



MANYAM FRANCHISE
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KCSE AGRICULTURE NOTES

TOPIC 3: Farm Tools and Equipment



DECEMBER 9, 2017
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FARM TOOLS AND EQUIPMENT (7 LESSONS)

TOPICS

1. Garden tools and equipment
2. Workshop tools and equipment
3. Woodwork tools and equipment
4. Metalwork tools and equipment
5. Livestock production tools and equipment
6. Plumbing tools and equipment
7. Masonry tools and equipment

Note: Study the above tools under the following headings:

- a) Name and uses
- b) Parts and uses
- c) Maintenance practices

Specific Objectives

By the end of the topic, the learner should be able to:

- a) Identify various farm tools and equipment
- b) Name parts of various farm tools and equipment
- c) Describe the use of various tools and equipment
- d) Carry out maintenance practices on tools and equipment
- e) Demonstrate an appreciation for care and maintenance of tools.



Introduction to Farm Tools and Equipment

Farm tools and equipment perform specific jobs in the farm.

They make work easier and more efficient.

They can be classified according to their uses as follows:

Garden Tools and Equipment

Panga

Cutting and shallow cultivation, making holes.

Jembe / hand hoe

Cultivation, digging, shallow planting holes and trenches.

Fork Jembe

Cultivation, digging out roots, harvesting of root crops.

Rake

Collecting trash, breaking large clods, levelling, removing stones from a seedbed and spreading organic manure.

Spade

Scooping and carrying of soil, sand, concrete mixture and manure.

Spring balance

Measuring weight.

Trowel

Scooping seedlings during transplanting and digging planting holes for seedlings.

Pruning hook

Bending tall branches when pruning.

Secateur

Cutting young stems and pruning branches.

Tape measure

Measuring distances.

Axe

Cutting big trees and roots and splitting logs of wood.

Soil auger

Making holes for fencing posts.

Mattock

Digging hard soils

Sprinkler

Overhead irrigation

Watering can

Watering plants in nursery bed

Wheel barrow

Transportation of soil, fertilizers, farm produce, tools and equipment.

Levelling board

For levelling a nursery bed

Pruning saw

Cutting old wood stems and pruning big branches.

Hose pipe

For conveying water from a tap to where it is need.

Knap sack sprayer

Applying agro-chemical by spraying.

Garden shear

Trimming hedges.

**Pruning knife**

Removal of small shoots.

Meter ruler

Measuring distances.

Garden fork

Shallow digging.

Workshop Tools and Equipment**Drenching gun**

Administering liquid drugs to animals orally.

Bolus gun/dosing gun

Administering solid drugs or tablets to animals orally.

Wool Shears

Cutting off wool from sheep.

Hypodermic syringe

Administering drugs by injection for example in vaccination.

Stirrup (bucket) pump

Application of acaricide by hand spraying.

Thermometer

Taking body temperatures of farm animals.

Burdizzo

Used in bloodless method of castration.

Halter

Rope designed to restrain the animal.

Trimming knife

Cutting short the overgrown hooves.

Elastrator

Stretching rubber ring during castration, dehorning and docking of lambs.

Iron dehorner

Applies heat on the horn bud to prevent growth of horns.

Nose ring

Fixed into the nose of a bull to restrain it.

Strip cup

Detecting mastitis in milk products.

Trocar and cannula

Relieving a bloated animal of gases particularly ruminants.

Hard broom

For scrubbing the floor.

Ear notcher

Making ear notches in livestock.

Bucket

For holding milk during milking.

Milk chum

For holding milk after milking.

Milk strainer/sieve

Removing foreign particles from milk for example hairs and sediments.

Rope

Tying or tethering animals.

Milking stool

Used by the milker to sit on while milking.

Weighing balance

Weighing milk after milking.

Teeth clipper

Removal of canine teeth of piglets soon after birth.

Chaff cutter

Cutting fodder into small bits.

Dehorning wire

Cutting grown horns.

Workshop Tools and Equipment**Spanner**



Tightening and loosening nuts and bolts.

Pliers

Cutting small wires and thin metal and gripping firmly.

Files

Sharpening tools, smoothening or shaping edges of metals,

Rasps

Smoothening and shaping of wooden structures.

Chisels (wood)

Making grooves in wood.

Cold chisel

Cutting and shaping metal.

Screw drivers

Driving screws in or out of wood or metal.

Cross cut saw

Cutting across the grain of wood.

Rip saw

Cutting along the grain of wood.

Hack saw/Bow saw

Cutting metals.

Tenon / back saw

Cutting branches of trees.

Coping saw

Cutting Joints on wood and fine sawing.

Compass/keyhole saw

Cutting curves on thin wood.

Cutting either along or across the grain of wood especially when cutting key holes.

Tin snip

Cutting metal sheets.

Braces and bits.

Boring holes in wood. ,

Drill and bits

Boring holes in metal work and woodwork.

Claw hammer

Driving in, removing and straightening nails.

Ball peen

Driving in nails, rivets and straightening metal. Also used on cold chisel, Mallet Hammering or hitting wood chisel.

Jack plane

Fine finishing of wood.

Scrappers/spoke shave

Smoothening curved surfaces of wood such as handles of jembes, axes.

Metre ruler

Measuring short length

Try square

Measuring length angles and to ascertain squareness.

Marking gauge

Marking parallel lines to the edge of wood.

Fencing pliers

Cutting wires, hammering staples when fencing.

Vice and clamps

Firmly holding pieces of work together.

Spirit level

Measuring horizontal or vertical levels.

Soldering gun

Melting soldering rods when repairing or fabricating metal sheets.

Wire brush

Brushing rough surfaces.

Divider

Marking and laying out.

**Centre punch**

Marking the point of drilling.

Paint brush

Applying paint on surfaces.

Sledge hammer

Ramming hardware, breaking stones.

Wire strainer

Tightening wires during fencing.

Riveting machine

Fix rivets when joining pieces of metal.

Claw bar

Removing long nails from wood, straining fencing wires and digging fencing holes.

Plumbing and Masonry Tools**Pipe wrench**

Holding, tightening and loosening metallic pipes.

Pipe cutter

Cutting PVC pipes.

Levelling rod

Levelling the floor during construction.

Mason's trowel

Placing mortar between construction stones and bricks.

Wood float

Create a level surface on walls and floors.

Mason's square

Ascertain verticalness.

Plumb bob

Spreading screed over floors and walls.

Shovel

Mixing and scooping concrete or mortar, measuring cement.



Care and Maintenance of Tools and Equipment

Reasons for Maintenance

- a) To increase durability.
- b) To increase efficiency.
- c) Reduce costs of replacement.
- d) For safety of the user/avoid accidents.
- e) Avoid damage to the tool.

Methods

- ✓ Use tools for the right work.
- ✓ Proper handling when using tools or equipment.
- ✓ Clean and oil tools after work.²¹
- ✓ Keep tools in their right place.
- ✓ Replace and repair worn-out parts
- ✓ Sharpen cutting or digging edges
- ✓ Grease moving parts to reduce friction
- ✓ Use safety devices in the workshop to reduce accidents and breakages