

SUBJECT: Agricultural Science
LEVEL: Forms 4 & 5
TOPIC: Care and Maintenance of Simple Tools & Equipment

CSEC Agricultural Science Syllabus

SECTION B: Crop Production

4. Land Preparation and Farm Machinery

Specific objective(s):

4.4 Describe the care and maintenance of simple tools and equipment

SBA Skill:

Section B – Crop Production

No. 7. Clean and maintain simple tools

WHAT IS A TOOL?

A tool is any device that makes work easier. Tools are generally hand held and manually operated.

A range of tools are needed for different operations that are carried out in the farm. Some of these include:

1. Construction e.g. hammer, measuring tape
2. Land preparation e.g. garden fork, hoe, spade
3. Planting and Nursery activities e.g. dibber, trowel, press board
4. Watering e.g. bucket, watering can
5. Pruning e.g. secateurs, pruning knife
6. Harvesting e.g. knives, garden fork
7. Grading and packing e.g. vacuum sealer

WHAT ARE EQUIPMENT?

Equipment are instruments that help make work on the farm easier. Equipment cannot work by themselves and therefore require an energy source to operate. Some examples of sources of energy that allow equipment to operate are:

1. Electricity e.g. vacuum sealer, freezer
2. Hydraulics e.g. Knapsack sprayer
3. Springs e.g. Scale

MAINTENANCE AND STORAGE OF TOOLS AND EQUIPMENT.

Tools and equipment must be well taken care of in order to ensure that they perform the tasks they were designed to do.

The following are some general guidelines for taking care of tools and equipment:

1. **Observe the tool for condition** e.g. broken, needs repairs, needs sharpening, needs cleaning
 - Wooden handles should be well set, strong and durable.
 - Moving parts should be well oiled and greased regularly
2. **Decide on appropriate action** e.g.
 - a. Clean tool
 - b. Repair where necessary e.g. fix handles, tighten parts, change parts, etc
 - c. Sharpen if necessary before and after use.

- d. Metal parts should be well oiled and greased to prevent rusting.
3. **Tools should be washed and dried after each use and stored** in a special room after each use.

CARE OF A SIMPLE TOOL e.g. Secateurs

Step 1

- Clean all metal parts thoroughly using a scourer or fine wire wool to remove any rust and build-up of plant and sap residue left on the blades.



Source: <https://www.gardenersworld.com/how-to/grow-plants/how-to-maintain-secateurs/>

Step 2

- Using a file, sharpen the cutting blade on an angle from the outside edge and then the inside edge to leave the blade sharp.



Source: <https://www.gardenersworld.com/how-to/grow-plants/how-to-maintain-secateurs/>

Step 3

- Oil the moving parts, keeping them lubricated and smooth so that the parts repel water from the metal parts, thus avoiding rust.
- Oil the spring and revolving shaft.



Source: <https://www.gardenersworld.com/how-to/grow-plants/how-to-maintain-secateurs/>

STUDENT SELF ASSESSMENT

Tools and Equipment Worksheet

1. List the tools and equipment needed for:

- a. Transplanting a seedling
- b. Harvesting lettuce

2. Place the following items in the correct column in the table below:

Pruning knife	Garden fork	Spray can
Watering can	Scale	Knapsack sprayer
Spade	Trowel	Vacuum sealer

TOOLS	EQUIPMENT

3. Place the steps for the care and maintenance of secateurs in the correct order:

Step	Order of task
Oil the moving parts	
Using a file, sharpen the cutting blade	
Clean all metal parts thoroughly	

4. Research Activity

Conduct your own research using either text books, the internet or interviews and give THREE reasons for the following statements:

- a. Tools should be sharpened regularly
- b. Tools should be kept well oiled

End of Lesson