Knapsack sprayer calibration

Seven steps, a calculator and a jug. Recheck whenever the nozzle, pressure, operator or ground changes.

Operator | Date | Sprayer and nozzle | Pressure setting

Before you start

- [ ] No leaks from the tank, hose, lance or trigger
- [ ] Pressure control valve fitted and the right one
- [ ] Calibrate with clean water only
- [ ] Filters and nozzle clean, nozzle undamaged
- [ ] Straps, lid and pump handle in good order

Calibrate

	STEP	YOUR FIGURE	WORKED EXAMPLE
1	**Walking speed** Wearing protective equipment and carrying water, walk 100 m at your normal spraying pace on similar ground. Time it in seconds. **Speed (km/h) = 360 ÷ seconds**		90 seconds 360 ÷ 90 = **4.0 km/h**
2	**Spray width** On a dry surface, spray water at your working nozzle height. Measure the width of the wet band in metres.		**1.0 m**
3	**Nozzle output** Spray water into a measuring jug for exactly 60 seconds. Read the litres collected.		**1.30 litres** per minute
4	**Application volume** How much spray you put on a hectare. **Litres per ha = 600 × output ÷ (width × speed)**		600 × 1.30 ÷ (1.0 × 4.0) = **195 litres per ha**
5	**Check the label** The application volume must sit within the water volume range on the product label. If it does not, change the nozzle or the pressure and start again.		Label range met? **Yes**
6	**Product per knapsack** How much product goes in each fill. **Product = label dose × fill ÷ litres per ha**		Dose 2.8 L per ha, 15 L fill 2.8 × 15 ÷ 195 = **0.215 L (215 ml)**
7	**Area per knapsack** How far one fill goes. **Area (m²) = fill ÷ litres per ha × 10,000**		15 ÷ 195 × 10,000 = **770 m²**

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The worked example is for illustration only and is not a product recommendation. Always read the label: the label takes precedence. Products must be applied by an operator holding a certificate of competence.