Team Presentation

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Cleft grafting of almond and apricot onto GF677 rootstock

Introduction:

- GF is a hybrid of *Prunus amygdalus* × *P. persica* and is the most commonly used rootstock for stone fruit orchards. This rootstock is tolerant to Fe deficiency and especially suited to soils with poor fertility, high water level and high CaCO3 content.
- Because it is a hybrid it can't be propagated by seeds. It is propagated with vegetative methods (layering and tissue culture). Tissue culture is a good method for propagation of wealthy and disease-free plants, however, this method is not easy and need equipment and skills

Justification:

-Recently, stone fruit plantation has been is increased in the West Bank , mainly under treated waste water, therefore there is a need for producing stone fruit trees, the attributes of the GF rootstock make is appropriate for our soil and climate conditions, as well as irrigation. propagating of the GF is difficult and has to be through different technique, the rootstock is difficult to be imported , and there are many restrictions to purchase it from Israel, therefore, producing the GF rootstock commercially is vital and important to support fruit tree plantation in the West Bank.

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Objectives

I. The objective of this study is to propagate GF peach rootstock using cleft grafting for both apricot and almond

II. The following variables were investigated

III. Effect of grafting technique (Machine and hand) on healing

IV. Effect of scion type on healing and rooting of the stock

Previous work on GF

Different protocol used

1. Micropropagation

-Difficult and took time

2.Mound layering

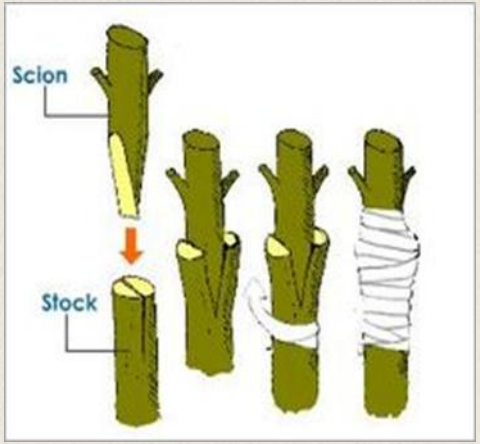
-Took time

3.Hardwood cuttings

-Good rooting, however, no bud growth

And take time for grafting

- The alternative was to try cleft grafting
- What is cleft grafting



Methodology

- Preparing rootstock
- One year old stems were
- Prepared about 30-35 cm

*Preparation of scion from both almond and apricot of last year

* growth were used

A piece with two buds Were used as scion and

* Inserted in the stock using either machine or Hand

Results :

Effect of using grafting machine on Healing Almond

Treatment	NO .of cutting	No . of Healing	%
Machine	20	0	0.0%
Hand	20	4	20%
P-value			0.025

- Effect of using grafting machine on Healing Apricot

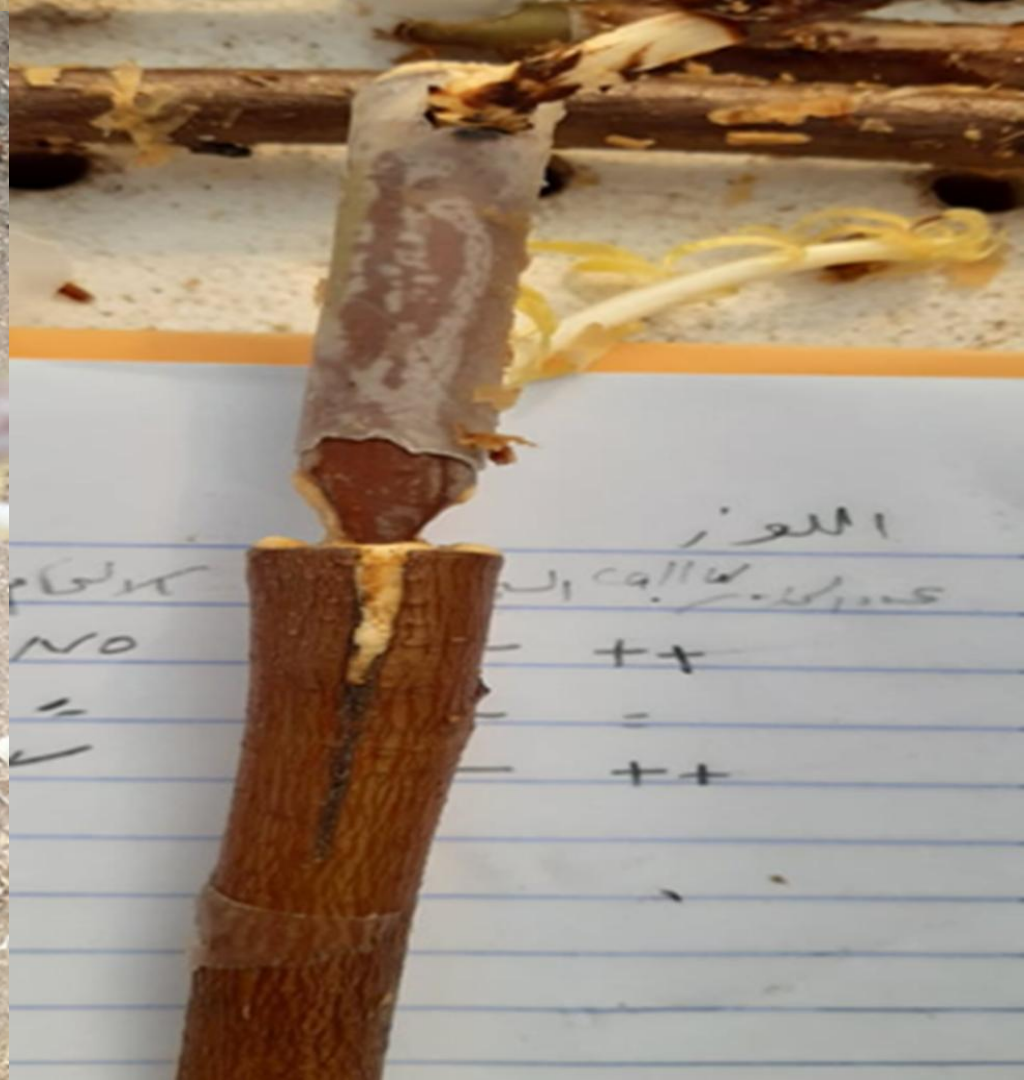
Treatment	No.of cutting	NO . of healing	%
Machine	20	3	15%
Hand	20	16	80%
P-value			0.00

- Effect of scion type on growing buds of graft union

Treatment	#No of cutting	#No of growth bud	%
Almond GF	40	22	55%
Apricot GF	40	17	42.5%
P- value			0.260

- Effect of scion type on rooting of GF677

Treat	No. of cutting	No.of rooting	%
Almond GF	40	4	10%
Apricot GF	40	12	30%
P-value			0.021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Conclousion

- The machine was not effective for grafting
- There was significant different in rooting and healing between almond and apricot
- More investigation should be done