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Research Article

RESTORATION AND PROPAGATION OF THE LOCAL PEAR VARIETY "ZUKHRA" IN DANGER OF EXTINCTION

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Yakubov Mirdjamil Mirziyatovich
Doctor of Philosophy of Agricultural Sciences (PhD), Scientific Research Institute of HV and V named after Academician M.Mirzaev, Uzbekistan

Mirzakhidov Ormon
Research Institute of Horticulture, Viticulture and Enology named after Academician M. Mirzaev, Ph.D., Senior Researcher, Uzbekistan

Dilshod Obidzhanov
Doctor of philosophy of agricultural sciences, laboratory manager, Scientific-Research Institute of Horticulture, Viticulture and Winemaking named after Academician MakhmudMirzaev, Uzbekistan

ABSTRACT

In the articleIt has unique characteristics and characteristics that make it an endangered species of agricultural cropspear "Zukhra" restoration of local varieties, researches were conducted in order to establish nursery gardens for the propagation of seedlings.

"Zukhra" variety of pear, the results of research on determining the level of biological compatibility of seedlings, cultivar-graft combinations are presented. In the experiment, Zukhra and Azamat varieties of pear were grafted on seed seedlings, quince A, VA-29 and Ghox-9 grafts, and their ability to hold buds was studied. The high capacity of buds was noted in the Zukhra variety grafted on the Ghox-9 rootstock. It was observed that high results were achieved in the Zukhra variety grafted on standard seedlings Ghox-9.

KEYWORDS

Pear, graft, bearing capacity, bud, standard, experience, native.

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INTRODUCTION

After apple, pear is the most common fruit crop in Uzbekistan, and it is appreciated for the taste of its fruit. Pear fruits are eaten fresh, and during processing they are made into jam, preserves, tsukat, povidlo, jam, juice, wine, bekmes (pear honey). The content of pears grown in Uzbekistan is 10.8-12.7% sugar, 0.13-0.30% acids, about 0.35% pectin and 0.31% ash. The climatic conditions of Uzbekistan are not very favorable for pears, but nevertheless there are local varieties of pears that are resistant to drought, heat, diseases and pests.

The staff of the scientific research institute of horticulture, viticulture and winemaking named after Academician M.Mirzaev produce rare, local varietiesto prevent it from disappearing scientific expeditions were organized to collect "Zukhra" variety of pear with unique signs and characteristics, which is in danger of extinction, from different regions of our republic, and researches were conducted in order to create mother gardens for their reproduction.

Common quince is the main rootstock for local pear grown in Uzbekistan, it has several varieties and is distinguished by its morphological and biological characteristics. When studying the growth and development of quince species A, R1, R3, R4, R5 in the conditions of Fergana region, rapid growth of branches was observed in May and ended in the last decade of September. In the second year of the development of vegetatively propagating mother plants, in some plants the assimilation level of the leaves is formed up to 2.0-2.5 m2, it has a well-developed root system and branches. Mother bushes of two-year-old beech are 90% of standard cuttings or 150-180 thousand pieces/ha, which in turn of the nursery field. 3.0-3, It made it possible to grow seedlings of a pure variety on an area of 5 ha. (1; 2; 3).

It is of great importance to use the promising pear "Zuhra" variety, which is high-yielding, the quality of its fruit meets the market demand, grows in saline, gravelly soils, and is resistant to drought, as a primary material for the establishment of mother gardens and for the creation of varieties for breeding scientists.

For this purpose, gardens and plots where the endangered pear variety "Zuhra" grows were identified, the general condition of the trees was studied, cuttings were made from pear trees and grafting was studied.

RESEARCH METHODOLOGY

Experiments was conducted at the Samarkand scientific-experimental station of the scientific-research institute of horticulture, viticulture and winemaking named after Academician M.Mirzaev. The experiment was carried out in four replications, each option was planted with four rows, four rows of "Seed Seedling", four rows of "Quince A", four rows of "VA-29" and four rows of "Fox-9" grafting type, and pear "Zukhra", and " Buds of Azamat varieties were grafted. Rows are 30 m long. One option is the surface area of 540m2. When conducting the experiments, the study of the biological characteristics of the graft and the graft was carried out according to generally recognized methods. (1;2;3).

At the end of the growing season, the seedlings were sorted according to the requirements of the current state standards and carried out according to the methods presented in the literature and methodical manuals (4).

RESEARCH RESULTS AND THEIR ANALYSIS

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In fruit crops, including pears, bud grafting is widely used. In the nursery, wild species and cultivated varieties of pear were planted from seeds, and seed seedlings and clone grafts were cared for. Based on the requirements of production in the nursery, the processes of holding the grafted bud, identifying the graft, preparing for grafting, choosing the right graft, and catching the plants were determined.

Welding buds Good preservation of shoots was observed when the seed was grafted onto the seedling (absolute standard) rootstock. 15 days after autumn grafting, the number of buds that did not catch during the approval of grafted shoots of the seed seedling (absolute standard) of the pear variety Zukhra was 9.7%. The average rate of death of grafted shoots in all grafts was 10.8%. Learned seed seedling (absolute standard) and Fox-9 welding samplesit was observed that the death of buds was less than the average. 121.8 and 126.0% higher shoot mortality compared to the seedling (absolute standard) option Quince A(standard) VA – occurred in 29 welds. Quince A(standard) 11.7% of buds were killed in the variant Zukhra, and 12.7% or 8.7% more in the second studied variety Azamat. The average indicator of all graft samples was equal to 14.2%, compared to that of Seed seedlings (absolute standard) and Quince A(standard) it was found that there were few options. Quince A(standard) grafted on the variantVA – 29 and Fox-9 in welding samples128.3 and 143.3% less mortality occurred.

The effect of wintering processes on the shoots of pear varieties in different growing grafts was also noted. Depending on grafts, the amount of graft shoots that died as a result of winter weather was 7.3-25.1% in Zukhra and Azamat pear varieties, respectively. Preservation of graft buds in the autumn-winter period depended on the type of grafts. In the Zukhra and Azamat varieties of pears, the ratio of grafting types to grafting showed its effect..Seedlings (absolute standard) grafted buds on samples of Zuhra and Azamat varietiesamount was 83.1%. Regarding it The seed is in the seedling (absolute standard) graftsurvival of graft buds in autumn-winter period was 79.4% in Fox-9 graft. It was found that this indicator was 3.7% less than the absolute standard.

When the "Zukhra" pear variety was grafted, the variation coefficient (V=8.2%) of the dead buds in the autumn examination of the preservation of graft types was low. The average square deviation of the numbers was X=10.8±3.9%.

The average index of grafts was 74.1%, a relatively low index, Aiva A(standard) and VA – 29 in weldsIt was 63.2 and 70.6%. Coefficient of variation of grafted buds of pear varieties Zukhra and Azamat according to types of grafts and dead buds in spring inspectionto the average (V=13.8%) indicator, the mean square deviation was equal to X=24.1±8.7%.

Table 1

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Resiliency of buds of pear cultivars on different growing grafts

Graft	Zukhra variety			Azamat variety		
	dead shoot, %					
	autumn	spring	total	autumn	spring	total
Seed Seedlings (absolute standard)	9.6	7.3/	16.9	9.7	8.9	18.6
Quince A(standard)	11.7	25.1/	36.8	12.7	18.4	31.1
VA – 29	12.1	17.3/	29.4	16.3	19.4	35.7
Fox-9	9.9	10.7/	20.6	18.2	19.9	38.1
Average	10.8	15.1	25.9	14.2	16.6	30.8

Not only did the type of graft have an effect on grafting bud retention, but it also had an effect on the number of seedlings obtained from the conditional nursery area.

Table 2

Effect of graft variety of pear Zukhra seedling on quality parameters

Variete	Graft	Seedling quality, standard, %			
		Number of seedlings per hectare, pcs	1 sort	2 varieties	non-standard
Zukhra	Seed Seedlings (absolute standard)	59403	51699	4748	2956
	Quince A	45142	24379	12187	8576
	VA – 29 (standard)	50428	34291	9581	6556
	Fox-9	56713	47072	6238	3403

The type of weld studied The number of seedlings obtained from one hectare in the seed-seedling (absolute control) optionIt made 59403 units.Weld tagAND – 29(standart) optioncompared to 45142 saplings 8975 seedlings or 17.8% more seedlings were grown in the option of seed seedlings (absolute standard). It was found that the number of saplings on the Fox-9 root graft was 6,285 or 12.4% more than the standard version, while the number of seedlings on the Aiva A graft was 5,286 or 10.5% less. The correlation coefficient (r=0.83±0.4) between the number of seedlings in the conditional area and the quality of the seedlings was strong. Type of weld from

conditional fieldthe quality of non-standard seedlings in the seed-seedling (absolute standard) optionIf it was 2956 pieces, it was found that the number of non-standard seedlings of the type of quince A graft was 8576 pieces. This indicator is control VA – 29(standard)was observed by 30.8% compared to the variant. The number of non-standard seedlings on the Fox-9 graft was 3403, this indicator was VA – 29(default)was 48.1% less compared to the variant.The correlation coefficient (r=0.83±0.4) between the

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number of seedlings in the conditional area and the standard seedlings of the first variety obtained was strong.

CONCLUSIONS AND SUGGESTIONS

Pear Azamat cultivar "Seed seedling" had a high rate of survival of grafted shoots.

Zukhra variety of pear "Fox-9" The level of the quality indicator of the seedling maintained at the graft was high.

The correlation coefficient (r=0.83±0.4) between the number of seedlings in the conditional area and the standard seedlings of the first variety obtained was strong.

High-yielding, fruit quality meets market demand, growing on saline, gravelly soils, drought-resistant, promising endangered pear variety "Zuhra" grafted on seed seedlings is recommended for use as primary material for the establishment of mother gardens and for the creation of varieties for breeders.

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