



IS 3652: 2024 Crop Protection Equipment - Foot Sprayer

A **foot sprayer** is a foot operated mechanical device used in agriculture for spraying pesticides, herbicides, fungicides, or fertilizers onto crops to prevent pests, weeds, and diseases, promoting healthy plant growth. It operates by using a pedal-powered mechanism, where the user repeatedly presses a foot pedal to generate the necessary pressure to spray the liquid from a tank through a nozzle. The sprayers of this type are normally used with an average working pressure of 600 kPa ($100 \text{ kPa} = 1.0197 \text{ kgf/cm}^2 = 1 \text{ bar}$).

The quality of a **foot sprayer** for crop protection is determined by a range of parameters like **pump efficiency**, **durable construction**, **tank capacity**, **pressure regulation**, user regulation and **safety features**.

Indian Standard IS 3652: 2024 specifies the requirements for foot sprayer used in agriculture. This standard provides guidelines for materials being used for construction of product to ensure efficient durability of product. The performance efficiency of product is demonstrated through various tests like discharge rate (specifying min. discharge of 1200ml water per minute), volumetric efficiency and endurance rate.

The standard also mandates that a user manual to be provided along with the product. The manual shall include technical specification of the sprayer, material of construction of various component, instructions for operations, calibration and maintenance, common faults and their remedies and safety precaution.

The Workmanship and Finish Test in the standard ensures the safety usage of the product. The marking and packaging requirement help customers to procure genuine product. Thus, IS 3652:2024 provides assurance that the foot sprayer that is being bought is safe, durable, and of high quality.