

# TOPIC 1 CONSERVATION OF RESOURCES.

## 1.1-SOIL CONSERVATION.

- x Soil is very important in agriculture because of the following:
- x It provides a surface in which plants grow in.
- x It provides air.
- x It also provides water.
- x Soil provides the nutrients needed by the plants for their growth.

Therefore, loss of soil affects growth of plants and animals which usually depend on plants. **How can Top soil be lost?**

- ~ When there is too much water on soil surface like when it is raining, some of the water is not absorbed by the soil since it has already absorbed much.
- ~ The excess water then flows on the soil surface. This flowing water is called **runoff**.
- ~ The runoff water usually carries the top soil when flowing. This process is called **soil erosion**.
- ~ Soil erosion leads to the loss of important nutrients which are in the soil.
- ~ This makes the plants to grow poorly.



**Surface run off after rain.**

## Soil Recovery.

- When runoff carry top soil that is fertile, the soil is deposited in areas where we cannot use it again such as in the rivers, forests and along the roads.
- Top soil should be taken care of by conserving it to prevent it from being carried away.
- This can be done by the process of soil recovery.
- Soil recovery is the process of collecting soil from soil from the site where it is deposited and using it to replace the lost top soil.



## SOIL IMPROVEMENT.

Soil improvement is the addition of fertility in the soil to improve the nutrients in the soil.

This can be done by addition of organic manure.

A pit can be constructed using tools such as jembe and spade where you can deposit materials such as plant wastes (dry grass, or weeds, dry plant leaves, crop remains), food remains and kitchen wastes.

The materials should be cut into smaller pieces using a panga.

They should be dumped in the pit or in the composts bin every day until it is filled up. (full)

Where compost pits cannot be made, you can use a drum or a wood pallet as a compost bin.

### A drum.



### Wood pallet



Organic waste in a pit.



Turning organic matter in the pit until it is fully decomposes.



## NOTES:

- ✓ Care should be taken when handling organic matter by observing hygiene. This can be done by using gloves and gumboots during the activities.
- ✓ Wash your hands after handling the organic waste materials.
- ✓ Avoid dumping materials plastics and chemical containers in the compost pits or bin.

### Growing crops in an Organic waste pit.

- Some crops can be planted in an organic waste pit which has fully decomposed waste materials.
- For compost pits, the waste material should be removed and mixed with the soil.
- Crops planted in an organic waste pit should be taken care of by:
  - ✓ Watering.
  - ✓ Weeding to remove weeds.
- Therefore, if a poor area is provided with compost pit and organic materials, the area is improved and crops can be grown.

### 1.2-WATER CONSERVATION.

- ✧ Some farming practices can be used to conserve water.
- ✧ These practices help to retain water in the soil for the crops to use when growing.
- ✧ **The following are practices used to conserve water in the soil for plant use:** a.) Mulching.  
b.) Shading crops.  
c.) Cover cropping.

#### 1. Mulching.

- Materials such as dry grass clippings, dry leaves, straws, seaweeds, crop remains, garden weeds and wood chippings can be placed on the ground near crops to cover it.
- This is called mulching.
- It helps to reduce evaporation of moisture from the soil hence conserving water from crops to use.
- Mulching also can control weeds as it prevents growth of weeds from the soil.
- Mulches also reduce splash erosion as they prevent rain drops from reaching the ground directly.





**Photograph showing Mulching materials (dry grass)**

## 2. Shading crops.

- This is erecting a shade over growing crops.
- The shade prevents direct sunlight from reaching the soil which reduces evaporation of moisture.



*a shade used to prevent evaporation of moisture.*

## 3. Cover cropping.

- Cover crops are crops whose leaves cover the soil surface.
- They protect the soil from losing water through evaporation.
- Cover crops also prevent splash erosion because they stop rain drops from reaching the ground directly.

### What are the examples of crops used as cover crops in farming?

- ☆ Beans.
- ☆ Desmodium.
- ☆ Sweet potatoes.
- ☆ Beans and cowpeas.
- ☆ Pumpkin plant.

Desmodium



Sweet potatoes.



Beans

Pumpkin plant



### 1.3- CONSERVING WILD ANIMALS.

#### Importance of Wild animals.

- ✓ They earn us money through tourists who come to see them.

Some wild animals are dangerous to human and domestic animals while others destroy crops in the farm.

#### **What are some of the ways to use in controlling wild animals without killing them?**

- ✓ Use of sound.
- ✓ Using smells.
- ✓ Use of smelly and bitter tasting plants.



✓ Use of irritating plants with thorns.

✓ Use of light reflecting objects such as CDs. ✓ Use of scarecrows.

✓ Using fences.

✓ Trapping them and returning to game parks.

### Care and safety from Wild animals.

- Some wild animals are dangerous.
- They attack human beings and even kill them.
- Animals such as wild dogs, wild cats' monkeys when they bite you or scratch, they transmit dangerous diseases such as **rabies**.
- It is always advisable to keep safe distance from the wild animals.
- Do not touch or provoke wild animals.

#### **NOTE:**

Wild animals should not be killed as they earn money for the country when tourists come to see them.

# TOPIC 2 FOOD PRODUCTION PROCESSES.

## 2.1 GROWING VEGETABLES.

- Vegetables are very important because they provide vitamin in the diet.
- Vitamins protect our bodies against diseases.
- Farmer can grow vegetables and sell them to earn some money or income.
- Some vegetables are not directly planted in the farm but are first planted in a nursery to give them special care.
- A nursery bed is a small area of land that is used for raising young seedlings before they are transplanted to a permanent place called a **seedbed**.

### Preparing a nursery bed.

The following steps are followed when preparing a nursery bed for planting.

- ⇒ Select a suitable site (place).
- ⇒ Clear the vegetation in the area. Use a lasher to clear the vegetation.
- ⇒ Using a tape measure, measure 1m wide and any preferred length.
- ⇒ Dig the marked site to loosen the ground and remove all the weeds and any stones present. Use a jembe and fork jembe.
- ⇒ Raise the soil to about 15cm above the ground.
- ⇒ Break bog soil clods until the soil is fine.
- ⇒ Add manure and mix it with the soil using a spade and wheel barrow.
- ⇒ Level the nursery using a rake.

Nursery bed can also be prepared using container or tyres.



### Sowing/planting seeds on a nursery bed.

Sowing seeds is done using the following steps or procedure:

- Use the index finger or a short stick to make shallow furrows that are spaced 15 to 20 cm apart.
- Spread the seeds evenly along each furrow. This method is called **drilling**.
- Cover the seeds with a thin layer of soil and press the soil slightly.

- Apply dry plant materials. This is called **mulching**.

- Water the nursery bed.

### Care for vegetable seedlings in the nursery bed.

After sowing seedlings and they have germinated, they require to be cared for so that they continue to grow healthy.

Farmer can take care of growing seedling through the practices shown below.

#### Shading.



**Shading**- this is putting up a shade to cover the growing seedlings.

It prevents direct sunlight to the seedling.  
It conserves water by preventing evaporation of moisture from the soil.

#### Thinning.



**Thinning** is removing overcrowded seedling. This is done to ensure there is correct number of seedlings to grow well and healthy.

#### Weeding



**Weeding** is the removal of weeds growing in crops.

Weeding can be done by uprooting the weeds growing inside a nursery bed.

#### Watering.



**Watering** is done to provide the seedlings with enough moisture to grow well,  
This prevents them from drying up.

## Mulching



**Mulching** is placing dry grass or plant materials to the soil that has growing crops. Mulching helps to conserve water by preventing evaporation of moisture. It also prevents weed from growing.

## Preparing a seedbed for planting vegetable seedlings.

- We plant seeds in a nursery bed and they germinate and grow into seedlings.
- When the seedlings are in the nursery they are transplanted to another main permanent field where they will grow fully and develop to crops.
- This permanent field where transplanted seedling will be taken is called a seedbed.
- A seedbed has to be prepared before seedling are transplanted in it.
- The seedbed should be ploughed or dug and all soil clods broken to fine soil.
- All weeds should be removed include an obstacles such as stone and stumps before transplanting.

## Preparing vegetable seedlings for transplanting.

- Vegetable seedlings for transplanting can be prepared by:
- Removing the shade and reducing the amount of watering few days before they are transplanted.
- Transplanting should be done when the weather is calm, cloudy and cool.
- Water the seedling before they are uprooted for transplanting. This prevents damage to the roots when uprooting.
- Uproot seedlings carefully to ensure the roots are surrounded by some soil.
- Ensure planting holes in the seedbed are ready before transplanting.
- The soil in the transplanting holes should be mixed thoroughly with decomposed manure.
- Planting holes should be placed properly in the seedbed.
- If soil in the planting holes is dry, it should be watered before planting the seedlings.

After transplanting, some excess seedlings might remain in the nursery bed. These seedlings can be sold to earn income for yourself.

## Identifying gardening practices for vegetable crops.

The following are gardening practices carries out in vegetable crops.

- ↳ **Irrigation**-during dry season, crops are irrigated to provide water or moisture

- ↪ Weeding-weeds are removed to ensure crops grow healthy without competition.
- ↪ **Pruning**-some parts that are not required are removed from the crops. This may be due to breakage or pests and diseases.
- ↪ **Training**-crops are made to grow in special ways such as supporting those with weak stems.
- ↪ **Gapping**-dead seedlings are replaced.

Maintaining tools used in the farm.

Tools and equipment used in the farm should be maintained to ensure they last longer.

Tools and equipment used in the farm include:

- ↪ Jembe.
- ↪ Watering can.
- ↪ Gloves.
- ↪ Secateurs.
- ↪ Trowel.
- ↪ Panga.

↪ Garden fork.



**The tools and equipment used in the farm are maintained by;**

- ↪ Cleaning them after use.
- ↪ Storing them in a dry place.
- ↪ Sharpening cutting parts of the tool if blunt.
- ↪ Using the tool for correct purpose.
- ↪ Replace broke parts such as the handles.

**Caring for growing vegetables.**

- Seedlings that dry up or die should be replaced.
- Weeding should be done to remove weeds.
- Shading should be applied to prevent evaporation of moisture.
- Watering is necessary to prevent drying up of weeds.
- Pests and diseases should be controlled.
- Excess branches should be removed in some crops such as tomatoes to remain with strong ones. This is called pruning.
- Tall varieties of tomatoes should be trained to grow upright and get enough sunlight.

## Appropriate stage of harvesting vegetables.

Vegetables are harvested when they are mature.

Some are harvested by plucking while other are harvested by cutting the heads such as in cabbages.

They should be harvested at the correct stages to prevent over maturing of the parts eaten, this reduce their quality and nutrients.

Immediately after harvesting they should be weighed to record their weight for recording purpose.

Keep the records indicating quantity that is consumed, quantity sold and total amount sold.

Other information that can be recorded include:

⇒ Date of planting.

⇒ Date of harvesting.

Some vegetables maybe harvested when they change in size and when they start changing colour such as tomatoes, hot pepper and some pumpkins.

Some vegetables such as sweet pepper can still be harvested when they are green in colour.

Ripe fruits are picked by hand.

Care should be taken so as not to damage the skin of the fruits.

Harvesting of fruit vegetables should be done at the correct time to avoid over ripening of fruits. Overripe fruits have low quality.

Leaf vegetables such as kales should be harvested when the leaves are tender and green.

Cabbages are harvested when the heads are firm. The head is removed by cutting the base of the stalk with a sharp panga.

Bulb onions are harvested when top leaves start bending and turning yellow. Soil is loosened around the bulb and then the bulbs are pulled out.

## 2.2-USSES OF DOMETIC ANIMALS.

### Uses of Domestic Animals.

Domestic animals are kept on the farm because they are useful.

Examples of domestic animals kept on the farm are:

↻ Cattle.

↻ Camels.

↻ Goats.

↻ Sheep.

↻ Poultry like chicken, ducks and turkeys.

↻ Bees.

↻ Fish.

↻ Rabbits.

↻ Donkeys.

↻ Horses.

↻ Dogs.

## General Uses of Domestic Animals.

- ✓ Providing food such as meat, honey, milk and eggs.
- ✓ Provides manure for farming.
- ✓ Providing raw materials such as leather, milk, wool to be used in production of other products such as clothes, shoes and yoghurt.
- ✓ Animals help in daily activities by providing labour such as carrying loads, ploughing the farm etc.
- ✓ Some provide with security and companionship such as dogs and cats respectively.

DOMESTIC ANIMAL	IMPORTANCE
<b>Cattle.</b>	<ul style="list-style-type: none"> <li>↳ Gives us milk.</li> <li>↳ Gives us meat.</li> <li>↳ Gives us manure</li> <li>↳ Helps to provide labour when ploughing.</li> </ul>
<b>Goats.</b>	<ul style="list-style-type: none"> <li>↳ Gives us milk.</li> <li>↳ Gives us meat.</li> <li>↳ Gives us manure</li> </ul>
<b>Sheep.</b>	<ul style="list-style-type: none"> <li>↳ Gives us meat.</li> <li>↳ Gives us wool.</li> <li>↳ Gives us manure.</li> </ul>
<b>Poultry.</b>	<ul style="list-style-type: none"> <li>↳ Gives us meat.</li> <li>↳ Gives us eggs.</li> <li>↳ Gives us manure.</li> </ul>
<b>Camels</b>	↳ Gives us meat.



↳ Gives us milk.



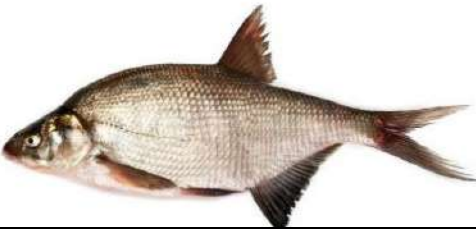
↳ Help us to carry loads or provide labour.

**Donkey**



↳ Helps us to do work like transport heavy loads.

**Fish**



↳ Gives us food.  
↳ Can be sold to get money

**Rabbits**



↳ Gives us meat.

**Bees**



↳ Gives us honey which is food.  
↳ Honey is sold to give us money  
↳ Pollinates our crops.

**Dogs**



↳ Provide security to our homes.  
↳ Provide companionship

**Pigs**

↳ Provides us with pork and bacon.

**Horses.**

- ↳ Used in sports.
- ↳ Used for ridding.
- ↳ Provide labour.

## TOPICAL WELL ANSWERED QUESTIONS

**Name the domestic animals that are important at home**

- Cattle.
- Sheep.
- Goat.
- Donkey.
- Camel.
- Pigs.
- Bees

**Name three domestic animals that give us manure.**

- Cattle.
- Sheep.
- Goat.
- Sheep.
- Chicken

**Name the domestic animals that provide us with food.**

- Cattle, sheep, goat, bees, chicken, camel, pigs

**Which domestic animals may be kept as pets to make homes beautiful?**

- Dog.
- Cat.

### 2.3-PRESREVATION OF CEREALS AND PULSES.

Food requires to be preserved to retain their quality for a longer period of time.

**Food preservation** is the process or techniques used to maintain food in good conditions to avoid spoilage.

Cereal are important source of energy

**A cereal** is a member of the grass family cultivated for food.

**Pulses** are edible seeds that grow in pods.

Examples of Cereals include:

Maize.

Wheat.

Rice.

millet

#### Methods of preserving cereals and pulse.

- ~ Sun drying cereals.
- ~ Use of ashes
- ~ Use of airtight containers.



#### Equipment and material for preserving cereals and pulses.

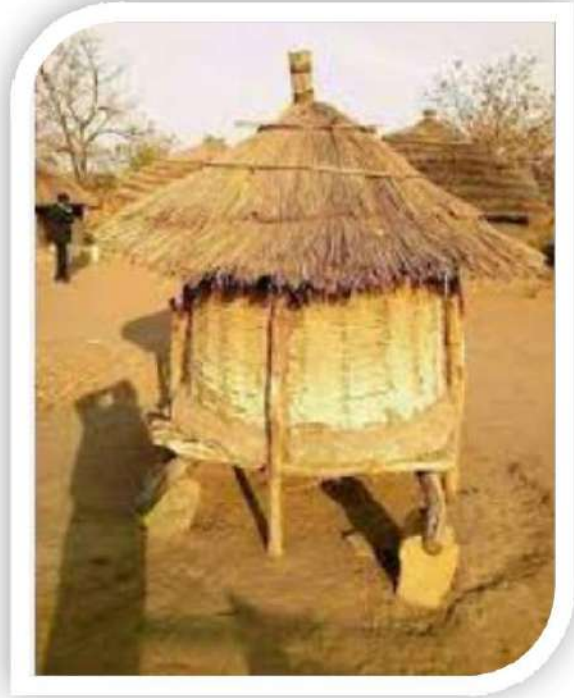
Sacks.

Granaries.

Airtight containers.

Pots.

Storage bags



### **Importance of preserving Cereals and pulses.**

- ✧ Preserving cereals and pulses makes sure they can be kept for a long time.
- ✧ It ensures they are readily available throughout when needed.

## **2.4 FOOD NUTRIENTS.**

### **Food and Nutrients.**

**Food**-this is what we eat and drink for energy and growth.

Feeding our bodies is about getting the right nutrition.

**Nutrition**- this is giving or providing the body with the food it needs for it to grow and be healthy.

Feeding the body so that it is healthy means that you are eating a varied diet to get enough nutrients.

### **Various nutrients found in foods.**

When we eat food, we get a variety of nutrients found in the diet.

There are various types of nutrients found in foods which are group into two categories.

## 1. Micronutrients.

They include fats, vitamins and minerals.

They are required by the body in small quantities.

## 2. Macronutrients-

They include carbohydrates and proteins.

They are required by the body in large quantities.

Some foods also provide roughages.

Roughages are important in the body as it helps to keep the digestive system healthy.

We also need water to help in digestion and stay alive.

Eating a varied, well-balanced diet means eating variety of foods that have atleast all the five groups of meals (carbohydrate, protein, vitamin, minerals and fats).

### Carbohydrates include:

- ✓ Ugali.
- ✓ Chapati.
- ✓ Mandazi.
- ✓ Githeri.
- ✓ **Bread.**
- ✓ Sweet potatoes.
- ✓ Sugar.
- ✓ Honey.
- ✓ Irish potatoes.

### Proteins include:

- ✓ Meat.
- ✓ Chicken.
- ✓ Fish.
- ✓ Eggs.
- ✓ **Milk.**
- ✓ Green grams.
- ✓ Yoghurt.
- ✓ Peas.
- ✓ Groundnuts.

### Fats include:

- ✓ Cheese.
- ✓ Avocado.
- ✓ Peanuts butter.
- ✓ Fatty fish.
- ✓ **Fish oil.**
- ✓ Soymilk.
- ✓ Nuts.
- ✓ Cooking oil.
- ✓ Pumpkin seeds.

**Vitamins include:**

- ◇ Green vegetables.
- ◇ Green peas.
- ◇ Carrots.
- ◇ Nuts.
- ◇ **Avocados.**

**Minerals include:**

- ◇ Dark green vegetables.
- ◇ Liver.
- ◇ Egg yolk.
- ◇ Poultry.
- ◇ Fish.
- ◇ Milk.
- ◇ Sardines.
- ◇ Millet.
- ◇ Sorghum.
- ◇ Rice.
- ◇ **Table salt.**

**Roughages (dietary fibre) include:**

- ◇ Brown rice.
- ◇ Barley.
- ◇ Nuts.
- ◇ Lack beans.
- ◇ **Lentils.**

**Water food include:**

- Water.
- Fruits.
- Juices.
- Water melon.
- Porridge.

- ◇ Ripe bananas.
- ◇ Lemons.
- ◇ Mangoes.
- ◇ Apples and oranges

- ◇ Pears.
- ◇ Apples.
- ◇ Maize.
- ◇ Green beans.
- ◇ **Vegetables.**

Nutritional deficiency	Symptoms and signs	Causes	Prevention
<b>Marasmus</b>	<ul style="list-style-type: none"> <li>✧ Excessive loss of weight.</li> <li>✧ Sunken eyes.</li> <li>✧ Alertness.</li> <li>✧ Wrinkled skin.</li> <li>✧ Diarrhoeas.</li> <li>✧ Respiratory infections.</li> <li>✧ Delayed growth</li> </ul>	Lack of all nutrients.	Eating balanced diet.
<b>Kwashiorkor</b>	<ul style="list-style-type: none"> <li>✧ Swollen face and hands.</li> <li>✧ Protruding abdomen.</li> <li>✧ Change in skin and hair colour and texture.</li> <li>✧ Fatigue and irritability.</li> <li>✧ Diarrhoeas.</li> <li>✧ Failure to grow or gain weight.</li> </ul>	Lack of proteins.	Eat proteins such as chicken, milk, fish, eggs, meat or beans.
<b>Rickets</b>	<ul style="list-style-type: none"> <li>✧ Bowed legs or knock knees.</li> <li>✧ Delayed growth.</li> <li>✧ Delayed crawling and walking.</li> <li>✧ Pain at the back and the legs.</li> <li>✧ Weak muscles.</li> </ul>	Lack of enough calcium, phosphorus and vitamin D.	Eat protein rich foods such as egg yolk and fish, liver and omena.
<b>Nutritional anaemia</b>	<ul style="list-style-type: none"> <li>✧ Body weakness and dizziness.</li> <li>✧ Breathlessness.</li> <li>✧ Rapid heartbeat.</li> <li>✧ Pale skin.</li> <li>✧ Headache.</li> <li>✧ Craving for soil due to lack of iron.</li> <li>✧ Sores in the mouth or on the tongue.</li> <li>✧ Weight loss.</li> <li>✧ Pale eyes, tongue and gums.</li> </ul>	Lack of iron. Vitamin B12	Eat foods rich in iron and vitamin B12. Such as liver, meat, egg yolk or vegetables.
<b>Goitre</b>	✧ Swelling in the front of the neck.	Lack of iodine.	Eat iodized salt and vegetables.

	<ul style="list-style-type: none"> <li>✧ A tight feeling in your throat.</li> <li>✧ <b>Coughing and hoarseness.</b></li> <li>✧ <b>Difficulty swallowing and breathing.</b></li> </ul>		
<b>Constipation</b>	<ul style="list-style-type: none"> <li>✧ <b>Difficulty passing stool.</b></li> <li>✧ <b>Passing less stool than usual.</b></li> <li>✧ <b>Lumpy, dry or hard stool.</b></li> <li>✧ <b>Pain and cramping in the abdomen.</b></li> <li>✧ <b>Feeling bloated.</b></li> <li>✧ <b>Loss of appetite.</b></li> </ul>	Inadequate drinking of water or consumption of vegetables.	Drink enough water, eat vegetables and fruits.
<b>Night blindness</b>	<ul style="list-style-type: none"> <li>✧ <b>Headache.</b></li> <li>✧ <b>Eye pain.</b></li> <li>✧ <b>Nausea and vomiting.</b></li> <li>✧ <b>Blurred vision.</b></li> <li>✧ <b>Sensitivity to light.</b></li> <li>✧ <b>Difficulty seeing into distance.</b></li> </ul>	Lack of vitamin A.	Eat food rich in vitamin A such as liver, milk, egg yolk, cheese, kidney or fish.
<b>Scurvy</b>	<ul style="list-style-type: none"> <li>✧ <b>Swollen, spongy and purplish gums that are prone to bleeding.</b></li> <li>✧ <b>Loose teeth.</b></li> <li>✧ <b>Scaly, dry skin.</b></li> <li>✧ <b>Very dry hair that curls and breaks easily.</b></li> <li>✧ <b>Slow-healing of wounds.</b></li> <li>✧ <b>Opening of previously healed scars.</b></li> <li>✧ <b>Premature stopping of bone growth in babies and children</b></li> </ul>	Lack of vitamin C.	Eat fruits such as lemon, oranges, tangerines, pineapples, guavas, strawberry or plums
<b>Obesity</b>	<ul style="list-style-type: none"> <li>✧ <b>Excessive body weight.</b></li> <li>✧ <b>Back and joint pains.</b></li> <li>✧ <b>Breathlessness.</b></li> <li>✧ <b>Increased sweating.</b></li> <li>✧ <b>Tiredness during play.</b></li> </ul>	Overeating.	Eat healthy foods in correct amounts and exercise regularly.

## 2.5 DRY FAT FRYING AND DEEP FRYING.

**Cooking** is the process of preparing food to make it safe and edible.

Cooking is achieved by preparing and combining ingredients and placing them on a source of heat to cook until they are ready

### Dry Fat Frying

This is a method of cooking foods that are high in fat in a pan where only the melted fat from the food is used.

#### **Safety when cooking foods at home.**

- Before cooking ask for permission from parents.
- Wash hands thoroughly before you start cooking.
- Clean the counter or tables where food will be prepared.
- Take out all the equipment and ingredients needed to prepare food.
- Thoroughly clean the food to be cooked.
- Use protective clothing and masks when cooking such as apron to protect your clothes.
- Be careful when handling sharp equipment such as knives in the kitchen.
- Do not leave food unattended.
- Keep cooking appliances away from water.
- Use potholders or dry clean cloths when you touch sufurias, pans and pots

#### **Storing dry fat fried foods appropriately.**

- ☞ Storing dry fat fried food ensures nutrients are preserved and food does not go bad.
- ☞ Allow dry fat fried foods to cool completely before storing them.
- ☞ They should be put in containers and covered before storing.
  - ☞ Has less fats compared to deep fried foods.
  - ☞ Gives a distinct aroma and taste.
  - ☞ It is a healthy way of cooking food.

### Deep frying.

This is the process of cooking food totally covered or immersed in hot cooking fat or oil.

This process produces evenly cooked food.

Foods to be deep fried should be dry to avoid oil spurting.

The food should also be placed gently into the oil.

Consider standing at a distance from the hot oil when putting in food to be deep fried.

Examples of deep-fried foods:

- Maandazi.
- Chips.
- Chicken.
- Beef.

**Benefits of deep frying.**

- ~ Quick way of cooking.
- ~ Deep fried food is tasty.
- ~ Well heated oil prevents food from absorbing excess oil.

# STRAND 3 HYGIENE PRACTICES.

## 3.1 GOOD GROOMING PRACTICES

### Good grooming as a daily health habit.

- Keeping clean is very important part of staying healthy. For example, the simple act of washing hands before eating and after using the toilet is proven and effective way of fighting off germs and avoiding sickness.

### **Ways of maintaining good grooming as a daily health habit;**

- Keep our clothes clean.
- Iron clothes after washing to keep them free from creases.
- Always wash sports kits after games.
- Damp or wet clothes promote growth of moulds that destroys clothes.
- Take care of torn clothes by mending them.
- Wash your hands before taking meals.
- Always brush your teeth.
- Have bath daily.
- Ensure your hair is clean.

## 3.2 HOME HYGIENE

### **Surfaces made from different materials.**

- ☞ Surface in the home are walls, floors, ceilings, tables and windows surfaces.
- ☞ There are different materials used to make surfaces in the home.
- ☞ These materials include:
  - ◇ Glass.
  - ◇ Wood.
  - ◇ Tiles.
  - ◇ Cement.
  - ◇ Earthen floors.



## Equipment and materials used to clean different materials in the home.

☞ Floor cloth – can be improvised from old cloths.

☞ Soap.

☞ Dustpan.

☞ Mop.

☞ Dustbins.

☞ Bucket.

☞ Broom.

☞ Brush.

☞ Wipers.

☞ floor

## Cleaning different surfaces at home.

### Cleaning Tiled surface.

Required:

☞ bucket.

☞ Warm water.

☞ Soap.

☞ floor cloth or mop.

☞ Soft brush.

- Remove any light furniture.
- Sweep the floor from farthest end moving towards the door.
- Use warm soapy water and a soft brush to scrub tile floor.
- Use a floor cloth or mop wrung out of clean warm water to rinse the tiled floor.
- Rinse the floor thoroughly again with clean floor cloth or mop wrung out of cold water.
- Dry the floor thoroughly using a clean dry floor cloth or dry mop.
- Repeat the cleaning process until the entire floor is clean, always cleaning a small section at a time.
- Clean and store the equipment and materials used appropriately.

### Cleaning Cemented floor.

~ You need equipment such as:

○ Mop or floor cloth.

○ Bucket.

○ Broom.

○ Soap.

○ Scrubbing brush.

○ Warm water.

- Collect any rubbish on the floor and dispose it off appropriately.
- Sweep the floor starting from farthest end towards the door.
- Scrub the floor using warm soapy water and scrubbing brush.
- Rinse the floor using a clean floor cloth or mop wrung out of warm clean water.
- Rinse the floor again with a floor cloth or mop wrung out of clean cold water to refresh the cemented floor.
- Dry the floor using a dry mop or floor cloth.
- Repeat the scrubbing and rinsing process until the entire floor is clean.
- Clean and store the equipment and materials used appropriately.

## Cleaning Wooden table.

### You need:

- Warm water.
- Soap.
- Clean dry cloth.
- Soft brush.
- Mild abrasive.
- Soft cloth.

- Remove all utensils from the table.
- Wipe table using a clean dry cloth to remove any food particles.
- Clean the table with a soft brush dipped in warm soapy water. Scrub along the grain. Scrub a small section at a time, overlapping each section.
- Wipe the table with a cloth wrung out of warm soapy water.
- In case of stains, remove by scrubbing with a mild abrasive.
- Rinse the table thoroughly using a clean cloth wrung in clean warm water.
- Dry the table with a clean dry cloth.
- Clean and store the equipment and materials used appropriately.

## Cleaning Glass window

### You need:

- ↳ Sponge or soft cloth.
- ↳ Bucket.
- ↳ Soap.
- ↳ Warm water.
- ↳ Old newspapers.

- Remove the window curtains.
- Close the windows.
- Dust from the top. Start with the curtain box or rail.
- Open the windows.
- Dust the ledges on the frames and other parts.
- Using warm soapy water and a soft cloth or sponge, clean the glass panes starting from the highest part moving downwards. Outer side then inner side.
- Rinse well with warm water.
- Clean the window stopper and window frame using a soft cloth and warm soapy water removing any stains by rubbing them hard with a cloth.
- Dry the window stopper and window frame with a dry cloth. Polish with a clean dry cloth.
- Rub the glass with a dry clean soft cloth or newspaper.
- Clean and store the equipment and materials used appropriately.

## **Safety measures when cleaning different surfaces at home.**

- ✧ Collect all cleaning tools, equipment and materials before starting to clean.
- ✧ Wear comfortable shoes that do not slip on wet floors.
- ✧ Remove any items that may cause you to slip and fall.
- ✧ Follow the correct procedures when cleaning different surfaces at home

## **Care of cleaning equipment and materials.**

- ✧ Store brooms and brushes by hanging them or placing them upright on their handles. This helps to prevent bristles from bending.
- ✧ Wash, rinse and dry all cleaning equipment before storing them. Do not dry plastic basins, buckets and dustpans in the sun. This makes them crack and break.
- ✧ Do not bang plastic dustpans, basins and buckets as this may break them. Store in a clean dry place.

## **3.3 LAUNDERING COTTON ITEMS.**

**Laundering** is the process of removing dirt and stains from clothes in order to maintain their appearance.

It involves:

- ✧ Mending.
- ✧ Sorting.
- ✧ Washing.
- ✧ Rinsing.
- ✧ Drying.
- ✧ Ironing.
- ✧ Airing.
- ✧ Storing clothes.

## **Procedure used for laundering white cotton shirt or blouse and fast coloured shirt or blouse.**

### **Laundering a white cotton shirt or blouse.**

**Requirements:**

- White cotton shirt or blouse.
- Two basins or buckets.
- Hot water.
- Cold water.
- Soap.
- Pegs.
- Iron box.
- Ironing board.

## **Procedure.**

- ✧ Find out if the white shirt or blouse needs mending. If yes, mend using the correct procedure.
- ✧ Put cold water in a basin.
- ✧ Completely immerse the cotton shirt or blouse in the cold water and soak for about 15 minutes to loosen the dirt.
- ✧ Wring the shirt or blouse from the soaking water.
- ✧ Wash in hot soapy water using friction method.
- ✧ Rinse the shirt or blouse in hot water as many times as needed to remove dirty water and soap.
- ✧ Rinse for the last time in clean cold water. Wring out of excess water.
- ✧ Before hanging to dry, turn the shirt or blouse inside out.
- ✧ Dry the shirt or blouse on the cloth line in the sun securing with pegs. Sunlight acts as a bleaching agent on white cotton.
- ✧ Use a hot iron to iron the shirt or the blouse while it is still slightly damp.
- ✧ After ironing, air the shirt or blouse.
- ✧ Fold the shirt or blouse and store in a clean dry place. It can also be hanged using a hanger and store in a clean dry place.

## **Laundering fast coloured cotton shirt or blouse.**

### **Requirements:**

- › Fast coloured shirt or blouse.
- › Two basins or buckets.
- › Warm water.
- › Cold water.
- › Soap.
- › Vinegar or lemon juice.
- › Pegs.
- › Iron box.
- › Ironing board.

### **Procedure:**

- ✧ Check incase the shirt or blouse requires mending and mend using the right procedure.
- ✧ Completely immerse the cotton shirt or blouse in the cold water and soak for 15 minutes to loosen dirt.
- ✧ Wring the shirt or blouse from the soaking water.
- ✧ Wash in warm soapy water using gentle friction.
- ✧ Rinse the shirt or blouse in warm water as many times as needed to remove dirty water and soap.

- ✧ Dilute half cu of vinegar or lemon juice with half a cup of water. Add this solution in the cold water used for the final rinse. Vinegar or lemon juice helps to brighten the colours.
- ✧ Wring out the excess water.
- ✧ Before hanging t dry, turn the shirt or blouse inside out. This will help stop the colour from fading.
- ✧ Dry the shirt or blouse on a clothes line under a shade secured with pegs.
- ✧ While the shirt or blouse is still damp, remove it from the drying lines.
- ✧ Use a moderately hot iron to iron the shirt or blouse.
- ✧ Air the shirt or blouse after ironing to ensure it dries completely.
- ✧ Fold it or hang on a hanger and store in a clean, dry place.

### **Importance of Laundering.**

- ↗ Laundering clothes last longer.
- ↗ Clean clothes promote health.
- ↗ Clean clothes prevent spread of skin infections.
- ↗ Laundering clothes improves personal hygiene.
- ↗ Laundering reduces maintenance costs.
- ↗ Laundering makes one smarter and feels more comfortable.

# STRAND 4

# PRODUCTION TECHNIQUES.

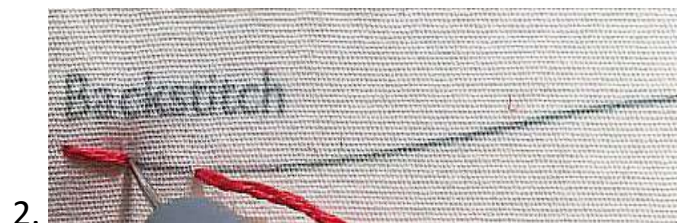
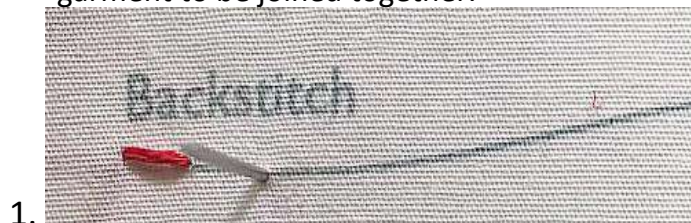
## 4.1 REPAIRING GARMENTS.

### Stitches Used in Repairing Garment.

- Clothes we wear are joined using stitches.
- Stitches can be used also when repairing garments.
- Stiches can be made using a sewing machine or made by hand using thread and a hand sewing needle.
- When repairing garment, two types of stitches are used:
  - **Back stitch.**
  - **Running stitch.**

### Back stitch.

- A backstitch is a joining stitch that joins together two pieces of fabric.
- The stitches are sewn by hand in a straight line along the seam (stitching) line of the part of the garment to be joined together.



## Running stitch

- A running stitch is a basic hand-sewing technique where the needle is passed in and out of the fabric in a straight line.



## Using the stitches to repair gapping seam.



Gapping seam

- When the threads holding a seam together breaks and loosen, they cause it to open leaving a gap.
- This forms a hole in the seam of the garment.
- Gaping seams makes a garment look untidy.
- Therefore, they need to be mended immediately they appear.
- Mending this gap improves the look of a garment.

## Factors to \hat{at determine the method to use when repairing a gaping seam.

- ↗ Location of the damage of the garment.
- ↗ Type of fabric to be repaired.
- ↗ Colour and quantity of thread to be used.
- ↗ Stiches to be used.

## 4.2 CONSTRUCTING VERTICAL & HORIZONTAL GARDENS.

- This is carrying out farming to produce food in places where there is little or no land at all using innovative gardening practices.

### Examples of innovative gardening practices are:

- ✧ *Horizontal gardening.*
- ✧ *Vertical gardening.*
- These practices also help to conserve water.
- **Vertical gardens** allow farmers to use space above the ground.
- Vertical gardening has the following advantages:
  - ↔ Allows very few weeds to grow.
  - ↔ There are less pests and diseases that can attack the crops compared to normal gardening.
  - ↔ Crops produced in vertical gardening are cleaner than those from the ground. This because they do not come in contact with the soil on the ground.

### Materials for making innovative gardens.

- ↗ Sacks.
- ↗ Plastic pipes.
- ↗ Plastic bottles.
- ↗ Drums.
- ↗ Buckets.
- ↗ Used car tyres.

### Sites for placing innovative gardens.

- ↗ Pavements.
- ↗ On the verandahs.
- ↗ Rooftops.
- ↗ On the walls of building.
- ↗ Along the fences.

### Innovative gardens like containers can be supported by materials such as:

- ↗ Wires.
- ↗ Poles.
- ↗ Timber

## Managing innovative gardens.

The following practices are done to manage innovative gardens.

- Watering.
- Adding manure.
- Weeding.
- Pruning.
- Controlling pests.
- Removal of plants or parts of plants that have diseases

## Determining the right stage of harvesting vegetables.

- ↳ Leafy vegetables such as kales and spinach are harvested when large enough to be used for cooking.
- ↳ They are carefully plucked using hands to avoid uprooting the whole plant.
- ↳ Ensure during plucking that you don't pull or injure the vegetable plant.
- ↳ Fruit vegetables such as tomatoes are carefully picked when they are ripe or almost ripe.
- ↳ When picking, do not pull the branch.
- ↳ Pick one fruit at a time

## TOPICAL WELL ANSWERED QUESTIONS

### Identify indigenous crops used for food in Kenya.

- Sweet potatoes.
- Yams.
- Arrow roots.
- Sorghum.
- Pigweeds.
- Pumpkin.
- Cassava.
- Millet.

\_\_\_\_\_ are crops which their grains are eaten as food.

- cereals

\_\_\_\_\_ are crops whose swollen roots are harvested and eaten as food.

- Root crops.

### What is the difference between a nursery bed and a seedbed?

A nursery bed is prepared to raise seedlings before transplanting them to the seedbed.

A seed bed is land that has been prepared and is ready for planting.

**In which ways can we take care of farm tools and equipment?**

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- Cleaning after use.
- Storing well in a dry place.
- Use a tool for correct purpose.
- Sharpen cutting blunt parts.
- Replace broken parts like handles.

**Give five management practices done in a nursery bed to young crop.**

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- Shading.
- Watering.
- Thinning.
- Weeding.

**Excess seedlings that remain in the nursery bed can be \_\_\_\_\_**

- Sold to earn income to the farmer.

**Some vegetables are first raised in a \_\_\_\_\_ before being transplanted in a \_\_\_\_\_**

- Nursery bed.
- Seedbed.

**Identify the following tools.**



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**Jembe.**

**Rake.**

**Panga.**

**Spade.**