

SCHOOL: KOLA SECONDARY

SCHOOL

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SUBJECT: AGRICULTURE

PAPER 3 {REPORT}

GRAFTING

Grafting is the practise of uniting two separate woody stems. Usually one of the two parts provides the base and has a rooting system whereas the other part is obtained from another plant.

Methods of Grafting

Diship or Tongue Grafting

- ✓ It is used for material in which the scion and the root stock are of the same diameter
- ✓ It is normally carried out when the diameters 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 fruit on the same plant.
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.
6. Plants with desirable root characteristics such as disease resistance, vigorous root system, resistance to nematode but with undesirable products may be utilised to produce desirable products.

problem and project identification

As Agriculture students we choose grafting fruit trees, flowers to help people in the surrounding Society to solve the problems which they encounter. Some of the problems are:-

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

1) 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 because of condition whereby children lack a balanced diet and they are even unhealthy. This is because their parents were unable to provide a balanced diet for them.

If the parents or people in the surrounding area has knowledge of grafting fruit trees, they would generate income through selling of grafting seedling

Seedling and fruit trees from the farm. The money generated would be used to provide a balanced diet more so that the children and their families who are lacking balance diet in the body. On poor hygiene, we visited the nearby hospital and after conducting oral interviews on the doctors about health records of the people in the society, we discovered that most of the people suffer from stomach related illness. This has increased in the community because of poor health eating uncleaned food, drinking dirty water which have been destroyed by the chemicals from the industries and lacking a good basic needs for them.

With the knowledge of grafting fruit trees as discovered from others farms we have found that our problem can be solved by selling grafted fruit trees that will make them get money and be able to provide proper hygiene to their families.

2) Unemployment

Unemployment is the most harmful thing that has increased in the society. whereby most of the people in the surrounding area are unemployed this is because of illiteracy and high rate of school dropout that has lead to the suffering in the people.

If the knowledge of grafting fruit trees is introduced to them they will be occupied by a constructive activity that will make people to get money by selling grafted fruit trees to the people. After selling the grafted seedlings and seedlings, they

will get income to sustain their families in their daily living life. This will make people to get money and help each other in their community when one person is in need of money.

3) Deforestation

As we know that deforestation is cutting down of trees in an area without planting others in a large piece of land covered by trees. This is very much pronounced in the surrounding society of our school due to cutting down of trees for domestic use such as burning of firewood, burning of charcoal whereby the burning of charcoal has effect on the land, that makes the land unproductive, as the micro-organisms which decomposes to form nutrients for the crops are burned that resulting to a great rate of crops in the farm.

If the people in the society are educated about grafting of fruit trees which will provide land cover and increase soil fertility thus replacing the trees that has been cutted down in the previous years. After planting the fruit trees they will be able to plant fruit trees thus minimising deforestation in the area surrounding our school. The income generated can be used in other activities such as pay school fees for the youths in the community hence making them committed to academic work.

4) poor roads

He also observed that feeder roads in our Society are very poor. It has lead to poor transport to the people more so during rainy seasons. During rainy seasons perishable fruits are very difficult to transport like Avocado do not due to delation caused by the roads because of Muddy and also during dry season the roads are dry, that make the buyers not ~~to~~ buy.

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 grafted seedlings. Through these, people will form general income that will make them to get money. The income generated they will use them in construction of roads thus making them to be more passable.

5) High Birth Rate.

This is evident in the surrounding Society whereby it has caused high rate of school drop out to the youths due to lack of job and money to sustain their when there is need of ~~money~~. This has lead Many of the young girls to engage themselves to early marriages, prostitution thus making a lot of people have to been affected by many diseases which have no cure like HIV/AIDS etc. thus leading to more suffering to their body and their daily living standards.

Through the knowledge of grafting fruit trees, parents

can generate income through selling of grafted fruit trees and seedlings. The generated income is used to pay the school fees and also to produce those basic need for their children. Thus minimising the numbers of school drop out and to control the birth rate to the society.

⑥ Low living Standards

how living standards can be brought up by lack of food which can lead to more suffering thus leading to diseases like kwashakos e.t.c. This can be affected by lack of clothing, lack of housing, Insecurity, lack of balance diet thus leading low living standards. After touring the Society around our school we discovered that many people have low living standards which has led to depression to the old and young people and isolation due to shame in the society.

And through our project on grafting we have found our problems can be solved. If the people had been educated more so to the young people about grafting fruit trees, they are able to sale grafted fruit trees and seedlings and produced fruits to the market can generate income. The income generated would be used to improve their low living standards and help each other when in time of need. Through this method of grafting fruit seedlings the problem of low living standards is being solved.

7) Low Agricultural produce.

When we visited the community around our school we conducted some oral interviews. We discovered that the agricultural produce of the society is very low. This is due to lack of machines and tools used in the farm to perform a specific task, lack of fertilizers and water to apply to the crops which makes the crops to grow fast, outbreak of diseases and pests which attack crops when they are on the process of growing, outbreak of diseases and pests which attack crops when they are on the process of growing, lack of good experts to control the farm inputs. Also climatic ~~change~~ has led to low agricultural produce.

If the people are educated about grafting fruit trees, they would be able to sell the grafted seedlings or fruits produced by fruit trees. This will generate income. And the income generated will be used to buy machines and tools, used to perform a particular task in the farm, buy farm inputs like fertilizers. By doing this practice in the farm farmers and other people who depend on farm produce they will get food from their farm.

8) 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 that many groups of young boys and girls doing nothing at the streets and

outside the markets, idleness can also lead to committing crimes such as stealing other people's property without their concern and even searching for a place where they can sit down and plan on how they can break into items so that they can fulfil their needs with one needs for the survival 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.

So, we have decided that by educating the youths about grafting of fruit trees and they will get income through selling of grafted fruit trees and seedlings to the market. Through the method of grafting they will have something to do and to be more occupied during the day, thus will reduce number of idlers who are loitering around in the market places.

⑨ poor health

Generally people in the surrounding society suffer from poor health, this is because of poor living standards in the society, such that most of them do not afford a balanced diet, thus leading to reduction of body to the people who lack a balanced diet. When we visited the market near our school we found that a lot of letters scattered everywhere whereby it made the numbers of mosquito to increase thus leading the people to suffer mostly in malaria. Also there was a lot of sewage and stagnant water which made a lot of people

to suffer from diseases which are incurable like cholera.

Through the knowledge of grafting fruit trees In the Society is being introduced to them. They are able to generate income through selling of the grafted seedlings and grafted fruit trees. The income generated can be used to buy a balanced diet to the family, employ some of the people to clean up the sewage, money to buy a water gard to clean the stagnant water.

⑩) High Rate of School Dropout

High rate of school dropout has increased in the society whereby one of the things that are putting back the growth of the surrounding society is the school dropout for the youths. This is caused by poor living standards in the society which limit the parents from paying school fees for their sons and daughters thus making them unable to sustain them in school. This has lead to generational poverty in the surrounding society to be high thus making most of the youths to drop out of school due to lack of money.

Through the knowledge of grafting fruit trees is being brought up to people, they will be able to sell grafted seedlings and produce fruits which will make them to get income. The income generated can be used to pay school fees for their children thus sustaining them in school, were they be educated and be able to get better job that

that will prevent them from becoming poor.

12. Sexual Immorality.

Through the oral interviews conducted around our school, it was also made to be known to us that the issue of Sexual Immorality is common and has increased in the Surrounding Society. This has been caused by high rate of School dropout and low living standards mostly to the youths. Also this is caused by poverty and poor growth to the people, whereby most of the youths are being forced to dropout of school in order to go in a sexual immorality business.

Through the knowledge of grafting of fruit trees is being taught to the people in the Surrounding Society, they will learn on how to graft fruit trees and be able to get income through the illegal means. This is by selling grafted seedlings and produce fruits which are being sold to the market traders to get money. The income generated will allow the people in the Surrounding Society to get their basic needs which they want.

12) High Death Rates

We also noted that the death rate in the Surrounding society is very high. This is caused by lack of Money whereby most of the people in the Surrounding society have died due to lack of food, lack of shelter, lack of clothes, lack of Money to buy medicine and to go to the hospital.

Through the knowledge of grafting fruit trees is being taught to them they will be occupied by a constructive activity; whereby they will be able to generate income through selling of grafted fruit trees and seedlings. The income generated will be able to make people to get their basic needs. Therefore it is used to take care of the health of their beloved ones in the surrounding society.

(3) Early marriages

Early marriages is another problem that is affecting the society around our school. whereby most of the girls in the surrounding society have dropped out of the school because their parents don't have money to pay school fees. This makes them to be married at a very young age and also increases the number of birthrate in the surrounding community at large. This has led to generation of poverty that is highly affecting the society at large.

Through the knowledge of grafting, fruit trees, parents can generate income through selling the grafted seedlings or grafted fruits from the fruit trees. The generated income can be used to pay school fees for their children thus containing them in school and minimising the early marriages around our school.

14) Scarcity of water

when we toured around the School Society we noted that water is a major challenge in the surrounding Society which helps in living. This is due to lack of trees in the society which helps in bringing rain. This has been encountered due to cutting down of the trees without planting others thus making the soil to be of no use. Due to lack of water the livestock and people are suffering while others are dying. Also most of the people in the Society are being forced to work for a long distance searching for water which has lead to pain and suffering of the people in the Society.

If the people in the Society are educated about the grafting of fruit trees they will be able to generate income through the selling of the grafted seedlings and grafted fruit trees from the farm. The income generated will help them supply water in the whole Society by digging boreholes, wells, dams and even buying pipes of transferring water from one place to another.

15) 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 rate 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 society. The income generated could be used to reduce crime such as stealing, murders and even corrupting other people in the surrounding society.

16) 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 include sheet erosion, gill erosion and gully erosion. This has led to poor soils thus leading to low agricultural produce that makes the crops to grow very thin. Through

Through the knowledge of grafting fruit trees the people in the society will be able to plant many grafted fruit trees whose roots 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 decompose, thus adding fertility to the soil and conserving the soil.

Group Discussion and presentation

Group discussion was done by the following four students in their group:

Group number 2.

Teresia	wanza	mutuku	18307307005
Rael	muikali	kiono	18307307009
phedelma	mueni	mwendwa	18307307015
stacy	nthenya	Muendo	18307307024

low living standards

malnutrition of the children and hygiene

Unemployment.

low agricultural produce.

Early marriages

High death rates

Crime such as theft.

poor health

Deforestation

School dropouts

Scarcity of water

Idleness

Sexual Immorality

High birth rates

In our group discussion we choose grafting of fruit trees avocado (*persea americana*) which is mostly affecting the society.

After discussing on our project of grafting Avocado

Some of the problems we encountered are listed above which I have discovered in the previous

pages. After discussing about grafting of Avocado we discovered that the problems listed above can be solved through grafting.

Group project Identification.

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

GROUP TWO

MEMBERS

NO.	NAMES	INDEX
1.	Teresia wanza mutuku	18307307005
2.	Rael muikali kioko	18307307009
3.	phedelma mueni muerdug	18307307015
4.	Stacy nthunya muendo	18307307024



project Implementation

Grafting is the practice of uniting two separate woody stems. Usually one of the two parts provides the base and has a rooting system whereas the other part is obtained from another plant. The rooting system is known as root stock while the grafted root stock is known as scion.

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 compatibility. A man in the society come to our school to show us directive ways of grafting avocado. After he showed us, we did it individually using Tongue Grafting method.

problem and project implementation - 33 mks

Group discussion and presentation - 36 mks

Group project poster. - 5 mks

Project implementation - 46 mks

Reporting on progress - 20 mks

Project report - 19 mks.