



## Application of Kavrak (*Ferula Assa-Foetida* L.) in Folk Medicine

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**Abstract:** *Kavrak (*Ferula assa-foetida* L.) Has long been used as a spice and medicinal plant. In ancient times, the sticky and sticky resin of the fetid plant was used in combination with pomegranate juice to prevent muscle injuries and treat severe pain in the body. If the resin of the plant is dissolved in water, then a sore throat, dry cough, swelling of the tongue can be cured. In folk medicine, alcohol or an aqueous tincture of the root and stem of the plant is used against many diseases. In Asian countries, kavrak is widely used as a seasoning, especially for indigestible foods. The plant improves the digestion process, while awakening the appetite. In a word, it is not for nothing that the foul-smelling plant is called the "Famous Plant of the East".*

**Keywords:** *Ferula assa-fetis, foul-smelling juice, sticky resin, tincture, traditional medicine, scientific medicine.*

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**Introduction.** In folk medicine, plants with biologically active substances that have a positive effect on the human body are widely used. Roots, leaves, bark, flowers, fruits and other plant parts are mainly used as medicines. We decided to collect and disseminate ethnobotanical data about this plant on a scientific basis, and to study on a scientific basis the use of the plant by the local population, doctors and beekeepers in the Bukhara oasis, mainly in desert areas. In our country, there are more than 40 species of stinky ferula. The name of the species in Persian "assa" means stick, stick, in Latin "foetida" - smelly, ugly. The roots and stems of the plant are so named because of the presence of a nauseating smell that remains on the hands [2].

**Objective:** The well-known smelly ferula or kavrak has long been used as a medicinal plant. The sticky resin or juice extracted from its root is widely used in folk medicine. kavrak is also widely used as a spice in the eastern countries of Iran, Pakistan, India and Afghanistan, as well as in cosmetology. But not all of us know about its healing properties.



**Pic. 1 - Kavrak (*Ferula Assa-Foetida* L.)**

Kavrak from the Ferulov order is a perennial herbaceous plant belonging to the umbrella family. Its height is 1.5-2 meters, the thickness of the roots is 15-20 cm, the plant is monocapsial, it blooms once every 8-9 years of vegetation. The flowers are arranged in a complex umbrella inflorescence, pale yellow. The fruit is a double pistachio. Blossoms in March-April, fruits ripen in April-May. It grows in sandy deserts, on hills, foothills and on clean soils of Surkhandarya, Kashkadarya, Samarkand, Jizzakh, Navoi, Bukhara regions of the Republic and the Republic of Karakalpakstan. The glutinous resin from the root of the plant is commonly used as a medicine [4].

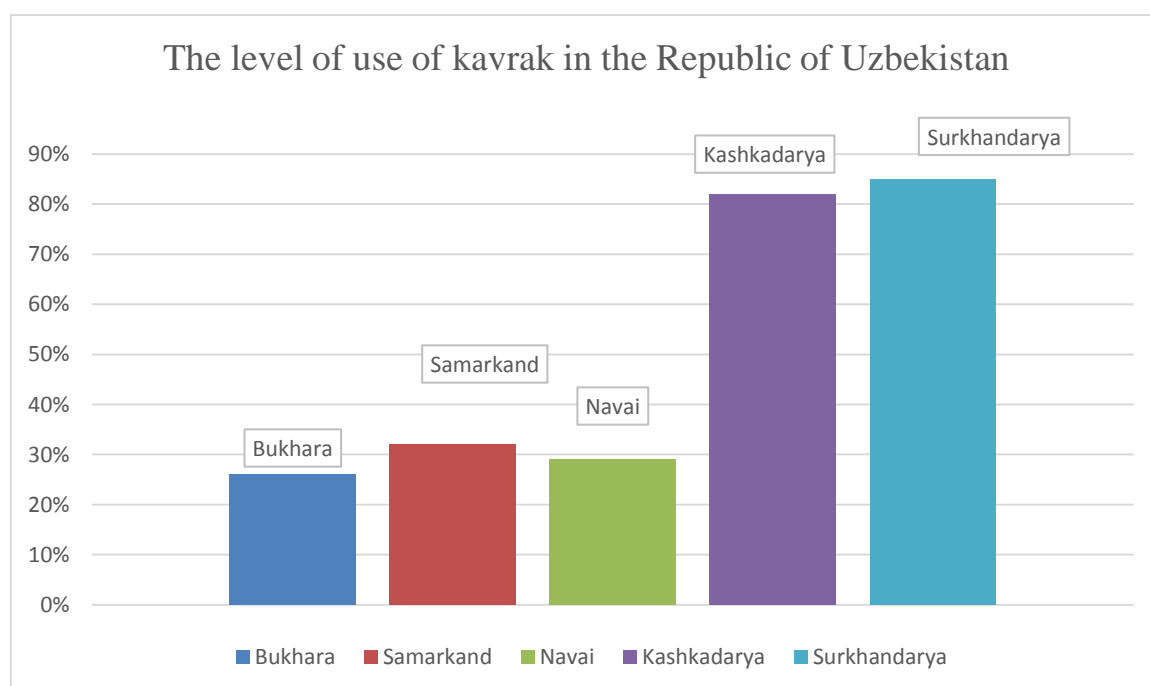
Abu Ali Ibn Sina described the healing properties of kawrak in his book *Laws of Medicine*. According to him, "if you drink 50 grams of a decoction of carpet seeds (seeds of the same brown color and shape as senmen broom) 3 times, breast milk will increase.

If you add resin to water and drink it, you will immediately hear the sound. Adding figs to kavrak juice cures jaundice (hepatitis). The addition of pepper and vinegar to the resin is useful when applied to malignant wounds. Prevents hair loss. Kavrak is used in the treatment of brain diseases, sclerosis (forgetfulness), bronchitis, asthma (shortness of breath), whooping cough, diabetes mellitus, it stops bleeding, increases appetite. The root treats diseases of the urinary tract and pain in the kidneys. It is useful to drink 30 grams of decoction three times a day (duration 15 days). A decoction of the root relieves all pain. It relieves suffocation and corrects pain" [1].

Historical documents also contain information about the healing properties of carpet. In particular, the personal doctor of the Russian Emperor (1762-1796) Catherine II, doctor of the University of Strasbourg, Professor Nestor Maksimovich Ambodik-Maksimovich (1744-1812) wrote about this plant in his *Encyclopedia of Nutrition and Medicine*: "having identified the causes of the disease, it expels them from the body, kills worms that multiply by laying eggs in the intestines, prevents the growth of tumors, breaks down sputum, eliminates stagnant cold diarrhea and evil spirits." [5]. "The described information about this plant is relevant today. The mainly sticky resin (the juice obtained from the root) is widely used in medicine. The root contains up to 67.31% starch, 9%

resin, 0.4% essential oils,. The resin essential oils contain organic sulfides (up to 65%), penin, p-oxycoumarin and other compounds that give the plant the smell of garlic. In addition, the composition of the adhesive resin includes 9.35-65.15% resins, 12-48% glue, 5.8-20% essential oils of umbrella coumarin, ferulic acid and its esters formed with resin alcohols [4].

Kavrak is widely distributed in nature, and in the Surkhandarya, Kashkadarya, Samarkand, Jizzakh regions of the republic, the resin produced and supplied to consumers is mainly obtained from this species. However, in the study area, i.e. in the Bukhara oasis, the carpet is almost never used. Low consumption and use is caused by the fetid smell of resin essential oil, very similar to the smell of oil. Only people involved in traditional medicine use it in the treatment of intestinal parasites and skin diseases. A local beekeeper said that he brings his mobile bee colonies every year for a month to collect honey from the flowers of this plant when the smelly carpet blooms in the desert area, and sells these bees to Pakistan and India.



**Diagram 1. The level of use of kavrak in the Republic of Uzbekistan**

Due to its numerous healing properties, kavrak is widely used for medicinal purposes. It is very useful in cleansing and treating slugging of the intestines, in the fight against parasites in the gastrointestinal tract. And also with angina, bronchitis and other respiratory and inflammatory diseases of the respiratory system. A solution of the plant, prepared from the resin, cleanses the airways of germs and eliminates bad breath, and drinking a small amount can cure hoarseness. An effective treatment of the initial stages of cataracts in eye diseases has been noticed, the plant can be used as a means of reducing the effect of poisons in the bites of poisonous insects. The ability to remove stones from the kidneys, treatment of psoriasis, eczema, skin cleansing, liver cleansing are covered in the writings of Ibn Sina [1].

In oriental medicine, it was used in the treatment of mastopathy, infertility, impotence. In modern medicine, a number of oncological diseases, uterine fibroids, and prostate adenoma have positive results. In ancient times, kavrak juice was used in combination with pomegranate juice in the prevention of muscle injuries, in the treatment of severe pain. If the resin of the plant (the juice obtained from the root) is dissolved in water, then a sore throat, dry cough, swelling of the tongue can be cured. In folk medicine, the root and stems of the plant are used in the form of an alcohol or water tincture. It is used for depression, diabetes, neurosis, rheumatism, bronchial asthma, as an

anti-inflammatory agent, for epilepsy, as an expectorant, for tuberculosis, liver and kidney diseases [1]. In scientific medicine, the plant has anti-inflammatory, analgesic, antihistamine, antiallergic properties, as well as extracts of seeds and roots are used for sexual dysfunction in men - erectile dysfunction [4]. Widely used in cooking in China, India and other Asian countries. Powder obtained from crumbly resin glue is added to the dish as a seasoning, instead of onions and garlic. Because it improves digestion, there is a popular Indian saying: "When you add this spice to food, the stomach is able to digest nails." It must be added to the dish when preparing indigestible foods. By increasing appetite, it also eliminates bloating and belching. In a word, the smelly carpet was not in vain called the "famous plant of the East." Widely used in cooking in China, India and other Asian countries. Powder obtained from crumbly resin glue is added to the dish as a seasoning, instead of onions and garlic. Because it improves digestion, there is a popular Indian saying: "When you add this spice to food, the stomach is able to digest nails." It must be added to the dish when preparing indigestible foods. By increasing appetite, it also eliminates bloating and belching. In a word, the smelly carpet was not in vain called the "famous plant of the East." Widely used in cooking in China, India and other Asian countries. Powder obtained from crumbly resin glue is added to the dish as a seasoning, instead of onions and garlic. Because it improves digestion, there is a popular Indian saying: "When you add this spice to food, the stomach is able to digest nails." It must be added to the dish when preparing indigestible foods. By increasing appetite, it also eliminates bloating and belching. In a word, the smelly carpet was not in vain called the "famous plant of the East." "When this spice is added to food, the stomach is able to digest nails." It must be added to the dish when preparing indigestible foods. By increasing appetite, it also eliminates bloating and belching. In a word, the smelly carpet was not in vain called the "famous plant of the East." "When this spice is added to food, the stomach is able to digest nails." It must be added to the dish when preparing indigestible foods. By increasing appetite, it also eliminates bloating and belching. In a word, the smelly carpet was not in vain called the "famous plant of the East."

In a word, kavrak has long been used by many peoples as a remedy, spice and in cosmetology. Therefore, for the widespread use of this plant, it is necessary to approach it wisely, initially it is necessary to identify natural biological and operational reserves. It will also be necessary to create a large-scale map of the plant's distribution areas and allow it to recover naturally without harming nature. One of the main ways to prevent the depletion of the natural resources of the kavrak is to collect its ripe seeds in the summer and sow them in the fall in the field where it grows naturally, since natural kavrak grows over a large area, propagating from seeds and reproduces in natural conditions. One of the main tasks in the future of our research is to study the bioecological features of the environment and solve the problems of reproduction and cultivation of kavrak.

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