

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

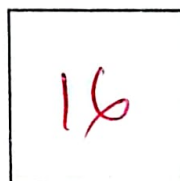
This is to certify that this is a true project report of my Agriculture Project and that it contains the details of the operations.

Name of the Candidate	Index No.	Signature
KIMACHIA KATE MUMBI	11241001255	

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Enter the score awarded in the box below.

Agriculture Teacher



NAME:

KINGDOM OF THE MUMBI

INDEX:

11241001255

PROJECT NAME:

GRAFTING OF

AVOCADO FRUIT TREES
(PERSEA AMERICANA)

GROUP NUMBER: 6

Introduction

Grafting is the practise of uniting two separate woody stems which include the scion and the Root stock. The scion has buds which develop into the future plant. The ability of scion and root stock to form a successful union is termed as compatability.

Some of the importance of grafting in Avocado fruit trees (*Persea americana*) include the following

It helps shorten the maturity age of the avocado trees, It helps to facilitate the changing of the top of the tree from being undesirable to desirable, It helps in repairing of damaged trees and it facilitates the growth of more than one type of fruit or flower on the same plant.

Identification of Issues

As we were identifying some of the issue in our surrounding community and the school itself. We were able to identify the major issue which was scarcity of fruits due to the late maturity of the Avocado trees which take 7 years to mature. So we found it suitable to carry out grafting since it shortens the maturity stage from 7 years to 3 years.

Project Objectives

- To learn how to carry out grafting.
- To learn some of the precautions needed to carry out grafting.
- To learn how some of the tools used for grafting are used.

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Project Description

The method we used for grafting was Whip grafting where by the scion and the rootstock are of the same diameter. The diameter of the root stock and the scion are 'pencil' thick.

Requirement for carrying out grafting:-

A grafting tape

A scion

A sterilized scalpel

A pair of secateurs

The root stock

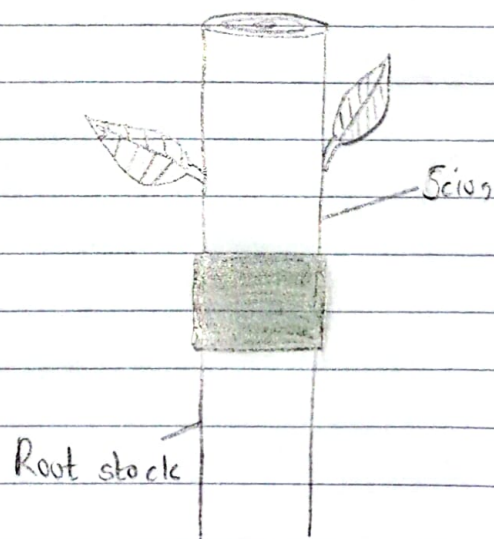
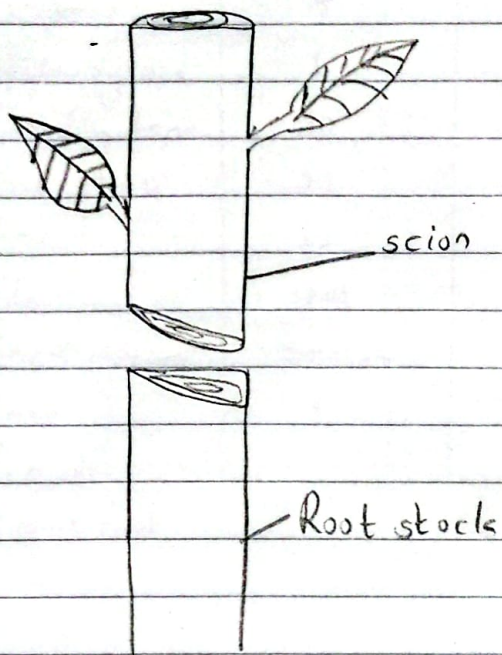
The watering can

Group 6

GROUP MEMBERS	Index Number
Happiness pendu	11241001248
Ivy Wanjiku	11241001249
Kate Kimachia	11241001255
Faith Njoki	11241001256
Bella Blessing	11241001257
Purity Hamisi	11241001251

Our agriculture teacher hired a trainer that taught us how to carry out Whip grafting we first chose scions of the same diameter as the rootstock. We then cut the ~~whip~~ rootstock ^{into} a wedge shape of about 1 inch and a cutting of 1 inch to the scion. We then took the grafting tape which was also cut ~~into~~ strips of 1 inch ~~was~~ width we binded the scion and the rootstock together using the grafting tape for to enable them to fuse together.

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WHIP
GRAFTING

Budget

Agriculture project budget per group included the following:-

Items	Quantity	Unit cost	Total cost
Scapel	5	10	50 sh
Watering can	1	400	400 sh
Grafting tape	20	20	400 sh
Root stock	20	100	2000 sh
Scion	20	10	200 sh
Steriliser	10ml	150	150 sh
Shade net	5mx10m	3000	3000 sh
Rake	1	350	500 sh
Trainer		1500	1500 sh

Total cost 8300/=

Implementation Plan and Timeline

Activities	J	F	M	Th	F	S	S
Instructions of the project issued							
Identification of the issue							
Individual presentation of the project							
Preparation of a Budget plan							
Group presentation							
Site selection							
arrival of the avocado fruit tree seedlings							
preparation of the nursery plots							
Training session with a grafting expert							
fortnight report on the project							
Evaluation of the project							
Watering and inspection							
Report writing							

Project Implementation and procedure

Training Session - ~~Our~~ agriculture teacher managed to find an external officer who trained us on ~~how to~~ the grafting process

Assembling of tools - The materials ~~for~~ grafting were sourced from a reliable source according to the requirements needed and budget made per group

Selecting the site ~~of~~ - A site was located near the school garden the planting material ~~we~~ which was 1m by 1m. We were able to carry some of the nursery management practices such as watering

Performing grafting - ~~Once~~ our trainer had ~~been~~ taught us on how to carry out grafting we tried grafting on our own and our agriculture teacher ~~long~~ ~~took~~ took some short videos as we did the ~~proceeds~~ whole procedure

Monitoring growth ~~⇒~~ This was done by all the group members were by we watered the plant early in the morning and ~~late~~ the late afternoon so that the scion and the rootstock would fuse ~~to~~ get together and become successful

Caring for the plant - ~~Each~~ member was allocated ~~different~~ days to water and ^{weed the} ~~carry out~~ grafting plot of land that they were allocated

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Evaluation

As a student undertaking the above project I collected the above information.

From the twenty trees in our group that we grafted only 15 trees turn out to be successful and were able to survive since they sprouted living the other five trees. The five trees that remained did not sprout since they were attacked by a certain disease which eventually lowered their survival rate.

Conclusion

From the project we achieved the following

- I was now able to carry out grafting by myself. I also learned some precautions that one should consider when grafting. I was able to identify some of the ^{tool} requirements that are needed to carry out grafting and how one uses them.

Recommendation -

Some of the things that I could recommend are:-

Proper Nursery establishment

Using root stock that are disease resistant

Proper precaution intake on how grafting is done

