

INNOVATION PROFILE



BUSINESS SNAPSHOT

OWNERS

Mark, Kathy, John and Nigel Turnbull

PROPERTY NAME

Moonabie Station

PROPERTY LOCATION

Upper Eastern Eyre Peninsula, SA

SIZE OF PROPERTY

24,000 hectares

BRIEF ENTERPRISE DESCRIPTION

Mixed farming operation of sheep and crop, approximately half of the sheep run on Moonabie Station

NUMBER OF PEOPLE WORKING IN THE BUSINESS

4 full time equivalents

AVERAGE ANNUAL RAINFALL

245mm

WHY THIS IS A PASTORAL ZONE INNOVATION

On pastoral properties the location of workers is a common issue when mustering. This smart phone app increases the safety and efficiency of the job. It indicates to the mustering team where each other are located at the click of a button.



Using GPS Smart Phone Apps out Mustering

Moonabie Station is run by the Turnbull family and is located 80km north east of their main farm at Cleve. The property was purchased in 2009 for merino grazing and is used as a grazing block to help drought-proof the business. One worker lives on the station part-time to look after the livestock.

This innovation is a smart phone app used to increase safety and efficiency while mustering.

WHAT WAS THE MOTIVATION TO CHANGE?

Three reasons the Turnbull's started to use the app were:

- Increased Work Health Safety and farm safety.
- Improved efficiency of work.
- Integration of everyday technology for agricultural purposes.

HOW DOES THE INNOVATION WORK?

The Turnbull's downloaded the Real Time GPS Tracker app onto their smart phones. They created an account and all connected to that account. This process allows all phones to be tracked by one account.

While out mustering each person turns the app on and are linked to show their location. This app also tracks and shows the pathway of where they have been. This helps to show what areas of the paddock have been mustered and the direction the other musterers are moving in.

The app can also be activated by remote command. This means someone's location can be known if they haven't turned on the app, check-in or returned home.

Figure 1: Mustering on Moonabie Station.



KEY FEATURES

The key features of the app include:

- It is a real-time GPS tracker.
- Shares the location to ~0.5m of all phones connected to the app.
- Tracks and displays each phone's pathway on a screen.
- Shows the speed of each phone connected to the app.
- Location is tracked relative to landmarks as all information is displayed on Google Maps or Google Earth maps. The features that can be identified on the maps include topographic details and infrastructure, including creek lines, open clearings, fences, shearing sheds and watering troughs.

WHAT ARE THE KEY BENEFITS?

The key benefits of using this app are as follows:

- This app provides significant safety and efficiency benefits. This is important when mustering paddocks that are 4,000ha in thick bush/scrub where visibility is limited to ~50-100m. Risks this app overcomes include mis-mustering on the assumption that someone else has mustered an area, and losing someone who may be in trouble.
- A key aspect is protecting the safety of people working in the paddocks alone. Others can activate this app and log in via a web page or smart phone to view their location and movements.
- It can act as a real time GPS tracker. It has similar characteristics to an emergency position-indicating radio beacon (EPIRB); however, it does not replace this device.
- The idea can be used for other farm management practices including spraying and seeding by changing the type of communication on the property.

THE FINAL WORD

"It's absolutely brilliant. We've saved so much time using the app and learning from our mustering practices, and now we're keen to see what else is out there to integrate into the business," said Nigel.

Bestprac acknowledges the contribution of Nigel Turnbull in the development of this innovation profile.

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

KEY RESOURCES REQUIRED FOR THE INNOVATION

The items required for this innovation are:

- Smart phone.
- Next G mobile phone service.
- An appropriate app installed and linked.

POTENTIAL CAUTION AND RISK

There are some lessons that Nigel and his family have learnt in implementing this innovation.

Firstly, the property must have mobile phone service to use smart phone apps.

Nigel recommends getting to know the app to understand the features before using it out in the paddock.

There is the potential of a lack of privacy. Once connected through the app, your location is known at all times by other people who are also linked to the account.

To overcome this, Nigel's account only connects to his brother and father. Short-term workers may use the app; however, they are logged into a separate short-term account. In either circumstance, for privacy they all turn off the app when it's not required.

Be aware that using the app switches on your phones GPS and therefore can use a lot of battery. Allow for this by starting the muster with full batteries and potentially using portable chargers. The Turnbull's switch it on and off as required to save battery power, particularly during long musters.

Some apps are made specifically for either Android or Apple operating systems. Assess your work team's phones and find an app that suits. Note that while an app may exist for both Apple and Android, it still may be incompatible to link on the same account

FURTHER RESOURCES

Check out the app store for more information on apps that suit your situation.

LOOKING FORWARD

From here, Nigel is keen to implement further technology advancements across the business. Some technology he would like to see developed include integrating GPS into sheep ear tags. This may include tagging a 'Judas' sheep in a mob to direct you where to go for mustering. This may also provide data on the location and grazing habits and movement of the mob.

COST BENEFIT ANALYSIS

If you are using an existing smart phone on a data plan, there is essentially no cost to you.

It saves time trying to explain your location over the radio to lost people in a paddock.

At the end of the day by looking at the tracking pathway you can check the paddock has been covered properly, and that no ground has been missed where sheep could be camping.

Figure 2: A screen-shot of the app showing the mustering pathways of Nigel and his brother on Moonabie Station.

