

## SPRING ADONIS, BIOLOGY AND MEDICINAL PROPERTIES.

**Kabilov Sokhib Sherovich**

*Fergana State University, Department of Fruit and Vegetable Growing, Ph.D., associate professor.*

*E-mail: [soxibjonkabilov961@gmail.com](mailto:soxibjonkabilov961@gmail.com)*

**Mamatkulov Orifjon Odiljon oqli**

*Teacher of the Department of Fruit and Vegetable Growing of Fergana State University*

*E-mail: [orifjonmamatqulov49@gmail.com](mailto:orifjonmamatqulov49@gmail.com)*

**Anotation:** *This article provides scientific information about the cultivation and care of spring Adonis. Due to its medicinal properties, the Adonis plant is widely used in medicine and folk medicine. The plant is listed in the Red Book that when this valuable medicinal plant is being prepared, only the aboveground part is harvested, and not sucked or plowed by the root.*

**Keywords:** *Adonis-Adonis vernalis, nut ball fruit, desiccant, rhizome, adonitoxigenin, simarin, adonitoxin, adonizid.*

**Introduction:** medicinal plants have been known to mankind since very ancient times. Plants were widely used not only as a source of food, but also biologically active substances. There are records of medicinal plants being used in Sumerian civilization 5,000 years ago for therapeutic purposes. Medicinal plants have served as the only source of medicinal remedies for long historical periods.

Many plants distributed in the flora of Uzbekistan are of great importance. In particular, it is a family of Ranunculaceae that is widespread in the flora of Uzbekistan and has not lost its importance.

**Main part:** Spring Adonis – *Adonis vernalis* L, the bearberry is a perennial, short-and multi-headed rhizome herb in the family Ranunculaceae L. The STEM is an erect-growing, unbranched or sparsely branched plant with a few smooth, sebareg stems that are 30-40 cm long after flowering 5-20 CM before flowering. The leaves are simple, panicle divided into 5 segments, of which 2 are short on the lower segment and the other 3 are equal to each other. The bottom two pieces are patchy, the rest are double - patchy separated, the pieces are thinly tapered, the bigizsy are sharp-tipped, 1-2 cm long by 0.5-1 mm wide. The flowers are yellow, arranged singly on a carpet, and are 3.5 cm in diameter when dried. The Kosacha leaves are 5-8, the petals are 10-20, the fruit is a multi - nut ball fruit, the nutlet is 4-5 mm long, with an inverted caloric shape. A maternal column in the form of a hook is preserved at the tip of The Nutcracker. Adonis blooms in April-may, the fruit matures in July [1]. Spring Adonis grows mainly on Black-ground land, in all kinds of grassy marshes, among birch groves and shrubs. It is found mainly in the steppe and forest zone of the European part of Ukraine, Balarus, Moldova, Russia, Siberia, the North Caucasus and on the Volga region and other lands. The preparation of products from the plant takes place from the moment it blooms until the top of the Earth is harvested until its seeds are shed. The shade is dried on the ground or in dryers at 50-60 C. The product is prepared in the regions of Kemerova,

Chelyabinsk, Novosibirsk in the Altai territory, Bashkortostan, Ukraine, the North Caucasus and the Volga region.

Adonis blooms from the age of 15-17 years. Often at the age of 80 - 100 years begins to give a lot of products. The plant is listed in the Red Book that when this valuable medicinal plant is being prepared, only the aboveground part is harvested, and not sucked or plowed by the root. Otherwise the Adonis plant may disappear naturally. The finished product consists of mixtures of stems, leaves, flowers and fruits of the plant. The STEM is 10-30 cm long, mostly it has flowers or fruits.

The product is odorless, tastes sour. When assembling the product, its biological activity should not be mixed with less Volga Adonis. It differs from spring Adonis in that it is small in size and the leaf fragments have thin lanceolate and pubescent hairs. The spring Adonis ground column contains cardiac glycosides and flavonoids.

Twenty-five individual cardiotoxic glycosides, strophantine adonitoxigenin, simarin, adonitoxin, and other cardiac glycosides and flavone glycosides have been isolated from the plant. K strophanthin-beta and simarin have been isolated from the plant's ground surface, and K strophanthin-beta was isolated from the ground surface. According to DF XI, the biological activity of the IGR product should be 50 - 60 LEDs or 6.3-8 KED [2].

Preparations of the Adonis plant are used in the treatment of heart diseases. Pharmacological effects: slows heart rhythm, increases systole, prolongs Diostolan, increases cardiac work volume. Adonis preparations can always be used in the treatment of chronic heart porog due to their lack of a cumulative effect. ( Difference from angishvonagul) fresh galen preparations adonizide of the Adonis plant (extracted from 15 ml in a glass case) in addition to dry extract, tincture.

Dry extract of Adonis is included in the BexteroV tablet as well as the Adonis brom tablet and preparations used for heart disease. There are some difficulties in growing the spring Adonis plant.

One of the main reasons is the very poor germination of seeds, some of which will sprout in 2 years. The seeds of the plant need to be sown as soon as it is harvested. Grows well in warm conditions. Humidity and heat should be at a specific level. The roots begin to rot if moisture becomes excess. Another problem is that the plant begins to grow stronger after 4-5 years.

Only then could the Adonis plant be harvested and counted. For some of these inconveniences, the plant is planted through root stems.

Spring Adonis is considered to be one of the rare plants listed in the Red Book. Breeding it helps to preserve the declining species, in addition to medical and decorative and cultural needs. Spring Adonis grows well on fertile soils, in order for it to grow, the soil must be enriched with lime. It is considered important to maintain moderate soil moisture. Flowers demanding on light can also die if it is not enough. The seeds of the plant have low germination, reproduction from the roots also does not bring much results, the roots are difficult to shake. Seeds are required to be sown by processing them into the ground immediately after harvesting in June-July. The growth is demanding on moisture during the early growing periods. But excess moisture can also develop fungal disease. Watering can require the first year of the plant [3].

Plant transplantation is carried out when the plant grows well. The plant is planted as a whole, it is not recommended to divide the rhizomes. It is transplanted along with moistened soil. The bottom of the pit is filled with soil mixed with mahaly manure. Transplanting a plant should be carried out only once, if it is reversible it can die. Long years will give a good harvest if the plant is well transplanted and settled on the ground. The plant flowers open in yellow from April and are open for 3 months. Organization in the mountainous districts of the Fergana region will give a good result in order to establish the cultivation of the plant. Growing the plant serves us to meet the demand for this plant, for people suffering from and being treated for heart disease. It is also planned to significantly reduce the narhs of the drug-products. Since all parts of the plant are poisonous, care should be taken when working with it. It is achieved to create soil conditions suitable for plant demand and adapt to the climatic conditions of Fergana soil, to reduce the volume of imports of medicines used in foreign heart diseases [4].

**Conclusion:** from the collected data, it can be concluded that Adonis is an important plant hissobized from the point of view of drug addiction and nutritional needs. Considering the inclusion of the plant in the red book, it is required only to stop the cultivation of rhizomes using the earthen top, and to take conservation measures. Since the germination of plant seeds is low, it is required to dig deeper into the scientific basis of its reproduction.

It is advisable to create test and experimental areas in the mountainous regions of the Fergana region in order to put the reproduction of the plant on the road.

#### BIBLIOGRAPHY:

1. I. A. Sobirov, B.M. Xusanov. Farmakognoziya. Qishloq xo'jalik oliy o'quv yurtlari uchun qo'llanma. Andijon 2020.
2. Xolmurodov E.A. va boshqalar. Qishloq xo'jalik fitopotologiyasi. (Darslik) "Navro'z" nashryoti. -Toshkent, 2014.
3. Xasanov B.A., Ochilov R.O., Gulmurodov R.A. Sabzavot, kartoshka hamda poliz ekinlarining kasalliklari va ularga qarshi kurash..Toshkent. "Voris-Nashriyot". 2009.
4. Yokubov S., Burhonova M. TUPROQ GUMUSINING HOSIL BO 'LISHI HAQIDAGI ASOSIY NAZARIYALARI. TUPROQNING UMUMIY FIZIK XOSSALARI //Biologiyaning zamonaviy tendensiyalari: muammolar va yechimlar. - 2023. - T. 1. - №. 4. - C. 715-717.