One of the main conditions for achieving a high level of pollination is placing the apiary close to the pollination area and reducing obstacles to the bees flying here. The fewer natural (rivers, lakes, hills) and artificial (buildings, trees, toxic gases, industrial smoke, chemical waste) barriers, the faster the bees will pollinate, use less energy to fly over barriers, and their working conditions will be safer for pollination of the designated area will require fewer bee colonies.

In the conditions of Uzbekistan, it is advisable to place the pollinator on cotton fields, rice fields in small pieces (40-50 families) at a distance of 450-500 meters from each other. In gardens, this distance is reduced to 200 meters.

To increase the efficiency of pollination on large, elongated areas, the apiary should be placed at a distance of 200-300 m from the edge of the field at a distance of 800-1200 m from each other. It should be borne in mind that there should be no plants around the pollinated area that would attract the attention of bees. Otherwise, some of the bees will remain in them. Watermelon, melon, eggplant, cucumber and wild plants: sage, ivy, horseradish and other crops enhance the vital activity of bees.

Bees transplant from flower to flower, transferring pollen from one plant to another, ensuring pollination. Since different types of plants emit different smells, bees search for them purposefully and quickly find them.

Bees adapt well to flowers that are planted more often, and each bee can find a flower from which it gets its nectar among dozens of flowers. It is only when the plant flowers run out of juice that the bees land from some types of plant flowers onto the flowers of other plant species.

While bees pollinate flowers for food and increase fruit yields, flowers provide bees with nutrients such as pollen and nectar (protein, carbohydrates).

A certain number of bee colonies are required to pollinate various crops.

Table 1: The norm of a bee colony for pollination of plants.

Plants	A family of bees per 1 hectare of sown area	Increased yield, %
Seed gardens	2,0	25-30
Buckwheat	2,0-2,5	40-60
Sunflower	0,5-1,0	40-50
Red wool	4,0-6,0	70-75
Wool	8,0-10,0	60-65
Sainfoin	3,0-4,0	30-50
Coriander	2,5-3,0	60-80
Cotton	0,5-1,0	15-30
Melons, cucumbers	0,3-0,5	30-160
Cucumbers in the greenhouse	10-12	200-300

Conclusion: Bees play an important role in pollination of plants than wild insects. One worker bee plants 100-150 flowers per flight, while bees from a strong family plant 50-60 million flowers per day on sunflowers, alfalfa, melons, fruit trees and other plants. Taking part in flowering, bees successfully pollinate plants, bringing 3-5 million pollen grains on their bodies. Bees pollinate 80-90%, and wild insects - 10-20%.

List of used literature:

1. Vereshchagin A.N., Khalko A.V. Removal of queens and obtaining royal jelly. J. "Beekeeping", No. 4, 2006, p. 12-14.
2. Isamukhammedov A.I. "Beekeeping" T., Teacher. 1995.
3. Kakhramanov. B.A., Isamukhammedov A.I., Ballasov Yu.Sh., Ergashev S.F., Turaev O.S. "Caring for bee colonies in their own, subsidiary peasant and farm households." T.2009. (tutorial).
4. Kakhramanov. B.A., Isamukhammedov A.I., Ballasov U.Sh., Isamukhammedov S.Sh. O.S. Turaev "Beekeeping" Tashkent 2012. (tutorial).