BIOMORPHOLOGICAL DEVELOPMENT AND ADAPTATION OF MELIA AZEDARACH L. IN THE URBAN ENVIRONMENT OF TERMIZ

Begmatov Abdusamat Mamatkulovich

Termiz State University Teacher.

Abstract. *In this article, the results of studies on the biomorphological characteristics, development patterns and phenological characteristics of the ornamental tree Melia azedarach L., which is acclimatized in the conditions of Termiz, and its growth and development are studied.*

Key words: *Melia azedarach* L, *ornamental tree, cultural, ontogenetic, ,flowering biology, phenology, introduction, introductory assessment.*

The Sustainable Development Goals are a global call of the United Nations aimed at improving the way of life and well-being of all mankind by improving the economic, social and environmental situation in the world, and building a just and sustainable society. It is determined that each country will localize the BRM, that is, develop national development goals based on its development priorities and financial capabilities from the 169 tasks of the 2030 agenda. Countries should adapt these targets to their national contexts, define quantitative indicators for the relevant statistical indicators for each objective, and define objectives and specific quantitative indicators in national strategic documents. Today, at the United Nations Department of Economic and Social Affairs (UNDESA), the Division on Sustainable Development Goals (DSDG) focuses on SDGs and related thematic issues, including water, energy, climate, oceans, urbanization, transport, science and technology. provides support and capacity building activities.

One of the goals of sustainable development is the rational use of forests, combating desertification, ending land degradation and restoring soil fertility, and eliminating the threat of biodiversity loss.

Taking into account the above, the bioecological features of the ornamental tree Melia plant were studied. Studying the growth and development of plants in the early stages of ontogenesis is important for knowing its biological properties. Plants show all the signs of their historical development already in the juvenile

period. It is observed that plants acclimatized to new conditions adapt faster during the juvenile period. It is possible to determine to what extent they can adapt in the later stages of life by observing sharp differences in the morphological signs and life processes of a plant in the early stages of its development. The dormant period and storage period of the seed depends on a number of reasons. The most important of these depends on the species of the plant, the bioecological and geographical characteristics of the growing conditions. It is clear that Melia, which is among such plants, will have an important role in the national economy of our country in the future, including in greening and maintaining the health of the population. The possibility of growing Melia (*Melia azedarach* L.) in the climatic conditions of Termiz determines the urgency of the problem. Cultivation and acclimatization of ornamental plants came to our republic from the Far East from China and India through the Great Silk Road and spread first in Samarkand, then in Bukhara, Kokand and other cities. Since 1920, a 12-hectare botanical garden has been established under the Central Asian State University, where more than 60 varieties of flowers have been cultivated. After increasing the number of flower varieties to 300, this garden was transferred to the account of the academy in 1943, and a new botanical garden was established with an area of 80 hectares.

Since 1962, plant science farms have been established in seven cities of our republic - Andijan, Angren, Almalyk, Bukhara, Samarkand, Fergana and Urganch. The area of these farms was 592 hectares. By 1977, 15 plant science combines were established in the Republic of Uzbekistan. The cultivated area of the Tashkent flower farm, which is considered the largest, was 1279 hectares. The area of glass greenhouse buildings was 5.9 hectares.

1980 yili botanika bog‘ida gulchilik laboratoriyasi tashkil topdi va unda 2000 dan ortiq gul navlari yetishtirishga muvaffaq bo‘lindi.

Bunga fan doktorlari, professorlardan F.N.Rusanov, Z.F.Bachanieva, A.P.Pechenitsin, fan nomzodlaridan P.K.Ozolin, L.K.Kravchenko, A.K.Kyatkin, A.X.Sharipov, L.A.Abduraxmonovlar o‘zlarining munosib hissalarini qo‘shdilar.

Mustaqil Respublikamizda hozir gulchilikka katta e’tibor berilmoqda. Gulchilik O‘zbekiston xalqining kundalik turmushiga kirib bormoqda va shahar aholisining turmushida muhim ahamyat kasb etmoqda. Samarqand shahrining manzarali va turli xil gul o‘simliklari bilan bezashda va ko‘chatlarni o‘z o‘rniga chiroyli qilib o‘tqazishda Shreder nomli meva va tokchilik ilmiy tekshirish institutining zabardast olimlarining hissalari beqiyos.

Meliyaning (*Meliaceae* Vent.) oilasi turlari daraxt va butalardan iborat bo‘lib, ularning 40 dan ortiq turkumi va 600 dan ortiq turi mavjud. Ular asosan Yer sharining tropik va subtropik mintaqalarida keng tarqalgan. Meliyaning (*Melia* L) turkumi 25 turni birlashtirgan. Ularning vakillari orasida doimiy yashil va barglarini to‘kadigan turlari mavjud. Ular janubiy va sharqiy Osiyo hamda Avstraliyada tarqalgan. Yovvoyi holda Himolayning tog‘ oldi zonasida, Xitoy, Hindiston, Yaponiya, Yangi Gvineya va Avstraliyada uchraydi. Tur nomi bargining shumtol bargiga o‘xshashligidan kelib chiqqan. Meliya turkumining asosan 4 ta turi: *M. Azedarach* L., *M. toosendan* Sieb. Et Zuss., M. condollei Juss, M. dubia Cav. Madaniy holda tarqalgan. Janubiy O‘zbekistonda esa faqat 2 tasi: *Melia azedarach* va *Melia toosendan* lar introduksiyalashtirilgan.

Melia Azedarach is a deciduous tree. Its height is 12-20 m, its body diameter reaches 40-75 cm. The stem grows upright, the wood is soft, it branches monopodially. In young trees, the cone is elliptical or umbrella-shaped. The leaves are densely placed on the branch and form a dark shade. Young branches are reddish, scaly, hairless, and the trunk is brown or gray, smooth or slightly rough.

The leaves are complex, divided into 2-3 folds, 25-95 cm long, up to 60 cm wide. Compound leaves are formed by 3-5 to 13 leaflets. The length of the leaf plate is 2-5 cm, the width is 1.5-2.5 cm, it is egg-shaped, the edge is sharp-toothed, light green, covered with sparse small hairs.

It consists of 32-35 flowers, 15-20 cm long, light purple, 2 cm in diameter, with a honey or vanillin smell, located in the axils of leaves at the base of annual branches. Petals 5, united or separate lanceolate, 10 mm long, 2 mm wide.

Sepals 5, ovate, not joined. Chain thread is dark purple in color, 8-9 mm long, 1.5 mm in diameter. The length of the cotyledon is 5 mm, the base is disk-shaped (lentil-shaped), with 5 seed buds. The fruit is soft fleshy and grainy, round or oval in shape, yellow in color. The flesh is hard, round, 1-1.3 cm in diameter, endocarp, shiny. Fruits hang on annual branches. The root system is mainly located in the soft fertile layer of the earth at a depth of 30-35 cm.

Melia is a tree with a height of 15-20 m, a trunk diameter of 40-70 cm, and leaves that fall in winter. The horn sabbath is in the form of an umbrella. The leaves are divided into 2-3 folds, and it is an odd feathery compound leaf. The length is 85-90 cm, the leaves are egg-shaped, the edge is straight, dark green. Petals are 5-6 cm long, 2-3 cm wide, banded. The flowers are arranged in a complex peduncle. The length of the inflorescence reaches 25-30 cm, it consists of 40-45 flowers. Petals are 5-6, separate, lanceolate, 10-12 mm long, 2 mm wide. Sepals 5, stamens dark purple, length 10-12 mm, diameter 1.5-1.7 mm. The beak of the seed has a head. The fruit is large, oval, orange, hard-grained, wrinkled, 17-20 mm long, 15-17 mm in diameter.

These species are very close to each other in terms of morphological structure. Therefore, in some sources there are opinions that Melia toosendan and Melia azedarach must be another form. In the process of natural selection, which continued for centuries, the species forms of tree-like plants appeared.

Morphologically different forms of tree plants also transfer genetic traits to the next generation. These hereditary characteristics were formed under the influence of specific soil and climate conditions, during its development and culturalization. Knowing the laws of seasonal changes helps to determine the possibilities of planting trees in which climatic conditions, expanding the area and using them correctly. These observations play a major role in demarcation of important tree plants, which are especially valuable for the national economy. In the conditions of the city of Termiz, Melia began to wake up and grow buds on February 25. Budding was observed in April and early May. Flowering in the middle of April, ripening of seeds until the end of June was

determined. Melia fruit seeds begin to ripen from September. As a result of the negative temperature in the winter season, the leaves fell and the plant went into the winter rest period.

List of used literature:

1. Abdusamat, Begmatov, and Ganieva Gulirukhsor. Bioecology and prospects of essential oil and medicinal plants cultivation in Surkhandarya region. Texas Journal of multidisciplinary studies. 1.1 (2021): 225-227.
2. AM Begmatov, MU Rakhmatova. Biology of cultivation of stevia rebaudiana Bertoni plant in Uzbekistan. Journal of Pharmaceutical Negative Results 13 (7), 3188-3193.
3. B Abdusamat, G Gulirukhsor. Bioecology and prospects of essential oil and medicinal plants cultivation in Surkhandarya region. The American Journal of Agriculture and Biomedical. 2021. 3 (06). -P. 121-124.
4. Бойсунов Б.Х. Биоэкологические особенности видов *Melia* L., интродуцированных в Южный Узбекистан: Автореф. дис. … канд. биол. наук.–Ташкент,2005.–20с.
5. Musurmonovich F. S., Baxriddinovna R. U. Soya barglarida fotosintez va transpiratsiya jadalligining o ‘ziga xos xususiyatlari //nazariy va amaliy fanlardagi ustuvor islohotlar va zamonaviy ta'limning innovatsion yo'nalishlari. – 2024. – Т. 1. – №. 4. – С. 268-272.
6. Baxriddinovna R. U., Musurmonovich F. S. Distance Learning System in Educational System Instead, and Significance //Texas Journal of Multidisciplinary Studies. – 2023. – Т. 21. – С. 11-13.
7. Фозилов Ш. М. Периодичность роста и формирования урожая у внутривидовых форм пшеницы //Интернаука. – 2019. – №. 45-1. – С. 18-20.
8. Amonova G. R., Rashidov N. E. Useful Properties of Medicinal Chamomile (Matricaria Recutita) //European journal of innovation in nonformal education. – 2024. – Т. 4. – №. 4. – С. 130-132.