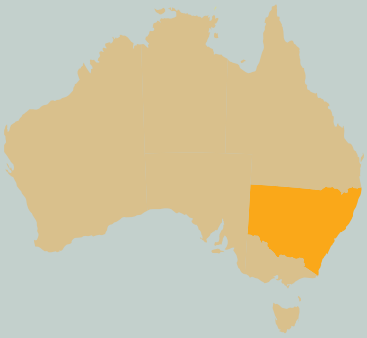
INNOVATION PROFILE



BUSINESS SNAPSHOT

OWNERS
Angus and Kelly Whyte

PROPERTY NAME
Wyndham Station

PROPERTY LOCATION
85km North of Wentworth on the Anabranch River, NSW

SIZE OF PROPERTY
12,500 hectares

BRIEF ENTERPRISE DESCRIPTION
A sheep and cattle operation utilising rotational grazing to manage pastures.

NUMBER OF PEOPLE WORKING IN THE BUSINESS
2 people working in the business (1.2 full time equivalents)

AVERAGE ANNUAL RAINFALL
260mm

WHY THIS IS A PASTORAL ZONE INNOVATION
Checking spread-out water points is labour intensive in the pastoral zone. Implementing water points in cell centres reduces the infrastructure required and also saves labour.

Cell Centre Watering Point

In 2001, Angus and Kelly implemented a rotational grazing system on Wyndham Station and increased paddock numbers from 8 to 33. By creating more paddocks they required more watering points.

This innovation profile introduces cell centres. A cell centre is a water point which multiple paddocks have access to, but only one at a time.

Figure 1: Cell centres on Wyndham Station.

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WHAT WAS THE MOTIVATION TO CHANGE?

Watering systems/points are a significant capital cost in any grazing business. Seeking options to reduce this cost drove the implementation of this innovation at Wyndham.

HOW DOES THE INNOVATION WORK?

- Four adjoining paddocks are watered by a trough at a single point, called a cell centre. All four paddocks have access to the troughs within the cell centre (see figure 2).
- Using electric tape and spring handles, the paddocks not being used are sectioned off. Only the paddocks which are being used have access to the water.
- The existing electric fences adjoining the cell centre are raised over the cell by a 3m insulated steel post to maintain the electric current, as seen in figure 1.

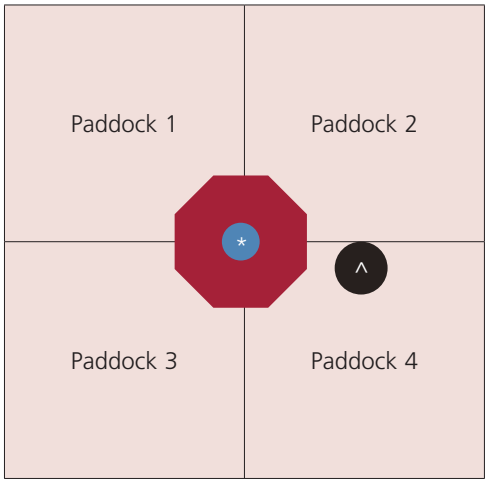

Figure 2: Diagram of four paddocks leading into a cell centre with a trough and water storage tank^.*

Figure 3: Round concrete troughs allow for an increased stocking rate or cattle to be run.

WHAT ARE THE KEY BENEFITS?

The key benefits of the innovation are:

- Lifting the fences above the cell has enabled the electric current to continue running through the fences.
- With a good rate of water flow into the trough (4L per second) it reduces stress on stock, allowing stocking rates to be increased in the good seasons.
- By opening the tape gate to an adjoining paddock, stock can leisurely wander through the cell centre to the next paddock. The tape gate to the previous paddock is then secured once they have all moved through.
- Stock can easily be moved into the next paddock via the cell centre, even when they have lambs or calves at foot. This also means the rotational grazing system is not compromised through lambing.

KEY MATERIAL REQUIRED FOR THE INNOVATION

The key materials and resources required for the innovation were:

- Pine posts
- A steel post concreted into the ground to hold the electric fence approximately 3m above the cell
- Rubble around the troughs for erosion control
- Round concrete troughs (one or two per cell, depending on stocking rate)
- 2 inch stainless steel float valves
- Storage tank
- Spirals to attach the short length of fence to the raised fence
- Electric fence tape and spring handles, two lengths of tape and two handles for each paddock leading into the cell
- 63mm poly pipe running from the storage tank to the trough; aiming for a flow rate of 4L of water per second into the trough
- Contractors to dig the post holes and run the pipe out to the troughs
- Contractors to deliver the rubble

Figure 4: Electric tape and spring handles are used as gates in the cell centre.

Figure 5: Spirals are used to attach the short length of fence to the raised fence.

POTENTIAL CAUTION AND RISK

Words of caution or risks of the innovation to pass onto others are:

- Not having an adequate water flow rate to the trough could risk stock not getting enough water or completely avoiding the cell centre.
- The raised fence can rattle in the wind which may deter livestock from walking under it to drink. Having quiet and well handled livestock can prevent the risk of stock not moving into the cell centre to drink.
- The cell centre needs to be the right size, based on the personal experience of each individual property manager. Cell centres should not be too big otherwise stock will camp within the cell. However, if they are too small then stock won't feel comfortable going in there to drink.
- As the cell centres are in the corner of each paddock, stock could camp near the cell and avoid grazing the whole paddock. To reduce this risk, stocking rate is managed and a rotational grazing system is implemented. Due to higher stocking densities, stock graze throughout the paddock and do not camp near the troughs.

LESSONS LEARNT

The lessons learnt implementing this innovation are:

- Once the electric fence was lifted to go over the cell, a small gap in the fencing was noticed where stock could potentially escape. This was overcome by connecting a short section of fencing using the spirals.
- Angus recommends trailing one cell centre on your property and then fine-tuning the method for further cell centres.

LOOKING FORWARD

The current carrying capacity at Wyndham Station is about 8,000 dry sheep equivalents (DSE), and current mob size varies from 1,500 to 3,000 DSE. Looking forward, Angus and Kelly would like to see how large they can run the mob size using the existing troughs. They may add more troughs to the cells to enable increased carrying capacity.

COST BENEFIT ANALYSIS

The cost of the innovation is as follows:

- Implementing cell centres has cost $800 for the trough, plus an extra $200 for posts and fencing; this supplies water to 4 paddocks.
- To water 4 paddocks individually, it would cost approximately $3,200 for the troughs alone.
- Approximately $2,200 across 4 paddocks is the estimated saving by using the current approach.

Figure 6: Wyndham Station.

THE FINAL WORD

The success of this innovation hinges on good rate of water flow to the trough and adopting low stress stock handling techniques. Flow rates greater than 3L per second is the aim.

Bestprac acknowledges the contribution of Angus and Kelly Whyte in the development of this innovation profile. For further information about Wyndham Station, visit www.wyndhamstation.com.au

To view more innovation profiles, business cases and videos of innovations in the pastoral zone, visit the Bestprac website www.bestprac.info

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