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SPRAYERS AND DUSTERS

**About one-third of the world food
production is lost through pest and
disease attack**



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According to energy requirement

- **Hydraulic energy sprayer:** Hand sprayer, Telescopic lance sprayer, Stirrup sprayer, Knapsack sprayer, Rocking sprayer, Foot sprayer, Hand compression sprayer, Power sprayer, Tractor PTO operated sprayer.
- **Gaseous energy sprayer:** Knapsack sprayer cum duster, Power operated sprayer, Tractor PTO operated sprayer
- **Centrifugal sprayer:** Spinning disc sprayer



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According to volume of spray

High volume sprayer: Hydraulic energy sprayer

Low volume Sprayer: Gaseous and centrifugal energy sprayer

Ultra low volume sprayer: Gaseous and centrifugal energy sprayer



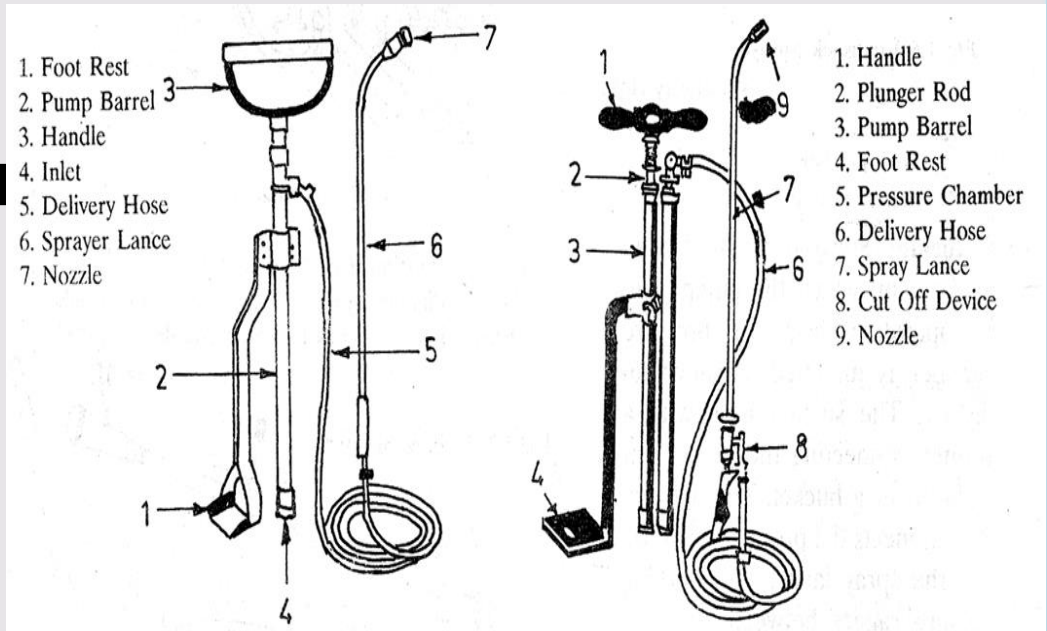
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Stirrup pump Sprayer

These sprayers are mostly used for small scale field spraying and public health projects

Working pressure is 7 to 10 kg/cm².

The diameter of the pump cylinder is around 5 mm.





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Knapsack sprayer

The tank either made of brass or plastic.

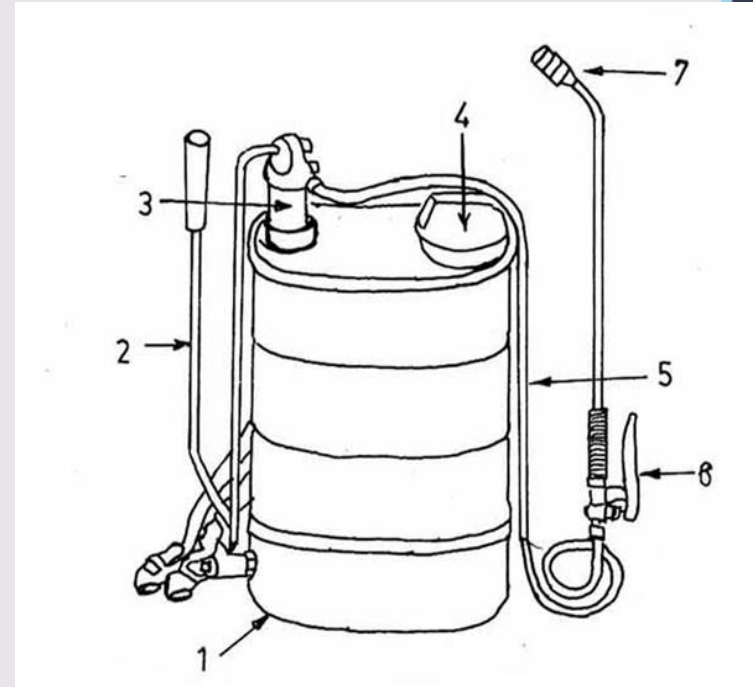
Working pressure of the sprayer is 3-4 kg/cm².

In some sprayers of the pump is centrally mounted which provides ease and comfortable operation.

The lever operating the pump is usually under the arm and should be easily adjusted for either the left or right arm.

Under arm sprayers more comfortable than over arm sprayers.

The lever is connected to either a piston pump or a diaphragm pump.





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Hand compression sprayer

Tank is a pressure vessel in which the liquid is filled to 2/3rd capacity.

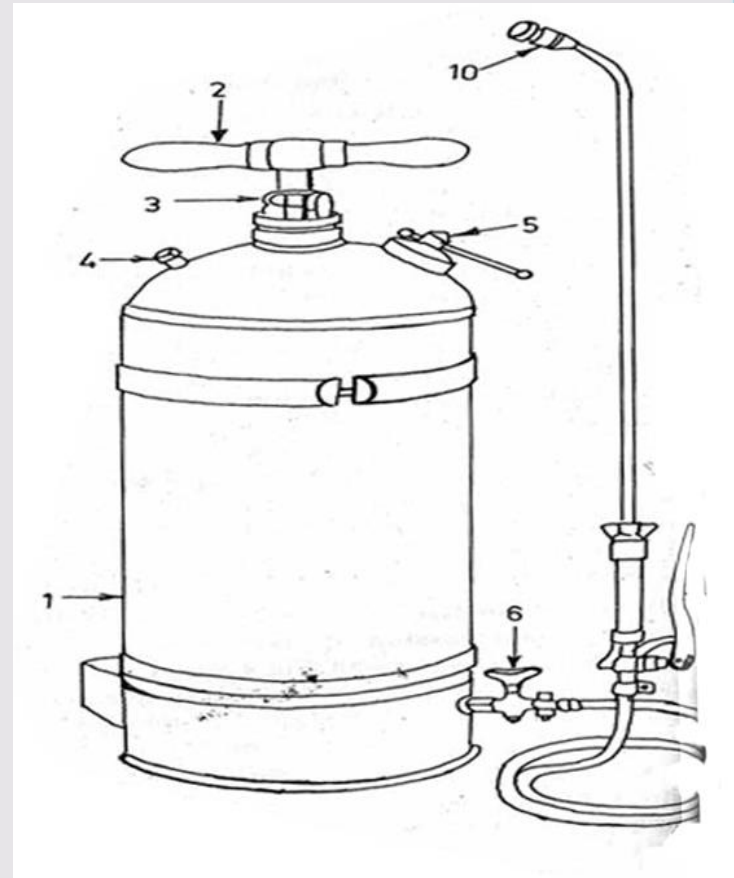
Working pressure is around 4 kg/cm².

Pressure is built up by an up mounted lever before operation.

When sufficient pressure is developed, spraying done.

Tank made of cold rolled industrial brass alloy sheet.

Withstand a pressure of 150 psi.





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Foot sprayer

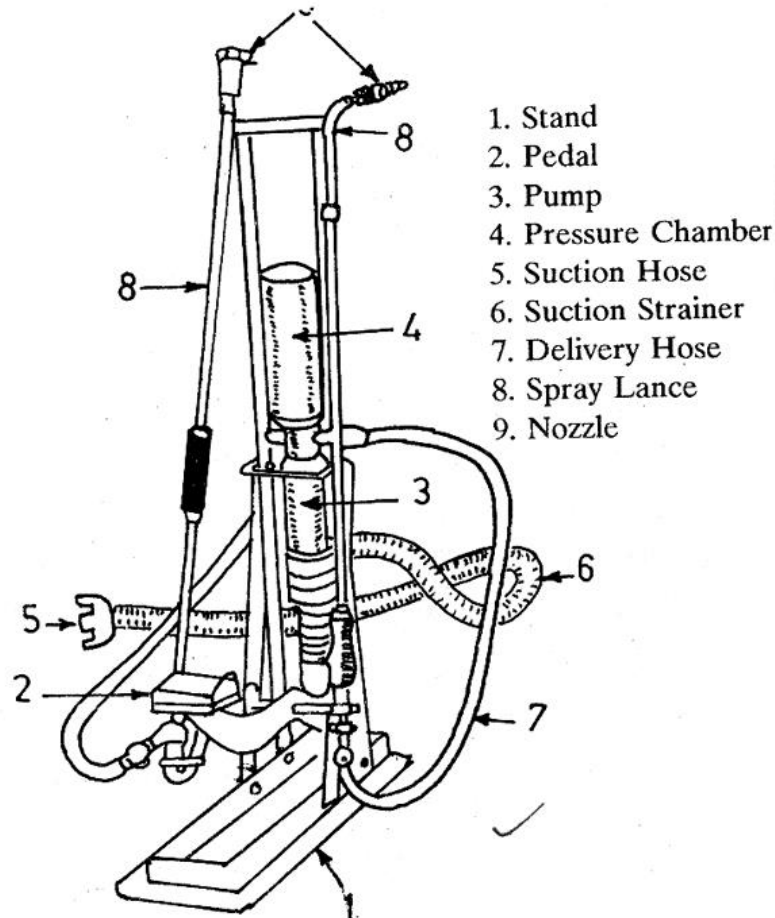
The sprayer develops a pressure of 17-21 kg/cm².

Dia of pump cylinder: 5cm

It has a provision of attaching two discharge lines.

It is suitable for spraying orchards, gardens and also field crops.

Trees up to 4 m can be sprayed with a foot sprayer.



5 Foot Sprayer



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Motorized Knapsack mist blower cum duster

It is motorized knapsack sprayer convertible to a duster.

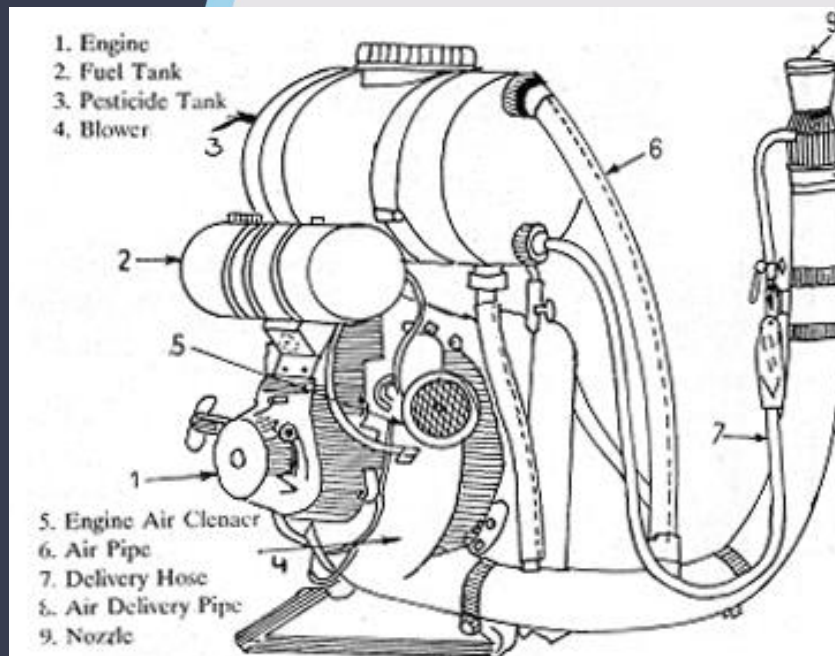
2-stroke air cooled engine of 35 or 70 cc capacity. (Petrol)

1 to 3-horse power running at an RPM of 5000 to 6000.

Air velocity of 60m/s.

Discharge rate of 0.3 to 0.2 l/min.

For dusting, the air blast enters into the tank from an air inlet which is connected to a tube with several holes on its surface.





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HAND HELD SPINNING DISC SPRAYER

Spinning disc atomizers are used to obtain small drops for ULV spraying.

Smooth or serrated stainless steel spinning disc powered by a 6 to 12 volt DC electric motor.

The disc is spun at 4000 to 5000 rpm.

The bottle capacity is about 1 litre.

The liquid is fed through from the bottle through a pipe fitted with flow control device into the spinning disc.

The high speed rotating disc atomizes the liquid using centrifugal energy.

