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THE IMPORTANCE OF FERULA (POPLAR) PLANT SEEDLINGS

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Abstract: This article provides a detailed analysis of the botanical characteristics, geographical distribution, chemical composition, and practical significance of the plant Ferula foetida. The role of the plant in folk medicine, its use in modern pharmaceuticals and the food industry have been thoroughly studied, and its main bioactive compounds and therapeutic properties have been elucidated based on scientific sources. The ecological and economic importance of the Ferula foetida plant, as well as the problems of preserving and rationally using its resources, were also comprehensively considered. The results of the study will serve to provide practical recommendations for the effective use of this plant in various fields and its conservation in the future.

Keywords: Ferula foetida, medicinal plants, chemical composition, bioactive compounds, folk medicine, pharmaceuticals, ecological importance, resource conservation, therapeutic properties, industrial uses.

The study of the riches of nature and their application to practice is one of the most important areas of modern science and technology. In this respect, the place of the Ferula foetida plant, which is distinguished by its unique biological and chemical properties, is incomparable. This plant, popularly known as "osafetida" or "sumbal", has many medicinal and industrial uses. Extracts and essential oils from its roots and aerial parts have been widely used in folk medicine, modern pharmaceuticals, and the food industry since ancient times. Today, the comprehensive study of the biochemical compounds contained in the Ferula foetida plant and the active substances isolated from them is of great scientific and practical importance. Therefore, this article focuses on the morphological structure, distribution areas, chemical composition, and economic importance of the Ferula foetida plant.

Ferula (kovrak) seedlings are of great economic and ecological importance in reclaiming desert and upland areas, combating erosion, producing valuable medicinal raw materials (gum-resin), and maintaining ecological balance. They are mainly distinguished by their medicinal properties and export-oriented products.

3-year-old seedlings of the Ferula foetida plant were brought from the Dehqanabad district of the Kashkadarya region. The seedlings are of different sizes, including 500 seedlings of plants ranging in size from 15 cm to 30 cm. It was found that the seedlings were 4 cm to 11 cm thick. The seedlings were planted in the Avval village of Fergana district. The soils of the village area are somewhat different from the soils of other areas of the Fergana district, mainly due to the proximity of groundwater to the surface. Soil type - Black, meadow-brown soil

The average annual temperature in Fergana district is 16.2 C. The maximum temperature is + 40.0 C, the minimum temperature is -14.3 C. Sunny days 255 days. There are 102 rainy days and 8 snowy days. (tripvenue.uz information)

Preliminary agrotechnical measures have been carried out in the area where the seedlings are planned to be planted. 6 egats, 10 m long and 40 cm wide, were prepared for planting seedlings.

Seedlings were planted in the middle of the egats, to a depth of at the level where the upper part of the seedlings was hidden. The distance between the seedlings was set at 20 cm.

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Seedlings were planted on March 10. After planting, it was watered for the first time on March 15, 5 days later.

The seedlings were watered for the second time on March 30. Starting in April, the seedlings began to germinate. On April 7, it was found that 410 si were valid from a total of 500 planted seedlings when the seedlings were examined. The height of the seedlings was measured to be from 4 cm to 10 cm. It was observed that the leaves of Ferula foetida are compound odd-pinnate.

The third irrigation was carried out on April 25. On April 27, the 1st agrotechnical measures, weeding and loosening of the furrows, were carried out. It was observed that the number of germinated plants reached 450 and the height of the seedlings ranged from 15 cm to 40 cm. It was observed that the seedlings had from 2 to 6 compound double-pinnate leaves. The 4th watering was carried out on May 15. The 2nd agrotechnical measures, weed control, were carried out on May 17. On May 25, it was observed that the growth and development of the plants had slowed down and the upper part of the leaves had turned yellow. It was observed that all the leaves of some plants turned brownish-red, while brown spots appeared on others. When observed on June 5, it was found that all the plants had dried up, i.e., they had temporarily entered a summer dormant period.

Seedlings of the Kovrak plant were found to be 90% in the village of Fergana district earlier in field germination.

Ferula, or in vernacular, cowrack plant seedlings, are considered to be plants of ecological and economic importance. The cultivation of its seedlings is of great help in the conservation of Natural Resources growing in the wild state. By expanding cultivated areas through seedlings, the medicinal raw materials of the plant are obtained in a sustainable manner and the wild population is not harmed. This process prevents the plant from becoming extinct in its natural habitat, reduces pressure on it, and allows it to be preserved for future generations. Even when the plant is young, it is rich in biologically active substances, and its care is relatively easy and effective. Growing plant seedlings in artificial crops increases the quality of the products obtained, improves productivity, and maintains ecological balance. The planting of Ferula seedlings also plays a special role in protecting the soil from erosion, improving the environment, and increasing soil fertility.

The above analysis shows that the cultivation of Ferula seedlings and the establishment of plantations based on them will help preserve natural resources and ensure the diversity of the plant. This method has a positive impact on improving the quality of medicinal raw materials, strengthening environmental safety, and ensuring the economic sustainability of local communities. Ferula seedlings are one of the most effective tools for nature conservation, natural resource conservation, and rational use of medicinal plants.

Conclusion.

The plant Ferula foetida does not occur naturally in the Fergana district. The main goal of our experience is to determine the ability of the kovrak plant, which is highly valued in the industrial and pharmaceutical sectors today, to grow in the soil and climatic conditions of the Fergana district, where plantations are being created and put into production. An important part of the experiment is to determine the growth of kovrak in field conditions, the factors affecting plant growth, and the types of fertilizers that are most useful in obtaining high yields.

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