

KOLA

SECONDARY

SCHOOL

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SUBJECT. AGRICULTURE

PAPER 3 (REPORT)

GRAFTING AND BUDDING

Grafting is the practice of uniting two separate woody stems. It has the upper part called scion and the lower part known as root stock.

Methods of grafting are;

a) Whip or Tongue grafting.

It is used for material in which the scion and the root stock are of the diameters.

b) 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.

c) Approaching grafting.

d) Bark grafting.

e) Notch grafting.

Grafting is done by uniting the scion and the root stock to form one complete tree.

Conditions necessary for grafting to be successful;

Temperature: Temperature is required to cool the process.

Compatibility: The scion to enhance compatibility.

Relative humidity: Relative humidity should be of high and maintained, physiological maturity of plants that is the scion

and root stock.

Budding is the practice of uniting a vegetative bud scions to a seedling or another plant root stocks.

Methods of budding; ✓ T-Budding.

✓ Top Budding

✓ Patch Budding.

Importance of Budding and 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 or flowers on the same plant.

3. They help to shorten the maturing age.

4. They help to propagate clones that cannot be propagated in any other way.

5. Grafting helps to repair damaged trees.

After discussing on our project of grafting avocados, some of the problems were encountered are:

✓ Deforestation.

✓ Unemployment.

✓ Malnutrition of the children and Hygiene.

✓ Poor roads.

✓ Early Marriage.

✓ High death rates.

✓ Scarcity of water.

✓ High birth rates.

✓ Illiteracy.

✓ Poor health.

✓ High rates of school dropouts.

✓ Low agricultural produce.

- ✓. Soil Conservation.
- ✓. Sexual Immorality.
- ✓. High Crime rates.
- ✓. Low living standards.

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 brought by major cutting down of trees for domestic uses such as burning of firewood and burning of charcoal which has major effects on the soil, that it makes the land unproductive because the micro-organisms which decomposes to form nutrients used by crops in producing yields are burned.

Also burning of the charcoal producer smoke which interferes with the ozone layer hence leading to low rainfall. 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 that have been cut in the previous years. After planting the fruit trees the people in the surrounding society will be able to generate income through selling of grafted seedlings and fruits from the grafted fruit trees thus minimising deforestation.

Then the income generated after getting the fruits and seedlings from the grafted fruit trees will be used in activities such as paying school fees for the youth in the community freely hence making them committed into academics.

UNEMPLOYMENT.

Unemployment is a situation where people have no job opportunities, which is the most harmful thing that has increased in the surrounding society as unemployed and this is because of illiteracy and high rate of school drop-out that has lead to increase in crime 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 by a constructive activity that will make the people to generate income through getting of grafted fruits and selling from the grafted fruit trees.

After getting 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 within the surrounding society to plant more grafted fruit trees in their farm and maintain the fruit trees by digging out the unwanted weeds from the farm, applying fertilizers for faster growth and

harvest good grafted fruits; using this method of grafting fruit trees we will reduce the numbers of people who are loitering around in the rural and urban areas searching for jobs.

MALNUTRITION OF THE CHILDREN AND HYGIEN

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 these parents were unable to provide a balance diet. If the parents or the people of the society have the knowledge of grafting fruit trees, they would be able to generate income through selling the grafting seedling and fruit from the fruit tree.

The generated income would be used to provide a balance diet more go to their families.

On poor hygiene, we visited the nearby hospital and after conducting oral interview 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 knowledge of grafting fruit trees as communicated earlier in my presentation, the generated income will assist the community at a large improve to their income.

POOR ROADS.

It also observed that feeder roads in our surrounding society are very poor and it has lead to poor transport more so during rainy seasons. During rainy season perishable fruits like mangoes, vegetables and oranges are likely to rot due to deletion caused by the roads prone to occur accidents because they are slippery and this may cause death of the drivers or damage of the fruits.

During dry seasons, road are dusty. The dust tends to make drivers suffer from fever or chest pain and can also lead to breathing problems of which the time he takes to heal he could have used it to transport more fruits to the market. It in the market. To solve this problem, people are educated on grafting of fruit trees, because they need to use roads when transporting those grafted fruits and selling.

Then after selling the fruits and seedlings they will be able to generate income. The income generated after selling the fruit seedlings from grafted fruit trees, they will

be forced to make roads more passable for all weather conditions thus the problem of poor roads is solved.

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 fruit trees and the income can be used to pay school fees for their children thus containing them in school and minimizing the early marriage.

Early marriages are also encouraged by lack of basic needs for the girls, this make them to get marriage as a solution for their problems. This makes them to be married at a very young age and this also increase the birth rate in the community at large numbers. 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 pay school fees, gratify their basic needs and provide for them in everything thus making all the youth be contained in school hence reducing early marriage and also reducing high birth rate in the community.

HIGH DEATH RATES.

We also discovered that the death rate in the surrounding Society is very high. This is caused by lack of financial to buy balanced diet for themselves hence this leads to diseases such as rickets,麻疹 and many more other diseases. Due to lack of financial, the rich will not be taken to better hospitals, buy drugs for them. This has led to reduced human labour and increased number of orphans.

If the people in the surrounding Society are educated about grafting of fruit trees they will be able to plant fruit trees. After planting the fruit tree they will be able to generate income through the selling of the fruit produced. Then the income generated will help them to take good care of their beloved ones by buying balanced diet for them to prevent rickets and also take those who are sick to the better hospitals for better treatment hence this will increase human labour because of healthy people in the surrounding society.

After generating income they will give their beloved ones good care whereby death rate will reduce as the people are healthy in the society hence this reduces large numbers of orphans and will bring a better society.

SCARCITY OF WATER.

As we toured around the school society we noted that water is a major challenge. This is due to lack of trees in the society which helps in bringing rain. The trees have been cut down for no major reason.

Due to lack of water the livestock and also people are dying as there is no moist and to plant crops. People in the society walk for long distances 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 fruit and seedlings from the planted fruit trees. The planted fruit trees will provide shade which will help in bringing rainfall in the society hence this will reduce the scarcity of water. Then the income generated will help them supply water in the whole society hence this will reduce water scarcity and lead people to live a better life in the society.

HIGH BIRTH RATE-

Due to school drop out many youths have involved themselves to early relationships and also involved themselves into early marriages which has lead to high birth rate in the society in every day childrens are born in large numbers which has encouraged poverty in the society as the number of educated people is very low hence this leads to lack of knowledge of giving birth to few kids.

For example lack of food, shelters, clothes and money to pay school fees for their born kids and also the money to take care of their born kids. So you find in the society young girls are engaged in marriage so that they can get the basic need they want.

If the people in society around our school are educated about the grafting of fruit trees they will be able to plant the fruit trees which will enable them to generate income through selling of the seedlings and fruits from fruit trees. The income generated will help them pay school fees for their children hence preventing large number of school dropout hence minimising early engagement and marriages which will reduce birth rates in the society and large numbers of young children in the society will reduce.

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, market or even supermarkets to take some items so that they can fulfil their desires.

By for instance if they are caught by mob justice they can be stoned to death hence leading to poor population of youths in our society; idleness has also lead to drug abuse which has resulted to drug to drugs addiction for example; at the market, there were many young boys who looked like mad people but in their real sense its just the effects of 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 idles in the market place and at home will reduce and the numbers of crimes in the society will reduce hence reducing drug and drug abuse.

POOR HEALTH.

As we toured around the surrounding society around our school we discovered that many people suffer 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 to generate income. Since they are jobless they are unable to buy balanced diet for their families, they will also be unable to take care of their sick people. Where this has led to 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 to 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 fruit 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 sewage to prevent spread of mosquito.

HIGH RATES OF SCHOOL DROPOUTS.

One of the things that are pulling back the growth of the surrounding society is the high number of 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 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 grafted seedlings and the produced fruits the generated income can be used to pay school fees for their children thus sustaining them in school.

The parents will be able to provide all the basic needs required by their children and that will minimise the number of school dropouts in the society surrounding our school.

LOW AGRICULTURAL PRODUCE

low agricultural produce is a situation where the farm and livestock yields are reduced due to weather and climatic conditions such as low rainfall standards and job opportunities.

Many people in the society suffer as they walk for long distances looking for job and water. As many rivers are seasonal and they dry up immediately after the season ends.

When we visited the community around our school and conducted some oral interview. We discovered that the Agricultural produces of the Society generally is very low. This has lead to food shortage to the community. At that community we found out that many people from urban centres have been relying on agriculture which is majorly practiced in rural areas.

The people are not educated about fruit trees, they would be able to sell the grafted seedling or fruit produced by fruit trees and the income generated can be used to buy food and sustain their families it will also increase farm labour and human hence increase food and agricultural produce. It will also increase demand of the agricultural produce and help those in urban areas have enough food to reduce expenses.

SOIL CONSERVATION

As we moved around the surrounding society we discovered that soil erosion is highly pronounced. This is because of deforestation which is practiced majority in the society and lack of land cover generally some of the common types of soil erosion in the society which include water drops are directly or 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 crop. 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 as a result of conserving. The fruit trees planted whose root will help to hold the soil particles together thus minimising soil erosion. The remains of the fruit trees like leaves they will decompose thus adding fertility to the soil and conserving the soil which will increase the growth of agricultural produce.

SEXUAL IMMORALITY.

Sexual Immorality is a situation where people of the both genders are sexually harassed. After we visited the community around our school we conducted oral interviews which made us know that sexual Immorality is commonly practised in the society. This has been caused by high rate of school dropouts and low living standards that is when people are raped and commit adultery and easily get pre-mature or early pregnancies which make the dropout of school.

This has led to high death rates as people suffer from sexual transmitted diseases such as Gonorrhea, syphilis, HIV/AIDS and many others, if people maintain themselves well and abstain from all those sexual Immoralities they will reduce high death rates in the community. If the people in the society are educated about grafting of fruit trees, they will be able to plant fruit trees they will have something that they can generate income through selling of the grafted fruits and seedlings from the planted fruit trees. The income generated will allow people in the community to get their basic needs without engaging in sexual Immorality and harassment.

LOW LIVING STANDARDS

Low living standards can be brought up by; lack of clothing, lack of houses and lack of balanced diets.

After touring the society around our school, we discovered that many people have low living standards which has lead to depression which is a state where you find some one is stressed beyond control. It has also led to isolation in a state where one likes living alone without interacting with others.

And through our project of grafting, we find that our problems can be solved. If people had been educated about grafting, they can sell their grafted incomb or after planting the seed trees they can sell the fruit and generate income as well.

The income generated can be used to improve their low living standards for example; the people could be able to buy clothings, others construct good houses, buying food, educate their balanced diets ~~to~~ ^{or} to improve their low living standards as well.

Even when they get money, people can buy land for grafting, and also creating markets as they improve their markets for selling their produced fruits.

Even after buying the land, they can use it on

even after buying the land, they can use it on
planting tree, by doing that they will
find our problems that can be solved easily
and improve the low living standards.

our local govt. has been giving us project of A
privileges and along from both government
districts, we have got local Govt. districts which
is one who bring up roads etc. in
of local areas and H.P. Roads brought beneath
privileges and under state or in national
ways with this particular function, so
bring up projects p. being no drought haA
stop 71. border and no flooding in both
participate funds, because and local
areas to small border isn't that no
with H.P. government work bring with privilege
Now to bring stoppings ban away

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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. This has caused insecurity in the community because when a farmer has livestock and he who has planted many trees and are already ripe the idlers can plan on how to steal the fruits and farm produce hence leading to starvation and lack of wealth to most farmers.

Also when many people in the society have lost their jobs and others don't have and they have been looking for job vacancies and yet there is no job they can plan on how to go to a certain village, house, shop, supermarkets and also groceries to steal the items so that they can sustain and satisfy their needs and the need of their families.

If the people in the society are equipped with the knowledge of grafting fruit trees they will be able to generate by selling the grafted seedlings and fruit from the fruit trees. This will provide job for those who don't have and then to provide basic needs to their families using legal ways hence minimizing high crime rates in society and to maintain peace, order and security.

Group discussion and presentation were done in group of four.

GROUP MEMBER 9.

Naomi	Muthami	Muitwa	18307307004.
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We agreed to do grafting on avocado tree (*peuced americana*).

Low living standard.

Malnutrition of the children and hygiene.

Low agricultural produce.

Unemployment.

High death rates.

Poor health.

High birth rates.

Deforestation.

Scarcity of water.

Idleness.

Early marriages.

School drop out.

Crime such as thefts.

Soil conservation.

After discussing on our project of grafting avocado, some of the problems were encountered are listed above which I have discussed in the previous pages.

PROJECT IMPLEMENTATION.

Grafting is the practice of uniting two separate woody items. 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 young man in the society came to our school to show us directive ways of grafting aracado, after he showed us, we than did it individually using Tongue grafting method.

problem and project identification - 32 mks

Group discussion and presentation - 35 mks

Group project poster - 5 mks.

Project implementation - 44 mks.

Reporting on progress - 19 mks

Project report - 20 mks.