

443/3
AGRICULTURE PROJECT
Jan. - July 2025
(Declaration form)

THE KENYA NATIONAL EXAMINATIONS COUNCIL



Kenya Certificate of Secondary Education

443/3 AGRICULTURE PROJECT REPORT

DECLARATION BY CANDIDATE

This is to certify that this is a true project report of my Agriculture Project and that it contains the details of the operations.

Name of the Candidate	Index No.	Signature
Njeri Joy Mumbi	11241001245	

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Enter the score awarded in the box below.

Agriculture Teacher

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PROJECT

REPORT

GRAFTING OF

AVOCADO TREES

(*Persea americana*)

NJERI JOY MUMBI

✓ 1

11241001245

GROUP

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Introduction

Grafting is a technique of uniting two woody separate parts of different plants to allow a continuous growth as one plant which consists of a rootstock and a scion. The scion has the buds which develop into the future plant. The rootstock forms the base of the plant while the scion is the upper part. The plant should be from the same species. To ensure compatibility they have to be from the same species.

Identification of Issue

The main problem that we discovered as a group in the school community is the poor rooting system of the fruit trees especially avocado (*Persea americana*) which leads to slow growth rate of the fruit trees. The option which is taken is grafting. The fruit trees especially the avocado trees when grafting is carried out and a rootstock with a good rooting system is used the yield is better fruits. This leads to increased yields, reduced risks of disease and faster growth of the avocado trees.



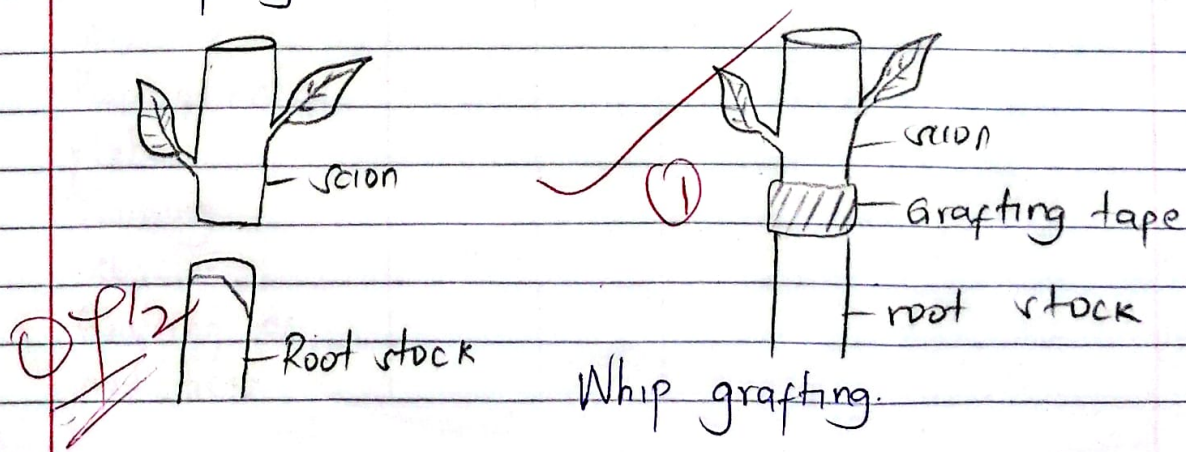
Project Objectives

By the end of this project I should be able:

1. To have produce successful grafted ~~avocado~~ fruit trees
2. To know the precaution need when grafting.
3. To know how grafting is carried out ~~successfully~~
4. To learn the practices to be carried out during and after grafting of the avocado trees.

Project Description

My group and I selected a suitable site which measured 1m by 1m. We cleared the land and removed the weeds. We made a shade over the land. We chose to carry out whip grafting; where the agricultural grafting technician was brought to teach us on how to graft. We had the trees, the scion, grafting tape, scapel and secateurs. We took the trees everyone with her own. We cut the root stock by use of the secateurs and took the scapel and cut vertically one inch. Then took the scion and cut it in a wedge shape and inserted it in the root stock and by use of the grafting tape tied round the point of attachment to encourage compatibility. We took them back in to the shade and watered them. My group which consist of Claire Koome, Lucy Gathoni, Sandra Wanjiku, Laurene Chinyavu and I Joy Mumbi, we were able to graft successfully.



Budget.

Materials	Quantity	Price	Cost
Scapel	5	10	50
Watering can	1	400	400
Grafting tape	20	20	400
Root stock	20	100	2000
Scion	20	10	200
Steritiser	10ml	150	150
Shade net	5m x 10m	3000	3000
Rake	1	350	350
Trainer	1	1500	1500
Total cost			Sh 8200

Project Implementation / plan and timeline

Activities	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY
Instructions given							
Identification of problem							
Individual presentation of problem							
Preparation of budget plan							
Group presentation of problem							
Arrival of seedling							
Preparation of plots							
Training session							
Grafting of fruit trees							

Project implementation and procedure.

On 12th of February 2025 we were given the outline on the project. We choose grafting of avocado trees. On the 13th of February my group and I was able to identify the problem around the school community that could be solved by grafting. The problem was the poor rooting system of the fruit trees leading to slow growth. On the 16th February we did the individual presentation on the problem.

On 4th of March, we prepared a budget plan for the project. We identified the site on the school farm. On 12th of March the fruit trees arrived where every group was allocated twenty each. We kept them on the nursery where they were provided with a shade and watered them.

On 7th May an experience external trainee came to train us on how to carry out grafting. We assemble the tools which were to be use. We carried on grafting. On 8th we grafted five of the avocado fruit and on 10th May we finishe grafting on the remaining. We monitored the growh on a daily basis as the group.

Evaluation.

The avocado fruit grafted were twenty of them fifteen of the grafted avocado trees were successful. The five grafted trees the survival rates were minimal. The successful ones there growth rate was very high and they are resistant to diseases. Due to the use of a root stock with a good rooting system there is faster growth.

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Conclusion

Grafting has enable the avocado trees to have a faster growth. The method is being applied through the school community. I have been able to know how grafting is carried out and by more practice most I have been able to graft well, and they successfully grow. In the school there will be frequent taking of the fruits.

Recommendation

1. Grafting to be carried out for it has helped the school community by high and faster growth rate of the trees
2. When grafting by use of a healthy root stock with good rooting system which will be disease resistant.
3. When there is high yielding due to use of grafting they are sold and they get an income.