

KOLA SECONDARY
SCHOOL

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INDEX NO: 18307307010

SUBJECT: AGRICULTURE.

PAPER : 3 [REPORT]

GRAFTING

Grafting is uniting two separate woody stems.

- One of the two parts provides the base and has a rooting system whereas the other part is obtained from other plant.

- There are methods of grafting;

a) Kiship or Tongue grafting

- It is used for materials in which the scion and root stock are of the same diameter.

b) Side grafting.

- It is practiced when the stock has a large diameter than the scion.

- The scion is inserted into the side of the stock.

c) Approach grafting.

d) Bark grafting.

e) Notch grafting.

Reasons / importance on why grafting is done.

- They help to shorten the maturing age.

- It helps to repair damaged trees.

- Helps to propagate clones that cannot be propagated in any other way.

- Helps them to grow more than one type of fruit or flower on the same plant.

- It helps to facilitate the changing of the top of tree from being undesirable to desirable.

- Through our project of grafting we find it is good to plant avocado because in the surrounding areas one can earn income from selling the avocados. Also we find some problems in the society which are;

Unemployment

Malnutrition of the children and hygiene

PROBLEMS

Idleness

High rates of school dropout

High birth rate

Sexual immorality

low living standards

Scarcity of water

Deforestation

Early marriages

High death rates

Poor roads

Low agricultural produce

Soil conservation

Crime such as theft

Poor health.

UNEMPLOYMENT

Unemployment is a situation where people have no job opportunities, which is the most harmful thing that has increased in the surrounding society around our school. Where most of the people in the surrounding Society are unemployed and this is because of illiteracy and high rate of school drop-out that has lead to increase in crimes such as stealing, committing murder, immorality and low living standards.

If the knowledge of grafting is introduced to the people in the surrounding society around our school such that they will be able to graft fruit trees which will make the people to generate income through selling of the grafted fruits and seedlings from the grafted fruit trees.

After selling the grafted seedlings and fruits, 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 fruits; 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 jobs.

MALNUTRITION OF THE CHILDREN AND HYGIENE.

When we visited different home from the surrounding society we discovered that children were suffering from malnutrition. This is a condition whereby children lack a balance diet and they are even unhealthy. This is because their parents were unable to provide a balance diet. If the parents or the people of the society have the knowledge grafting fruit trees which after selling them they will be able to generate income through selling of the fruit trees and seedlings from fruit trees.

The income generated will be used to buy food which will provide a balanced diet more so to the children and their families. On poor hygiene we visited the nearby hospital and after conducting oral interviews on the doctors about the health records of the people in the society, we discovered that most of the people suffer from stomach 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 hence this will reduce malnutrition and encourage a healthy life.

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, idleness can also lead to committing crimes such as stealing where they can sit down and plan on how they can break into banks, markets or even supermarkets to take some items.

So that they can fulfil their needs and if they are caught stealing they can be stoned by mob justice to death 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 the market place there were many young boys who looked like mad people but in their real sense just the effect of the drugs they take.

If we have decided that by educating the youths about grafting of fruits 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. Numbers of crimes in the society will reduce hence reducing drug and drug abuse.

HIGH RATES OF SCHOOL DROPOUTS.

One of the things that are pulling back the growth of the surrounding society is the school dropouts. This is whereby young boys and girls stop going to school before completing Primary, Secondary and 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.

This has lead to generational poverty in the surrounding society to be high. Through the knowledge of grafting fruit seedlings the people will be able to sell the grafted seedlings and the produced fruits. The generated income can be used to pay school fees for their children thus sustaining them in school.

Again the parents will be able to provide all the basic needs required by their children thus minimising the number of school dropouts in the society surrounding our school.

HIGH BIRTH RATES.

High birth rate is also evident in the surrounding society, this is caused by high rates of school dropouts. This has lead to early marriages that encourages poverty. For example, lack of food, shelter, clothes and money for fees. You find in the society young girls are engaged in early marriages so that they can get the basic needs they wanted.

Through the knowledge of grafting seedling, parents will be able to sell the grafted seedlings and the produced fruits. The generated income will be used to pay the school fees. Again the parents will be able to provide all the basic needs required for their children thus minimising the number of school dropouts and control early marriages to reduce high birth rate in the community.

SEXUAL IMMORALITY.

Through the oral interview contacted 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 dropout and low living standards. This has led to high death rate when people suffer from sexual transmitted diseases such as gonorrhoea, syphilis, HIV and AIDS.

Through the knowledge of grafting fruit trees, 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.

LOW LIVING STANDARDS.

After touring the society around our schools, we discovered that many people have low living standards which it has led to depression and isolation. Depression is the state where one is stressed beyond control and isolation is the state where one likes a living ~~alone~~ without interacting with others.

Through our project on grafting, we found our problems are solved if people had been educated about grafting. People in the society are able to sell seedling fruits and the produced fruits. The generated incomes used to improve their living standards for example to buy food, clothing, construct good houses and ~~look on balanced~~ diet.

SCARCITY OF WATER.

I also noted that people in the surrounding society are forced to walk for long distance to search water. This has led to a lot of pain and suffering to the people due to minimal chances of rainfall and climatic condition. In the community there is misuse of vegetation like cutting down of trees which has brought ~~lack of~~ water in the society where people suffer. Through the knowledge of grafting fruit trees, people in the society will be able to

Sell the grafted fruit seedling and the produced seedlings. If all the community came together, they will generate money and dug out boreholes which can supply water in whole community then all the ~~problems~~ of water scarcity will be solved.

DEFORESTATION.

As we know that deforestation is cutting down of trees which is very much pronounced in the surrounding society our school due to cutting down of trees for domestic use such as burning firewood and also burning charcoal, where burning of charcoal has effect on the land that it makes the land unproductive as the micro-organisms which decomposes to form nutrients for the crops are burned.

Burning of charcoal produces smoke which also interfere with the ozone layer hence leading to low rainfall. If the people in the 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 that has been cut in the previous years. After planting the fruit trees they will be able to generate income through selling of grafted seedlings and fruits from the fruit trees thus minimising deforestation. The income generated can be used in other activities such as paying school fees for the youths in the community hence making them committed to academic work.

EARLY MARRIAGES.

Early marriages is another problem that is affecting the society around our school. This has lead to generational of poverty that is highly affecting the society at large.

the roads are dusty. The dust tends to make the driver sick of which the time he will take to heal, he could have used it to transport more fruits to the market and this creates high market demand for fruits in the market?

Also during rainy seasons the Musam roads are prone to accidents because they are slippery. This may lead to death of driver or damage of the fruits. To solve this problem, people are educated on grafting of fruit trees because they need to use those roads during transporting those grafted fruits and seedlings. The generated income they will get from selling those grafted seedlings and fruits they are forced to make roads more passable for all weather's. Thus the problem of poor roads is solved.

Local Agricultural Produce

When we visited the community around our school, we conducted some oral interview and discovered that the agricultural produce in the society is very low. This has led to food shortage of the community. Also we found out that if the people are educated about fruit trees, they would be able to sell the grafted seedlings and produced fruits by fruit trees. The income generated can be used to buy food and sustain their families.

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 and 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.

CRIME SUCH AS THEFT.

We also discovered that in our surrounding society crime rates are 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 fruits and seedlings in our markets and society. The income generated can be used to reduce crime such as stealing, murders and even corrupting other people in the surrounding society.

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 led to reduced or low human labour. Through the knowledge of grafting fruit trees, the society can generate income through seedlings of the grafted seedling and grafted fruits, people will be able to keep hygiene and eat balance diet and buy medicines for the sick people.

Group discussion and presentation was done in group of four.

GROUP NUMBER 3.

1. Faith Mueni Mutuo 18307307010
2. Annah Mwethya Makau 18307307003
3. Consolata Kanini Mugimi 18307307011
4. Klarinyia Gware Mutheu 18307307025

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

Unemployment

Malnutrition of the children and hygiene

Idleness

High rates of school dropouts

High birth rate

Sexual immorality

Low living standards

Scarcity of water

Deforestation

Early marriages

High death rates

Poor roads

Low agricultural produce

Soil conservation

Crime such as theft

Poor health

We agreed to do grafting on Avocado trees (*Persea americana*)

Group Project Identification.

Ike identified our project in a group of four as illustrated

GROUP THREE

MEMBERS

NO	NAME	INDEX
1	Faith Muensi Mutisol	18307307010
2	Annah Mwethya Makau	18307307003
3	Consolata Kanini Musyimi	18307307011
4	Klavinya Grace Muthee	18307307025

PROJECT

PROBLEMS IMPLEMENTS

Grafting is a technique of uniting two woody parts of different plants for continued growth as one plant.

The plant is cut into two pieces where one part provide the base and has a rooting system whereas the other part obtained from another plant.

The part with the rooting system is root stock and the part which is grafted onto 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 an older man who was invited by the school to show us on how to graft. Then we grafted on our own individually.

Ike used two methods of grafting to graft the plant which were;

i) Khip 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 top of the stock.

The two separate parts were fitted together and wrapped

with a grafting polythene strip.

iii) Side grafting.

Where the stock had a large diameter than the scion, we cut the stock using a sterilised scalpel. It is inserted into the side of the stock. ~~I~~ wrapped the fitted parts using a polythene strip.

Project

Problem and project implementation - 30 mks

Group discussion and presentation - 31 mks

Group project poster. - 4 mks

Project implementation - 43 mks

Reporting on progress - 19 mks

project report - 19 mks