**Calibration Sheet – Knapsack Sprayer**

**NB.** This sheet requires the use of METRIC units throughout

**Step 1:** Calculate your walking speed:

To do this, mark out a 100m run and time yourself over this distance whilst wearing full PPE and pumping the applicator.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 360 | ÷ |  | = |  |

FACTOR Seconds per 100m Speed in kph

**Step 2:** Measure your spray width, by spraying onto a dry surface:

|  |  |
| --- | --- |
|  | = Spray width (metres) |

Metres

**Step 3:** Measure your nozzle output for one minute, by spraying into a measuring vessel:

|  |  |
| --- | --- |
|  | = Flow rate in litres per minute |

Litres per Minute

**Step 4:** Calculate the application volume in litres per hectare and compare to the label recommendations:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | × | 600 | ÷ |  | ÷ |  | = |  |

Flow Rate FACTOR Spray Width Speed l/ha

If the rate does not comply with product label guidelines, it may be necessary to change pressure, nozzle, spray width or speed and try again.

Activity: Using information supplied to you by the presenter, complete the above calibration sheet.

**Step 5:** Calculate pesticide and water required for a full tank and a specified area.

To calculate pesticide required for a full tank:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Dose rate(l/ha) | ÷ | Application volume (l/ha) | X | Tank size(l) | = | Pesticide required |
|  | | | | | | |
|  | ÷ |  | X |  | = | Litres |

To measure an area and express in HECTARES:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Length(m) | X | Width(m) | ÷ | 10 000 | = | Area in hectares |
|  | | | | | | |
|  | X |  | ÷ | 10 000 | = | ha |

To calculate spray required for an area:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Application Volume (l/ha) | X | Area (ha) | = | Total spray (litres) |
|  | | | | |
|  | X |  | = | Litres |

To calculate pesticide required for an area:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Dose rate(l/ha) | X | Area (ha) | X | 1000 | = | Pesticide required |
|  | | | | | | |
|  | X |  | X | 1000 | = | ml |

Activity: Using information supplied to you by the presenter, complete the above calculations for both a full knapsack and a specified area.