

Trial design

Two similar blocks, each their own MA, which were suitably variable for the purposes of the trial.

Block X: Tagga – bays above a threshold of 60 fruit per m² marked up their length with a white line.

Block Y: Unmarked control.

Timeline of activities

- 21/11/24: pre-thin fruitlet scan
- 27/11/24: Tagga application
- 28/11/24: fruitlet thinning commenced
- 05/12/24: post-thin fruitlet scan

Labour summary

Thinning hours provided show a difference of 44 hours per hectare, a 35% reduction.

| | | Block X - Tagga | Block Y - Control |
|------------------|----------|--------------------|----------------------|
| Thinning time | Hours | 104 | 156 |
| | Hectares | 1.32 | 1.27 |
| | hrs/ha | 79 | 123 |

Scan results

The pre-thin scans showed that the two blocks were of similar crop load in the high 50's - low 60's per m² (on average) and both were quite variable with CVs of 43% and 42%. On average, both blocks received a moderate reduction in crop load, block Y more so than block X in both absolute and percentage terms. The CV from the post-thin scans showed that the uniformity had improved much more in block X (42% down to 34%) than in block Y (43% down to 39%).

| | | Block X - Tagga | Block Y - Control |
|-------------|-----------------|--------------------|----------------------|
| Whole block | Mean pre-thin | 61 (42%) | 56 (43%) |
| | Mean post-thin | 51 (34%) | 43 (39%) |
| | Absolute change | 10 | 14 |
| | % change | 16% | 24% |

*CV in brackets

To better understand the difference between the Tagga and the control, bay level maps were created for both scan stages and both blocks. Essentially, this meant making a Tagga map for the control block to understand what bays would have been marked and what the subsequent crop reduction was in these bays. Equally important to understand is what the crop reduction was in the bays that *would not* have been marked.

For both blocks, the bays that had >60/ m² pre-thin had similar averages of 73/ m² (Block Y) and 74/ m² (Block X), and the reduction of crop in each block was comparable with 28% and 24% decreases respectively, meaning slightly more crop was removed in the control block.



Similarly, the bays that had <60/ m² pre-thin had similar averages of 47/ m² (Block Y) and 49/ m² (Block X). The reduction of crop in these bays was notably different though, with a 20% reduction in the control block and only a 5% reduction in the Tagga block. This appears to indicate an excessive removal of crop in these bays that were already light. The scan data tells us that this equates to around 60,000 additional pieces of fruit that were removed from bays with <60/ m² in the control block compared to the Tagga block.

| | | Block X - Tagga | Block Y - Control |
|-----------------------|-----------------|--------------------|----------------------|
| Bays that were >60 | Mean pre-thin | 74 | 73 |
| | Mean post-thin | 57 | 53 |
| | Thinning change | -17 | -21 |
| | % change | -24% | -28% |
| Bays that were <60 | Mean pre-thin | 49 | 47 |
| | Mean post-thin | 46 | 37 |
| | Thinning change | -2 | -9 |
| | % change | -5% | -20% |
| Pieces removed | | 15840 | 74290 |

