

Calculations, Terms used and Precautions in Herbicide Application

Calculations

$$\text{Quantity of Commercial produce required (kg/ha)} = \text{Rate of herbicide application (a.i kg/ha)} \times \frac{100}{\% \text{ active ingredient}}$$

Example : Rate of Atrazine (active ingredient) application per ha = 1.25 kg

$$\begin{aligned} \text{Active ingredient in commercial product} &= 50 \text{ WP} \\ \text{Thus the quantity of commercial product of atrazine per ha} &= 1.25 \times \frac{100}{50} \\ &= 2.50 \text{ kg} \end{aligned}$$

Terms

Pre-emergence :	Application of herbicide before crop and weed emergence within 48 hrs after sowing.
Post emergence	Application of herbicide after crop and weed emergence preferably when the weeds are in 3 to 4 leg stage.
Directed spray	Application of herbicide by directing the spray nozzle on weed only.

Precautions

1. Read the herbicide label carefully and follow the direction on the label.
2. Check the sprayer before starting spray. It should be working properly.
3. Use only *Flat fan* or *Evan* spray nozzle.
4. Clean the sprayer with clean water before and after spraying.
5. Calculate the amount of commercial products required for area to be sprayed.
6. Mix the herbicide in small quantity (1-2 litres) or water first and then make the required volume with water (600-750 L/ha).
7. Divide the field to be sprayed into parts i.e. one bigha land may be divided into four parts of 200 sqm. each and spray 12-15 litres of herbicide solution in each part. This will ensure uniform spray in whole area.
8. Do not spray herbicide on windy and rainy days.
9. Judge the stage of crop and weeds in case of post-emergence application.
10. *Store the herbicide* in labelled containers and away from food material and children.