



Technology of Growing Applants in a New Form in the Motherland

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ABSTRACT

The article describes the technology of growing new varieties of apple seedlings in the native nursery. The results of the new type's bugs of apples for apples inoculation in the conditions of head and nursery for vegetative reproducing are given in this article.

Keywords:

Apple, motherland, MM-106, MM-102, M-7, root, growing, biological efficacy.

Introduction. At present, the most intensive in horticulture are gardens grown on vegetative grafts, and especially on weakly growing panvandtags, where the stems are flattened (fan-shaped). In recent years, 40-50% of seed orchards in the U.S. have been grown on vegetative clone grafts. Growing Canadian fruit trees in low-growing vegetative grafts is of great importance. Gardens grown on medium and low-growing vegetative grafts are also common in Australia and are spreading to Latin American countries.

In all regions of the country, there are opportunities for the rapid development of horticulture and viticulture, a sharp increase in productivity, improving quality, and thus the population, production enterprises to grow quality fruit and grape products.

In order to effectively use these opportunities, first of all, all attention should be paid to improving the condition of existing orchards and vineyards on each farm, timely implementation of technological processes, full implementation of disease and pest control measures, radical improvement of harvesting, delivery and storage of fruits. We must focus on

the rapid development of the industry, increase productivity, production of quality products with the supply of technical means. Only then will the production of fruits and grapes increase, our network will be economically strengthened, and the supply of the population will improve [1, 6, 7].

At present, the total area of gardens in the country is 216.4 thousand hectares. Of this, 89.1 hectares are seed crops. At present, the most intensive gardens in the country are horticulture, which is grown on vegetative grafts, and especially on weakly growing grafts, in the form of flat (fan-shaped) branches. Orchards of the Spur type are also intensive, they grow low, even on strong (tall) grafts, and enter the early harvest. Such gardens have become widespread in our country and abroad. Gardens are of the same type when the branches are grown in round (volumetric) and tall grafts and the trees are densely packed [2].

Intensive orchards require advanced agronomic methods (water regime, special shaping and pruning of fruit trees) and mechanization of production processes [3].

When fruit trees are attached to weakly growing grafts, the quality of the fruits usually improves, their average flatness improves, their sugar content increases, their color becomes beautiful, however, if properly cared for diamond orchards grown from low grafted grafts, they give high quality yields -95% standard fruits, including 80% first grade fruits.

There are new regional quince seedlings in the nursery farms of Uzbekistan, and the urgency of their study is that it is expedient to

study the technology of growing promising apples in new vegetative grafts used in the cultivation of rare apple varieties in the garden. [5].

Results of the study. Preliminary results of scientific research conducted on the experimental fields of the farm "Azamat qizi" in Yangarik district of Khorezm region are that Data on the study of technologies in the conditions of the mother nursery are shown in Table 1

Table 1

T/r	Planting depth of welds (options)	Number of branches in 1 bush, (one)	Percentage of rooted branches	The average number of rooted grafts to be taken per 1 bush	
				(one)	in relation to control, %
Spring planting depth					
1.	10-12 cm (control)	34	91,3	32	100
2.	6-8 cm	30	93,4	29	90,6
3.	12-15 cm	38	92,2	36	112,5
4.	15-17 cm	37	94,5	34	106,2
Autumn planting depth					
1.	12-15 cm (control)	31	87,0	27	100
2.	8-10 cm	29	79,3	23	85,1
3.	15-17 cm	34	94,1	32	118,5
4.	20-22 cm	38	94,7	36	133,3
	0,5%	-	-	4,2	-

The MM-102 type of apple clones used for apples

The effect on the rooting property of planting depth of grafts in the parent nursery.

Effect of planting depth of MM-102 on the root system of root seedlings The average number of rooted panvandtags taken from 1 bush The best results for spring planting depth were observed at 12-15 cm depth and 12.5%, but

at 15-17 cm depth compared to control 6, It was observed that it was 2%.

Like the previous graft in terms of autumn planting depth, this graft was found to have achieved high performance in the latter variants.

Good results were obtained and it was observed that it was 15-17 cm, 18.5 and 33.3%, respectively, compared to the control [4].

The effect of spring and autumn planting shows that the M-7 graft with the highest depth on seedlings of weak varieties of apple diameter of the seedling stem in different grafts varieties "Golden Delishes" grown in the 2nd field of the nursery is given in Table 2. The table was 25.0% compared to the control variant.

Apples of the Golden Delishes variety are grown in different types of apples seedling growth and development

Table 2

No	Apple grafts (options)	Diameter of seedling stem, (sm)	In relation to control, %	The amount of annual growth of branches	In relation to control, %
Spring planting depth					
1.	MM-106 (control)	0,36	100	28	100
2.	MM-102	0,27	75,0	25	89,2
3.	M-7	0,48	133,3	33	117,8

Analysis of the depth of autumn planting shows that the maximum rate of annual growth of the diameter of twigs and twigs of seedlings of apple varieties "Golden Delishes" was observed at a planting depth of 15-17 cm and 20-22 cm, 21.2-21.4-36.3% relatively additional growth. The roots are relatively cold-resistant (-12°C) and do not sprout from the roots, they are more resistant to beetle sap.

MM-106 grafted varieties of medium-sized vegetative propagation of apples can also be zoned for planting in the saline soils of Khorezm region. When analyzing the onset of branch growth, it was found that the Golden Delishes

variety of apples started on March 12, the Starkrimson variety on March 14, and the local Nafis variety on March 13, i.e., 2-3 days later than other varieties. [3]. Mass growth of twigs was observed in the latest periods of seedlings from late apple varieties Golden Delishes, Starkrimson and local Nafis varieties and took place on April 1-2. In general, late apple varieties grafted on buds of medium height in the nursery of Khorezm region completed the entire vegetation period, phenological processes in a timely manner during the full annual vegetation period. Indicators of growth dynamics of twigs in the end field of seedlings are given in Table 3.

**"Azamat qizi" farm of Khorezm region is in the experimental field
The apple is grown on medium-sized MM-106, MM-102 and M-7 grafts
Dynamics of growth of twigs of late varieties of 1-year-old seedlings**

Table 3

The name of the weld	The name of the evening varieties of apples	Months				The total increase in 4 months is relative to the control	
		May	June	July	August	CM	%
		CM					
MM106	Renet Simirenko (control)	10	15	18	22	12	100
	Golden Delishes	12	17	20	23	11	91,6
	Gold Spur	12	20	23	27	15	125,0
	Starkrimson	10	12	17	23	12	100,0
	Korea	15	25	26	28	13	108,3
	Nafis	13	20	31	31	18	150,0

MM102	Renet Simirenko (control)	18	22	28	32	14	100
	Golden Delishes	19	24	29	31	12	85,7
	Gold Spur	17	22	28	29	12	85,7
	Starkrimson	15	17	25	32	17	121,4
	Korea	20	24	27	30	10	71,4
	Nafis	18	24	28	31	13	92,8
M7	Renet Simirenko (control)	10	12	18	23	13	100
	Golden Delishes	14	15	20	25	11	84,6
	Gold Spur	12	17	23	27	15	115,3
	Starkrimson	11	16	20	25	14	107,6
	Korea	8	14	21	27	19	146,1
	Nafis	12	16	20	26	14	107,6

The analysis of Table 3 shows that of the intensive varieties of evening apple attached to the MM-106 graft, the strongest grown are Gold Spur and the local Nafis varieties, in which the amount of seedlings grown in 4 months is 15-18 cm. However, MM-102 was the highest in the seedlings grown in graft, ie the amount of branches grown at 4 months was 17 cm, observed only in the Starkrimson variety. This was 21.4% compared to the controlled evening Renet Simirenko nov, while the remaining varieties were found to be 71.4-85.7% less than the controlled navigator.

Cultivation of seedlings in M-7 medium-sized grafts shows that, in general, the amount of growth of seedlings was lower than in the above-mentioned MM-106 and MM-102 grafts, and it was observed that seedling growth and development was much lower in this graft.

Thus, the analysis of the growth dynamics of seedlings grown in medium-sized MM-106, MM-102 and M-7 grafts shows that the growth of twigs is strongly observed from spring to summer (July) and stops growing slightly on hot summer days. observed in the cultivar, i.e. on both cultivars at the same time on the 8th of March. The latest was observed on March 12-14 in Korean and Starkrimson varieties, which were connected to the MM-106 graft from seedlings of intensive varieties of apples.

When calculating the number of roots in the 2nd field of seedlings, the highest number of roots was observed in the apple varieties Gold Spur, Starkrimson and Nafis, ie 19.4-26.4-32.3%

more than in the controlled Renet Simirenko navigator. The lowest number of roots was observed in seedlings of late apple Korean variety, which was 3.6% less than in control navigator. Also, when studying the assimilation rate of seedlings of intensive apple evening varieties in the new medium-sized MM-102 graft, it was found that the assimilation level of Korean and local Nafis varieties was higher than that of the control varieties.

When the acceleration of leaf transpiration was studied, it was observed that the indicators of all varieties in general were 6.4% to 14.6% less than the control evening Renet Simirenko navigator. Renet Simirenko, Golden Delishes, Gold Spur, Starkrimson, Korean and Nafis varieties of evening varieties tested on medium-length welds showed that their economic efficiency was 47.1 and 52.5%, respectively, ie the Renet Simirenko variety shown in the control was higher than other evening varieties.

The total cost of growing seedlings of these apple evening varieties in the experiment is increasing, but the cost-effectiveness shown in the medium-sized grafts used in production is high. The varieties with the highest net income are Renet Simirenko and Nafis, ie 16.5 million soums and 18.9 million soums.

When we take the total expenditures relative to net income, it turns out that the highest level of profitability is also in the varieties Renet Simirenko and Nafis.

Thus, as a result of testing various varieties of late apples in the mother nursery on

medium-sized grafts and selecting the most optimal of them, it will be possible to get 4.5-5 million soums of additional income from the cultivation of seedlings in the second field. Conclusion Some features of the cultivation of evening varieties of apple seedlings on medium-sized grafts were conducted in 2020-2021 in the experimental research area of the farm "Azamat qizi" located in Yangiariq district of Khorezm region, and the following conclusions were made:

1. When apple grafts were studied in the mother nursery, it became clear that the best grafts for apples are MM-106, MM-102 and M-7 grafts. When MM-106, MM-102, and M-7 of medium-sized grafts were planted in the mother nursery on March 25, root rooting was observed in the highest MM-102 graft, which was 11.1%.

2. When the mother seedlings were planted 15-17 cm and 20-22 cm in the spring and autumn planting seasons, it led to an increase in the yield of standard grafts compared to the control of apple grafts.

3. The retention of welded apple eyes on MM-102 and M-7 type grafts was increased, and the yield of finished seedlings per 1 ha was 20-30% higher than the control.

4. Evening varieties of 1-year-old apples are evaluated according to GOST when grown in the nursery from medium-sized grafts MM-106, MM-102 and M-7.

5. In the MM-102 and MM-106 medium-sized grafts, it is advisable to carry out the early grafting of late intensive apple varieties, which is one of the most important agro-measures, no earlier than August 15.

6. According to the biometric indicators of seedlings, it was concluded that in the new medium-sized MM-102 grafted seedlings of late varieties of apples of Korean and local varieties of Nafis should be propagated. In the nursery farms located in Khorezm region, it is recommended to propagate Starkrimson, Korean and local Nafis varieties from the late promising varieties of apples in the low-grafted M9.

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