

The influence of under bud wood for the plantation of pear nurseries

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Abstract: *This article presents the results of the experiments on the study of the impact of under bud wood, in the bud grafting, on the susceptibility to seedlings. Grafting with and without under bud timber showed good results during the autumn and early spring. The standard seedlings were evaluated according to the bud grafting method. As a result of research, the "R3" and "R4" types were selected as the weakest growth factors.*

Key Words: *pear, quince, bush, rod, bush, holding, seedlings, standard.*

1. INTRODUCTION:

Our government pays great importance to the intensification of existing traditional gardens. Therefore, in accordance with the Decree of the President of the Republic of Uzbekistan "On additional measures to accelerate the development of fruit and vegetable growing in the Republic of Uzbekistan" on March 29, 2018, PF-5388 enlarges the area of intensive gardens and vineyards through regular reduction of cotton and grain fields in the Republic, and the annual supply of semi-precious and semi-small seeds for the reconstruction of existing ones [1].

It is noteworthy that today the system of weak seedlings for intensive pear orchards is not at the level of demand. Received harvest of pear from per unit orchards does not meet today's requirements by quantity and quality of seedlings. In most cases this can be explained by shortcomings in welding and care.

2. MATERIALS AND METHODS:

In our research on cultivation of weak plant pellets, type "A", Type "S-A", Type "R3", Type "R4", Type "R5", "Alushtinskaya", Type "VA-29", "Xersonskaya" and number of "U" quince types were studied [6]. All these types were grafted with Lesnaya krasavitsa buds. The experiments were conducted in the same way as recommended H.Buriev and others [5]. Autumn selection of pear nurseries has been carried out according to the existing state standard [4].

For the experiment, seedlings grown on a vertical irrigation path were planted in the early spring in the second field of the nursery. The bud grafting was carried out in two different ways: grafting with under bud wood and welding without it.

3. RESULTS AND DISCUSSIONS:

Most scientists [2, 3, 7] believe that buds are the most effective and reliable among all welding methods. However, when bush grafting, it is possible to find contradictory ideas about the removal or keeping of the bush. Therefore, in our research, we conducted research to investigate the impact of wood on the under bud wood.

Experience has shown that welding of the under bud wood with the removal of the bush has led to increased hold ability of plants. Regarding the results, grafting with the keeping of under bud wood showed 74-81% and grafting buds with the removal of wood results changed to 80 to 92%. The highest permeability is recorded in the experimental version welded to the R3. The lowest retention was recorded when the Tip "U" grafted with under bud wood. (see table).

Table data shows that removal of buds during the grafting operation leads to significant increase in their detachment.

Grafting with removal of bushy buds also showed positive results in the subsequent growth of seedlings and the standard seedlings output. The plantation of the bush removed buds were much more intense than controlled ones. This also has a significant impact on the standard seedlings.

Observing seedlings growing from budweed showed that the standard seedlings were more likely to be grown in buds with removal of the wood. Hence, the share of standard varieties in the seedlings grown in this method was 81-87%, compared to the total cultivated seedlings, whereas the rate of graft dropping did not exceed 72-78% (see figure).

Table 1. - Influence of under bud wood for the susceptibility of seedlings 2015-2017

№	Grafted type	Resistance of buds regarding the grafting methods, total grafted buds in percentage, %					
		Kept under bud wood – control			Removed under bud wood		
		Died buds during the autumn control	Died buds during the spring control	Total number of saved buds	Died buds during the autumn control	Died buds during the spring control	Total number of saved buds
1	Type “A”	12	13	75	7	8	85
2	Type “C-A”	11	10	79	10	6	84
3	Type “R ₃ ”	10	9	81	4	4	92
4	Type “R ₄ ”	9	11	80	5	4	91
5	Type “R ₅ ”	11	12	78	8	6	86
6	“Alushtinskaya”	13	9	78	7	7	86
7	Type “BA-29”	13	12	75	10	8	82
8	“Hersonskaya”	12	11	77	8	9	83
9	Type “U”	11	15	74	11	9	80

Figure data analysis shows that the standard seedlings of the type RT and Type R4 were experimented through the grafting method with keeping under bud wood. The sampling of extracted seedlings by standard requirements has shown that in these wastes the seedlings resistance reached 86-87%

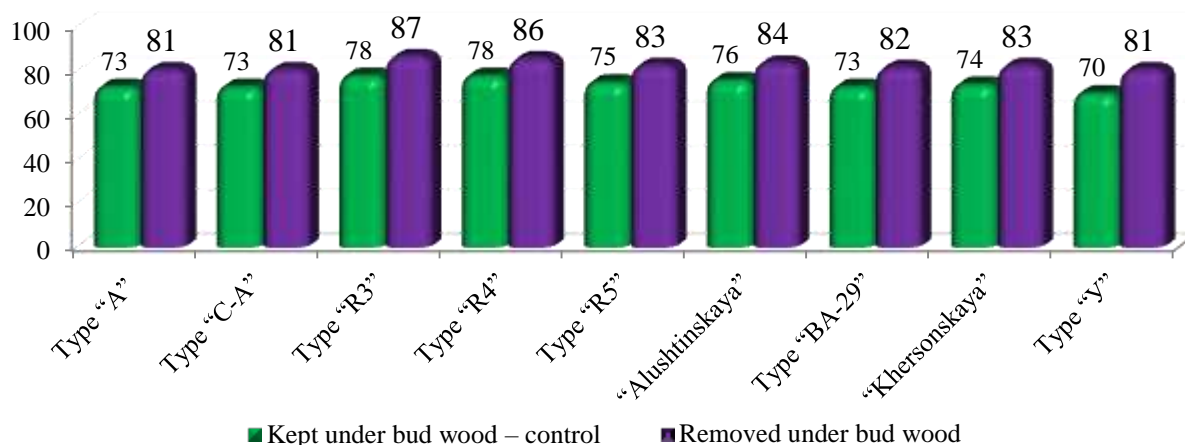


Figure.1 The standard seedling output, depending on the method of welding.

4. CONCLUSION:

In the pear buds, grafting through the method of removing under bud woods increases susceptibility of the buds by 75% to 92% comparing to the control ones (kept wood).

The plantation of standard seedlings grafted by removing under bud wood reached to 81-87%, in the variant grafting buds with keeping wood does not exceed 72-78%.

REFERENCES:

1. Mirziyoyev Sh. PF-5388 “On additional measures to intensive the development of fruit and vegetable growing in the Republic of Uzbekistan” President decree-Tashkent, 2018 year, March 29.
2. Yefimova N.V. Advantages of high graftage of apple and pear seedlings// Crop growing and berry growing of Russia. – Moscow, 1996. – T. Z. -P. 114-117, 269.
3. Vinnikov Y.A. Influence of grafting methods to the plantation of seedlings// questions: modern agriculture of central black belt areas. – Moscow, 2003 P 78-80.
4. State register 1192-2009 (UzStR 1192-2009). Crops with seeds and stone. General technical norms.
5. Buriev H.Ch., Yenileyev N.Sh. and others Methodics of phonologic observations of experiments conducted with fruit trees and berry crops. Tashkent, 2014. – P 64.
6. Tatarinov A.N. Cloned apple and pears// Methodical recommendations.-M: Kolos, 1984. – P. 29-30.
7. Fedorenko V.S., Sherengovim P.Z., Kumpan Y.D. Influence of methods and time duration to the output of agricultural crop seedlings// Perfection technology of crop cultivation.- Kiev, 1990. – P. 25-29.