Horticultural Spraying Specialists
helping growers make better decisions

# Work Rate Calculator©

**Acknowledgement** – the work rate calculator is the property of Dr David Manktelow of Applied Research. Please respect the copyright. Horticultural Spraying Specialists has been given approval to distribute this Workbook from our website – with thanks to David.

**The purpose** of the work rate calculator is to help you decide on the most efficient method or sprayer type you should own relative to your operation.

1. For example, what is the cost per hectare difference every time you do a spray round if you purchase a 3-row sprayer versus a 2-row sprayer?
2. What if you need to travel more slowly to get effective coverage, but go from two-times concentrate application to three-times concentrate spraying?
3. What if you decide to buy a sprayer with a larger tank? How will this improve efficiency and the time it takes to spray your block?
4. These answers can be easily found in the work rate calculator, and up to four scenarios can be saved to help make the right decisions.

**If you need help** – please call us at Horticultural Spraying Specialists to discuss – 0448 511 771 or email don@hortspray.com to ask for help.

**How to use** the work rate calculator:

- Download the workbook to your desktop
- Open the work rate calculator and ensure you click “enable macros” so the calculator will produce answers for you
- All cells highlighted in yellow can be edited and figures adjusted – have a look at those and use the table below to help you
- Click on the scenario buttons for each scenario you create, and then take a look on the comparisons tab.

**Some hints:**

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| Travel Speed | Input your normal spraying speed. You can adjust up or down. Note – spray coverage can be adversely affected by travelling too fast, so keep this in mind. |
| Row Spacing | Input your row spacing, per block or per farm – or you can use an average (not as accurate as the per block method) |
| Spray Volume | This is your litres per hectare applied rate. By having a look at using different concentrate spray applications, you may be able to really make some efficiency gains – ask us how |
| Tank Size | This can have quite an impact on time taken to spray your farm, orchard or vineyard |

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| Row sprayed per pass | This is relevant mostly for vineyards. The number of rows you spray (single, 2 or 3 rows being the most common options) will probably have the most impact on the cost per hectare to get the job done – have a play and see! |
| Labour, Tractor & sprayer cost | This will vary, but hopefully you will have a fairly close idea. These cells have been pre-populated with industry figures |
| Mix & fill time | This will vary, but is typically about 20 to 30 minutes – remember to add the travel time to & from the fill point! |
| Turning time | Pre-populated at 10 seconds, this may vary on your farm depending on your headlands and sprayer size |
| Average row length, property area & number of sprays per year | These will vary but you will know this information |

So, hop to it and get calculating your next move to improve your cost per hectare!!