

JOB ROLE – FLORICULTURIST (OPEN CULTIVATION)

Sector – Agriculture

(Qualification Pack Code: AGR/Q0701)

PPT's for Class XI



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UNIT 3: TOOLS AND EQUIPMENT

Session 2: Other Tools and Equipment

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Session Objectives

The student will be able to :

- Identify tools and equipment.
- Explain precautions to be taken during use of tools and equipment.

Introduction

For carrying out various horticultural operations, one needs different kinds of tools and equipment, such as hand cultivator, harrow, spade, secateurs, hand trowel, garden fork, sprinklers, rake, pruning saw, spray pumps, grass shear, budding and grafting knives, etc. These tools and equipment can be categorised as hand tools and power equipment. Hand tools are less expensive than power equipment, often serve multiple uses, and are easier to be used in small spaces. These tools and equipment help one to carry out day-to-day farm operations efficiently, easily, timely and economically.

Other Tools and Equipment

Bill hook:

It has single or double cutting edges. It is a hook-shaped tool consisting of a curved blade made of high carbon steel and manganese steel, attached to a wooden or plastic handle. It is commonly used for cutting big branches or to remove the old and dead branches from a tree.



Other Tools and Equipment

Budding-cum grafting knife:

A budding-cum-grafting knife is a combination of two knives used for budding and grafting operation. It consists of two blades, one for budding and another for grafting. These blades are fixed to the ends of the handle. The length of working blade may be 6.5–7.5 cm and width 1.5 cm.



Other Tools and Equipment

Slashing and pruning knives:

These knives are used to remove unwanted twigs or branches of a plant or tree. Such a knife is made up of a tang joined rigidly to the handle and a blade. One end of the blade is hooked or curved in order to cut or slash the small branches or twigs of a plant by pulling action.



Other Tools and Equipment

Secateurs:

These are meant for cutting the branches, de-shooting, disbudding, cutting of scion sticks, defoliation of leaves from the sticks and topping off of small trees, etc. These are also useful in pruning off pencil thick branches and making of cuttings for propagation.



Other Tools and Equipment

Grass shear:

Grass shear in various types are used for the maintenance of lawns. A grass shear is used for trimming and side dressing of the lawn. The important parts are cutting blades made of high carbon steel or alloy steel. The blades are sharpened at the cutting edges. The length of the blade varies from 15–20 cm.



Other Tools and Equipment

Hedge shear:

It is used for trimming, pruning and cutting of hedges and shrubs in the desired shape. It consists of two blades with tangs. The size of the shear is according to the size of the blades varying from 15–30 cm in length and 0.8 cm thickness.



Other Tools and Equipment

Spade:

It is made up of cast iron and is used for digging or turning over the soil, making bunds in the field, and to prepare irrigation channels, etc. .



Rake:

It is used for breaking the soil surface, removing stubbles, small stones and collecting weeds.



Other Tools and Equipment

Khurpi:

It is made up of cast iron having a wooden handle on one side end. It is meant for weeding, lifting of seedlings and plants in the nursery, for transplanting the plants in pots and field, and for performing various other operations.



Other Tools and Equipment

Sprayer:

It is used for spraying insecticides, fungicides, herbicides, fertilisers and various other chemicals in the field. Different types of sprayers are available in the market as per the requirement.



Other Tools and Equipment

Water canne:

It is used for watering seed beds, nursery beds and potted plants to avoid washing of the soil and damage to young seedlings .



Pruning saw:

It is used to cut thicker branches of plants



Other Tools and Equipment

Wheelbarrow:

It can be used to move heavy things from one place to another, and also to hold garden trash.



Hand cultivator:

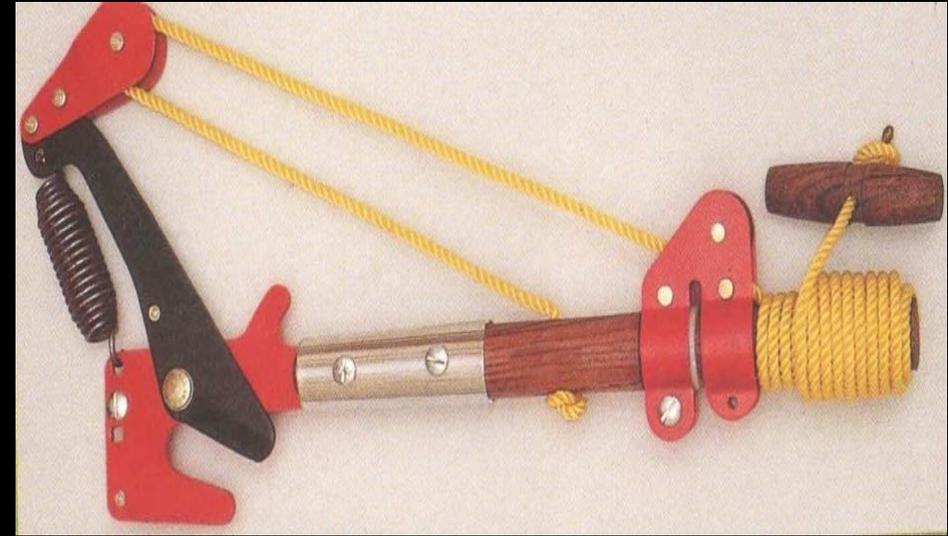
It is used for altering and loosening the soil without damaging the roots in the garden nursery .



Other Tools and Equipment

Tree pruner:

It is used for pruning shoots of trees, which are beyond reach from the ground level .



Flower scissor:

A flower scissor is used for cutting the flowers with stems. It has two short blades with handles.



Precautions to be Taken During the Use of Tools and Equipment

- Keep all the tools and equipment out of the reach of children.
- Handle them carefully and follow the instructions given in the manual provided with them.
- If there is any accidental hazard, immediately contact the doctor.
- It is essential to clean the equipment after use.
- During the spraying of insecticides, pesticides and fungicides, effective safety measures need to be taken.

Care and Maintenance

- Ensure cleaning of equipment before and after use.
- Store all machinery and equipment in a dry place.
- Drain the tank and flush it with clean water, wash the pump nozzle before and after the use of sprayer.
- Remove dust from the hopper of the duster and clean it with a cloth.
- Always keep all spare parts in a tool kit.

Care and Maintenance

- Overhaul the machines regularly and replace the workout parts. Grease and oil all moving parts of the machinery as per requirement.
- Do not throw nozzles of sprayers and delivery tubes of dusters on the bare ground.
- Sharpen the blades of harrow, cultivators and cutters regularly.

Summary

In this session you have learnt about the care and maintenance of tools and equipment and precautions to be taken during use of tools and equipment.

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