

# Natural Distribution and Medicinal Properties of the Ferula L Genus Growing in Mountainous and Desert Areas in Uzbekistan

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## ABSTRACT

This article presents literature data on the natural distribution and medicinal properties of Ferula L, which grows in Uzbekistan in mountainous and desert regions.

**KEYWORDS:** Ferula L, ferula assafoetida, honey, medicinal, resin preservative, medicinal.

**Introduction.** In the action strategy for the development of the Republic of Uzbekistan in 2017-2021, the rational use of desert areas in the development of the desert regions of our country, the plantations of the carpet plant, which is the main weight of the desert food plants in the desert flora strengthening and implementation of organizational-practical measures for creation is recognized as one of the priority issues. It is urgent to implement the tasks specified in the decision PQ-3617 of March 20, 2018 "On measures to establish carpet plantations of the Republic and increase the volume of processing and export of their raw materials".

Preservation of biological diversity in the world, protection of flora and their rational use is one of the global problems. Therefore, special attention is paid to the study of bioecological characteristics of plant species, introduction work, development of protection measures, identification of rare and declining species and their preservation. Ferula L species used as essential oil, fodder, honey, medicinal, tar preservative, aromatic, nutritious and technical plants are of special importance here (O.N. Avalbaev, 2020).

Celery is a perennial herbaceous plant, up to 1.5 m tall, belonging to the Apiaceae (Umbelliferae) genus. U. Rakhmonkulov (1999) stated that after 8-9 years, the stem, which grows upright, is thick and the upper part is branched. The leaves before the root are banded, oblong or lanceolate, divided into three parts, and the leaves on the stem are several times smaller and feather-cut, arranged in a row. The flowers are five-lobed and white-yellow in color. According to Pimenov M.G. (1983), the sassik korub blooms in March-April, and the double pistachio fruit ends in April-May. After the sedge plant seeds, its leaves, stems and roots dry up and turn into firewood (PehlivanS., -2009). Studying the biology, growth and development of the F. assafoetida plant, the dimensions of the surface part of the earth helps to determine which species it belongs to (Oleynikova E.M., 2014).

According to U. Rakhmonkulov (1995), there are 96 types of carpet (Ferula L) in the mountains and mountain slopes of Central Asia, 55 of which grow in the Western Tianshan region. 30 of them contain biologically active sesquiterpene lactones, terpenoid coumarins and complex ether compounds. Some of them are important for pharmacological research.

N.N. Najmitdinova, A.I. Saidkhodjaevs (1994) stated that the examination of terpenoid compounds found in the composition of the sedge plant showed the following: Scorodesma, one of the oldest species of sedge, contained coumarins, while all other species contained terpenoid coumarins and sesquiterpene lactones, while Pencedonoides in some it is noted that complex ethers are the majority.

Ephemeral plants are mostly widespread in Hisar-Darvaz and southern Tajikistan, and they cannot be used rationally without studying their biological and morphological structures, since it is necessary to distinguish between them poisonous, medicinal and food necessary (Khalimov A. - 2014).

When studying the ontogeny of the species of *F. tadshikorum* growing at 700-750 meters above sea level in the peaks of Southern Sarsarok, it was found that it is similar to *Ferula foetidissima* Regel et Schmakh (Rakhimov S., 2017).

Currently, there are 150 species of plants belonging to the *Ferula* genus (Beknazarova X.A., Navruzshoev D. 2014) in Central Asia, Eastern Siberia, the Caucasus, the Black Sea, North Africa, Asia Minor, Iran, Afghanistan, China and India. lib, of which 105 species have been identified in Central Asia and Kazakhstan. It is noted that 110 species of this plant are distributed in the territory of the CIS countries, and 37 species are distributed in the territory of Tajikistan. Out of 37 types of *ferula*, 5 types are distributed mainly in the Pamir-Aloy region.

There are 180-185 species of the *Ferula* L. genus on Earth, 106 species in the CIS countries, 105 species in Central Asia, 48 species in Uzbekistan, more than 50 species in Western Tianshan, about 60 species in the Pamir-Aloy Range, in the Western Pamir-Aloy Range There are 33 types. (O.N. Avalbaev, 2015)

*Ferula* L. species are of great importance as fodder plants due to their growth in various ecological conditions. These plants can be found in bottomless deserts and hills, on all mountain slopes, even in pastures up to 3000 m above sea level, forming carpets. Since most of them have large stems and leaves, they are considered nutritious food for livestock (Rakhmankulov, 1998).

There is very little information about *Ferula* L. species found in the Western Pamir-Aloy range - Turkestan, Zarafshan, and Hisar mountains. In particular, the morpho-biological and medicinal properties of the most important species of these plants have not been determined, and the reasons for the decline of some species have not been studied. (O.N. Avalbaev 2013).

In the spring, sheep and camels enjoy the soft leaves of the carpet, and during the flowering period, they enjoy their branches and seeds. According to the data of U. Rakhmonkulov (1999), the productivity of pastures increases by 25% due to the carpet plant, productivity increases by 10% in the juzgun, izen, and karasaksovulli pastures of Kyzylkum. This indicator becomes even more as the height of the pastures increases (above sea level).

After checking the servitamin content of the carpet growing in the pastures of the territory of Uzbekistan, they found the following: carotene, which is considered a source of vitamin A, is collected in the green organs of the plant. The most biologically active of them is beta-carotene. From one molecule of beta-carotene, two molecules of vitamin A (retinol) are formed in the intestinal walls of sheep, and they are collected in the animal's liver. Vitamin A is a hydrogen carrier and participates in oxidation-regeneration and metabolism processes in the body. In short, the organism actively participates in all aspects of its life. The lack of vitamin A in the diet of animals or the extreme lack of carotene slows down the activity of the peripheral nervous system, the spinal cord, the digestive system of the mucous membranes of the respiratory tract, the urinary system, and the laxity of the epithelial layer of the walls of the eyeball. ensures that. Among the spring pasture plants, sorghum is the richest in carotene. 10 days after the appearance of leaves, their 1 kg of dry weight contains 350 mg of carotene, after which the amount of carotene decreases. 1 kg of freshly harvested green *Ferula assafoetida* plant (at 79.5% humidity) contains up to 25.2 mg of carotene. The amount of carotene in the blanket dried in the open air is 93.3 mg/kg, and in the completely dry state it is 130 mg/kg (N.N. Najmitdinova, 2007; M.A. Mamatxanova, 2009).

It should be noted that in addition to the medicinal properties of the plants belonging to the *Ferula* L genus, they are mainly poisonous to sheep, horses, pigs, and a small amount of goats. 1969).

**Conclusion.** Several species belonging to the *Ferula* L genus are used as essential oil, fodder, honey, medicinal, resin-preserving, aromatic, and nutritious plants. These plants are found in bottomless deserts and hills, on all mountain slopes, even in pastures, forming carpets.

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