Optimising cattle monitoring with in-paddock weighing

Producer case study: Metcalfe family, Manypeaks, WA

Why In-paddock Weighing?

In southern Western Australia, cattle producers often don't have the opportunity to weigh their animals regularly. This makes it difficult to detect changes in growth rates early, potentially impacting decision-making around sales and nutrition.

Traditionally, weighing cattle means bringing them to the yards which is time-consuming, labour-intensive and hard to justify if weighing is the only reason for yarding.

In-paddock weighing offers an alternative by providing real-time weight data without the need to move stock. This data can help producers plan more effectively, including setting sale dates, drafting target weights, and adjusting management based on animal performance.

About the Project

This Producer Demonstration Site (PDS) project began in early 2023 and will run through to late 2025. The PDS aims to assess the on-farm value of in-paddock weighing systems, with a focus on labour efficiency, improved weight monitoring, and the potential to better meet target market specifications.

Switching up the Strategy

In late 2024, the Optiweigh in-paddock cattle weighing unit was trialed by the Metcalfe family, the fourth host in this ongoing project. Running 5,200 head of cattle across multiple herds ranging from 50 to 200 animals, the Metcalfes have traditionally conducted just one weigh-in per year during routine yarding, with two additional weigh-ins specifically for weight tracking of cattle.

Rather than using the Optiweigh unit to track weight gains over time, host producer Tim Metcalfe adopted a different approach. He used the Optiweigh unit as a roving weight monitoring unit, rotating it between herds more frequently to obtain quick snapshots of herd weight averages and weight distributions. This allowed him to make timely decisions around management and marketing, without the need to yard cattle.

Trial Details

Across the trial period at the Metcalfe's, the Optiweigh unit was moved through 10 separate herds:

- 6 mobs of steers
- 2 mobs of heifers
- 2 mobs of mixed-sex weaners

The data showed that not all cattle walk through the Optiweigh unit, with herd coverage ranging from 17% to 45%. Interestingly, the number of days the unit remained in a paddock did not always increase coverage. However, the data collected was consistently representative—weight distributions and standard deviations across mobs showed the readings were still a reliable sample.

As an example, one herd of 190 steers recorded a herd average of 490kg, ranging from 442kg to 559kg, while another heifer mob recorded an average of 452kg, with weights between 382kg and 538kg. Across the board, the average difference from the mean weight (standard deviation) was stable, suggesting confidence in the Optiweigh units sampling.

The economics – does it stack up?

An economic analysis showed a Net Present Value (NPV) of $45,380 over 10 years, confirming the investment could be worthwhile for the Metcalfe family business under their operational model. Key annual benefits included:

- $19,066 in reduced labour costs

- $1,650 in reduced time off feed
- $7,030 in improved nutritional management

Tim Metcalfe believes that with two Optiweigh machines, he could monitor his entire herd effectively, removing the need for dedicated yarding to weigh cattle. The combination of improved nutrition management and labour savings makes for a compelling case.

Lessons learnt

The Metcalfes' approach highlighted the value of flexible use. For operations with multiple herds and limited time, rotating the unit can deliver valuable, actionable insights supporting improved nutrition and sales decisions.

Another important, practical tip is that the set-up matters. The Optiweigh unit must be placed on level ground to record accurate weights. Tim recommends either relocating the unit regularly or placing it on a stable pad such as gravel to avoid pugging or uneven terrain.

Looking Ahead

This approach provides alternative option for producers to consider. In-paddock weighing doesn't need to mean long-term monitoring of one mob, it can also be a fast, flexible diagnostic tool. With the right setup and strategy, the Metcalfe's have shown that in-paddock weighing can fit a range of business models.

The SCF-led project continues into 2025, and with each new host, we're building an improved picture of where the Optiweigh unit fits best and what producers can do to maximise its value on-farm.

Figure 1: Stirlings to Coast Farmers and Cattle Australia representatives with the Optiweigh unit at the Metcalfe's property.

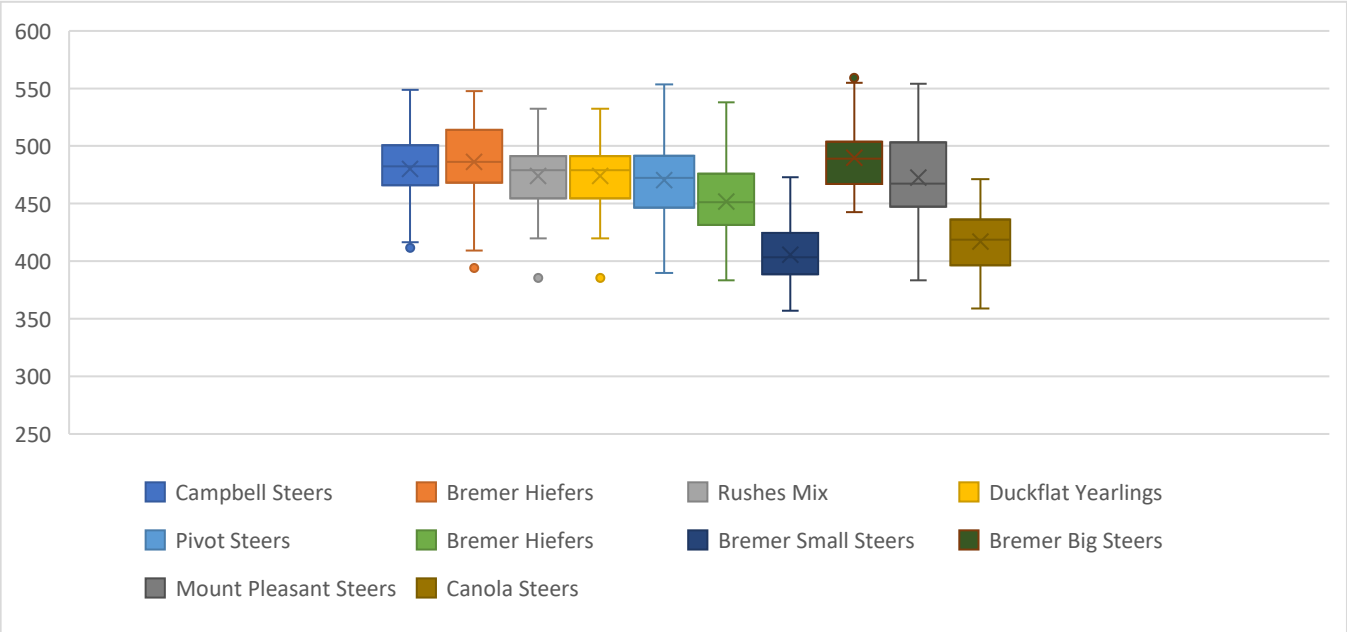

Figure 2: Optiweigh average weights and weight distribution of the 10 herds trialled at the Metcalfe property.

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