

# TIME TO REJIG YOUR RIG?

Five simple steps in spray rig calibration

## STEP 1: CHECK YOUR SPEED

Checking the speed of your tractor is an important step in calibrating your rig. It can be done by using the following calculation:

$$\text{Speed (km/h)} = \frac{\text{Distance (meters)} \times 3.6}{\text{Time taken (seconds)}}$$

## STEP 2: KNOW YOUR INPUTS

It's important to note down the following to ensure quality and consistency of calibration:

- Nozzle type on your sprayer (ensure nozzles are identical to one another)
- Application volume as listed on chemical manufacturer's label (e.g. 160 L/ha)
- Sprayer speed (determined in previous step) (e.g. 12 km/h)
- Nozzle spacing (e.g. 50 cm)

## STEP 3: CALCULATING NOZZLE OUTPUT

Using the information gathered from Step 2 determine the L/min required using the following calculation:

$$\text{Nozzle output (L/min)} = \frac{\text{L/ha} \times \text{km/h} \times \text{cm}}{60,000}$$

## STEP 4: SETTING THE CORRECT PRESSURE

Before you begin setting the pressure, make sure your sprayer is clean and free of blockages and leaks. Replace any broken or damaged nozzles with the exact same model nozzle.

It is important to know if the chemical being sprayed has a higher or lower density than water, as this will affect pressure. A conversion factor must be used if this is the case.

Check information outlined by the nozzle provider to determine the pressure required to meet the calculation outlined in Step 3.

- Half fill your spray tank with water, turn on the sprayer and adjust to the required pressure
- Hold a large measuring jug under one nozzle for exactly 1 minute and fine tune the nozzle to meet the output calculated in Step 3

## STEP 5: FINAL CHECK

Use the same system outlined in Step 4, check a few different nozzles on different sections of the boom to make sure that the flow rate is correct. If there is a 10 percent difference in any nozzle, replace it with the same model nozzle. However, if there is a difference in more than one nozzle, replace all of the nozzles on the rig.