

## **INTRODUCTORY EVALUATION OF ECHINACEA (ECHINACEA PURPUREA (L.) MOENCH) PLANT IN TERMEZ CONDITION.**

Qahhorov Ismoiljon Barotali o'g'li

Teacher of the Faculty of Natural Sciences of Termiz State University

**Annation:** As we know, plants with medicinal and healing properties can be found in almost all regions. The wide use of their medicinal properties and especially the introduction and evaluation of medicinal plants of foreign flora to local regions have gained great importance in recent years. This article presents data on growth and development assessment of Echinacea Purpurea (L.) Moench, an ornamental plant with medicinal properties, under introduction conditions.

**Key words:** introduction, folk medicine, growth and development, perennial plants, seasonal, local, foreign flora, pharmaceutical industry, medicinal plant.

**Introduction:** It is evident that evaluating the introduction status of a plant being introduced is considered one of the factors indicating its potential. The assessment of introduction results is primarily determined using methods proposed by G.N. Andreev (1975) and R.A. Karpisonova (1978) for annual plants, and by B.A. Golovkin (1973) for perennial herbaceous plants. Subsequently, G.N. Andreev conducted an evaluation of herbaceous plant introduction results based on their life forms. Also, N.A. Bazilevskaya (1964) assessed the results of the acclimatization and introduction of grass plants on the basis of a 6-point scale.

**Purpose of work:** Echinacea - evaluation of Echinacea purpure L. Moench plant in terms of growth, development, formation of vegetative and generative organs, adaptation to different conditions in the growing area in Termiz climate.

**Research object:** Echinacea is a valuable perennial medicinal plant belonging to the Echinacea family, Asteraceae or Compositae family. The Echinacea family includes 5 species, and these plant species are considered to be

erect, perennial rhizomes. Their height reaches 1-1.5 m. The flowers are large purple in color.

Echinacea - *Echinacea purpurea* is a perennial plant of the Asteraceae family, reaching a height of 80 to 180 cm. It is partially distinguished from other species by the fact that it has a straight, erect stem and relatively few branches. The leaves are large, the lower leaves are broad lanceolate, located in a long leaf band; the tip of the upper leaves is relatively narrow, with a sharp tip. The flowers are large, the flower heads are 1.5-3 cm long and 5-10 mm wide. Red Echinacea is propagated by seeds and vegetatively.

**Research methods:** In this regard, under the conditions of our Republic, a plant introduction evaluation scale was developed based on the eco-introduction method of evaluating the results of the introduction of plants recommended by I.V. Belolipov (1971-1983) in the Botanical Garden of the Academy of Sciences of the Republic of Uzbekistan. Based on it, plants were evaluated from 0 to 5 points in the conditions of introduction, and plants with 5 points were selected as successful plants in the introduction process.

Yu.M. Murdakhaev (1992) studied the introduction of medicinal plants in the conditions of our Republic, the characteristics of growth and development, the process of adaptation in relation to their floristic areas, life form and ecogeographic distribution.

Later, in this regard, B. Yo. Tukhtayev (2009) developed a scale for evaluating the results of the introduction of medicinal plants in saline soils in the scientific research work on the topic of "Introduction of medicinal plants in saline soils of Uzbekistan" and based on it emphasis was placed on plant introduction resistance, moisture, high temperature, low temperature conditions and natural reproduction.

The success of the introduction of plants is evaluated by the sum of its signs, the most important of which is the completeness of the large (ontogenetic) and small (seasonal) life cycles of the plant, which includes plant habitus (Latin habitus

- preservation of image, appearance) is characteristic. When evaluating the success of the introduction, generative development, vegetative reproduction, preservation of the habitat, damage by diseases and pests, viability of plants in unfavorable periods of the year are taken into account. In this regard, we also used a 5-point evaluation in the introductory evaluation of *Echinacea purpurea* L. and analysis of the results (Table 1.1). Type evaluation was done on a 100-point scale. In this case, the introductory assessment of plants based on the sum of points is expressed as follows:

20-39 - not promising, 40-59 - less promising, 60-79 - promising, 80-100 - very promising

**Results:** The ability of *Echinacea purpurea* L. Moench to form a mass of above-ground and below-ground parts in the conditions of introduction is considered one of the main indicators of its economic value. In winter, at a temperature of -20 °C, the roots and shoots of the plant are almost not affected by cold. Roots are strong and have the ability to firmly attach the base of the stem to the ground. As a result of the observations, it was clear that *Echinacea purpurea* L. Moench, which is being studied under conditions of introduction, almost not affected by diseases and pests. Taking into account the instruction on the scale of introductory assessment of plants on saline soils proposed and developed by B. Tukhtayev, an introductory assessment specific to the conditions of Surkhandarya region was developed.

*Echinacea purpurea* L. Moench plant according to its reaction to high temperature - moderately resistant, watering requirement - moderate, reaction to low temperature - resistant, vegetative propagation - strong, natural planting - moderate, resistant to diseases and pests. Introductory assessment is carried out on the basis of the comparison of indicators such as growth, development, productivity and durability of the introduced plant in the given environmental conditions and is completed with an introductory assessment in specific conditions. The total score is 100 points.

The prospects for the acclimatization of echinacea (*Echinacea purpurea* L. Moench) in the conditions of Termez can be determined based on the data presented in the table below. This table, based primarily on 6 indicators, allows for the provision of information about the adaptation of the introduced plant to the studied area, provides a number of conveniences for evaluation, and is considered one of the important indicators for distinguishing it from other species.

*table-1.1*

**Introduction to *Echinacea purpurea* L. Moench  
rating scale (points)**

Main indicators	Rank and scores						Introductory evaluation (score)
Reaction to high temperature	resistant	15	moderately resistant	10	low resistance	5	10
Watering requirements	low	15	average	10	high	5	10
Low temperature	resistant	15	moderately resistant	10	low resistance	5	15
Vegetative reproduction	intensive	25	strong	15	does not grow	5	15
Natural planting	low	15	average	10	it won't happen	5	10
Resistance to Disease and pest	not damaged	15	slightly damaged	10	strong damage	5	15
Total:							75

**Conclusion.** Overall, *Echinacea purpurea* L. Moench scored 75 points under introduction conditions and was considered a promising species. *Echinacea*

purpurea L. Moench can be grown in the conditions of Surkhandarya oasis Termiz. This introduced plant species can be propagated in the field in terms of its ability to reproduce from seeds, its response to high and low temperatures, seed productivity, resistance to diseases and pests, and it is important to achieve economic efficiency at the expense of raw materials obtained from it. is counted from indicators. Cultivation of such medicinal plants in a common area will definitely provide raw materials necessary for our pharmaceutical industry and will be able to be exported.

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