

KOLA

SECONDARY

SCHOOL

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SUBJECT. AGRICULTURE

PAPER 3 (REPORT)

GRAFTING

- It 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 part with the rooting system Known as root stock And the Part which is grafted onto the root stock 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 .

Methods of Grafting

a) Whip or Tongue Grafting

- It is used in the scion and the rootstock are of the same diameter

b) Side Grafting

- It is practiced when the stock has a large diameter than the scion .
- And also there are other methods of grafting including : bark grafting , notch grafting And Approach grafting .

Importance of Budding And Grafting

- They help to shorten of maturing age .
- It helps to repair damaged trees .
- Helps to propagate clones that cannot be propagated in any other way .
- Helps to repair damaged trees .
- Facilitate the changing of the top of the tree From being undesirable to desirable .

Reasons why a Farmer may Prefer Using Grafting

When the Stick has a larger diameter than the Scion

When the farmer requires more plants using One rootstock

Through Our Project on grafting, we Find it is good to solve problems in our Society as follows:

- ✓ Low living standards
- ✓ Malnutrition of the children and hygiene of plants
- ✓ 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 marriage
- ✓ Sexual immorality
- ✓ High birth rate

LOW LIVING STANDARDS

After touring the society around our schools we discovered that many people have a low living standards which has led to depression and isolation. Depression is the state where one is stressed beyond control while isolation is the state where one likes living alone without interacting with others. And through our project on grafting, we found that low living standards can lead to lack of unemployment may lead to lack of unemployment may lead to low living standards because many people lack employment so that they can satisfy their unlimited wants. Many people living in the rural areas they lack employment which causes to low living standard. Also lack of food, clothing, houses and basic needs. Also the problems can be solved if people had been educated about grafting and produce they are able to sell seedling fruits and the produced fruits. And can generate income. Income generated is used to improve their living standards for example, if they buy food, buy clothing, construct good houses and look on balanced diet.

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 balanced diet and they Are Even Unhealthy. This is because diet. If the parents or the People Of the Society have the Knowledge grafting fruit trees, they will be able to plant 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 illnesses. This is because in their homes they do not maintain proper hygiene. Even we had to Visit some Of the nearby Schools And discovered that day.

DEFORESTATION

As we know that deforestation is cutting down of trees which is very much pronounced in the surrounding society around our school, due to cutting down of trees for domestic use such as burning firewood and also burning Charcoal for sale. 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 can 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 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. Then 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 works.

SCARCITY OF WATER

We also noted that people in the surrounding Society are forced to walk for long distance to search for water. For example a lot of people moves from one place to another over a long distance where they go and search for water for domestic use. Also search for suitable area to get fresh water majority of people. Due to this problem there are major challenges of poor health and hygiene where youths and adults die day after the other, this is because of high mortality rate. This has led to a lot of pain and suffering to the people. Due to minimal chances of rainfall has the climatic condition of the community is low because the vegetation is misused like cutting down of trees has bring a lot of lacking water in the society. Where people majorly suffer when walking for long distances. During hot season, we found that there is a big challenge of water. Many people and animals die due to lack of water. We also noted that, during dry seasons plants in the farm starts to dry and stops to grow due to lack of water. Through the knowledge of grafting fruits trees the people in the society are enable to generate income through selling the grafted seedlings and the produced fruit. If all the community come 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.

POOR HEALTH

As we toured around the surrounding Society Around our School we discovered that many people suffered from poor health where this is a major problem because of the poor living standards such that they do not have jobs which can enable them generate income. Since they are jobless they are unable to buy balanced diet for their families, they will be also unable to take care of their reduced or low human labour.

Also as we visited the market near the School we noticed that a lot of sewage were unclean and stagnant water which made a lot of people suffer from cholera also there were many children suffering from malaria and other related diseases because of the poor living conditions such that most of them lacked money to go to hospital or money to buy medicine. And other also can't afford a balanced diet.

Through the knowledge of grafting fruits trees the Society will be able to generate income through selling of the grafted seedlings and grafted fruits from fruit trees where the income generated will be used to take care of health of their beloved ones and used to clean all the markets and sewages to prevent spread of mosquito.

POOR ROADS

We also observed that feeder roads in our Society are very poor. It has lead to poor transport more so during rainy seasons. During rainy season, perishable fruits like mangoes do not reach due to delation cause by the roads. Also during rainy season, murrain roads are prone to accidents because they are slippery and this may cause death of driver or damage of the fruits. During dry seasons, 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 markets it creates 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 general income they get after selling those grafted seedling and fruits, they are forced to make roads more passable for all weather condition thus the problem of poor roads is solved.

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 drugs addiction, for example at the 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 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. Also drugers people can be educated through the knowledge of grafting and that can reduce idleness in the community and also in the society.

HIGH RATES OF SCHOOL DROP OUTS

One of the things that are pulling back the growth of the surrounding Society is the School dropouts. 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 limits 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 in the Society will be able to Sell grafted Seedlings On 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.

LOW AGRICULTURAL PRODUCE

When we Visited the Community Around the School we conducted some Oral interview. We discovered that the Agricultural produce of the Society generally is Very low. This has led the Food Shortage to the Society. But we Are Found out that, if the People Are Educated about Fruit trees, they would be able to sell the grafted Seedlings And Fruits produced by Fruit trees And the Income generated Could be Used to buy Food and Sustain their families.

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 illtracy 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 make be occupied by a Constructive activity that will make then 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 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 bordering around in the rural and Urban Areas Searching for jobs.

HIGH BIRTH DEATH RATES

High birth rate is also evident in the Surrounding Society, this is caused by high rate of School dropout, which leads to Early marriage that encourages Poverty for Example lack of Food, Shelter, Clothes and money for free. So you find in the Society girls are in Engage in marriage so that they can get the basic need they want. But through the Knowledge income of grafting fruit trees, Parents can generate income through Selling of grafting Seedlings and the produced fruits. The generated income is used to pay the School Fee and also to produce those basic need for their Childrens. Thus minimising the number of School dropout. And to Control the birth rate to the Society.

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 diets. This has led to reduced human labour And increase number of Orphans through the Knowledge of grafting . the members of the Society will be able to generate income though selling Of the grafted Seedlings And the Produced Fruits . The generated income is therefore Used to take care Of the health of their ~~beloved~~ ones.

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 dropout And low living standard . This has led to high death rate when People Suffer from Sexual transmitted disease 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 .

EARLY MARRIAGES

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

Early marriages are also encouraged by lack of basic needs for the girls. This makes them to see marriage as a solution for their problems. This makes them to be married at a very young age and this also large number. If the parents are educated about grafting of fruit trees this will enable them to sell fruits and seedlings from fruit trees thus making them generate income which will be used to paying school fees, satisfy their basic needness and provide for them in everything thus making all the youths be contained in school hence reducing early marriages and also reducing high birth rate in the community.

SOIL CONSERVATION

As we moved around the surrounding society, we discovered that soil erosion is highly pronounced. This is because of deforestation is practiced majorly in the society and lack of land to cover generally some of the common types of soil erosion in the society.

The splash Erosion where the impact of water drops are directly on Soil Particles or on thin water surfaces. It strikes on bare soil hence it disperses the soil particles by detaching and transferring the splashes and leaving the land crusted.

When the land is crusted it leads to low Agricultural produce where people can suffer from starvation as the community has no good and fertile soil to plant or do Farming to produce crops. If the people in the surrounding society are educated about grafting of fruit trees they will be able to plant trees which will provide land cover. As a result of conserving the tree fruit planted whose root will help to hold the soil particles together thus minimising soil erosion. Also the remains of the fruit trees like leaves decompose thus adding fertility to the soil and conserving the soil which will increase the growth of agricultural produce.

HIGH CRIME RATES

When we visited the community around our school we noticed that many idlers have engaged themselves into drug abuse which has led to more occurrence of crimes in the society. In our surrounding society crime rate is very high. Therefore Crime are activities that involve breaking the law and it is also said that crime is an act that you think is morally wrong or is a big mistake.

Crime rate is caused by a lot of insecurity

In the Society. This knowledge of grafting fruit trees in our surrounding society which have something to generate income through selling the fruit and the grafted seedlings. And through having source of income the crime rate will decrease.

Group discussion was done in groups of four

Group number 4 members are:

Munywoki Agnes Kambua (1830730707)

Muenkit Sharon Mwikal (18307307012)

Kiilo Phyles Kialondu (18307307017)

Musasa Anna Wanz (18307307018)

Malnutrition of the children and hygiene and

Low Agricultural produce

Unemployment

High death rates

Poor health

Poor roads

Deforestation

Scarcity of water

Idleness

School drop outs

Sexual conservation

Crime such as theft

Early Marriages

High birth rate

Sexual immorality

After discussing our project of grafting of Avocados, some of the problems we encountered are listed below which we have discovered in the previous pages. In our group we agreed to graft Avocado trees (*Peregrina Americana*) in good condition from our project.

GROUP PROJECT IDENTIFICATION

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

GROUP FOUR		
NO	NAME	INDEX
1	Munywoki Agnes Kambua	18307307007
2	Muent Sharleen Mwikkalo	18307307012
3	Kiulu Phyles Kalondu	18307307017
4	Musaga Anne Wanzala	18307307018

PROJECT IMPLEMENTATION

- There are a man who was invited into our school and guide us on our project grafting. Grafting is to practice uniting two separate woody stems into one by budding or grafting. He took one Avocado tree and shown us, Oh how to graft.

- The requirements which he used;

- Razors blade
- Plastic Papers
- Budding Stems

- He took a razor blade and starts removing the leaves in order to graft.
- Cuts down the soft part upside, he took some of budding plants which was already for grafting and sharpened one which was like the plant.
- Therefore, one part provides the base and other part is obtained from another plant.
- That's where scion and rootstock is shown above.
- The plant is fix well in order to develop and use a plastic paper and then cover the grafted avocado plant with a plastic paper to grow.
- Place the avocado plant after grafting into an open place.
- The scion has buds which develop into the future plant.
- The ability of scion and rootstock to form a successful union.
- There are some methods of grafting.

a) Tongue grafting

- It is used for material in which the scion and the root stock are of the same diameter.
- Slanting cuts are made with a sharp knife on the scion and top of the stock of a pitot.
- It is normally carried out when the diameters of the root stock and the scion are thick.

b) Side Grafting

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

- And Other methods Of grafting includes: Approach grafting, bark grafting And notch grafting' ✓

Group project poster - 5 mks

Project implementation - 44 mks

Reporting on progress - 18 mks

Project report - 18 mks

Problem and project identification - 32 mks

Group discussion and presentation - 8 35 mks