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Standardization of Rootstock for Apricot in the Pothohar Tract

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Abstract: This experiment was conducted at the Horticultural Research Station, Soan Valley, Nowshera, Khushab during the period from 1997-98. Various rootstocks viz. Wild apricot (Hari), Peach and Almond were tested for apricot scion on the basis of their effects on grafting success, scion thickness, rootstock thickness and height of grafted plants. Maximum grafting success (67.%), stock and scion girth (3.85 and 3.62 cms) and plant height (55 cms) was recorded with apricot scion was grafted on Hari stock during 1997. Almost similar trend was noted during 1998. Conclusively Hari rootstock is recommended for apricot in Pothohar tract.

Key words: Apricot, rootstock, nursery raising, Pakistan

Introduction

A grafted plant is composed of two parts. The basal part which provide the root system for anchorage and absorption of moisture and nutrients is called rootstock. The scion provide top and fruit bearing surfaces and synthesizes food which is transported to other parts of the plant. Stock and scion should be compatible. The use of congenial rootstock allows wider adaptability of a variety to soil, climatic and biotic conditions. The influence of rootstock on scion variety can also be utilized to regulate tree size, yield, quality of produce and time of ripening (Ahmad, 1994). Hartman and Kester (1959) reported that apricot rootstock is resistant to crown rot but it is not tolerant of poor soil drainage conditions. Apricot roots are not as susceptible to crown gall as are peach and plum roots. Ibrahim and Malik (1998) reported that apricot is the best rootstock for apricots. Generally wild apricot (Hari) is used but peach and plum seedlings are also used with satisfactory results. Plum is used only when soil is too wet for apricots. Apricot and almonds are resistant to lime induced chlorosis. than peach. For dwarf peaches. *P. tomentosa* is used. Thus the present project was initiated to evaluate rootstock for apricot in the Pothohar tract.

Materials and Methods

These investigations were carried out in the nursery area of the Horticultural Research Station, Nowshera, Soan Valley, Khushab. Apricot scion was grafted on one year old plants of Hari, Peach and Almond stock during 1997-98,

adopting tongue grafting technique in the month of January. Grafting success percentage, girths of scion and stock was noted during November, 1997 while plant height was recorded in the last week of December each year. Same study was repeated for the year 1998 as well. Analysis of variance techniques at 5% probability (Steel and Torrie, 1990) was used for data analysis.

Results and Discussion

Data presented in Table 1 showed significant results during both the years. By comparing the means with one another, it was found that during first year grafting success percentage was noted maximum when apricot scion was tongue grafted on Hari stock followed by peach stock. Minimum grafting success was noted when almond stock was used for apricot scion with means of 33.75%. Almost similar trend was noted during the second year.

During 1997, maximum scion girth was noted in apricot plants which were grafted on Hari stock followed by peach stock. Minimum scion girth was noted in plants grafted on almond stock. In contrast to first year's results, during second year the scion girths found non-significant among all tested treatments.

During first year maximum stock girths were obtained in almond stock and Hari stock. Minimum girth was noted in Peach stock. Various factors of study adopted the same fashion in the following years as well.

Table 1 also indicated vegetative growth in terms of height of grafted plants that it was maximum for those with

Table 1: Effect of various rootstocks on the grafting success scion girth, stock girth and plant height of apricot

Character	Year	Treatment means			
		Hari	Peach	Almond	FR
Grafting success (%)	1997	67.00a	37.256	33.75b	21.71*
	1998	60.00a	40.006	26.50c	21.89*
Scion Girth (cms)	1997	3.95a	3.70ab	3.376	6.57*
	1998	3.32	4.17	3.92	1.81 ^{NS}
Stock girth (cms)	1997	3.62a	3.12b	3.82a	7.81*
	1998	3.67a	3.17b	3.87a	7.81*
Plant height (cms)	1997	55.00a	44.006	40.00b	12.00*
	1998	57.00a	48.00b	42.004	15.00*

apricot (Hari) rootstock followed by peach stock. Minimum height was noted in plants when grafted on almond with means of 40 cms during 1997. Almost similar results were noted with this parameter during 1998.

In the present findings our results fully support the findings of earlier workers (Ibrahim and Malik, 1998) who reported that apricot is the best rootstock for apricots.

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