Green-Flowered Black Root - Cynoglossum Viridiflorum Pall.Ex. Lehm., In The Flora Of The Republic Of Karakalpakstan

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ANNOTATION
The article gives a botanical description, biology, growth and development, flowering, reproduction, chemical composition, use in everyday life in medicine, in the elimination of rodents, as well as harvesting and storage, diseases and pests of green-flowered black corn - Cynoglossum viridiflorum Pall.ex. Lehm. In the Republic of Karakalpakstan.

Keywords: green-flowered blackcorn, reproduction of blackcorn, chemical composition of blackcorn, biology of blackcorn, botanical description of blackcorn, etc

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Chernokoren (Latin Cynoglossum) is a weed plant, the correct use of which can give benefits in the national economy. The plant has no decorative qualities, exudes an unpleasant smell. However, the useful substances contained in the plant, if used correctly, can help to cope with many diseases. Black root is also used in economic activities.

Botanical description

Cynoglossum viridiflorum Pall.ex. Lehm. Pl. Aspera. 2 (18) 160. – M. Pop. In Fl. USSR. 19 (1953) 662. – Ch. zelenotsvetkovy.

Perennial. The root is multi-headed. The stem is erect, apiculate-branching in the upper half, glabrous in the lower part, scattered above covered with hairs sitting on tubercles, 1-1.5 m tall. The leaves are pale green from above, grayish from below, basal, with a plate 15-34 cm long, 5-17 cm wide, oblong elliptical pointed, wedge-shaped narrowed at the base, on a long petiole up to 35 cm long, glabrous from above or covered with short bristles sitting on tubercles, almost felt greyish fluffy from below; the middle stalked ovate oblong, acute, wedge-shaped narrowed at the base, on a shorter petiole, the upper sessile, smaller, lanceolate, acute, pubescent, like basal. The terminal whorls and abundant lateral ones are collected in a apiculate inflorescence, especially lush and wide during fruiting [1].

Fig. 1. General view *C. viridiflorum*

Fig. 2. Inflorescence *C. Viridiflorum*

Pedicels 4-5 mm long, pressed gray pubescent, with fruits lengthening to 10-20 mm. Calyx 3.5-4 mm long, with oblong, blunt, densely pressed gently hairy, with fruits bent downwards with non-increasing lobes. The corolla is yellow-green, 5-7 mm long, with a tube 2-2.5 mm long, a bend of 8-9 mm in diameter, with blades of various lengths and shapes lying on top of each other. The arches are located in the throat, 1-1.5 m high, trapezoidal, cap-shaped bent at the top, densely hairy at the edges. Stamens are located in the upper half of the tube, with filaments about 0.5 mm long, anthers 1 mm long, oblong. The column is awl-shaped, 1.5 mm long. The nuts are ovoid, 6-7 mm long, from the back with a flat or concave disc, along a low weakly pronounced keel and along the edges from it with single anchor spikes; the edges of the disc are raised, thickened, densely covered, as are the sides with the abdomen with short anchor spikes. The attachment site occupies about ½ of the abdomen [1, 2].

Fig. 3. Fetal eremas *C. viridiflorum*

The fruit is a cenobium formed by the upper ovary of a 2-membered syncarpous gynaecium. When maturing, it splits into 4 eremas. The eremas are 5-7 mm long, 4.5 - 5.5 mm wide, vertically compressed, ovoid or rhombic-ovoid; the dorsal pad is smooth, without a keel, studded with sparse spikes, almost flat, its edges are raised, thickened, together with rounded sides and abdomen, studded with thick anchor spikes of equal length. The abdominal side is concave (Fig. **Weight of 1000 diasporas:** 33, 5032 g.

Blooms and bears fruit in May-June.
It grows on Ustyurt, at the exits of variegated rocks, along salty sandy depressions.

Blossom

The flowering of the blackcorn falls in the summer. Some varieties bloom in late summer, but most of them bloom in May. During flowering, multicolored paniculate inflorescences are formed on long pedicels. Depending on the variety, shrubs can bloom in white, purple, pink or purple cups.
The flowers are small in size, but the combination of several buds collected in one brush gives the culture an unusual appearance. Panicles rise above the bushes, hanging down.
Wild varieties of cynoglossum are propagated by self-seeding. However, for the cultivation of hybrid varieties and indoor crops, it is necessary to take care of the collection of planting material. If necessary, the perennial can be propagated using seeds, or cuttings [1, 2].
The main importance for the breeding of cynoglossum is the formation of seedlings. To obtain seedlings, the seeds of the plant are pre-harvested, which are collected immediately after ripening and stored in dry bags.
Sowing is carried out in the spring. To do this, nutrient soil is poured into pre-prepared containers. The ground is abundantly watered with water, after which small grooves are made. An even layer of seeds is poured into these grooves. After sowing, the grooves are buried with earth, and the container with plants is placed in a bright, warm place. To accelerate the rate of emergence of seedlings, some gardeners cover the slides with seeding film to create greenhouse conditions. After the emergence of seedlings, the shelter is removed, and care is carried out in the usual way.
Immature seedlings do not try to water, because weak stems break down quickly. Sprayers are used to irrigate the soil, which are sprayed on the soil. After the formation of several permanent leaves, the black root begins to be taken out into the open space, tempered. In addition, grown seedlings can dive.
In the spring, after drying the soil and the formation of constant heat, the seedlings are placed in the open ground, where the usual care of the plant is carried out. Seedlings are not afraid of small temperature changes, so the culture does not require additional shelter immediately after planting in the soil. When planting in the open ground, a distance of about 30 cm is maintained between the seedlings.

Diseases and pests

The chemical composition of black corn gives a positive effect not only for others, but also for the culture itself. The fragrance that the plant exudes repels pests and insects. Therefore, the plant is not attacked by pests. the plant is quite stable and unpretentious in cultivation. In addition, the plant itself is used to repel rodent pests [3].
Blackroot is rarely exposed to various diseases. The culture is afraid only of stagnation of water in the roots. In this case, the shrub withers quickly, the rhizome rots. Having eliminated the problem, the culture grows rapidly [3].

Chemical composition

Chernokoren is rich in its chemical composition. Alkaloids are present in all parts of the plant. Also, the roots and leaves of the culture contain tannins, which have medicinal properties. The herb contains a small amount of carotene, essential oils and polysaccharides. Such a chemical composition determines the use of the plant for medical purposes, as an analgesic [1, 3].

Application

The black root has found its application in folk medicine and in the household. The plant is not a recognized pharmacopoeia, but the chemical composition of the plant causes the widespread use of culture in folk medicine. Blackfoot is also used in the household, as a means to control rodents [4, 5].

In medicine

Medicinal black root is used for medicinal purposes. The rich chemical composition of the plant allows the use of culture for the improvement of the body. In folk medicine, there are enough recipes for preparing decoctions and infusions from parts of the plant, for the treatment of pathologies of the musculoskeletal system and in homeopathy. The plant has a soothing and astringent effect. It is used for the treatment of bronchopulmonary pathologies. The external use of black corn–based products helps to cope with the manifestations of allergies - itching and redness.

The plant has a number of medicinal properties. So, the plant is used to relieve pain in muscles and joints. In addition, the plant is rich in substances that accelerate the healing of wounds and burns. However, the plant should be used with caution, since changing and increasing the dosage can lead to the development of serious complications.

Folk medicine uses black root to combat gastric bleeding caused by peptic ulcer disease. In addition, a decoction from parts of the plant helps to fight diarrhea and other gastrointestinal disorders. An infusion of black corn roots is used as a medicinal plant [5, 6].

To prepare the infusion, take a tablespoon of crushed dry plant roots. The mixture is poured into a container and poured with a glass of boiling water. After that, the resulting mixture is infused for 2 hours. The finished composition is filtered. Before use, the infusion is diluted in pure water in a ratio of 1: 30. Taken orally, three times a day, 1 teaspoon of the remedy [6].

Fresh juice of the plant is also used for medicinal purposes. To eliminate pain in the musculoskeletal system and stomach diseases, I take 2 drops of fresh juice 3 times a day, diluting with water.

black root is widely used as an insecticide. The chemical composition of the plant and its poisonous properties have become a natural means to combat rodents, often attacking household plots. Decoction from parts of the plant helps to fight against various caterpillars that eat the harvest.

As an insecticide, a decoction of black corn leaves is used. To obtain it, 300 g of dry leaves of the plant are poured with 10 liters of water. The resulting mixture is boiled for half an hour, and then cooled. A crushed piece of household soap is added to the resulting mixture. The mixture is treated with cultures on the site [6].

To eliminate rodents

With the help of blackcorn, it is possible to remove not only insects from plantings, but also rodents. The culture has a pungent smell that rats and mice cannot stand. Therefore, to eliminate rodents, the walls of basements, stables and barns are treated with a ready-made decoction.

To eliminate mice, a decoction is made from the roots of the plant. Some scatter dry grass in storerooms and cellars. It is also effective to scatter foliage and roots of black corn near fruit plants and plantings. The black root, located next to the culture, will not allow the appearance of rodents near the plantings.

Beekeepers also use the plant to protect hives from rodent attacks in winter. The plant is safe for bees, so you can often see black corn plantings around the apiary. In addition, the abundant amount of nectar attracts bees.

Chernokoren in landscape design

Black corn bushes are sometimes used to decorate small flower beds. Neat crops growing upwards are used to decorate house paths, to decorate lawns. The plant is also grown outdoors, on balconies and as indoor plants [6, 7, 8].

In garden conditions, the black root is effectively combined with other tall plants – verbenas, asters, snapdragons, dahlias. The peculiarity of the plant is that the black root in cut form can decorate rooms for more than two weeks.

Danger to people and pets

Blackroot is a poisonous plant. Therefore, it can be dangerous for people and pets. Planting is carried out away from the places of children's games. It is unacceptable to use black corn for food to people and livestock. The poison contained in the culture can cause a serious complication. Therefore, it is impossible to use black root in high dosages.

The restriction to the use of decoctions and infusions of cynoglossum is an allergic reaction to the components of the decoction. In case of signs of poisoning or irritation, it is necessary to seek qualified help immediately [6, 8, 9].

Harvesting and storage

Medicinal value, to a greater extent, is the leaves and roots of the cynoglossum. The rhizome is harvested at the end of the active growth of the shrub. To do this, the plant is dug out of the ground; the roots are washed and dried. It is necessary to dry the roots in well-ventilated rooms, in a dark place. As one side dries, the roots are turned over. Raw materials are stored in dry places, in paper or fabric bags.

The leaves are harvested during the active growth of the flower. In spring, with the appearance of young shoots, the foliage is collected and laid out in a dark cool place in an even layer. For drying, you can use dryers whose temperature does not exceed 35 degrees. After drying, the grass is put into dry cloth bags [4, 5, 6, 8].

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