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
Mung'one Tracy Mideva	112410012 32	

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Enter the score awarded in the box below.

Agriculture Teacher | 17

24 JUL 2025

925074

TRACY MIDEVA

PROJECT REPORT

GRAFTING OF AVOCADO (Persea Americana) FRUIT TREES

112410012 32

GROUP 4 (4)

INTRODUCTION

Grafting is the practice of uniting two separate woody stems with the upper part known as the scion and the lower part called the root stock, to enable them to grow as one plant.

The scion and the rootstock should be from the same species in order to ensure compatibility

IDENTIFICATION OF ISSUES

The main problem that my group and I saw that it was greately affecting the school community was the scarcity of fruits This is dormant especially in avocado fruits (Persea Americana). After a very thorough research, I and my fellow member of group four discovered that grafting of avocado fruit trees takes three and a half years for them to mature while normally they take seven years when ungrafted.

Therefore, grafting was the light at the end of the tunnel. Many students suffer malnutrition as they are unable to get a fruit to eat every once in a while. An example is our school diet where we take fruits only twice a week. As a result, the immunity in our bodies become low. Another problem is soil erosion cause by strong blowing winds. This is a result of absence of ground cover which can easily be solved by the grafting of fruit trees like avocados and planting them to provide adequate ground cover.

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PROJECTS OBJECTIVES

By the end of this topic project I should be able to:

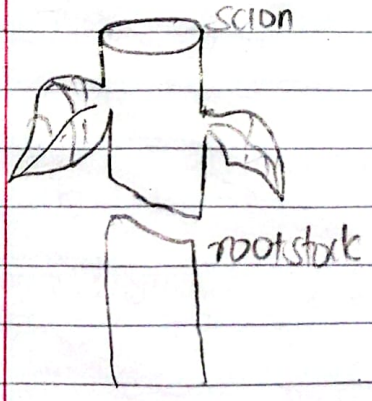
1. To learn how grafting methods is carried out
2. To produce accessful grafted avocado fruit trees
3. To learn the various ways on the grafting process
4. To learn the techniques of grafting

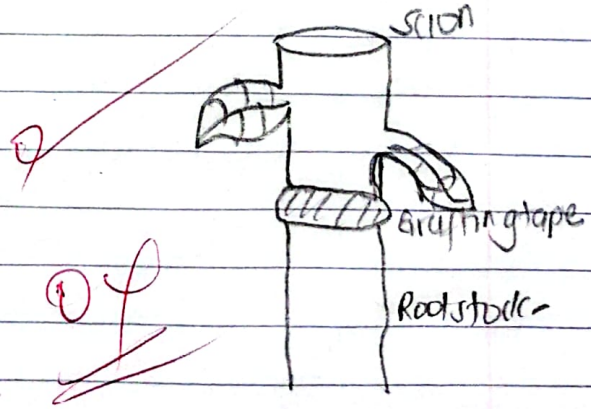
PROJECT DESCRIPTION

My group members and I selected a suitable site which measured 1m by 1m. We then cleaned the site by removing weeds and trash around. The following are members of group 4.

Joan Nyuguna
Tracy Mideva
Cynthia
Manon Valentine

We decided to carry out whip grafting. We then selected the rootstock and scion. They were to be of the same diameter. The rootstock and scion had to be compatible and able to adapt to change in weather conditions. It was also supposed to be pure to avoid transmission of undesirable characteristics to emerge on the plant. On 17th May, we carried out our grafting. The various materials that we used were as follows. Sterilised scapel, a rootstock, scion, grafting tape, secateurs and a watering can. The root stock and scion were 20 in number. A shade net was also used.





BUDJET

The budget plan was as follows:

Material	Quantity	Unit cost	Total cost
Scapel	5	10	100
Watering can	1	400	400
Grafting tape	20	20	400
Rootstock	20	100	2000
Scion	20	10	200
Sterliser	10ML	150	150
Shade net	5m x 10M	3000	3000
Rake	1	350	350
Trainer	1	1500	1500
Total			8200 =\

PROJECT IMPLEMENTATION, PLAN AND TIMELINE

Activity	J	F	M	A	M	J	J
Giving of project instructions							
Identification of issues							
Individual presentation of project							
Preparation of a budget plan							
Group presentation of the project							
Site selection							
Arrival of avocado fruit tree seedling							
Preparation of tree nursery plots							
Training session with extension officer							
Fortnight report on project							
Evaluation of the project							
Watering and inspection							
Report writing							

PROJECT IMPLEMENTATION AND PROCEDURE

Assembling of tools -> Tools and equipment needed for grafting were purchased and taken to areas ~~of land~~ where grafting took place.

Training session - The external trainer called upon by our teacher of agriculture came to teach and demonstrate the method that would be used. as a lesson.

Site selection - The site selected measured 1m by 1m which was well secured and also easily supplied with water. The area is fertile and gentle sloping. The nursery plots were established and a shade net put in place over ungrafted seedlings to prevent dehydration.

Grafting practice - finally, we carried out the practise of grafting and the steps were:

a) First, cut the root stock at a pencil thick diameter
b) The scion was also cut at the same diameter as the rootstock
c) The rootstock and the scion are then joined to form one plant.
d) To make the union firm, wrap the joint with a grafting tape.

Monitoring growth progress - My group members and I came to the realisation that the seedlings began drying up. We, therefore, created a routine where each group member would water the plants everyday. This would ensure our seedlings get enough water.

Post operation practices - As plants continued to grow, some weeds also grew. My group members and I decided to come up with another routine to get rid of weeds and at the same time water the crops and provide shade over them.

EVALUATION

After assessing our project we finally evaluated it. We realised that though we faced many difficulties, our project was successful. Many trees had begun to sprout about 2-3 buds. During our project we encountered some hitches since two tree seedlings had begun drying up. This was because they refused to form a union.

During our second milestone, we ensured that we carried out regular watering and ensured that the union was firm. The tree seedlings are now succulent and have a deep green colour and buds have began sprouting.

CONCLUSION

In conclusion, the practice of grafting has a very positive impact in our school community. We will thus have solved the problem of scarcity of fruits. I have also gained a lot of knowledge through the grafting practice. I am now able to successfully carry out grafting.

RECOMMENDATIONS

As a group, we came up with the following recommendations.

a) Famers should be encouraged to ~~plant~~ practice grafting when plants delay in maturity as it will enable them to produce a large amount of fruits, hence they will be in constant supply.

b) The project should be supported by various agricultural communities. Through this, the practise would be made wide spread thus solving the problem in scarcity of fruits.

c) The project should be encouraged to other schools which are undergoing the same problem of fruit scarcity.