



## Pests of Medicinal Saffron (*Crocus Sativus L.*) in Surkhondaryo Region and their Control Measures

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**Abstract:** This article describes the medicinal properties of the saffron plant. Currently, as a result of pests and diseases causing great damage to agricultural crops, their quality and quantity are being damaged. Among them, spider mite, tobacco thrips, and aphids cause great damage to the saffron healing plant. It is recommended to use microbiological preparations against pests that harm the saffron medicinal plant.

**Keywords:** agriculture, export, plantations, nodule, entomological accounts, saffron plant, medicinal plant.

**Introduction.** Saffron, a member of the saffron family, grows in dry soils on a slightly sloping south side, sheltered from the wind. According to literature sources, it is planted on thousands of hectares around the Indian town of Pampari. Today, Uzbekistan is strengthening its place and potential in the world community. Agriculture, which is the main economic support of our country, is taking part in the process of development in accordance with the requirements of the times. According to the information given by the experts in the field, the quality and quantity of the agricultural crops are being damaged by pests and diseases. Pampore is called the saffron city of Kashmir. According to the information given by the experts, it was found in research that 75000 flowers are needed to collect 450 grams of saffron. It is considered a perennial plant and is both a herb and a delicious spice and flower. It mainly grows in forest farms in Boysun, Oltinsoy, Denov, Uzun districts of Surkhondaryo region in Togoldi districts. The great representative of the world of medicine, our grandfather Abu Ali Ibn Sina, in his "Laws of Medicine" mentioned that saffron is a cure for the following diseases. 1. against tuberculosis. 2. Drinking the tincture of saffron rejuvenates a person, brightens the complexion, and brightens the eyes. 3. Elderly people complain of insomnia. Drinking saffron tincture before going to bed. 4. Strengthens the heart, facilitates the movement of sputum, strengthens the respiratory organs. Therefore, saffron cultivation requires a lot of work and attention. Therefore, its value is equal to gold. 1 kg of saffron harvested in Western countries is estimated at 2000-10000 US dollars, depending on the quality. Therefore, the head of our state has made it our goal to study the main pests of the medicinal saffron plant grown in the forest farms of the Surkhan oasis with the above-mentioned names, and to organize timely measures to combat them [1,2,3].

**Research methods.** Entomological calculations and observations were made by B. Yakhantov, B. Biyenko 1943, the density of insects by Sh.T. Khojayev 2014, the dominance and quantity of entomophages was performed based on the methods of K.K. Fashlati, S.N. Alimukhammadov.

**Research results.** According to our observations in the Uzun and Bobotog forest farms, the main rodent pests of saffron are autumn beetle, gamma beetle, spider mites, alfalfa beetle, thrips, tobacco mosaic, and aphids. We witnessed that aphids damaged the saffron plants of Kyziryq and Boysun

forestry farms. As we all know, aphids are Aphididae plant lice, a subspecies of aphids with winged proboscis. About a thousand species are known to us. The length of the body is 0.5-60 mm, ovoid or oval, from light green to brown. The head is motionless, the stinging mouth apparatus has a snout-like appearance and consists of joints starting from the back of the head. They live in groups, the development cycle is completed with the laying of fertilized eggs. The development period of plant lice is 3-20 days, depending on the air temperature [2,4].

**Tobacco thrips.** According to the given information, **tobacco thrips.** -*Thrips fabaci Lind* it is considered a pest that often falls on the goza. In addition to cotton, it is strong for tobacco, onion, cabbage, greens and flowers, among medicinal plants that grow next to saffron, wild radish, wormwood, kotychka, kopychak, It reproduces on foreign and cultivated plants such as sarsabil, sorrel, pepper.

The sucking pest of saffron, the spider mite (*Tetranychus urticae* Koch) is a serious pest of many plants and damages 248 plant species, 37 of which are agricultural crops, medicinal safflower, chakanda, frankincense, zupturum, medicinal kashqarbeda, medicinal marigold, kovull and weeds feed on plants. Organochlorine lays 160 to 600 eggs, in the southern regions of Uzbekistan (Surkhandarya and Kashkadarya) it gives birth 18-20 times. The literature and scientific articles analyzed in the course of scientific research show that information about pests and diseases of the saffron plant, which is one of the medicinal plants, has not been studied yet [2,5,6].



**Figure 1. The growth of the saffron plant**

Since saffron is considered a medicinal plant, it is recommended to carry out biological and microbiological control measures against its pests. From the time of germination of crops, the saffron plant is regularly checked for pests and beneficial insects [7,8].

**Agrotechnical control measures.** It is necessary to strictly adhere to agrotechnical measures to obtain a high and quality harvest, to prevent pests and diseases, and to organize measures to combat them in time, determining the time of their appearance in the biocenosis. 1. Proper organization of crop rotation. 2. Irrigation and fertilizing between rows according to quality treatment (Scientifically based case). 3. Put 3-4-day-old eggs of the golden eye on the plant joints in a ratio of 1:10, 1:5 depending on the amount in the pest. 4. As saffron is a medicinal plant, according to the recommendations of Sokha specialists, the following microbiological preparations are recommended [5,7,8].

**It is recommended to use microbiological preparations (for spider mites, thrips).** We can recommend the following microbiological preparations. Microbiological preparations affect exactly one phase or age of the pest. In our republic, microbiological preparations Bioslip BV (*Beauveria bassiana*) at the consumption rate of 3.0 l/ha have a strong effect on spider mites that cause damage in orchards. is a tool. Microbiological preparations are mainly recommended in the fight against small larvae of spider mites. The effect of microbiological preparations can be achieved on the third-seventh and fourteenth-twenty-first day. Biopreparations also have a negative effect on the next generation of spider mites, the fertility of spider mites decreases. Breeds that are damaged by microbiological preparations and do not die will be morphologically defective or larvae will not

emerge from the laid eggs. To determine the effect of microbiological drugs, the suspension of the drug should be thoroughly sprayed on both surfaces of the leaf [2,4,8].



**Figure 2. Control procedures for saffron plantations**

**Conclusion.** Based on the results of our research, the saffron plant is seriously damaged by the autumn moth, gamma, spider mites, aphids and thrips. In conclusion, it was found that the main pest of saffron plant growing in the forests of Uzun and Sariosyo districts is the spider mite, which causes more damage than others. It is important to use microbiological preparations against pests that harm the saffron medicinal plant.

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