

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

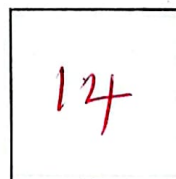
This is to certify that this is a true project report of my Agriculture Project and that it contains the details of the operations.

Name of the Candidate	Index No.	Signature
Rumai Cynthia Njen	11241001202	

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Enter the score awarded in the box below.

Agriculture Teacher



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925074

PROJECT REPORT

11241001202

GRAFTING
OF AVOCADO
TREES

PERSA AMERICANA

Lynthia
~ NJERI
Rimu

Group 4

INTRODUCTION

Grafting is the practise of uniting two separate woody stem. The part of the rooting system is known as rootstock and the part which is grafted onto the rootstock is the scion. The ability of scion and rootstock to form a successful union is termed as compatibility. One should note that only structures which are botanically closely related are compatible. We chose grafting of avocado fruit trees. Each group was issued their number of trees in which we were guided on how to graft our trees.

BRIEF OVER VIEW OF THE PROJECT

Before the trees arrived, we the agriculture students were able to prepare a nursery bed which was set aside in a secure place in the school farm. The construction of a shade was done and it was good to go. The trees arrived and we neatly arranged them per group as they were distributed. We maintained a good shading and we irrigated the trees on a daily basis. The trees continued to mature and we eventually grafted them.

PROBLEMS AFFECTING THE COMMUNITY

- i) Scarcity of fruit for consumption
- ii) High cost on the purchase of fruits enough for all the students
- iii) Exposed land leading to soil erosion.
- iv) The fruit trees face attack from pest and diseases

PROJECT OBJECTIVES

Grafting of avocado fruit trees ^{Objectives} mature earlier than those propagated from seeds that is why grafting shortens the maturity age to 2-3 years. Grafting fruit trees would solve the problem of scarcity of fruit tree in the school and also reduce the cost of buying the fruits. It can also act as a covercrop to protect the soil from being eroded. This project has equipped us with the knowledge of grafting which is really important.

PROJECT DESCRIPTION

My project was carried out by my group 4 members and I :-

RIMILI CYNTHIA NJERI

11241001202

CAROLINE NYAKONYU NYAMBIIRA

11241001204

TRACY MINEVA MUNG'ONE

11241001232

NJUNGUNA JOAN KAIRIMU

11241001217

MARION VALENTINE KIAMUKI

11241001198

The method used for grafting was whip grafting where the rootstock and the scion should be of the same diameter or pencil thick and should be compatible. The materials that we required for grafting are a sterilised scalpel, a rootstock, scion, watering can and a shade net. The selected species of the fruit trees was the hass species.

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PROJECT BUDGET

Tool	Quantity	Unit cost	Total cost
Gscalpel	5	10	50
Klating can	1	400	400
Grafting tape	20	20	400
Root stock	20	100	2000
Gron	20	10	200
Steriliser	10ml	150	150
Shade net	5x10m	3000	3000
Rake	1	350	500
Trainer	1	1500	1500

PROJECT IMPLEMENTATION, PLAN AND TIMELINE

Activity	January	February	March	April	May	June	July
Project Instruction							
Problem Identification							
Individual presentation							
group presentation							
Arrival of trees							
Preparation of Land							
Training session							
Klating and inspection							
Grafting of trees							
Fortnight report							

PROJECT IMPLEMENTATION AND PROCEDURE

Training session- This was done once when our teacher of agriculture invited a trainer who guided us step by step.

Assembling tools- All the tools were bought from a reliable source to prevent transmission of diseases to the rootstock and the scion.

Selecting the location for the nursery bed- We discovered a well secured and well shaded place on the school farm which was selected and a well established shade was erected using a net.

Performing grafting- We did the actual grafting of the avocado seedlings guided by the trainer and the help of our teacher.

Monitoring growth progress post-operation- Monitoring was done everyday by my group members making sure that the scion sprout and hydrated and always in a shade to prevent dehydration. 90% of our seedling survived.

Caring for plants- Watering was done everyday and removal of any growing weeds.

A table of activity was made by group members and each member was given a responsibility once every week of watering and weeding.

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- When the trees arrived, each group was allocated their number of tree. We placed them in the pieces of land that we had and watered them regularly to keep them strong and for continued maturity. Our teacher of agriculture invited a trainer who step by step guided us on how to perform a successful graft. We eventually were able to do it.

ourselves. Later we were issued all the tools we required. When we finished the procedure we returned them to the nursery bed which a shade was constructed during the preparation of the land.

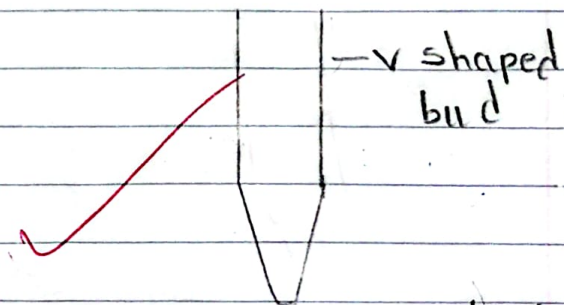
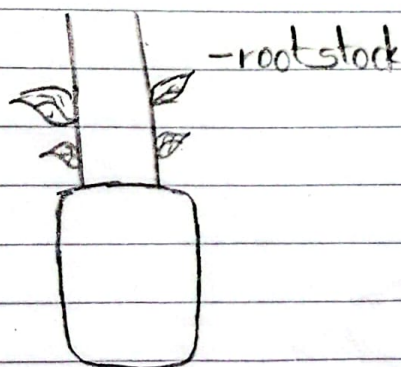
EVALUATION

Each group was issued their piece of land of 1m by 1m which was located in a secure place in the school farm.

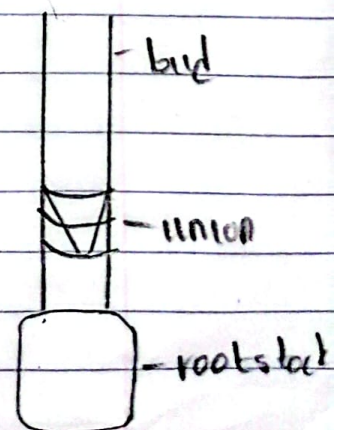
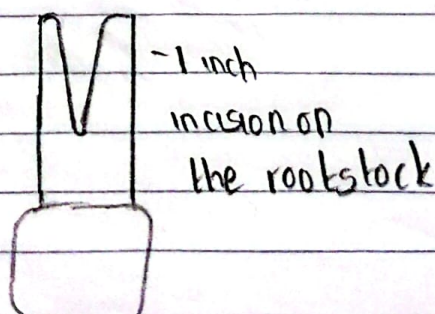
GRAFTING PROCEDURE

- i) We cut off the upper part of the rootstock and make an incision at the top to one inch down the rootstock.
- ii) After cutting the bud in a v-shaped manner.
- iii) The bud is fitted between the incision of the rootstock and sliding the bud downwards until it lies between the edges of the bark.
- iv) They are then tied firmly using grafting tape.

ILLUSTRATION



(1)



REFLECTION

After each group was done with grafting and the trees were returned back to their respective nursery bed, we continued to care for the fruit trees. 90% of the fruit trees survive and are still growing at a fair pace. ✓

CONCLUSION

By carrying out grafting, it has helped me have a kinder knowledge of factors that affect agriculture and to boost my knowledge for future careers.

RECOMMENDATION

I highly recommend that schools should be able to involve the students in more projects like this because it helps them in grasping more content. ⊕