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SAFFRON (CROCUS SATIVUS) CULTIVATION TECHNOLOGY

У статті представлена сучасна технологія вирощування шафрану, вказані особливості його вирощування. Також представлені проблеми які виникають при вирощуванні шафрану. Надані рекомендації по його вирощуванню та збору.

Ключові слова: шафран, вирощування, обробіток ґрунту, збирання, хвороби.

The article presents the modern technology of saffron cultivation, the features of its cultivation are indicated. The problems that arise when growing saffron are also presented. Recommendations for its cultivation and collection are provided.

Keywords: saffron, cultivation, tillage, harvesting, diseases.

Saffron (*Crocus Sativus*, crocus, red gold) is grown on an industrial scale mainly in South Asia, Iran is the largest exporter [2].

In Ukraine, you can find this plant in the Crimea, as well as in the Kherson

region in small farms . To create a saffron business, Ukrainian farmers offer a ready-made formula. 20 acres of land, 1 ton of bulbs (*Crocus Sativus*) worth about 7 thousand dollars. Harvesting of flowers from a field of 20 acres under the force of 2 workers. From 25 flowers you can get about 1 g of saffron [1].

Growing saffron is not a complicated process. Saffron grows well on fertile soils well lighted by the sun. Therefore, it is recommended to plant on the southern slopes and on hills or ridges. The amount of precipitation for growing saffron should be about 800 -1000 mm per year, so it is desirable to grow under irrigation. The optimal climatic conditions for growing the plant are conditions with high rainfall in the spring growing season and dry hot summer period. The main tillage is carried out using plowing to a depth of 25-30 cm. The main task of pre-sowing tillage is to level the soil surface [2].

Saffron is stamens of perennial crocus flowers, which are planted in bulbs. Every year the planted bulb dies, leaving behind offspring, which later gives a flower - the harvest. If the bulb is small, it takes 2-3 years to give the first colour, when the weight reaches 5-7 grams - you can get one flower. That is, the larger the planting material, the more spices can be collected from one area [4].

In order to obtain high yields, in addition to soil and climatic conditions and tillage technology, the depth of planting bulbs is of great importance. For growing in Ukraine, the optimal depth is from 15 to 20 cm. The smaller the planting depth, the higher the yield of planting material (daughter bulbs), but it decreases winter hardiness. Planting crocus in open ground can lead to the death of bulbs, it is desirable to plant in closed ground or under agrofiber. Planting crocus is carried out from July to mid-September, manually or using technology. Approximately 0.6 kg of bulbs per m² are planted [3].

Crocus can be affected by disease. One of the most common diseases affecting saffron is leaf rust. There are several reasons for its occurrence: mostly the main reason - high humidity or excess nitrogen in the soil. The symptoms of this disease appear on the leaves of the plant, in the form of small spots that gradually increase in size. White pustules develop on the underside of the leaf,

which later turn brown and lead to drying of the leaf surface, which can cause the death of the entire aboveground and underground part of the plant. In order to prevent the spread of this disease in a timely manner, it is necessary to remove all affected parts of the plant at the first signs. When affected by leaf rust, it should be sprayed with Bordeaux liquid or copper sulfate. The incidence of plant diseases is significantly reduced when grown under drip irrigation with the introduction of small doses of phosphorus and potassium fertilizers during planting. This culture has no malicious pests, it can be grown without the use of insecticides. The main damage is caused by forest and steppe mice, which can be fought with chemical or biological drugs [2].

Saffron harvesting is one of the most labor-intensive operations that requires human labor. The most valuable part of the plant is the dried stamens of flowers, which are used as spices, medicines and dyes. Flowers are collected manually, the separation of 3 saffron stigmas from flowers is also done manually. If all operations are done manually, the production of 1 kg of saffron requires approximately 250-350 man-hours. This is reduced to 3-4 grams of dry product per hour. It is better to collect flowers early in the morning, when the flower is still closed, to maintain better quality. Drying is carried out for 15 minutes. After drying, the stamens are crushed and packed [5].

Saffron can be stored for many years, with proper storage, its quality only improves over the years [3].

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ВИВЧЕННЯ ДИСЦИПЛІНИ «ФІЗИЧНА КУЛЬТУРА» В УМОВАХ ДИСТАНЦІЙНОГО НАВЧАННЯ

У статті репрезентовано стан дистанційної освіти в процесі вивчення дисципліни «Фізичне виховання» на прикладі Миколаївського національного аграрного університету. Представлено позитивні та негативні аспекти впровадження дистанційної форми навчання для здійснення професійної підготовки майбутніх фахівців усіх спеціальностей з урахуванням особливостей студентського контингенту та специфіки регіону. Виокремлено перспективні можливості розвитку дистанційної освіти з урахуванням особливостей цільової аудиторії.

Ключові слова: *дистанційне навчання; дистанційна освіта; електронний навчальний комплекс; фізична культура і спорт; платформа Moodle; регіональні особливості.*