

BIOECOLOGICAL CHARACTERISTICS OF MELIA IN THE CONDITIONS THE CITY OF TERMIZ

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Abstract. *This article presents the results of research on the climate, soil conditions of the Surkhandarya region, existing conditions for the growth of plants, as well as the acclimatization of new plants in the city of Termiz.*

Key words: *Melia azedarach L., bioecology, ontogenetic, bioecological features, flowering biology, phenology, seasonality, introduction, introductory assessment.*

Most cities and villages of Uzbekistan are located in the mountain valleys of the Tien-Shan and Turkestan systems, and Bukhara and Termiz are located in the desert plains. The climate of the mountain region is almost mild compared to the climate of the mountains above and the desert below in summer, the temperature is slightly more moderate than in the desert and slightly higher than in the mountains. There is also relatively little wind here. In order to properly organize floriculture, it is necessary to take into account the climatic characteristics of the given place, because accordingly it will be easy to choose varieties of decorative plants. According to climate data, the following are determined: vegetation and flowering times, sowing and transplanting of plant seeds in spring, and harvesting periods in autumn, as well as wintering possibilities of perennial flowers. The lowest winter temperature is a decisive factor for the selection of overwintering perennials. In the conditions of Uzbekistan, the main feature is the lack of humidity or the lack of air saturation with water vapor.

Surkhandarya region is located in the southernmost part of our country. At the same time, it is located in the southern part of Central Asia, and its territory corresponds to the dry subtropical climatic region. 37°10'E-39°02'E north latitude and 66°32'E -68°25'E east longitude cross the territory of the region. In terms of the structure of the earth's surface, the territory of Uzbekistan is divided into two parts

- the main part consists of plains, and the lower part consists of mountains and intermountain hollows. The surface of our republic gradually rises from the west and north-west to the east and south-east.

The lower part of Uzbekistan is 60-100 m above the ocean level and is located around the lower part of Amudarya and the Aral Sea. Flowering and seeding of introduced plants in new conditions is an important indicator of adaptation. Because only when the demand of plants for environmental factors is adapted to new conditions, they bloom, produce seeds and ultimately leave offspring. This has been proven in many scientific studies.

The flowering biology of acclimatized plants has been widely studied by many scientists. Different species belonging to the same family can enter the generative stage at different ages. In the natural area of Melias, it was recorded that they first enter the generative stage at the age of 3 years. In climatic conditions, this indicator can change in one direction or another. In particular, in the Caucasian republics, *M. azedarach* blooms at the age of 4-5 years.

According to G.N. Anisimova's authorities, *M. Toosendan* bloomed and produced seeds at the age of 7 at the Nikita Botanical Garden in Yalta. In the US states of Texas, Florida, Oklahoma, as well as Iran, Pakistan and Japan, they begin to bloom at the age of 3-4. *Melias* began to bloom at the age of 3 in the Botanical Garden of Turkmenistan. Almost no difference is observed in the flowering biology of these two species.

It bloomed at the age of 4 in the Dushanbe Botanical Garden, and at the age of 3 in the oasis of Kafirnihan and Vakhsh of the Southern regions.

The entry of plants into the phase of flowering and seed formation is determined not by the influence of any single factor, but by the complex influence of environmental factors. In the conditions of South Uzbekistan, it was observed that both types of melia enter the generative stage from the age of 3. In trees of this age, generative organs are initially formed in small quantities. On average, 5-6 inflorescences form on one plant. Such flowers bloom for 8-10 days. Our long-term observations and the analysis of data in the literature showed that the flowering

phases of *M. azedarach* and *M. toosendan* are very close to each other, and in the next species this period is only a few days later.

Phenological observations are one of the most convenient and effective methods for studying introduced plants. Phenological observations are of great importance not only in determining different periods of transition, but also in determining the characteristics of plant resistance, beauty, and the rhythm of vital processes in them. Species originating from different geographical locations begin their vegetation period in a certain sequence. And this will be preserved regardless of the arrival of spring.

If the temperature is the main factor, this process is controlled by the genotypic characteristics of the plant that are strengthened in its natural range. The pattern of seasonal development of plants reflects the historical development of the species under the influence of the external environment. Annual meteorological factors (heat, precipitation, relative humidity of the atmosphere, etc.) affect the seasonal development of the plant. When the conditions of introduction correspond to the conditions in the natural area of the plant, it is noted that they are well acclimatized. Different plants start their summer vegetation at different times. In many scientific sources, we find evidence that shows that the period of seasonal development of plants of one or another species begins when the sum of useful temperatures reaches a certain level. The success of the introduction of plants is evaluated by a set of signs, the most important of which is the completeness of the large (ontogenetic) and small (seasonal) life cycles of the plant, which is characterized by the preservation of the plant habit. 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. We used a 6-point evaluation to analyze *Melia's* introduction results. Type evaluation was done on a 100-point scale. The sum of points from 20-39 was considered as unpromising, 40-59 as less promising, 60-79 as promising, and 80-100 as very promising. The ability of *Melia azedarach*L. to produce abundant leaf mass under the conditions of introduction is

considered one of the main indicators of its economic value. *Melia* was not affected by diseases and pests in the conditions of introduction. Taking into account the instruction on the scale of introductory assessment of plants in saline soils proposed by B. Tokhtaev (2007), an introductory assessment specific to the conditions of Surkhandarya region was developed. *Melia* plant according to its reaction to high temperature is moderately resistant, its demand for watering is moderate, its reaction to low temperature is durable, vegetative reproduction is weak, natural cultivation is moderate, resistance to diseases and pests - not damaged. Thus, the *Melia* plant scored 70 points in the conditions of introduction and was considered a promising species.

Also, *Melia* can be propagated in open fields due to its ability to reproduce from seeds, its productivity in response to high temperatures, and its resistance to diseases.

Melia is recommended to be grown in the Surkhandarya region due to the fact that *Melia* successfully passes the stages of ontogenesis under the conditions of introduction, vegetative reproduction, and is not affected by pests.

The city of Termiz, *Melia*, goes through all stages of ontogenesis. Due to the beginning of budding and its duration at the scale of the plant bush, flowering is observed at the same time, fruiting is slightly longer than other phases.

The growth of *Melia* branch started in March, and the growth was active from April to the beginning of June. The researched species belong to xeromesophyte, thermophilic, mesotrophic and heliophytic plant groups according to their response to environmental factors under the conditions of introduction.

In the conditions of Surkhandarya region, *Melia* starts growing in March, blooms in May, and continues to grow until December. For this reason, the possibility of growing as an ornamental tree is widely considered.

Melia seeds are harvested in December when they are fully ripe and planted in open fields. The seeds sown in spring are stratified in moist sand from December and stored in the cellar until sowing. If this is done, the seeds will germinate on time and the seedlings will develop well.

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