AMERICAN JOURNAL OF APPLIED MEDICAL SCIENCE
ISSN: 2996-5101 (online) | ResearchBib (IF) = 9.818 IMPACT FACTOR
Volume-3| Issue-2| 2025 Published: |28-02-2025|

MEDICINAL PROPERTIES OF THE LICORICE PLANT AND METHODS OF ITS REPRODUCTION

https://doi.org/10.5281/zenodo.14890084

Oltiboyeva Mavsuma G'ulom qizi
Assistant, Samarkand State Medical University
Xurramov Xalil Hasan o'g'li
Student at Samarkand State Medical University

Abstract

Licorice has been known as a medicinal plant since ancient times. In Chinese folk medicine, this plant was used to treat various diseases 3000 years ago. There is also information about the healing properties of the licorice plant in Indian and Tibetan medicine. Our great grandfather Abu Ali ibn Sino, a famous scientist and physician of the Middle Ages, used the underground parts of licorice extensively in his medical practice. In particular, it was used in the treatment of gastrointestinal ulcers, lung and respiratory diseases, and as a diuretic.

Key words

Glycyrrhiza glabra-L, fabaceae, glycyrrhizin.

ЛЕКАРСТВЕННЫЕ СВОЙСТВА СОЛОДКИ И СПОСОБЫ ЕЕ РАЗМНОЖЕНИЯ

Аннотация

Солодка известна как лекарственное растение с древних времен. В китайской народной медицине это растение использовалось для лечения различных заболеваний еще 3000 лет назад. Также имеются сведения о целебных свойствах солодки в индийской и тибетской медицине. Наш прадед Абу Али ибн Сино, известный ученый и врач Средневековья, широко использовал подземные части солодки в своей медицинской практике. В частности, ее использовали при лечении язвы желудка, заболеваний легких и дыхательных путей, а также как мочегонное средство.

Ключевые слова

Glycyrrhiza glabra-L, fabaceae, glycyrrhizin.

In modern medicine, this plant has an incomparable place, and various medicines are produced by processing it at pharmaceutical enterprises. At the same time, it is one of the main components of many medicinal preparations. After our

AMERICAN JOURNAL OF APPLIED MEDICAL SCIENCE
ISSN: 2996-5101 (online) | ResearchBib (IF) = 9.818 IMPACT FACTOR
Volume-3| Issue-2| 2025 Published: |28-02-2025|

country gained independence, special attention was paid to the cultivation of medicinal plants. Thus, on December 7, 1995, the Cabinet of Ministers adopted a special resolution No. 453 "On measures to increase the cultivation of raw materials of the licorice plant in the Republic of Uzbekistan" in order to meet the needs of the domestic and foreign markets. In order to ensure the implementation of this decision, the licorice plant is being cultivated in the forest farms specializing in medicinal plants established under the Shifobakhsh State Agricultural Research Institute.

Licorice (Glycyrrhiza glabra-L.) is a perennial herb belonging to the Fabaceae family. Theophrastus called this plant in his works as licorice root, skifskaya trava, pontiyskaya trava. This plant is called in Russian as licorice, in Uzbek as shirinmiya, chuchukmiya, kislimiya, and in the Karakalpakstan Autonomous Republic as boyan. The distribution area of the siberian is very wide, it is distributed in the European part of the Eurasian Union, Crimea, the Caucasus, Siberia, Asia Minor, Iran, Afghanistan, North Africa. In our republic, siberian is a typical forest plant, mainly found in the lower reaches of the Syrdarya and Amu Darya rivers. siberian is a polycarpic herb with well-developed stems and a cylindrical structure. The stem is woody, its height is 150-160 cm, sometimes its height in forest conditions reaches 200 cm and more. In saline soil conditions, these indicators are recorded at around 50-70 cm. Its leaves have a complex structure it has. It consists of 4-8 pairs of leaflets, arranged in a row on the stems. The length of the leaf is 11-18 cm, the leaflets are ovate, elliptical, the edges are entire, hairy, length - 5 cm, width - 2.5 cm. The flowers are white-violet, the stamens are large, heavy. Due to its strong nectar secretion, it attracts bees and other insects. The above-ground part of the sweetgum is used as a nutritious feed for animals. The stem contains 11-18% protein, 10-15% proteins, 3.3-9.1% fat and other useful compounds. The underground part consists of a brown root and a rhizome with a length of about 180-200 cm. The amount of glycyrrhizic acid in the roots and rhizomes is 3-24%, glucose - 8%, sucrose - 11%, starch - 34%, fiber - 24%. The amount of substances that can be extracted in water reaches 43%. Raw licorice from our republic is exported to developed countries such as the USA, Great Britain, Germany, Japan, Korea. It should be noted that this plant is not demanding on soil conditions. It is undoubtedly important for its cultivation in areas that have been abandoned from agricultural turnover, with close groundwater, and with the ability to achieve high economic efficiency, as well as to improve the melioration of lands. The sweet potato plant is propagated mainly in three ways: from seeds, rhizomes and seedlings. The first method is carried out by sowing seeds. For this, it is necessary to select areas with proper agrotechnical equipment, thoroughly

AMERICAN JOURNAL OF APPLIED MEDICAL SCIENCE
ISSN: 2996-5101 (online) | ResearchBib (IF) = 9.818 IMPACT FACTOR
Volume-3| Issue-2| 2025 Published: |28-02-2025|

plowed in the fall, cleared of weeds, raked, chiseled, and leveled. In the prepared areas, furrows are made with a distance of 70 cm and the seeds are sown to a depth of 1-3 cm. Sowing can be done in the fall and early spring months with the help of mechanization. 4-5 kg of seeds are sown per hectare. After sowing, the field is irrigated and the surface layer of the soil must be kept moist until the grass is harvested. When the soil temperature exceeds 100C, grass germination is observed. As soon as the grass reaches 20-25 cm, the rows are cultivated. During the growing season, the planting area is irrigated 8-10 times. After every 2-3 irrigations, cultivation is carried out and the row spacing is cultivated with a hoe and maintained. However, given the significantly low seed germination rate in saline soils (1.5-2.0%), it is not possible to establish industrially important cultivated areas by growing sweet potato seeds. The second method is propagation by rhizomes. In this method, plant raw materials, i.e. rhizomes, are dug up from the fields. Using sharp-edged tools, 10-15 cm long rhizome cuttings are prepared. It is recommended to use 2000-3000 kg of rhizomes per hectare. In pre-prepared and properly agrotechnically prepared fields, rows are made with a spacing of 90 cm and the rhizomes are planted with the help of mechanization at a depth of 5-8 cm. This process is also carried out in the autumn and early spring months. Taking into account soil moisture, frequent watering of the field where the rhizomes are planted and maintaining moisture in the soil will give effective results. Agrotechnical measures are carried out in the planted areas depending on the condition of the plant and irrigated and maintained 6-8 times in the 1st year (during the growing season). Starting from the 2nd year of the plant's growing season, the irrigation rate is reduced depending on soil conditions. This method is mainly effective in establishing large arable land of industrial importance. However, when multiplied by this method, 2000-3000 kg of valuable raw materials are spent per 1 ha of area. The third method is carried out by first sowing seeds in fertile soil, growing seedlings from them, and then transplanting them to saline soil. For example, when seedlings that have passed one vegetation period are transplanted to saline soils, their growth and survival rate is 70-80%. Raw material is harvested from the 4th-5th year of vegetation. Raw material of industrial importance consists of roots and rhizomes, the bark is brown, the interior is orange, has a characteristic odor and a very sweet taste. It is possible to grow 8-10 tons of underground part that meets state standard requirements per hectare, and 20-25 tons of nutritious fodder products in wet form. The underground part of the plant is mainly dug up from a depth of 0-50 cm, cleaned of soil and dried.

The raw materials are tightly tied with the help of special mechanisms and a label is attached to them, and they are stored in dry warehouses. The shelf life is 3

years. Thus, it is advisable to use rootstock and seedling methods in the establishment of sugarcane plantations, which are considered a valuable raw material plant.

REFFERENCES

1. Akbar o'g'li U. S. et al. TURLI KASALLIKLARDA OSHQOZONNING MORFOFUKSIONAL HOLATI //O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI. – 2024. – T. 3. – №. 33. – C. 38-43.
2. G'ulom qizi Samarkand O. M. et al. MORPHOFUNCTIONAL CHANGES IN THE STOMACH UNDER THE INFLUENCE OF FOOD DYES (E-171, E-173) AND THEIR CORRECTION //International journal of advanced research in education, technology and management. – 2024. – T. 3. – №. 5. – C. 194-199.
3. Bazarova N. et al. Determination of the relationship between the polymorphic genes of metaloproteinases MMP9 (A-8202G) RS11697325 and the level of cystatin c in children with chronic nephritic syndrome //BIO Web of Conferences. – EDP Sciences, 2024. – T. 121. – C. 03011.
4. Алтыбоева М., Норкулова З., Худойбердыева З. СВОЙСТВА РАСТЕНИЯ SALVIA SUBMUTICA //Инновационные исследования в современном мире: теория и практика. – 2023. – Т. 2. – №. 10. – С. 10-11.
5. Alikovna J. F. et al. SALVIA O'SIMLIGINING XUSUSIYATLARI //JOURNAL OF INNOVATIONS IN SCIENTIFIC AND EDUCATIONAL RESEARCH. – 2023. – T. 6. – №. 2. – C. 217-218.
6. Mavsuma O. medicinal properties of sea buckthorn (Hippophae Rhamnoides L.) OIL PLANT //Horizon: Journal of Humanity and Artificial Intelligence. – 2023. – T. 2. – №. 3. – C. 1-3.
7. G'ulomovna O. M., INTESTINAL S. B. N. M. V. O. N., MICROFLORA I. N. CHILDREN//Nauchnyy Fokus.-2023 //T. – T. 1. – C. 279-282.
8. Altyboeva M. G., KISHEChNUY B. N. S. S. V. N. A., MIKROFLORU U. DETEY//Nauchnyy Fokus.-2023 //T. – T. 1. – C. 109-112.
9. Altyboeva M. G., KISHEChNUY B. N. S. S. V. N. A., MIKROFLORU U. DETEY//Nauchnyy Fokus.-2023 //T. – T. 1. – C. 109-112.
10. Gulyamovna A. M., Sadriddinovna A. S. Hypotensive properties of the plant salvia submutica //Eurasian Medical Research Periodical. – 2023. – T. 19. – C. 51-52.

11. Sadriddinovna A. S., Gulyamovna A. M. The relevance of the meaning of plantain in folk medicine //Eurasian Medical Research Periodical. – 2023. – T. 19. – C. 49-50.