

CROCUS MEDICINAL AND INTEGRATED MEASURES AGAINST THEIR PESTS

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ABSTRACT: This article provides information about planting, propagation of medicinal *Crocus*, determining the cultivated area, depending on conditions, various harmful insects. The article shows that *Crocus* damages winter scoops, gamma scoops, spider mites, bedbugs, aphids and thrips, especially bed bugs and spider mites, do more harm than others. It is also noted that the implementation of agreed measures against them is a guarantee of a high and quality crop.

KEYWORDS: insects, biological, chemical, agrochemical, pests, plants, butterflies, pupae, egg, larvae.

1. INTRODUCTION

In our country, great attention is paid to the cultivation and processing of medicinal plants. Training of specialists in the cultivation of *Crocus*, the selection of individual educational institutions for this and training of young people. It was noted that it is advisable to grow *Crocus* and create a center for its reproduction in the future. The center was tasked with selecting medicinal and food plants, conducting research, sending young scientists to the field, and ultimately exploring advanced foreign technologies and organizing exports.

The Italian company Opera SRL offered to allocate \$ 20 million for the cultivation of *Crocus* on 400 hectares of land in the Bakhmal district of the Jizzakh region. *Crocus* is planted on large areas of forestry in Surkhandarya, Kashkadarya, Samarkand, Jizzakh, Namangan, Fergana, Andijan and Tashkent regions on the basis of scientific research and recommendations of *Crocus* agricultural technology.

2. BOTANICAL DESCRIPTION OF CROCUS

Crocus, which belongs to the pink family, grows in dry soils, slightly sloping to the south, protected from the wind. The annual cycle of root development, in which many spring flowers bloom, is the beginning of spring. Usually in April, after the greenery appears, the buds bloom in 2-3 weeks. The Latin name for *Crocus* is *Crocus*, which translates from Greek as "thread" or "fiber".

The planting time for *Crocus* is June-August, when the plant goes into a dormant period. *Crocus* tubers are planted at a distance of 10 cm, 15 cm deep and 60 cm wide.

Thousands of hectares are planted with *Crocus* around the Indian city of Pampore. Pampore is also known as the *Crocus* city of Kashmir. Research has shown that 75,000 flowers are needed to harvest 450 grams of *Crocus*. *Crocus* is basically a perennial plant, it is both a medicinal plant and a delicious spice and flower. It grows mainly in the foothills. Protected from the wind, gives good yields in hot and sloping areas. The product obtained from *Crocus* stalks is used in cooking and pharmaceuticals.

Rose leaves can be used to make tea, so growing *Crocus* now requires a lot of work and attention, so its value is equal to gold. In Western countries, the price of 1 kg of the harvested crop is estimated at 8,000 to 30,000 euros.

Considering the above, we have set ourselves the goal of studying the main pests of *Crocus* and organizing timely measures to combat them.

3. RESEARCH METHODS

Entomological calculations and observations were made by V. Yakhontov, G. Ya. Bei-Bienko, the number of insects Sh.T. Khodjaev; The dominance and number of entomophages is based on the methods of K.K. Fasulati, S.N. Alimukhamedov. The degree of damage to phytophages was determined by the method of V.I. Tansky.

4. RESULTS OF STUDIES

One of the main rodents of *Crocus* is *Agrotis segetum* Schiff. He loves and consumes crops such as cotton, alfalfa, beets, corn, melons, wildflowers, and alfalfa, which are common in fields irrigated in the fall. It hibernates at a depth of 5—10 cm in the soil in the form of worms. In March, it turns into pupae, and in April the first butterflies fly out and lay eggs. The maximum number of eggs laid by a butterfly is observed at an air temperature of 12-20°C.

Eggs are scattered and placed between the leaves of the plant. After 3—7 days, gray larvae hatch from the eggs, which first feed on leaves, then penetrate the soil and only at night damage the surface of the plant. It gives 3-4 generations in our conditions, another one is a gamma nightmare (*Phytometra gamma*), which belongs to the rodent family. In Uzbekistan, pruning three times a year can damage many types of vegetables and industrial crops.

In greenhouses, it is especially harmful to eat leaves and even traces of plant fruits in autumn, winter and spring. Due to the mature breed of this insect (butterfly) and the presence of specific features of the worm, it is not difficult to determine. The front wings of the butterfly resemble the Greek letter gamma, and the worm has 12 legs instead of 14, sucking the sap of plants from the leaf holes on the side.

In teplitzaks, it is especially harmful to eat leaves and even traces of plant fruits in autumn, winter and spring. Due to the mature breed of this insect (butterfly) and the presence of specific features, the worm will be determined non-layer. The front wings of the butterfly resemble the Greek letter of scale, and the worm has 12 legs instead of 14. sucking the sap of plants from the leaves of an open set.

Another *Crocus* pest is alfalfa (*Adelphocoris lineolatus* Coeze) and field alfalfa (*Lygus pratensis* L.). Field caterpillars and alfalfa are broadleaf insects that infect various cultivated plants. The body size of an adult caterpillar is slightly larger - 5.8-7.3 mm, the larva is 1-4 mm. A distinctive feature of the field arch is that it has 2 black spots on the front and back of the shoulder, as well as 1 black spot on the forehead and abdomen.

During the field of adult insects, herbaceous plants hibernate under a canopy, and when the air temperature is up to 12°C, they start flying in search of food, and when the temperature rises to

16⁰C, in search of food. In mid-May, separate breeds of second generation field shackles appear. Caterpillars lay up to 150-250 eggs.

Adult insects 6.5-9 mm, green, give 3-4 generations in Uzbekistan, hibernate with eggs. Field candelabra are similar to alfalfa candelabra, but green in color is less than 3.4-4.0 mm. Adult insects hibernate among plant debris.

The larvae reproduce by laying eggs on the leaf and its stem. The fourth generation lays eggs at the end of August, and the full cycle takes place in September. In our conditions, field reed grows up to 5 generations per year. The duration of caterpillar development from egg to imago depends on the air temperature.

Thrips. It belongs to the genus *Thrisanoptera*, the genus *Terebrantia* and the genus *Thripidae*. Among thrips, tobacco thrips are more common and more harmful than other species.

Thrips tabaci Lind. It is a pest that infects cotton. Besides cotton, it causes severe damage to tobacco, onions, cabbage, herbs and flowers. The adult form of tobacco thrips overwinters in evening vegetables, winter wheat and field weeds, plant debris. Female thrips lay up to 100 eggs. Pest larvae hatch from eggs in 3-4 days. The larvae develop in 10-15 days and become sexually mature insects. Adult insects live 10-25 days in summer, development of one generation lasts 23-25 days.

Aphididae. Aphids - belong to the subfamily of insects with the same wings. More than a thousand species are known. Body length 0.5-6.0 mm, ovoid or oval in shape, color from light green to brown. The head is motionless, the sucking mouthpiece has the shape of a hose, consists of joints, starting from the back of the head, lives in balls. The development cycle ends with the laying of fertilized eggs. The development of aphids is 3-20 days, depending on the air temperature. During the season, it gives 18-20 offspring, in summer females live up to 14 days.

5. CONTROL MEASURES

Measures against winter moths: Deep plowing in autumn, weeding of fields, preparation of poisonous forage during germination, application of 20-50 kg per hectare, anti-egg, 60,000 trichograms per hectare, when butterflies begin to lay eggs, 5-6 days then apply 80 000 pieces per hectare and 60,000 pieces of trichogramma after another 2-3 days, and against the entomophagous worms of poach in a ratio of 1:10 or 1:15, when breeding pests, it is recommended to use the recommended chemicals.

To combat spiders, special acaricides are used: Nissorán, Zoom, Ortus, Flumayt, Neoran, Omite, etc., which are recommended for high agronomic techniques, high-quality fall plowing, when there is a risk of pest infestation.

To control the chains, organizational, agronomic and preventive measures will be taken. For chemical treatment, the recommended chemical or biological agents are used, which establish the criterion for the magnitude of economic harm (IZMM).

Organizational farming and agronomic practices are carried out against thrips and aphids, *Crocus* bulbs or seeds are treated with effective seed pesticides before planting in areas where thrips are grown, insecticides recommended against aphids are used for thrips, aphids and thrips are grown during the growing season. weed control, Entolucho (0.3 l), Entospilan (0.25 kg), Deltasis (0.25 l), Entomitrin (0.3-0.5 l), Agrofós-D (1.0 per hectare in severely affected areas) l), Bi-58 should be treated with one of the new (1.5 l) preparations.

Since *Crocus* is a medicinal plant, it is recommended that biological and microbiological measures be taken to control its pests as much as possible. Since the germination of crops, the influence of pests and beneficial insects on the *Crocus* plant is regularly checked.

6. CONCLUSIONS

To summarize, we can say that *Crocus* is seriously damaged by *Agrotis segetum*, *Autographa gamma*, *Tetranychidae*, *Lygus pratensis* L., *Adelphocoris lineolatus* Gz., *Aphidoidea* and *Thrips tabaci*.

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