



Technology of Growing Zaffaron in the Condition of Uzbekistan

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Abstract: This article discusses one of the medicinal herbs that have long been used by people and its development in the Uzbekistan.

Keywords: Plant, medicine, Saffron, specialists, seeds, flowering, biology, usefulness.

Shafran or zaffaron is one of the medicinal herbs that people have long used. Country of this plant - the Middle East, the Nearest South and India. It also existed during the time of the Sumerian civilization. It was drawn in the ancient city of Crete the people painting shafran on the walls of the palace. Medical properties of zaffaron were also written in the pre-Chinese medical books, 1,500 year old Egyptian inscriptions.

Babur emphasized in his "Boburnoma" about zaffaron growing in the mountain of Kashmir and the foothills. In the botanics (shafran, crocus) (*Crocus sativus* L.) it is a perennial herb with tuber onion belonging to the Cossatic family. On one place it gives harvest during good 5-7 years. The word "shafran" comes from the Arabic word "za -fran" and means "yellow, yellowish." Today the plant is widely spread in France, Italy, Turkey, Iran, India, China, Pakistan, Spain, Japan, Azerbaijan, Russia and other countries. This is a very valuable plant, and the price of one gram of zaffaron is equal to one gram of gold.

This plant came to Europe after the invasion of the Arabs. Products are used as spice. It gives a very pleasant aroma and smell. Most dishes are served to taste. It is known that our great scientist Ibn Sina used Zaffaron for many diseases.

It is very helpful in urination and problems with the reproductive organs, in improvement of the immune system and eye vision, in pain relief. It is also widely used to enhance brain activity, prevent cancer and increase human mutations.

There are many similar species in this plant, often selling other species as shafran, such as imeritin shafran in Azerbaijan, in Mexica saflor flowers, and curcuma in India. There are cases in our markets when saflor flowers are sold as zaffaron. These plants belong to the same family of shafran, but they are not shafran. In our country, various types of Shafran are endemic, but they need to be studied.

According to data, the number of zaffaron production grown in the world is very small, only about 300 tons. 175 tons are grown in Iran and 120 tons is exported.

Shafran loves heat and light and sows the soil well. Zaffaron grows and develops when it is wet in the soil in accordance with the biological nature. Vegetation stops here in the summer and in places where the soil is wet, the roots are rotted. So it is well preserved in dry soil in summer. It requires a certain temperature to flow twice a year. For flowering in autumn, the air temperature should be 12- C and chosen the right varieties. In many cases, it blooms in early spring, and the difference from other plants is in the leaves and buds of the flower at the same time. Height is 10-12 cm. There are three homogeneous pollens in the open flower that will be collected.

In order to collect one kilogram of Zaffaron at least 200,000 plant flowers will be collected from pollinators. Zaffaron blooms during just three days. At this time, three pollens should be collected from flowers. One onion forms one or three large flowers. They are of light purple, dark purple, and sometimes light yellow or orange colour. When the onions are planted in summer, the roots take root until autumn, large berries are poured out by 8-10 cm, and the small ones are sown in a depth of 4-5 cm. Before planting, a bucket with rotten fertilizer is laid in the area of 1-2 m on the furrows. Onions of Zaffaron remain on one place for 4-5 years, then dug out, carefully dried and dried in a solution of potassium permanganate, dried depending on their size. It is advisable to plant small onions in order to have more calves during the growing season. Its harvest is collected only one week. The harvest is about 20 kg per hectare when it is given the best agrotechnical cultivation.

Review of experiments conducted in the Buka district. Number of flowers was 4-6. The color was violet, the length was 1.5-2 cm. The number of seeds was three, the ends were covered with yellowish grains of 2 cm long. The pollens are of yellow color, they were 3 and each pollen was divided into two parts, and white leaves appeared in the leaves. The formation of generative organs began in the second decade of October. In the leaves of plants there appeared the top of bud with pale violet color. The complete formation of bud lasted 2 days, its length was 1.5-2 cm, and the total duration of common bud formation was 8 days. The flowering process began in late October. The full opening of one flower was 1 hour 25 minutes, and the total flowering period was 8-9 days.

The beginning of flowering of a plant does not depend on a daily change in air temperature, but on a change in relative humidity of the air. Despite the decrease in air temperature, the flowers continued to grow rapidly.

Review of experiments conducted in the Tashkent region. In the conditions of Tashkent region (in versions: on onion diameter, depth of onion and watering) the biology of flowering of a planted plant started earlier than in the Buka district. The period of formation of the generative organs began almost ten days ago. Among the leaves of the plant it was seen the top of bud of pale violet color. The length of full bud was 2 cm. The complete formation of bud lasted 2 days, and the duration of the period of bud formation was 10 days. Flowering process began in the second decade of October. The full disclosure of one flower continued 1 hour 10 minutes, while the total flowering period was 8 days, and the full flowering process was 5 days. The duration of flowering plants decreased because of the large amount of precipitation (2.20 mm) in the Tashkent region.

It is seen the same in two different conditions that the vegetative organs of the plant grow during the formation of the generative organs. Thus, the plant also grows during flowering. During the flowering period (01.10.2018-30.10.2018), the normal air temperature is 10-15°C, and the relative humidity of 40-60% is favorable for the plant with the formation of generative organs growth of stem organs.

In our scientific studies, on the basis of chemical analysis, we have analyzed the adaptive properties of plants, changes in the anatomical structure of tissues, the chemical composition of raw materials (flower pillars), i.e. dyes (crotchine). According to the results of scientific research, it is possible to organize large plantations of safflower plants with the introduction of soil and climatic conditions of the Republic of Uzbekistan, rich in fertile soils.

Grain and other promising medicinal plants for cultivation and cultivation in Turkey in soil and climatic conditions will be used not only in the domestic pharmaceutical, food and perfume industry, but also provide an opportunity to export this valuable product.

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Spanish farmers can make a living for a year. According to the Internet, currently the demand for zaffaron is huge and the product is low. In our regions, this plant is planted and studied. Presumably, the experiment should have a good result. Because in our foothills, in the deserts, we have suitable conditions for planting zaffaron. Having studied well plants biology and good agricultural agrochemicals, having brought from Iran its onions and attracting aware undertaker- farmers, we will base another profitable industry in our country.

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