

# Medicinal Properties And Agrotechnology Of Cultivation Of *Capparis Herbacea* Willd

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**Abstract.** The article provides information about the distribution, life cycle, medicinal properties, uses, and agricultural technology of the marigold plant. The plant is a first-class honey-juicing plant. Its flowers contain a large amount of nectar. A large flower of the thorny thorn yields one drop of honey, while one bush yields 3,000 drops of honey during the season. In addition to its medicinal uses, the root is also used to obtain natural dyes. Since ancient times, pickles have been prepared and consumed from the buds of the thorny thorn. During agrotechnical activities, in July-November, the ripened fruits of the plant are picked and the seeds are separated. 100 gr from a bush of perennial sorghum. until the seed is taken.

**Key words:** medicinal plants, perennial creeping, above-ground part, underground part, flower, diseases root, bark, leaf.

Conservation of biodiversity has now become one of the most important issues in the world. Among them, the conservation of medicinal plants requires special protection. Today, medicinal plants are widely used in scientific medicine. Its main purpose is to prepare medicinal preparations on the basis of medicinal plants. *Capparis herbacea*: - a perennial creeping plant up to 1.5 m high, with slightly pubescent and creeping branches and a powerful root system, going into the depth of up to 7 m. Leaves are oval-ovate, pointed with prickly, small, yellowish stipules. Flowers are single, large, initially white, pinkish when flowering, with 4 sepals, 4 petals and numerous stamens, sit in the axils of the leaves[1,2,3,]. The fruit is berry-shaped, oval, fleshy, green, contains many kidney-shaped brown seeds. It blooms in May-June. In this regard, the plant in adulthood does not need surface moisture at all, does not suffer from drought and can grow where other plants die. The species is widespread throughout the territory of Uzbekistan and Central Asia, found mainly in the desert and semi-desert zone, foothills and lowlands, sometimes reaching the middle mountain belt[3,4]. It can often be found on destroyed buildings, duvals, mosques. In some places, this species forms almost pure thickets over very large areas, especially in the adyr (foothill) zone of our Republic. Small caper buds are of commercial importance, which are harvested by hand, starting from the end of May until mid-October. After primary processing (sorting and pickling), the buds are exported, mainly to Turkey, where they are used to produce a finished product - pickled capers. Capparis are unblown capers flower buds. In diameter, such a bud is about 1 cm. The original taste of capers and low calorie content made this plant a popular product for humans more than 2000 years ago, and maybe even earlier[2,3,4]. The Greeks began to use capers in food. Presumably, capers owe their name to the Greek name of the island of Cyprus (Kipros). Currently, capers are produced in the Mediterranean countries: Turkey, Greece, Spain, Cyprus and the islands belonging to Italy[4].

The benefits of capers and their taste, original and exquisite, are appreciated by the traditional cuisine of the southern peoples, and, having appeared in our country not too long ago, this product began to quickly gain popularity. Along with excellent taste, capers have invaluable health benefits. The main medicinal properties of capers are as an analgesic, antiseptic, astringent, anti-inflammatory and diuretic.

Chemical composition of the plant: The whole plant contains a lot of rutin, quercetin, vitamin C, and dyes [1,4]. The fruits contain a lot of sugars, vitamin C, and thioglycosides. The leaves of the plant contain up to 2.8% lipids. Rutin is found mainly in the leaves and flowers of capers (up to 60 mg in 100 g of powder). Stachydrine is determined in the leaves[1,2,4]. The biflavonoids isoginkgetin and ginkgetin, benzoic acid, 5-hydroxymethyl furfural, daucosterol, uracil, and stachydrine.

The benefits of capers are due to the rich composition of this product. The buds of the plant contain the following elements: fiber, proteins, fats. The seeds contain about 36% oil. Capers contain a large number of vitamins, these are vitamins A, B1, B2, B4, B5, B6, C, E, K and PP. In addition, the benefits of capers are represented by a wide range of trace elements included in their composition: sodium, potassium, iron,

magnesium, zinc, copper, selenium, phosphorus, manganese and calcium[1,3,4]. Along with the high benefits of capers, their calorie content is very low, so they can be eaten without worrying about your figure. Thus, the calorie content of capers is only 23 kilocalories. However, such valuable indicators as the low calorie content of capers and health benefits are slightly muffled due to the too high sodium content in them. Excessive content of this trace element can negatively affect human health. Therefore, to neutralize this harm, capers are soaked in water before use. The nutritional value of canned capers is:

proteins - 2-3%, fats - 0.9%, carbohydrates - 1.7%. This plant was used to heal wounds, get rid of toothache, heartache and headache.

For this, decoctions were prepared from all parts of the caper (flowers, fruits, roots, leaves). The benefit of capers is in the powerful anti-inflammatory and analgesic effect, which is used to combat various diseases. Thus, regular consumption of capers in food helps to cope with rheumatic pain. They are also recommended for

other problems, such as, meteorism, thyroid disease, diseases of the teeth and gums, and cardiovascular pathology[1,2,4].

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Growing prickly capers is the most promising industry, and its creation does not require excessive funds and resources. The reason is that the blackthorn bush, growing freely in the ground, does not choose a place, it is very resistant to dehydration. Wild species grow and produce a harvest from May to October.

**Agrotechnical activities.** It is necessary to organize its plantations without harming the natural resources of the plant. For this, in July-November, the ripe fruits of the plant are picked and the seeds are separated. 100 gr from a bush of perennial sorghum. until the seed is taken. In the process of seed collection, it is advisable to carry out with the participation of a specialist to determine its quality. 3-4 kg of seeds are used for 1 hectare of area to establish a plantation of thorny gorse[5].

Seeds are sown in autumn or early spring in moist or arid soils after stratification. The sown seeds germinate in May. The germination rate of seeds is 80-90%. After the second true leaf appears on the plant, it is cleaned of weeds. The sprouted seedlings begin to bear fruit in the first year. The seeds of the plant are sown to a depth of 3-4 cm, and there should be 10,000 seedlings per hectare[5]. The yield from 1 hectare is 300 kg in the first year, three to four times more in the second year, and from the third year onwards, 21 centners per hectare are obtained[5].

Currently, the demand for pickles made from the buds of the yam plant is very high in the world market. The economic importance of the prickly pear has been known since ancient times. Edible oil is obtained from its seeds, and its fruits are consumed because they contain 12% sugar and more than 12% protein. In medicine, the above-ground part, underground part, and flowers are used for hemorrhoids, diarrhea, sore throat, headache, toothache, gout, pulmonary tuberculosis, various swellings, and duodenal ulcers.

The prickly pear is a first-class honey-juicing plant. Its flowers contain a huge amount of nectar. If a large flower of the pear yields one drop of honey, then one bush yields 3,000 drops of honey during the season (May-November).

In addition to using the root for medicinal purposes, it is also used to obtain natural dyes.

Since ancient times, pickles have been prepared and consumed from the buds of the prickly pear. Nowadays, in addition to being consumed, it is also a valuable plant for export to foreign countries.

## References

1. Abdiniyazova GJ. Medicinal plants of republic Karakalpakstan. Tashkent, Bayoz. 2017;168.
2. Abdiniyazova G.J. Khojimatov O.K. Medicinal plants of Karakalpakstan. International Journal of Science and Research (IJSR), ISSN (Online): 2319-7064, Index Copernicus Value (2016): 79.57.

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3. Khojimatov O.K., Abdiniyazova G.J., Valeriy V. Pak Some wild growing plants in traditional foods of Uzbekistan // Journal of Ethnic Foods, 2015. – № 2. –Pp. 25-28.
  4. Makhlayuk, V. P. Prickly capers // Medicinal plants in folk medicine. - M.: Niva Rossii, 1992. - 544 p.
  5. Tokhtaev B.Yo., Makhkamov T.Kh., Tulaganov A.A., Mamatkarimov A.I., Makhmudov A.V., Allayarov M.U. Instructions for organizing plantations of medicinal and food plants and preparing raw materials. Tashkent – 2015.109p.