EFFECTIVENESS OF THE PROCEDURE AND TIMING OF THE FORMATION OF DISEASE-FREE SEEDLINGS IN THE FORMATION OF NUTRITIOUS SHRUB MULBERRIES FROM CUTTINGS IN THE CONDITIONS OF KHOREZM REGION

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Abstract:
The article conducts research on the effectiveness of growing high-quality mulberry leaves from disease-free mulberries on the basis of the organization of varietal mulberry seedlings and intensive mulberry bushes in the conditions of Khorezm region through the ringing of woody branches.
Key words: mulberry variety, hybrid, shoot, ringed, hard cutting without leaves, intensive type, bushy mulberry plantation, productive mulberry seedling, formation, time, method, regionized, leaf yield, nutritional value, feeding value.

Introduction

Extensive work is being carried out in our country to develop the fodder base of mulberry silkworms, expand intensive high-nutrient mulberry trees, create and introduce into production the varieties of mulberry that are suitable for silkworm hybrids. At the same time, the study of the mechanism of influence of mulberry varieties and hybrids on the adaptation of cuttings, seedlings and saplings to the natural climatic conditions of different regions of the country, rooting, germination of cultivars, growth dynamics and leaf yield of mulberry trees free from disease and implementation of new innovative ideas There is a need to increase research and increase the effectiveness of their introduction, as well as to pay more attention to the introduction of new advanced developments and technologies in production.

In this regard, the President of the Republic of Uzbekistan dated March 20, 2018 No PP-3616 "On additional measures for further development of the silk industry", the President of the Republic of Uzbekistan dated August 20, 2018 "On measures for more effective use of existing opportunities in the silk industry" Resolution of the President of the Republic of Uzbekistan dated January 17, 2020 No PQ-3910 "On additional measures to develop the

silkworm feed base in the silkworm industry" No PQ-4567 construction of mulberry plantations, expansion of mulberry plantations throughout the country, application of water-saving irrigation technologies in mulberry growing, construction of silkworm feeding facilities, radical overhaul of existing facilities and their use in future mulberry silkworm feeding.

Address and purpose of the research: In Khorezm region, due to the ringing of woody branches of high-yielding mulberry varieties with high yields, along with the growth of cuttings mulberry seedlings free from infectious diseases and intensive type of bush mulberries, cultivation of valuable mulberry varieties.

The research was carried out in the open field in Hazarasp district of Khorezm region by laying cuttings made of annual and biennial twigs of mulberry saplings of horizontal leafless mulberry saplings (horizontal) and sowing at a slope of 450 C. October, Winter-1, Pioneer, Tajikistan seedless, Jarariq varieties and Pobeda x Pioneer hybrids were carried out. Bunda K.Rakhmonberdiev [1] (1960), Sh.A.Muhammadjonova [2] (1969), A.S.Didichenko [3] (1972), U.Abdullaev. [4] (1989), O.Kuchkarovs [5] (2002) used the methods of scientific and practical research on the cultivation of disease-free varieties and the organization of bush mulberries by forming roots independent of cuttings.

Results of the study: In general, it is recommended to strictly follow the methods and timing of shaping mulberry seedlings and feeding mulberries from woody cuttings with their own roots.

Consequently, in order to form an intensive-type bush mulberry with high nutritional value and yield, varietal mulberry seedlings that retain the hereditary parental characteristics that emerge from the cuttings are cut by the roots and planted in a new mulberry.

Also, cultivated seedlings are immersed in fungicides (Topas, Folicur, Impact, Panch-40, Entalikur) to prevent infection with bacterial and fungal diseases, and are buried to the root collar, leaving them deep. If a special nutrient-intensive shrub is planted in order to form a mulberry, the seedling body (branch) is cut, leaving 2-3 buds, and placed in the designated place, depending on the method of planting.

Table 1. Growth and growth rate indicators of non-ringed and ringed cuttings in Khorezm region depending on the method of sowing (2015)

Planting methods	Number of cuttings planted			The average length of an annual branch, cm
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Unfolded cuttings				
Cuttings planted horizontally	300	123	61,5	212
Cuttings planted on a slope at 450S	220	82	32,9	175
Ringed cuttings				
Cuttings planted horizontally	300	270	90.0	291
Cuttings planted on a slope at 450S	250	165	66	278

From this table, it can be said that in the conditions of Khorezm region, the rate of rooting was 1.4-1.9% higher when uncovered and ringed cuttings were planted in the bed at a slope of 45o C. It also reduces the number of rings on the twigs due to the part of the twig used for pruning, which confirms that by thinning the twigs on the mother bush mulberry, ie leaving 4-5 twigs, it is possible to get a large number of cuttings with a diameter of not less than 20 mm per hectare. Hence, the useful part of the branch should be not less than 1 cm in diameter, and the strength of an annual branch is determined by the thickness of the base. Under such conditions, the thickness of the branch to 1 cm should correspond to its highest part, and the mother mulberry trees are cut every year in the spring in the second half of February, in early March to prepare cuttings.

In this case, according to the methodology specified in the experimental program, a scheme of 0.5x3 m, 05x4 m is selected for the organization of the bush mulberry. After that, depending on how many seedlings per hectare planted in the plowed field, the soil is dug in a scheme 40x40 cm, and the damaged buds of the seedlings, additional lateral roots and the ends of the bullet roots are cut with garden shears.

This means that the earlier the seedlings start to grow taller, the less nutrients the weak seedlings in the soil will be able to absorb and the better the growth of the remaining seedlings will be. In addition, in order to increase the productivity of mulberry trees, it is necessary to cultivate high-yielding varieties, apply favorable agro-technical measures, as well as develop measures to combat its diseases on a scientific basis.

In recent years, there have been cases of seed germination, seedling death, and a decrease in leaf yield due to mulberry diseases. Observations show that the mulberry tree growing in the country suffers from more than 40 diseases, including the following groups of infectious diseases: bacteria, fungi, viruses, diseases caused by mycoplasmas, and non-communicable diseases of flower parasites (butterflies, water lilies, mosquitoes).

At the same time, the use of new innovative technologies (biological and chemical methods) to control the seedlings in a timely manner to ensure the healthy and high leaf yield of intensive shrub mulberry and free from infectious diseases (bacteria, viruses, fungi and mycoplasma) in the cultivation of nutritious mulberry leaves for many years and shaping is carried out from June 1 to June 10, (in the territory of North Khorezm region) annual side branches are cut off in order to thicken the seedlings.

As a result of the shaping method carried out to thicken the seedling body, it can be observed in the data in the table below that the main nutrients are spent on thickening the seedling body rather than on the side branches.

Table 2. Development of mulberry seedlings in the second-year seedling department in Khorezm region without branches and roots (2016-2017)

Name of mulberry varieties	Seedling height, cm	The thickness of the body		In relation to control	Branches	
		Basically M + M	M + M at a height of 120 cm		Thickness, M + M	Length cm, M + M
Pioneer	384,4	31,4 ± 1,129	22,2 ± 0,733	152,0	15,9 ± 0,351	264± 5,38
Uzbekistan	349,6	30,3 ± 1,411	20,1 ± 0,808	137,6	15,6± 0,374	228,6 ± 5,28
Tajikistan seedless mulberry (comparator)	258,0	24,1 ± 0,436	14,6 ± 0,323	100,0	10,2± 0,214	137,6 ± 2,64

Seedlings grown from cuttings are dug to a depth of 40-45 cm on special agricultural tractors and digging plows in the fall, similar to seedlings grown from seed, after the fall pruning or in early spring without the movement of sap. 7–12 days before digging the seedlings, the seedlings are lightly watered. Before pruning the seedlings sprouted from the dug cuttings, the roots are cut in 2-3 cm places.

In doing so, each seedling should have twigs and roots. Seedlings prepared in this way are divided into varieties IIII.III in accordance with the State Standards UzDST №1027-2002, thrown into the pit before burial, treated against diseases and pests, fumigated and buried with a mixture of soil and sand. In order to determine the economic advantage of propagating mulberry seedlings from cuttings, it is necessary to compare them with the method of propagation by grafting seedlings with high nutritional quality and nutritional value.

Conclusion

In the conditions of Khorezm region as a result of application of new agro-technical technologies with high yields and nutritious leaf properties, as well as fungicides against infectious bacterial and fungal diseases (Topas, Folicur, Impact, Panch-40, Entalikur) found in mulberry trees (cuttings, seedlings and mulberries) plays an important role in the reproduction of intensive-type shrub mulberries and strengthening the nutrient base of silkworms in the schemes recommended for the production by ringing the branches of foggy mulberry varieties on the basis of timely control of diseases.

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