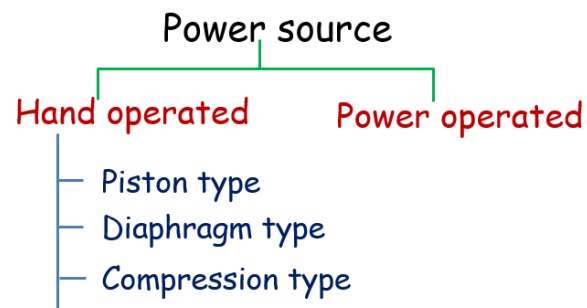


5. Plant Protection Machineries

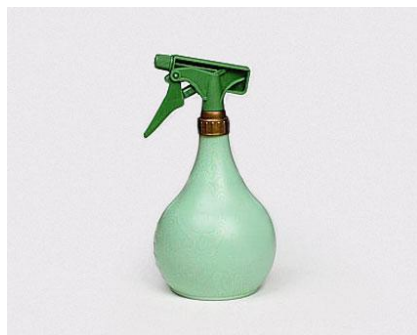
Sprayers

Classification criteria for sprayers

- Power source
- Carrying pattern
- Volume of handling
- Pressurized mechanism



Hand



operated

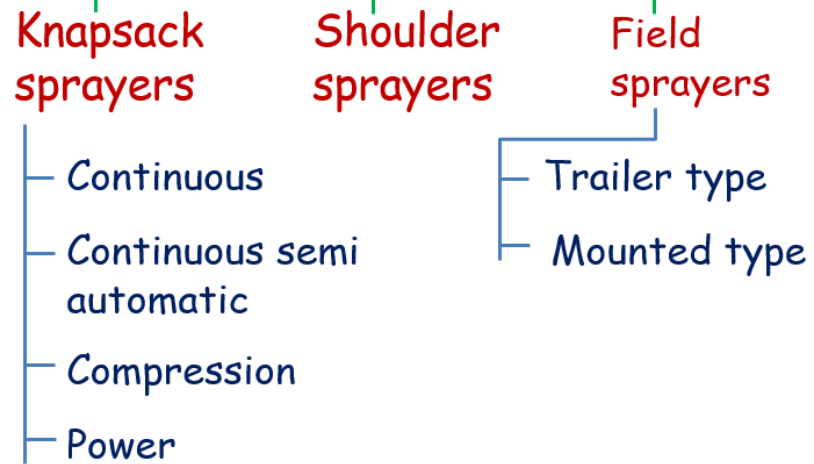


sprayer

Power operated sprayer



Carrying pattern



Knapsack sprayer

- Carry in the back side of the operator



1. Continuous type knapsack sprayer

Pump should be operated continuously while liquid is discharge

No pressure chamber



2. Continuous semi automatic knapsack sprayer

- Has pressure chamber



3. Compression type knapsack sprayer

- Liquid tank works as pressure chamber
- Heavy metal bottle
- Disadvantages:
 - Not even out put



4. Power sprayer



Shoulder type sprayer

- Carry in the shoulder of operator



Trailer type field sprayer



Mounted type field sprayer



Volume of handling

- High volume (>600 ℓ / ha)
- Medium volume (600-200 ℓ / ha)
- Low volume (50-200 ℓ / ha)
- Very low volume (2-50 ℓ / ha)
- Ultra low volume (2 ℓ / ha)

Ultra low volume sprayers

- Supply high voltage (liquid +, Plant -)
- Spray liquid due to voltage difference
- Not popular method
- Released thin particles not appear for naked eyes
- Application rate < 1L/ha
- No dilution
- Not suitable for field application



Low volume sprayers

- Common use type
- knapsack sprayer



High volume sprayers

- Field sprayer



Pressurized mechanism



Types of sprayer nozzles

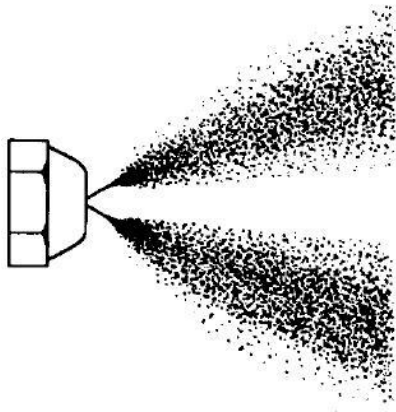
- Solid cone type
- Hollow cone type
- Flat fan type
- Flood type

Solid cone type: More concentration in middle

For Systematic herbicides



Hollow cone type: Uniform distribution
Insecticides, Fungicides



Flat fan type: Not use in agriculture
Herbicides, Fungicides



Flood type: Use in large scale application
Large size drops



Nozzle type

Hollow/solid/flood – use in agriculture

Hollow/solid – use to penetrate liquid in to bush