



Using electronic identification (eID) to manage sheep in the pastoral zone

Focus Farm case study

eID has proven invaluable in CC Cooper and Co.'s pastoral operation, ensuring the most productive sheep are retained during drought, and allowing for more efficient resettling of sheep after shearing.

Enterprise snapshot

Owners: CC Cooper and Co.

Property name: Wonga and Madura Plains

Locations: Broken Hill, NSW, and the Nullarbor Plain, WA

Brief description: 30,000-45,000 Merino ewes

Number of employees: Approximately 30

Average annual rainfall: Approximately 220 mm

On-farm technology in use: eID, wool testing, autodrafter, water system monitoring

Background

CC Cooper and Co. is a Jamestown-based farming and sheep grazing operation run by Leith and Averil Cooper, their sons Seth and Tom and their wives Ali and Anne. Their sheep operation is focussed on production from approximately 30,000 Merino ewes. Sheep are run on two pastoral properties – at Wonga Station, south of Broken Hill, and Madura Plains on the Nullarbor Plain – with 50% more ewes run in good years. This case study focusses on the way the Coopers are using eID eartags to drive productivity and reduce mortality in their Merino flock.

What improvements were the Coopers looking for?

At Wonga Station:

- increased wool cut, reduced fibre diameter, improved weaning rate
- ability to retain the most productive sheep in the flock when destocking is needed
- easier methods for recording individual animal traits
- autodrafting of sheep based on classing information.

At Madura Plains:

- ability to track which sheep belong in which paddocks during shearing – even when mobs have been combined during mustering
- autodrafting of sheep into original paddock mobs after shearing.

What have they adopted?

- eID eartags in all sheep
- Prattley five-way autodrafter at Madura Plains and Prattley three-way at Wonga Station with radio-frequency identification (RFID) panel readers
- Wand for reading eID in classing race and on shearing board for recording wool traits and visual assessment
- Wool weight and micron testing on hoggets at Wonga Station
- Traditionally classed hoggets based on wool traits and weight at Wonga Station using the 7% micron premium Rampower index. They are now moving to genomics-based ram selection at Wonga Station
- Monitoring of tank levels, flow rates and water pressure in extensive water systems on Madura Plains and Wonga Station.

Use of eID at Wonga Station

- Before 2014, ewes were visually classed and numbered tags were used to record information
- eID eartags have been used in all ewe hoggets since 2014 to aid the selection of flock and stud ewes
- eID has allowed accurate and more convenient collection of fleece and body weight data
- Accurate, objective information is available on 2,000 stud ewes, with ewes selected by index (including wool cut, micron and body weight) and visual assessment to refine selection
- Genetic improvement has been accelerated
- Ewes that fail to raise a lamb can be identified, and twice dry ewes are culled
- During drought in 2019, when the flock needed to be reduced, the Coopers were able to cull the bottom half of the flock using objective information.

Use of AgTech at Madura Plains

- When the Coopers bought Madura Plains in 2016, paddocks were large with few water points. Bringing sheep in from distant paddocks (80 km from the shearing shed) was labour intensive.
- Returning sheep to paddocks and re-settling them on water took approximately two months, with the risk sheep could perish while looking for water in an unfamiliar paddock.
- In 2019, all sheep were tagged with eID tags, enabling individual animals to be assigned a 'home paddock'.
- Now mobs from different paddocks can be combined during mustering and shearing, saving labour.
- After shearing, most sheep are now autodrafted back into their original mobs and trucked back to their paddock of origin.

General management, telemetry and future AgTech at Madura Plains

- The Coopers are redeveloping Madura Plains, fencing it into smaller paddocks, establishing laneways and setting up more water points.
- A 10,000 head feedlot has been set up to help manage sheep during shearing and to simplify the trucking of sheep to and from the property.
- With eID, smaller paddocks and smaller mobs now in place, the Coopers will monitor lambing performance in each paddock.
- New bores have been drilled and set up with submersible pumps, diesel generators, automated pumping systems and about 800 km of pipeline.
- Telemetry is used to help staff identify problems, keep up with general maintenance and keep pipelines full. The system provides staff with a daily overview of water system performance so they can focus on any problem areas. The effectiveness of repairs can also be monitored remotely.
- Most water pumping uses solar technology. The exception is bore pumping at Madura Plains, where there is a need to continuously pump from 150 m depth. Over time, these pumps will be changed to 24 hour solar systems with battery storage.
- The use of drones is also being explored – either drones with species recognition software to locate mobs of sheep before they are mustered, or to locate wild dogs on the property.

Contact

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Fig. 1. Sheep at Madura Plains,



Fig. 2. David (Seth) Cooper of CC Cooper and Co.



Fig. 3. Lambs in the new CC Cooper and Co. feedlot.