BIOTECHNOLOGY OF MICROCLONAL REPRODUCTION OF SOME PROMISING INTRODUCED PLANTS

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БИОТЕХНОЛОГИЯ МИКРОКЛОНАЛЬНОГО РАЗМНОЖЕНИЯ НЕКОТОРЫХ ПЕРСПЕКТИВНЫХ ИНТРОДУЦИРОВАННЫХ РАСТЕНИЙ

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Annotation: *In this article, the demand for ornamental plants is increasing, especially the need for ornamental trees, their propagation, the use of various parts of plants: flowers, leaves, fruits, stems and other useful properties, In vitro method of plant cultivation and effective reproduction of cultural ornamental plants by biotechnological method, aimed at producing high-quality and numerous plants in a short period of time.*

Ключевые слова: *Деревья, цветы, плоды, стебли, декоративное дерево, папайя, мушмула, микроклональное размножение.*

Аннотация: *В данной статье увеличивается спрос на декоративные растения, особенно потребность в декоративных деревьях, их размножение, использование различных частей растений: цветков, листьев, плодов, стеблей и других полезных свойств, метод выращивания растений in vitro и эффективные методы выращивания растений. размножение культурных декоративных растений биотехнологическим методом, направленное на получение качественных и многочисленных растений в короткие сроки.*

Key words: *Trees, flowers, fruit, stem, ornamental tree, papaya, medlar,*

INTRODUCTION

Nowadays, the demand for decorative plants is increasing. Especially the need for ornamental trees, their propagation, different parts of plants: flowers, leaves, fruits, stems, and other useful properties are used. It is difficult to breed some ornamental shrubs, it takes a long time, the characteristics of adapting to the conditions are considered passive, and other species are being propagated by biotechnological methods in order to eliminate the invasion of other species and other similar problems. Today, the architectural beauty of cities requires the introduction of new, highly scenic trees and shrubs suitable for the climate of the region in the creation of the urban landscape.

Determining priorities for the development of biotechnology and improving the country's biological safety system, ensuring the integration of science, education and production in these areas, developing the economy and social sphere on the basis of advanced biotechnologies, as well as in 2017-2021 In order to consistently implement the tasks set by the state program on the implementation of the Strategy of Actions in the five priority directions of the development of the Republic of Uzbekistan in the "Year of the Development of Science, Enlightenment and Digital Economy": in 2020-2024, the development of biotechnology and the country's biological in accordance with the program of comprehensive measures to improve the security system; Approved in accordance with the program for the implementation of priority research and development works in the field of biotechnology in 2020-2024

The level of relevance of the topic. Fruit growing and horticulture is one of the leading branches of agriculture, which aims to provide food products for the population, fodder for livestock and raw materials for many light industries. . This network has its own characteristics: seasonality, creation of new plants, varieties, new technologies are considered the demand of the times.

It is the main branch of introduction, which is the result of the study of biological and ecological properties of field crops and seeds, the development of advanced technology suitable for certain soil and climate conditions, and its wide implementation in production. It provides scientific and practical reasons for getting high-quality crops.

Research object and methods: rapid and high-quality reproduction of cultural ornamental plants, in particular, trees, shrubs and indoor flowers by biotechnological method. Importance of in vitro reproduction of ornamental plants. Creation of special greenhouses for flowers, use of different soils, use of growth and pest protection agents.

The purpose of the study. It consists of studying the growth and development of Japanese boxwood in Kuva district, Fergana region.

Subject of research. bioecology of introduced landscape plants, the process of studying and analyzing the perspectives of unique landscape plants in acclimatization. Studying the characteristics of cultural landscape plants.

The main tasks of the study:

- To determine the distribution, homeland, number of species of mussel and papaya species on earth and to study their importance for human life;
- Identifying the morphology, systematics, botanic-geographical distribution of Japanese mussel and papaya and describing the varieties on earth;
- Studying the biological properties of Japanese mussel and papaya (reproducing by seeds, determining the growth and development of one-two-year seedlings, studying phenology);
- Determination of reproduction of Japanese mussel and papaya by vegetative means and determination of growth dynamics of branches;

• Recommending the production of Japanese mushroom and papaya.

Research method. The work was carried out from 2021 to 2023, and the Japanese medlar introduced in Kuva district of Fergana city was studied under warm room conditions.

8-10-year-old bushes were taken into account when describing the Japanese medlar, because at this age of the medlar, morphobiological signs are fully embodied. That's why we set the time of planting the plant as 10 years.

About 10 plants are described in warm room conditions. This number shows that according to the instructions of E. Romedr and G. Shenbach [42], in the study of shrub-tree plants, that is, there should be at least 10-20 individuals in order to demonstrate the exact size.

In 1956, I. Azimov first experimented with the propagation of Japanese medlar using cuttings and rhizomes in the conditions of Uzbekistan. However, due to the fact that this work was not completed by the author and some shortcomings were allowed, no clear results were obtained. Therefore, we found it necessary to conduct it again [4].

For this, we conducted the following experiment. When preparing cuttings from high-quality forms of mussel, attention was paid to their size, age, time of preparation, and the structure of the soil to be planted. Cuttings in the first experiment were taken in early December, and in the second experiment in early spring, before the plant wakes up, and planted in black sandy soil with good fertilizer. Because cuttings planted in this soil have a positive effect on rooting and its development in previous experiments. The cuttings in both experiments were cut into five different sizes (20-25 cm, 25-30 cm, 30-35 cm, 35-40 cm, 40-45 cm), one-year (10 mm wide), two-year (12-14 mm wide) and three-year-old (18-20 mm wide) branches. After the cuttings were planted, they were watered immediately and the soil was loosened to ensure soil aeration. The results of the research are shown in Table 1.

Table-1

Roots obtained depending on the planting of cuttings in different sizes and in different periods

Types of experience	Size of pencils, cm	Experiment time							
		Spring	planted	It was blue		Kuz-da	planted	It was blue	
			piece	piece	%		piece	piece	%
Annual branches	20-25		50	21	42		50	13	26
	25-30		50	33	66		50	14	28
	30-35		50	35	70		50	16	32
	35-40		50	36	72		50	21	42
	40-45		50	35	70		50	20	40

Two annual branches	20-25		50	19	38		50	17	34
	25-30		50	26	52		50	28	56
	30-35		50	34	68		50	32	64
	35-40		50	35	70		50	33	66
	40-45		50	34	68		50	32	64
Three annual branches	20-25		50	12	24		50	18	36
	25-30		50	16	32		50	21	42
	30-35		50	19	38		50	25	51
	35-40		50	21	42		50	28	56
	40-45		50	21	42		50	25	50

Conclusions.

1. Japanese medlar - Eriobotrya japonica - belongs to the Rosaceae family and is a perennial evergreen subtropical tree or shrub. It has Japanese and German medlar species.

2. The height of the Japanese medlar is up to 3-6 meters (9 meters), the weight of the fruit is up to 30-80 grams, some varieties are up to 100 grams, the fruit can contain up to 2-3 (up to 5 in some varieties) seeds. .

3. Japanese medlar tree can tolerate -15 ^{o}C degrees, -20 ^{o}C degrees, up to 7 ^{o}C degrees during budding, -3 ^{o}C degrees during flowering, flowers can withstand -4 ^{o}C degrees, and seeds die at -4 ^{o}C degrees possible

4. The fruit of the Japanese medlar is not only tasty, but also useful. It contains sugar, malic acid, citric acid, pectin substances, vitamins C, B1, B2. You can make juice, jam, syrup, wines from it. In addition, it is used in medicine as an intestinal stimulant, expectorant, chronic bronchitis, antitussive, digestive and cancer treatment.

5. When Japanese medlar is planted from seeds, it grows within a month, and its germination rate is 50%-72%.

6. When grown from the seeds of Japanese medlar in a greenhouse, its height is 16-30 cm, the length of the leaf is 6.2-15.3 cm, and the width of the leaf is 3.3-7.2 cm. it turned out.

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