

THE ECONOMIC VALUE OF TRIFOLIUM REPENS L. (PALL.) FROM THE FABACEAE LINDL FAMILY. WILD RELATIVES OF CULTIVATED PLANTS OF THE REPUBLIC OF KARAKALPAKSTAN

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Abstract:

The article describes the economic value of *Trifolium repens* L. A moisture-loving and light-loving winter-hardy plant that grows well on soils of different fertility. It grows in the valley and delta of the Amu Darya; it is found along the banks of ditches, in gardens, damp wetlands, as well as among crops. Geographic type: Paleoarctic. It is a valuable plant, it is used as a medicinal, food, industrial, fodder and melliferous plant.

Keywords: Wild relatives of cultivated plants, flora, *Trifolium repens* L., Fabaceae Lindl.

Introduction

Plants are widely used in the food industry, as well as in medicine in the treatment of certain diseases, which is not unimportant in ensuring the industrial safety of the population. Play an important role in human nutrition. Their fruits have high taste and technological characteristics, contain sugars useful for the human body, vitamins (A, C, B₁, B₂, B₃, P, Fe, K, etc.), organic acids, vegetable oils, etc. Fruits are used both fresh and dried in the confectionery and canning industry. The wood and leaves of some fruit are widely used in various fields of industry and medicine.

About 80% of the area of Uzbekistan is occupied by deserts, of which Kizilkum is the largest with an area of 30 million hectares. A unique gene pool of various ecological groups is concentrated on the territory of Uzbekistan, which is a valuable reserve of forage, raw materials, medicinal, food and other useful plants. [1].

Wild relatives of cultivated plants once played a huge role in human life. Later, some of them began to be cultivated, and many others, until recently, retained the value of "emergency stock used in critical situations. However, many of these plants are still widely used today. Mushrooms, wild berry and fruit nut plants are of the greatest importance as food plants; several wild-growing types of vegetables are widely used, spicy and insular ones are used less - wild-growing onions, capers, etc. [7].

Determination of biological productivity and rational use of wildlife is one of the most important tasks of modern ecology. [2].

Objects and research methods. The objects of research are *Trifolium repens* L. a species from the *Fabaceae* Lindl. Family, distributed on the territory of the Republic of Karakalpakstan. Geographic type: Paleoartic. It grows in the valley and delta of the Amu Darya; it is found along the banks of ditches, in gardens, damp wetlands, as well as among crops.

Family *Fabaceae* Lindl. - Legumes are an economically important family of flowering plants - a number of legumes have long been cultivated as food plants and are widely used in agriculture, others are known as ornamental or fodder plants, some are a source of valuable wood species. In addition, the practical significance of the claimed study is determined by the uniqueness of the position of legumes in any plant community, since *Fabaceae* L., due to symbiosis with nitrogen-inducing microorganisms, are able to actively enrich the soil with nitrogen available to plants and, therefore, are at the origins of the nitrogen cycle. Apparently, even rare species of legumes in the plant community can be an important element of sustainability and maintenance of biodiversity in biocenoses [8, 11].

It is customary to refer to useful plants as those species that a person uses directly for their needs, both fresh and after processing, i.e. these are plants, the benefits of which are obvious [5].

Trifolium repens L. is a moisture-loving and light-loving winter-hardy plant that grows well on soils of different fertility, with a reaction of the environment from acidic to alkaline. An excellent fodder pasture plant, resistant to trampling and soil compaction and grows well in the second half of summer after grazing. 100 kg of meadow clover hay contains 52.2 feed units. In terms of the nutritional value of hay, it is almost as good as alfalfa. The plant is widely used for green fodder, hay, haylage and silage. After harvesting the seeds, the straw is used as forage. Nitrogen accumulated in the roots remains in the soil after plowing, which contributes to an increase in the fertility of the fields. It is widely cultivated as a fodder plant. Geographic type: Palearctic. It is a valuable plant, it is used as a medicinal, food, industrial, fodder and melliferous plant.

Research Results

The green mass contains essential and fatty oils, tannins, glycosides tripolin and isotrifoline, organic acids, sitosterols, resins, vitamins. The leaves contain maakiain, a flavonoid from the pterocarpan group with fungicidal properties. After mowing the aboveground part, the roots accumulate up to 150 kg / ha of nitrogen. The content of essential oil in flowers reaches 0.03%, it contains furfural and coumarin methyl acid. Seeds contain up to 12% of semi-drying fatty oil [3; 4].

Salads are prepared from the leaves, they are seasoned with green cabbage soup, botvinia. In the past, dried pounded leaves were added to flour when baking rye bread, and also used to make sauces and in the production of cheeses. In the Caucasus, young unblown flower heads are fermented like cabbage and added to green salads.

Valuable honey plant, but nectar is available only to bees with a long proboscis, so honey productivity is only 6 kg of honey per hectare of crops. Honey belongs to the best varieties, it does not take a long time to sugar. According to some data, 1 ha of creeping clover yields up to 100 kg of honey, red clover - only 6 kg [5; 6].

Discussions

According to the results obtained, it can be said that *Trifolium repens* L. is a biennial plant, it is used as a medicinal, food, fodder and melliferous species. The Fabaceae family, as a whole, and many genera, subgenus, and legume sections are an example of a very active modern speciation, which is of considerable scientific interest, primarily for understanding the peculiarities of phylogeny in flowering plants. The relative youth and active modern speciation of taxa of this family, a wide range of variability of characters, the presence of different levels of ploidy - all this sharply complicates the study of *Fabaceae* L. in a systematic way.

Conclusions

Thus, summarizing the above, we can conclude that *Trifolium repens* L. is a valuable plant, it is used as a medicinal, food, industrial, fodder and melliferous plant. The wild flora of the Republic of Karakalpakstan has significant potential and, with rational and competent use, will provide the population not only with high-quality, environmentally friendly honey, medicines and other valuable products for many years to come.

References:

1. Butnik A.A., Toderich K.N., Matyunina T.E. and other Handbook on the morphology of fruits and biology of seed germination of desert plants in Central Asia. T: Yangi Nashr. 2016.
2. Chudnovskaya G.V. *Sanquisorba officinalis* L. In Eastern Transbaikalia. UDC 582.734 (581.52). 2013.
3. Dudchenko L.G., Koz'yakov A.S., Krivenko V.V. Spicy-aromatic and spicy-flavoring plants: Handbook / Otv. ed. K. M. Sytnik. - K.: Naukova Dumka, 1989. -- 304 p. - 100,000 copies - ISBN 5-12-000483-0.
4. Gubanov I. A. et al. 829. *Trifolium pratense* L. - Meadow clover // Illustrated guide to plants of Central Russia. In 3 volumes - M.: T-in scientific. ed. KMK, Institute of technologist. issl., 2003. - T. 2. Angiosperms (dicotyledonous: dicotyledonous). - S. 472. -- ISBN 9-87317-128-9.
5. Beketov A.N.,. Clover, plants from the legume family // Brockhaus and Efron Encyclopedic Dictionary: in 86 volumes (82 volumes and 4 additional). - SPb., 1890-1907.
6. Mchedlishvili G.I. Root system of honey plants // Beekeeping: journal. - 1962. - No. 1. - P. 29.

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7. Gubanov I.A., Krylova I.L., Tikhonova V.L. // Wild-growing useful plants of the USSR. Ed. "Think". Moscow. 1976.
 8. Новые сорта зерновых и зернобобовых культур, включенные в Государственный реестр с 2007 года. Минск, 2007. URL: <http://www.mshp.minsk.by//zern-bobov> - 2007.
 9. Князев М.С. Бобовые (Fabaceae Lindl.) Урала: видообразование, географическое распространение, историко-экологические свиты. Том 1. «Ботаника». Екатеринбург – 2014.
 10. Юлдашев А.С., Тожибоев М.У. Ботаническое ресурсоведение. Андижан – 2020