

SCHOOL: KOLA

SECONDARY SCHOOL

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SUBJECT: AGRICULTURE

PAPER THREE (PROJECT)

Grafting is the practice of uniting two separate woody stems.

Methods of grafting

a) Whip 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.

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.

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. Plants with desirable roots characteristics such as disease resistance, vigorous root system, resistance to nematode attack but with undesirable products may be utilised to produce desirable products.

As Agriculture students we choose grafting fruit trees, In order to help people in the surrounding society to solve problems.

PROBLEMS OF THE CHILDREN AND THE ENVIRONMENT

- Some of the problems are;
- a) Malnutrition of the children and hygiene
 - b) Unemployment
 - c) Deforestation
 - d) Poor roads
 - e) High birth rates
 - f) Low living standards
 - g) Low agricultural produce
 - h) Idleness
 - i) Poor health
 - j) High rates of school dropouts
 - k) Sexual immorality
 - l) High death rates
 - m) Early marriages
 - n) Scarcity of water
 - o) Crimes such as thefts
 - p) Soil conservation

MALNUTRITION OF THE CHILDREN AND HYGIENE

When we visited different homes from the surrounding society. We discovered that children were suffering from malnutrition. This is because of condition where by children lack a balance diet and they are even unhealthy. This is because their parents were unable to provide a balance diet for them. If the parents or people in the surrounding area have knowledge of grafting fruit trees, they would generate income through selling of grafted seedling or fruit trees, they would generate income through selling them. The money generated would be used to provide a 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 from the rivers which have been destroyed by the chemicals from the industries and lacking a good basic needs for them. Even we visited some of the nearby school and discovered that there is lack of balance diet and lack of clean water which is making the students to suffer from diarrhoea and vomiting each and every time. With the knowledge of grafting fruit trees as discovered from other farmer 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.

UNEMPLOYMENT

Unemployment is the most harmful thing that has increased in the society. Where by most of the people in the surrounding area are unemployed this is because of illiteracy and high rate of school drop out that has led to increase in crime and low living standards. That has led to the suffering of the people. If the knowledge of grafting fruit trees is introduced to them they will ~~be~~ make people to get money by selling the grafted seedlings and fruits from fruit trees they will get income to sustain their families in their daily tiring life. This will make people to get money and help each other in their community when one person is in need of money. This can be done by advising people in the surrounding society to plant more grafted fruit trees in the farm by digging the unwanted weeds from the farm, applying fertiliser or planting the trees where the climate is available. By doing this, you will harvest good grafted seedlings from your farm. This will reduce the number of people who are loitering around in rural and urban areas searching a job to maintain their families.

DEFORESTATION

As we know deforestation is cutting down of tree 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 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 thus resulting to low great rate of crops in the farm. Also burning the Ozone layer hence leading to low rainfall and pollution of the environment and the atmosphere. If the people in the society are educated about grafting of fruit trees which will provide land cover and increase soil fertility thus replacing that has been cutted down in the previous years. After planting the fruit trees they will be able to plant fruit trees which will provide land cover and generate income through selling of grafted seedlings and fruit trees thus minimising deforestation in the area surrounding our school. Then the generated income can be used in other activities such as paying school fees for the youths in the community hence making them committed to academic work. This will make people not to cut down the trees in the surrounding area because they have found a solution that will make them get money and not to cut down the trees again.

POOR ROADS

We also observed that feeder roads in our society are very poor. It has led to poor transport more so during rainy seasons. During rainy seasons perishable fruits like mangoes do rot due to delation cause by the roads. Also during rainy seasons, murram roads prone to accident because they are slippery and this may cause death of driver or damage of fruits. During dry season roads are dusty, the dust tends to make the driver sick of which the time he takes to heal he could have used it to transport more fruits to the market to create high 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 generated income they get after selling those grafted seedlings or fruits, they are forced to make roads more passable for all weather conditions thus the problem of poor roads is solved.

HIGH BIRTH RATES

High birth rates is also evident in the surrounding society, this is caused by high rate of school drop outs. This has led to early marriages that encourages poverty. for examples 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, parents will be able to sell the grafted seedlings and produced fruits. The generated income will be used to pay the school fees and also the parents will be able to provide all the basic needs required for their children thus minimising the number of school drop outs and control early marriages to

reduce birth rate in the community.

LOW LIVING STANDARDS

After touring the society around our school we discovered that many people have low living standards which has led to depression and isolation. Depression is the state where one is stressed beyond control and isolation is the state where one likes 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 seedlings, fruits and produced fruits. The generated income is used to improve their living standards for example to buy food, clothing, construct good houses and look on a balanced diet.

LOW AGRICULTURAL PRODUCE

When we visited the community around the school, we also conducted some of the oral interviews. We discovered that the agricultural produce of the society generally is very low. This leads to food shortage in the society.

Through our project on grafting we found out that if people are educated about fruit trees they would sell the seedlings or the fruit trees to generate income. The income generated could be used to improve their low agricultural produce, and buy food to sustain their families.

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 community 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 effects of the drugs they take. If we decide 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 and at home will reduce numbers of crimes in the society will reduce hence reducing drug abuse.

Poor Health

Generally, people in the surrounding society suffer from poor health. For example, when we visited the market around our school we found a lot of litters everywhere whereby it made the number of mosquitoes to increase making people to suffer from malaria. Also there was a lot of sewage and stagnant water which cause people to suffer from cholera. Most of the children in the area are suffering from various different diseases because of the poor living conditions such that most of them lack money to go to the hospitals or money to buy drugs. Others also can't afford a balanced diets. Through the knowledge of grafting fruit trees the society

can earn income through selling of the grafted seedlings and grafted fruits to buy medicine and improve on balanced diets so as to manage their good health.

The generated income can be used to buy a balance diet to the family; employ some of the people to clean up the sewage, money to buy a water guard to clean the stagnant water which is making people to suffer from cholera etc. and also to buy medicine and to go to the hospital which can treat people well when they are sick.

HIGH RATE OF SCHOOL DROPOUTS

High rate of school dropout has increased in the society. Whereby one of the things that are pulling back the growth of the surrounding society is the school dropouts of the youths. This is whereby young boys and girls stop going to school before completing their primary, secondary and even tertiary education. This is caused by poor living standards in the society which limit their parents from paying school fees for their sons and daughters thus making them unable to sustain them in school. This has led 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 brought up to people, they will be able to sell grafted seedlings and produce fruits which they will make them to get income. The generated income can be used to pay school fees for their children thus sustaining them in school, where they will be educated and be able to get a better job that will prevent them from being poor.

SCARCITY OF WATER:

Scarcity of water is also another problem we noted in the people surrounding society whereby are forced to walk for long distances searching for water. This has led to suffering of people. Others can feel sick on their way or attacked by wild animals leading them to death. Others lack where to store their water after bringing to their homes. Some of the people they use their hands to carry their jerrycans which is tiresome. People face challenges during transportation due to poor roads. In other way such that you find no vehicle can pass through the roads. Even when people cut down trees instead of planting it can lead to lack of rainfall leading to scarcity of water. For those who live in deserts you find its rare for them to plant trees due to lack of water. Some of the communities even they have not dug boreholes or construction of dams due to lack of money. It has led pain to people living in such areas. Through our knowledge of grafting fruit trees people can generate income through selling the fruits they produce. If all communities come together they will get money and dug out boreholes which can supply water in the whole community then all problems of water scarcity will be solved as well.

SOIL CONSERVATION

As we were moving around the society we also discovered that the soil erosion is high pronounced. This is because of deforestation and lack of land. Some of the common types of soil erosion in the society include:

- Sheet erosion
- Gully erosion
- Rill erosion

• STATUS OF AGRICULTURE

Splash erosion

flow of water over soil surface causes soil particles to wash off

This has led to poor soil thus leading to low agricultural produce. Through the knowledge of grafting fruit trees the people in the society will be able to plant many fruit trees whose roots will help to hold the soil particles together thus minimising soil erosion. The remains of fruit trees like leaves decompose thus adding fertility to the soil and conserving the soil.

SEXUAL IMMORALITY

Through the oral interviews conducted it 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 dropouts and low living standards. This has led to high death rate when people suffer from sexual transmitted diseases such as gonorrhoea, syphilis and HIV 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 people in the society to get their basic needs without engaging in sexual immorality.

• HUMAN CAPITAL

CRIMES SUCH AS THE FTS.

After touring the society around our school, we also discovered that the surrounding society crime rate is very high. This has been caused by insecurity in the society. The people living around them have no knowledge about grafting fruit trees. Most of the trees planted they grow without grafting whereby they take long time to grow. And through our project on grafting, we find that their problems can be solved easily. If people around the society could be educated more about grafting fruit trees, they could stop fruit thefts and increase the fruits produce. After getting the fruits they produce from the fruit trees, they will much be able to sell them and generate income. Income generated they can use to improve their living standards in buying clothes, buying food, lowering thefts around their societies and educating their children.

EARLY MARRIAGES

Early marriage is another problem that is affecting the people living around our school. This has led to generation of poverty that is highly affecting the society. This problem is mostly brought up by when people live idle without doing nothing. Even farming or running a business it has become also a big problem. People living in towns does not care about their life. You find a family has three or more girls who don't go to school or they are pregnant. This leads to early marriages because they lack money to protect their children with their basic needs. Most of early marriages causes are supported by little care from their parents. Others became thieves and drugers. The number of street

children and poverty increase in high rates. If people will get in farming practices they will be able to reduce such problem they occur. Hence they will increase their living standards and decrease early marriages in the society as well. Through the knowledge of grafting we found out that their problems can be solved easily. They will be able to generate income through selling the grafted seedling or fruits from fruit trees. Income generated can be used to pay school fees for their children thus containing them in school.

HIGH DEATH RATES

While also noted that the death rates in the surrounding society is very high. This is caused by lack of finances to take their sick people to better hospitals, buying drugs for them and supplement their balanced diets. This has led to reduced human labour and increase number of orphans in the society. And through our knowledge of grafting members of the society will be able to generate income through selling of grafted seedlings and the produced fruits. Income generated is therefore used to take care of their beloved ones by buying food, drugs, improving their balance diets and buying clothes so as to lower the high rates of death in the society.

PROJECT IMPLEMENTATION

Group discussion was done in groups of four.

Group number 3.	Index
Ann Muethya Makau	18307307003
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Consolata Konini Musyimi	18307307011
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Low living standards

Malnutrition of the children and hygiene

Low agricultural produce

Unemployment

High death rates

Poor health

Poor roads

Deforestation

Scarcity of water

Idleness

School drop outs

Soil conservation

Crime such as thefts

Early marriages

After discussing on our project of grafting Avocados, some of the problems we encountered are listed above which i have discovered in the previous pages

GROUP PROJECT IDENTIFICATION

According to the group identification we identified using the following posters -

GROUP THREE

MEMBERS	INDEX
Ann Murethya Makau	18307307003
Grace Mutheu Klarinya	18307307025
Consolata Kanini Musyimi	18307307011
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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 came to our school to show us directive ways of grafting Orocado. After he showed us we did it individually using Tongue Grafting method.

- problem and project identification - 23 mks
- Group discussion and presentation - 36 mks
- Group project poster - 5 mks
- Project implementation - 44 mks
- Project report - 19 mks
- Reporting on progress - 19 mks