



SNS COLLEGE OF TECHNOLOGY

AN AUTONOMOUS INSTITUTION

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DEPARTMENT OF AGRICULTURAL ENGINEERING

COURSE CODE & NAME: 19AGO301 & FARM MECHANISATION

III YEAR / VI SEMESTER

UNIT : IV Harvesting and Plant Protection Machinery

TOPIC 7 – Types of appliances & application technique





Type of appliances

Pesticides are available in various forms.

Application Equipment are designed according to the types of formulations to be sprayed.

Application Equipment are available in a variety of sizes ranging from small to big keeping in view the application capacity and the source of energy.

These application equipment may be either manually or power operated.

They can be further classified into moveable and portable appliances.

By 'Moveable' is meant that which can be moved around on wheels or lifted by two or more persons.

'Portable' means equipment which can be carried by one person.



Selection of appliance

Purchase of pesticide appliance is a long term investment. One needs to keep in mind the type of job one wants to handle and check the appliance for the following

Suitability for the job

Ease of operation and maintenance

Good performance

Good serviceability

Easy availability of spare parts

Reasonable cost



Selection of equipment

- The wise farmer will use the following check-list when selecting his sprayer or duster:
- Carefully check the quality of all the raw material used in the equipment.
- Check welded joints and seams, and examine moving parts for smoothness and finish.
- Make sure detachable parts fit securely and are easy to assemble and take apart.
- Do not be put off by higher price – it usually means superior quality. Ensure that you get the equipment most suitable for the job you wish to do.
- Select the Nozzle most suited for your purpose. Test the nozzle for discharge rate and degree of spray angle.
- Ask for the equipment to be demonstrated and make sure you understand completely how it works, before buying it.
- Check availability of parts and after-sales service. Always purchase genuine spare parts, preferably from the manufacturer's authorized dealer or stockist.



Application Technique

- Spray Volume : Depending upon the volume of spray required per hectare the application is categorized
- HV : High Volume = More than 150 l/ha.
- Suitable for insecticides, fungicides, herbicides.
- Can be done with knapsack sprayers, tractor mounted sprayers.
- LV : Low Volume = Approx. 10-150 l/ha.
- Suitable for insecticides, fungicides.
- Can be done with motorized knapsack sprayer, air craft, (in other countries) low r.p.m. Spinning Disc Appliances are also used.
- Various equipment and techniques being used in last three decades are shown diagrammatically alongside.
- ULV : Ultra Low Volume = Approx. 1-5 l/ha.
- Suitable for insecticides.
- Can be done with High r.p.m. spinning disc appliances, motorized knapsack sprayer fitted with special spinning disc with special spinning disc attachment and air craft.



Thank You