

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
Lucy Gathoni Kariuki	11241001236	

FOR OFFICIAL USE ONLY

Enter the score awarded in the box below.

Agriculture Teacher

18



© 2025 The Kenya National Examinations Council

925074

PROJECT
TRYING
GRANTING OF
AVOCADO FRUIT TREES

Peysa Americana
HOME OF LUCY
GATHON KARL
INDEG: 11241001236
GROUP NUMBER: 5

INTRODUCTION

Grafting is the technique of uniting two separate woody stems of different plants. It involves joining of two parts of a plant; the scion which is the upper part and the rootstock which is the lower part. They should be compatible and ensure that good conditions are provided to enhance the joining of the cambium for a successful graft. The scion and the rootstock should be from the same species. Grafting is beneficial as it helps to repair damaged trees, it facilitates the changing of the top tree from being undesirable to desirable, it also helps to shorten the maturity of trees.

PROJECT IDENTIFICATION OF THE ISSUE

After thorough investigation, my group members and I were able to find out that the most pressing problem ^{was} that avocado fruit trees (*Persea Americana*) takes a long time to mature. This problem further leads to scarcity of avocado fruits in the school as we are only provided with one avocado fruit per week. Thus grafting will shorten the maturity period for the avocado fruit trees and it will lead to increased supply of avocados so that they can be included in the everyday meal in the school.

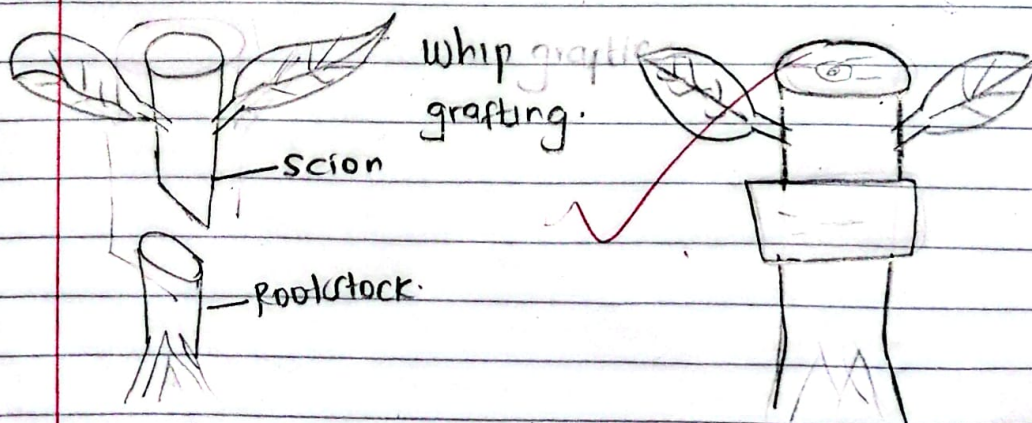
3

PROJECT OBJECTIVES

1. To learn different methods of grafting.
2. To acquire practical skills on how to graft.
3. To learn the various routine management practices required for grafting trees.
4. To acquire skills on how to use various tools such as secateurs.

PROJECT DESCRIPTION

My group members consisted of, Koome alair Hanja, Sandra Wanjiku Maina, Joy Mumbi Njeri, ~~Loureen~~ Chinyaru Wilson and I; Lucy Gathoni Karuki. We were allocated with various tasks to carry out. First we were to carry out primary cultivation practices such as clearing the land. Next, we dug out our plots measuring 1m by 1m. We were provided with 20 seedlings which we took care of by placing them under a shade that we erected and watering them daily. On 17th 1 May, a trainer came and taught us how to graft and everyone dispersed to their various groups and grafted their own tree. We decided to carry out whip grafting also known as a tongue grafting. It needed both the scion and the rootstock to have a pencil thick diameter. For the tools we used rakes, pangas to carry out primary cultivation. And for grafting we used a grafting tape, a grafting knife and secateurs.

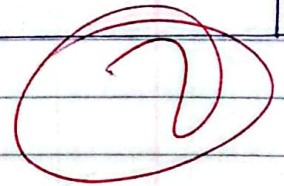


Grafted avocado fruit tree

PROJECT BUDGET

The budget plan prepared was as follows:

Material	Quantity	unit cost	Total cost
Shovel	5	10	50
watering can	1	400	400
Grafting tape	20	20	400
Rootstock	20	100	21000
Scion	20	10	200
sterilizer	10ml	150	150
Shade net	5m x 10m	3000	3000
Rake	1	350	500
Trainer	1	1500	1500
Total cost			8200



PROJECT IMPLEMENTATION PLAN AND TIMELINE

Activity	J.J	F	M	A	M	J	J.J
INSTRUCTIONS OF THE PROJECT ISSUANCE							
IDENTIFICATION OF THE ISSUE							
INDIVIDUAL PRESENTATION OF THE PROJECT							
PREPARATION OF A BUDGET PLAN							
GROUP PRESENTATIONS OF THE PROJECT							
SITE SELECTION							
ARRIVAL OF THE AVOCADO FRUIT TREE SEEDLINGS							
PREPARATION OF THE NURSERY PLOTS							
TRAINING SESSION BY A GRAFTING EXPERT							
FORTNIGHT REPORT ON THE PROJECT							
EVALUATION OF THE PROJECT							
WATERING AND INSPECTION							
REPORT WRITING							

PROJECT IMPLEMENTATION AND PROCEDURE

Training session - This was done by a grafting expert sourced by the school from an agricultural research centre.

Assembling tools - The necessary equipment that was needed for grafting were sourced from a reliable source to prevent transmission of diseases eg the rootstock and scion.

Selection of location for planting - The requirement for the site for grafting was that it was to be a well shaded place, slightly sloping and a well secured place. The site had to be near a water source that will ensure easy watering of the seedlings. We chose a section of the school farm that suited all the requirements. The nursery plots were erected over the seedlings to prevent dehydration.

Performing grafts - We did the actual grafting in groups where each individual grafted their own tree. We were all guided by the technician and our teachers on how to graft and videos were taken from the short activity.

Post operation practices - We conducted daily inspections as group members. Each member had their own day for watering the seedlings. This was to ensure good results.

Monitoring growth progress - 95% of our seedlings were able to survive because of the continuous watering and weeding. We also destroyed pests that we found attacking the seedlings.

3

Reflection and Evaluation

After the first attempt of grafting, almost all the group members were able to graft apart from one whom we assisted to carry out grafting.

Out of the 10 trees that we grafted in the first attempt only one tree survived because of poor growing conditions. During the second attempt only two trees did not survive and the last attempt was more successful as all the trees survived and everyone was able to graft for themselves.

Conclusion

The project was successful and we were able to graft more trees and planted them around the school. After grafting, I learnt how to use various tools such as secateurs and the grafting tape which during the first attempt of grafting I had a challenge of tying it on the tree properly.

I will use this skill to teach others how to graft and encourage them to plant grafted trees.

We have also taught other students in the school community on various methods of grafting.

Recommendation

It was recommended that during transplanting, the school community be involved and other students to be taught how to graft so that one student can plant one tree each and increase the production of fruits in the school.

The project enabled me to gain skills on grafting and maintaining trees.

03/11