

From Fences to Algorithms

Practical experiences with virtual fencing in a mixed farming system

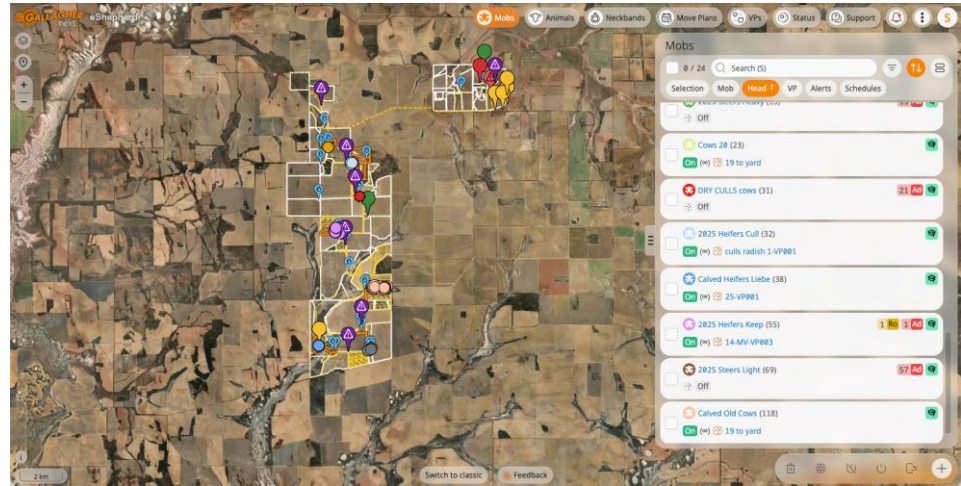
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Why did we need something different?

70% cropping • 30% cattle • 320 mm annual rainfall

- Large paddocks made conventional strip grazing labour intensive
- Dry months made temporary fencing increasingly impractical
- A major fencing replacement program was looming
- We wanted more grazing flexibility without redesigning the farm in steel and wire



From trial to 400+ collars

2023 — severe drought; the worst season I had experienced

2025 — connectivity grant enabled a 50% co-investment in our first collars

Now — 400+ collars, with adult cattle and animals over about 200 kg fitted

What started as a fencing trial quickly became a whole-farm management tool.



The fence you can't see

Same paddock. No physical barrier. Two completely different grazing outcomes.

At this Gallagher field day, the cattle were inquisitive and could see the crowd but remained on the grazed side of the virtual boundary.



Cattle learn remarkably quickly

- We train cattle after fitting before using laneways and desired paddocks
- They rapidly learn to trust and respond to the audible cue
- Initial excitement generally settles quickly
- A single animal losing a collar usually stays with the herd
- When refitted — even 4–6 weeks later — they generally do not shake to remove the collar

Animal welfare remains central: correct fit, good training and observation matter.



Precision grazing — without a physical fence

The boundary is virtual. The grazing difference isn't.

- Allocate a little or a lot
- Move as frequently as required
- Control timing, intensity and recovery
- No temporary wire to shift



Turning feed into production

Grow it → Crimp it → Allocate it virtually →
Finish cattle

This feed was crimped in September. We were then able to finish some steers over the following ~100 days by progressively giving them a little at a time.

Virtual fencing did not create the feed — it gave us control over how the cattle accessed it.





Design grazing around the cropping system

Long virtual strips aligned with cropping tramlines.

- Reduces cattle pads across machinery working direction
- No temporary fences across very large paddocks
- Strip width and location can change whenever required

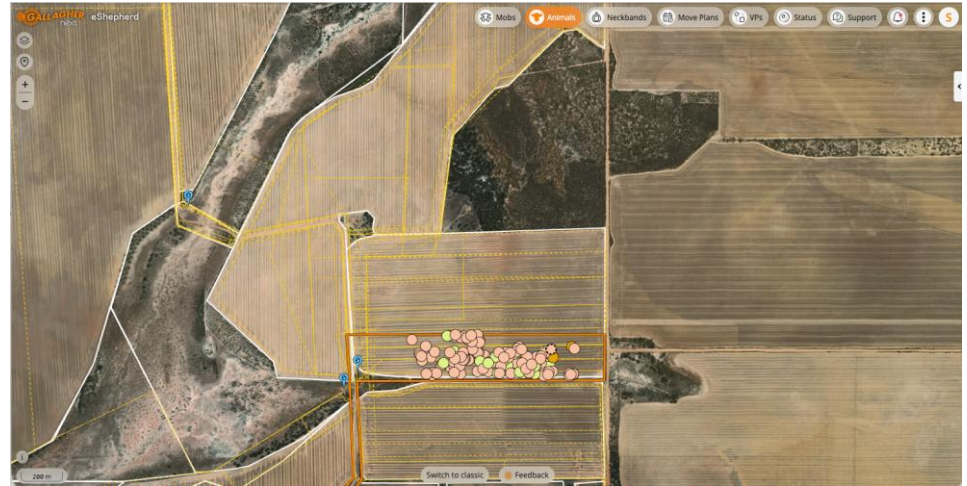
The cattle can follow the farming system — rather than the farming system adapting to the cattle.



Move cattle from the screen

Create a boundary in minutes — then move it from a desktop or mobile device.

Some paddocks are over 200 ha and up to 2.5 km long. Virtual subdivision can be changed whenever required.

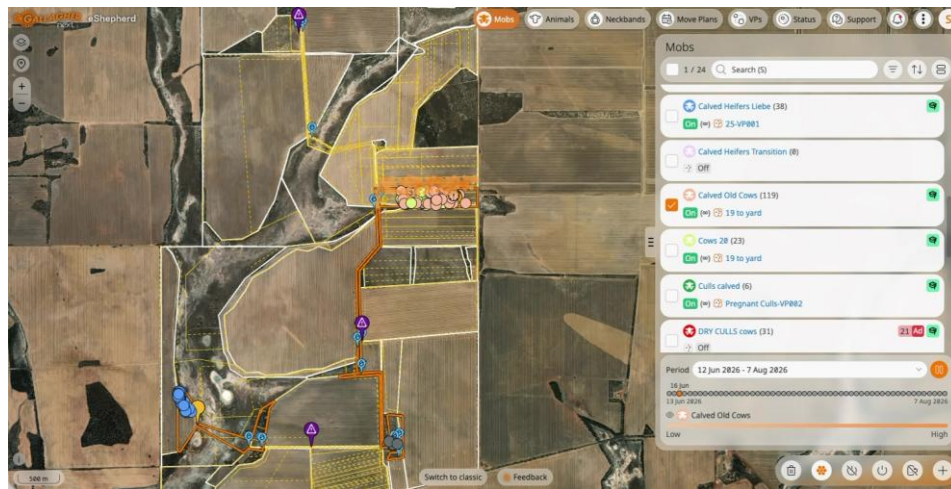


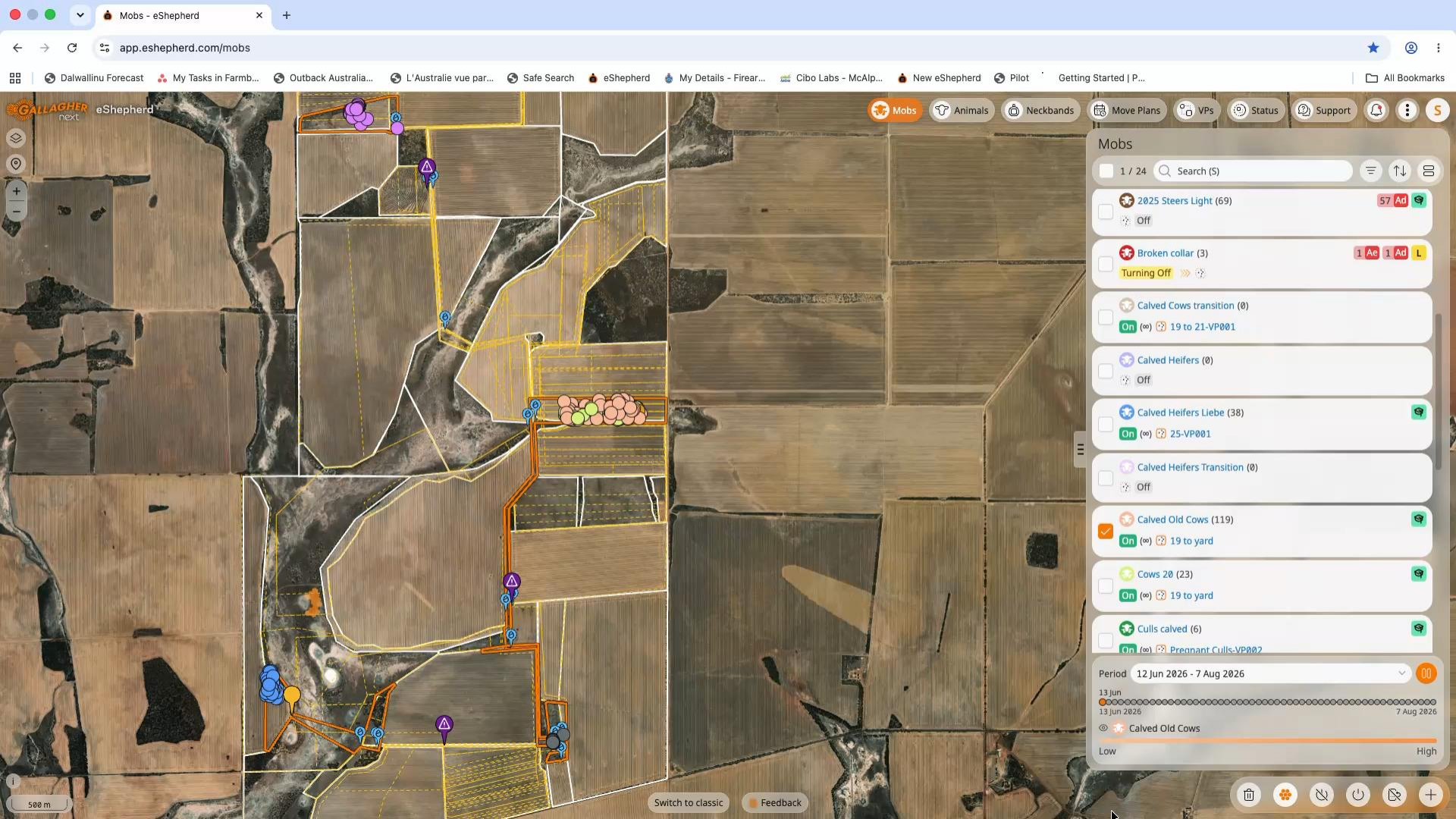
Six weeks in motion

Calving mob over six weeks.

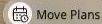
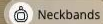
- Virtual boundaries progressively moved
- Cows follow the available grazing area
- Mob numbers increase as calves arrive
- The movement record becomes a spatial history of grazing

PLAY: six-week movement / heatmap video.





eShepherd



Mobs

1 / 24 Search (5)

2025 Steers Light (69) 57 Ad

Broken collar (3) 1 Ae 1 Ad L
Turning Off

Calved Cows transition (0)
On (w) 19 to 21-VP001

Calved Heifers (0)
Off

Calved Heifers Liebe (38)
On (w) 25-VP001

Calved Heifers Transition (0)
Off

Calved Old Cows (119)
On (w) 19 to yard

Cows 20 (23)
On (w) 19 to yard

Culls calved (6)
On (w) Pregnant Culls-VP002

Period 12 Jun 2026 - 7 Aug 2026

13 Jun
13 Jun 2026
7 Aug 2026

Calved Old Cows
Low High

Switch to classic

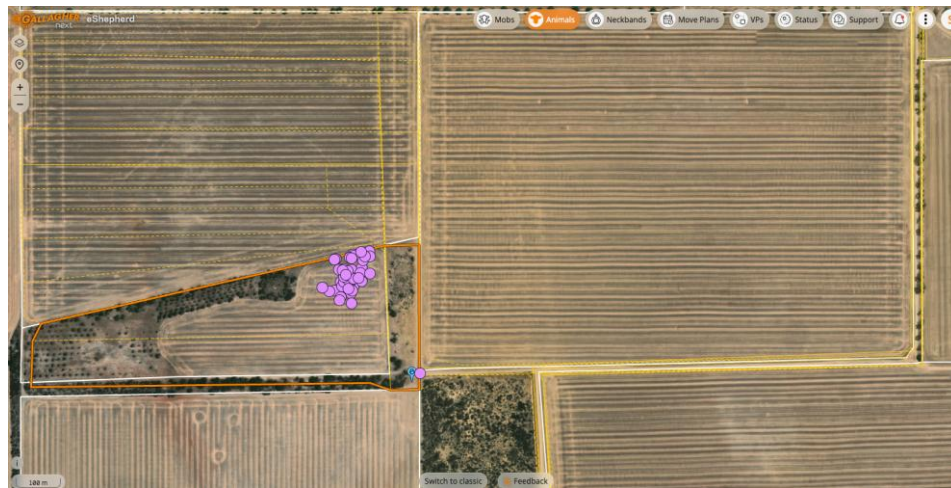
Feedback

From fencing to a management system

Where are they?

- Where have they grazed?
- What have they eaten?
- How are they performing?
- What is happening to the landscape?

Next opportunities: pasture monitoring • automated weighing • soil/carbon • animal welfare signals



10 things I've learned

1. Start with the problem, not the technology
2. Value goes beyond labour savings
3. It is a management tool, not just a fencing tool
4. Environmental opportunities are significant
5. Cattle learn quickly — welfare stays central
6. Data becomes increasingly valuable
7. It is a positive disruptor for agriculture
8. Manage landscapes, not just paddocks
9. New business models become possible
10. Think bigger

“I started looking at virtual fencing as a better way to manage cattle. I now see it as a technology that can help redesign our entire farming system.”