

KOLA

SECONDARY

SCHOOL

NAME : KOKO RAEI MWIKALI

INDEX NO: 18307307009

SUBJECT: AGRICULTURE

PAPER 3 (REPORT)

1: GRAFTING.

Grafting is the practice of uniting two separate woody stems. usually here two parts provides the base and has a rooting system whereas the other parts is obtained from another plant.

Methods of Grafting

- i) Whip or Tongue Grafting
- ii) Side Grafting

(1) WHIP OR TONGUE GRAFTING.

- It is used for material in which the scion and the root stock are of the same diameter.
- The whip grafting it is normally carried out when the diameter of the root stock and the scion are thick like pencil.

(2) SIDE GRAFTING.

It is practised when the stock has a large diameter than the scion. The scion is inserted into the side of the stock.

Importance of Grafting.

1. They facilitate the changing of the top of the tree from being undesirable to desirable.
2. They make it possible to grow more than one type of fruits on the same plant.

- PHIT FARM
- 3. They help to propagate clones that cannot be propagated in any other way.
 - 4. Grafting helps to repair damaged trees.
 - 5. They help to shorten the maturing age.
- B. Plants with desirable root characteristics such as disease resistance, vigorous root system, resistance to nematode attack but with undesirable products may be utilised to produce desirable products.

Take as Agriculture students choose grafting fruit trees to solve the problems which are;

- a) Poor roads
- b) Idleness
- c) Poor health
- d) Low agricultural produce

High birth rate

High rate of school drop out

Early marriages

Scarcity of water

Crime such as theft

Soil conservation

Unemployment

Nutrition of the children and hygiene

High death rates

Sexual immorality

Low living standards

Afforestation

2. GROUP DISCUSSION AND PRESENTATION.

Group discussion and presentation was done in group of four.

Group Number 2.

Kioko	Rael	Mwakali	IS 307 307 009
Mutukutu	Manza	Theresia	IS 307 307 005
Mwendwa	Muoni	Phedelma	IS 307 307 013
Stancy	Ntanya	Mwendwa	IS 307 307 024

After discussing on our project of grafting Okacado; some of the problems which we encountered are as listed below;

- 1 poor roads
- 2 Illness
- 3 poor health
- 4 low agricultural produce
- 5 High birth rate
- 6 High rate of school drop out
- 7 Early marriage
- 8 Scarcity of water
- 9 Crime such as theft.
- 10 Soil conservation
- 11 unemployment.
- 12 Malnutrition of the children and hygiene
- 13 High death rates
- 14 Sexual immorality
- 15 Low living standards
- 16 Deforestation.

We agreed to do grafting on avocado trees
L. persica americana

PROBLEM AND PROJECT IDENTIFICATION.

1) POOR ROADS

It is also observed that Feeder roads in our society are very poor which has led to poor transport more so during rainy seasons. During rainy season, perishable fruits like mangoes do not reach due to delays caused by the roads. Also during rainy season, murrum roads prone to accidents because they are slippery and this may cause death of drivers or damage of the fruits.

During dry seasons, roads are dusty. The dust tends to make the drivers sick of which the time he takes to heat he could have used it to transport more fruits to the market and it creates high market demands of the fruits in the market.

To solve this problem, people are educated on grafting of fruit trees because they need to use those roads when transporting those grafted fruits and seedlings. So from the general income they get after selling those grafted seedlings and fruits in the market, they are forced all weather conditions. Thus the problem of poor road is solved.

2. IDLENESS:

A lot of people are idle in the community surrounding our school. This is affecting mostly the youths. For example, when we visited the market place during the day, we found many groups of young boys and girls doing nothing. They were just staring each other and asking people for money. Idleness can also lead to committing crimes such as stealing where they can sit down and plan on how they can break into banks, shops, kiosks, markets or even supermarkets to steal some items so that they can get money and fulfill their needs and desires and if they are caught stealing, they can be stoned to death by mob justice hence leading to poor population of youths in the society. Idleness has also led to drug abuse which has resulted to drug addiction. For example at market place there were many young boys who looked like mad people. but in their real sense it's just the effects of the drugs they take. So we have decided that by educating the youths about grafting of fruit trees they will have something to do and so occupied during the day thus the number of idlers in the market places and at home will reduce thus the problem of being idle is solved.

3. POOR HEALTH.

Generally, people in the surrounding society suffer from poor health this is because of poor living standards such that most of them do not afford a balanced diet. This has lead to reduced or low human labour. Through the knowledge of grafting fruit trees the society can generate income through selling of the grafted seedlings and grafted fruits.

4. LOCAL AGRICULTURAL PRODUCE

When we visited the community around our school we conducted some oral interview. We discovered that the Agricultural produce of the society generally is very poor and low. This has lead to the food shortage at the Community. But we found out that, if the people are educated about fruit trees, they would be able to sell the grafted seedlings or fruits produced by fruit trees and the income generated could be used to buy food and sustain their families.

5. HIGH DEATH RATES.

We also noted that the death rate in the surrounding society is very high. This is caused by lack of finances to take their sick people to better hospitals, buy drugs, and supplement their diet. This has lead to reduced human labour and increases number of orphans through the knowledge of grafting the fruits and seedlings from fruit trees, the members of the society will be able to generate income. Through selling of those grafted fruits and seedlings the generated income will therefore be used to take care of the health of their beloved ones. Also that will reduce high death rate to the members of the society.

6. HIGH RATES OF SCHOOL DROPOUT

Ideas also noticed that one of the things that are pulling back the growth of the surrounding society is the school drop out. This is where by young boys and girls stop going to school before completing the primary secondary or even tertiary education. This is caused by poor living standards which limit the parents from paying school fees for their sons and daughters thus unable to sustain them in school. Also this may lead to early pregnancies and early marriage.

7. EARLY MARRIAGE

Early marriage is another problem that is affecting the society around our school. This has led to generation of poverty that is highly affecting the society at large through the knowledge of grafting, parents can generate income through selling the grafted seedlings or the fruits from the fruits trees. The generated income they get, can be used to pay school fees for their children thus containing them in school and minimising the early marriages.

§. SCARCITY OF WATER.

In our surrounding society people are forced to walk for long distance for search of water. This has lead to a lot of pain and suffering to the people. Through the knowledge of grafting fruit trees and generated income they get after selling the grafted seedlings and the produced fruits if all the community come together they will generate money and dig out boreholes which can supply water in the whole. Community then all the problem of water scarcity will be solved. ✓

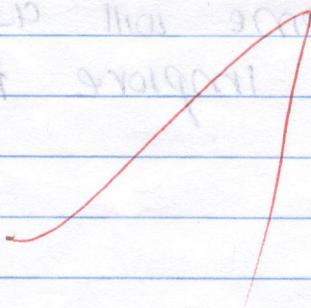
g. CRIME SUCH AS THEFT.

We also discovered that in our surrounding society crime rate is very high. This has caused a lot of insecurity in the society. Also it has led to high death rates in the surrounding society thus reducing the number of people who are loitering around. Through the knowledge of grafting fruit trees people in the society will have something to do thus making them to generate income through selling the grafted fruit and seedlings in our markets and society. The income generated could be used to reduce crimes such as stealing, murders and even corrupting and other people in the surrounding society.

10: SOIL CONSERVATION

As we were moving around our surrounding society we discovered that soil erosion is highly pronounced. This is because of deforestation and lack of land cover. Generally some of the common types of soil erosion in the surrounding society includes sheet erosion, rill erosion, gully erosion. This has lead to poor soils thus leading to low agricultural produce that makes the crops to grow very thin. Through the knowledge of grafting fruit trees the people in the society will be able to plant many grafted fruit trees whose roots will help to hold the soil particles together thus minimising soil erosion. Also the remaining fruit leaves decomposes thus adding ~~fertility~~ to the soil and conserving the soil.

11:



II. MULTINUTRITION OF THE CHILDREN AND,

HYGIENE.

When we visited different home from the surrounding society we discovered that children were suffering from malnutrition. This condition is whereby children lack a balance diet and they are unhealthy this is because their parents were unable to provide a balance diet. If the parents or the people surrounding the society had knowledge of grafting fruit trees, they would be able to generate income through selling those grafted seedlings and fruits from the fruit tree. The generated income would be used to provide a balance diet more so to the children and also their families. Also on poor hygiene, we visited the nearby hospital and after conducting oral interview on the people in that society, we discovered that most of the people were suffering from stomachache related illness with the knowledge of grafting fruit trees as communicated earlier in my presentation the generated income will assist the community at large to improve their hygiene.

12. SEXUAL IMMORALITY

Through the oral interview conducted it was also made known to us that the issue of sexual immorality is common in the society. This has been caused by high rate of school drop out and low living standard. This has led to high death rate when people suffer from sexual transmitted disease such as syphilis and HIV and AIDS. Through the knowledge of grafting Trustees the people in the society will learn to generate income through legal means. This is by selling grafted seedlings and produced fruits the generated income will allow the people in the society ~~to~~ get their basic needs without engaging in sexual immorality.

13. LOW LIVING STANDARD

After touring the society around our school, we discovered that people have a low living standards which has led to isolation and depression and through our project on grafting, we found out our problem can be solved.

If the people were been educated about grafting they can sell the grafted seedling and fruits and the produced fruits can generate income as well. The income generated can be used to improve their living standards such as buying food, clothings, constructing good housing and balanced diet.

14: UNEMPLOYMENT.

Unemployment is the most harmful thing that has increased in the society where most of the people in the surrounding society are unemployed. This is because of illiteracy and high rate of school drop out that has lead to increase of crime and low living standard. That has lead to the surrounding of the people. If the knowledge of grafting fruit tree is introduced to them they will be occupied by a constructive activity that will make people to get money after selling those grafted fruit trees. After selling them, they will get income to sustain their families in their daily living life. This can be done by advising people in the surrounding society to plant more grafted fruit trees in their farm and maintain the fruit trees by digging the unwanted weeds from the farm, applying fertiliser for faster growth and harvest good grafted fruit trees using this method of grafting fruit trees we will reduce the number of people who are loitering around in the rural and urban areas searching for a job.

15. DEFORESTATION

As we know that deforestation is cutting down of trees which is very much pronounced in the surrounding society around our school. This is due to cutting down of trees for domestic use such as burning of firewood and burning of charcoal has effects on the land that is making the land unproductive because the micro-organisms which decomposes to form nutrients for the crops are burned. The burning of charcoal produces smoke which interferes with the ozone layer hence leading to low rainfall standards. If the people in the surrounding society are educated about grafting of fruit trees, they will be able to plant fruit trees which will provide land cover hence replacing the trees which has been cut in the previous year through the planted fruit trees they will be able to generate income through selling of those grafted fruits and seedlings from fruit trees hence minimising deforestation. Then the income generated can be used in many activities such as paying school fees for the youths loitering freely in the society so that they can be committed academically.

16. HIGH BIRTH RATES.

High birth rate is also evident in the surrounding society, this is caused by high rate of school dropouts, this leads to early marriages that encourage poverty through the knowledge of grafting fruit trees, parents can generate income they get through selling grafted seedlings and the produced fruits. The generated income is used to pay school fees and providing basic needs thus minimising the number of school dropouts and to control the birthrate.

(3) GROUP PROJECT IDENTIFICATION

According to this group to our project we identified using the following posters.

NO.	MEMBERS.	INDEX NO.
1.	KIOKO RAELE MWIKALI.	18307307 009.
2.	MUTUKU TERESIA WANZA.	18307307 005.
3.	MWENDWA PHEDELMA MUENI.	18307307 015.
4.	MWENDWA STACY NTHENYA.	18307307 024.

4: PROJECT IMPLEMENTATION.

Grafting - it is the ^{practice of} uniting two separate woody stems usually one of the two parts provide the base and has a ~~rooting~~ system whereas the other part is obtained from another plant.

Part with the rooting system is known as root stock and the part which is grafted into the root stock is known as scion.

The scion has buds which develop into the future plant. A successful union between the scion and the root stock is known as compatibility.

There was a man from our society who was invited by the school to show us on how to graft. Then we grafted individually.

We used two methods of grafting to graft the plant which were whip or tongue grafting where we used the scion and the root stock of the same diameter.

A slanting cut is made using a sterilised scalpel on the scion and tops of the stock.

The two separate parts were fitted together and wrapped with a grafting polythene strip.

Side grafting.

If here the stock had a large diameter than the scion we cut the stock using a sterilised scalpel inserted into the side of the stock. We wrapped the fitted parts using a polythene strip.

problem and project identification - 30 mks

group discussion and presentation - 32 mks

Group project poster - 4 mks

project implementation - 13 mks

Reporting progress report - 18 mks

Project report - 17 mks