



Using technology for increased fertility, productivity and profitability

Focus Farm Case Study

McPiggery is using technology to accurately measure and monitor fertility of their merino flock. This has enabled them to make informed decisions when classing sheep for increased productivity and profitability.

Enterprise Snapshot

Owners: McMahon family

Property name: McPiggery

Location: Lameroo

Size: 18,000 hectares

Brief enterprise description: Cropping, piggery, self-replacing merino flock, Angus cattle

Number of Employees: 3 full time in sheep and cattle business, 32 staff in the piggery and cropping business

Average annual rainfall: 325 mm

What on-farm technology they're using: Electronic identification for collection of individual animal data, remote water monitoring.

Background

The McPiggery property is a mixed cropping and livestock business together with a 1,650 sow piggery. The livestock business is run by Duane Simon, together with two employees. Yearly, McPiggery sows 5,000 hectares of crop to cereals and pulses with 4,000 hectares of improved pastures consisting predominantly of veldt grass and legume pastures (lucerne and medic), and sown pastures of barley and vetch to fill the early feed gap.

Pasture paddocks average 40 hectares in size and are rotationally grazed, with mobs up to 1,000 ewes. Rotational grazing allows retention of good levels of at least 50% ground cover in all grazing paddocks,

provides early feed options depending on seasonal conditions, minimises feed gaps, and importantly allows pastures to recover from grazing and to build pasture biomass.

McPiggery has a 7,500 self-replacing merino flock, with an average 19-20 micron wool. Ewes are shorn six monthly, averaging 65mm staple length and 3.5-4.5 kg wool. Duane has found that six monthly shearing makes management easier, particularly for grass seed contamination, lambing ewes and fly control. McPiggery also produces first cross ewe lambs for the Naracoorte First Cross Ewe Sale in November each year.

Tank Monitoring

Remote tank monitoring was introduced in 2017 to monitor selected water tanks at high points across the McPiggery properties. Water telemetry of tanks allows monitoring of water levels and aids in identification of leaks. Installation of the telemetry has saved McPiggery time, fuel and labour as tank levels do not need to be physically checked. Most importantly, telemetry provides peace of mind for Duane and the team in that their livestock always have access to water. Most of the water for their livestock comes from bores fitted with solar pumps.



Remote tank monitoring

Electronic Identification (eID)

McPiggery introduced eID tags 3-4 years ago with the aim of increasing their fleece weight and fertility of their flock. Collection of ewe fleece weight data has been discontinued in recent years due to ewe wool weight being assessed visually through staple length (correlated with wool weight), with an increased focus on increasing fertility.

Maternal data including rearing type (e.g. twin, single) and pregnancy scanning status is collected for individual animals. This information is used to class ewes and hoggets. Duane says that accounting for rearing type is important when classing ewe hoggets, as it ensures he does not penalise smaller animals which may have been raised as twins. Duane expects better performance from hoggets raised as a single compared to those born as a multiple.

Classing ewes using individual animal data is also beneficial in identifying the most profitable ewes; i.e., not penalising ewes that have raised multiples, and accounting for ewes that have only raised singles.



Duane and the autodrafter at the McPiggery property

Pregnancy Scanning

McPiggery has been pregnancy scanning for 10-12 years for multiples. Data from pregnancy scanning is used to ensure appropriate nutrition for lambing ewes, based on pregnancy status. This is particularly

useful in dry years. Mob size is reduced to 100-200 ewes to minimise mismothering during lambing. Ewes scanned as bearing multiples are separated from singles and trail fed barley prior to lambing and post weaning to ensure that ewes are in appropriate condition for mating the following year. Ewes are also wet/dry checked at weaning to ensure any ewes that have lambed and lost are recorded and treated the same way a dry ewe would be.

SA Merino Sire Evaluation

McPiggery is hosting the SA Merino Sire Evaluation 2019 and 2020 drop progeny. The SA Merino Sire Evaluation provides the opportunity for objective comparisons to be made between rams from different studs, evaluating their progeny by measured traits (e.g. greasy fleece weight) and visual assessment (e.g. breech cover). The progeny are run together in the same environmental conditions that typify SA Merino production¹.

Being a host for the SA Sire Evaluation trial has resulted in numerous benefits to both Duane and the McPiggery sheep enterprise. These benefits include improved knowledge and use of eID equipment, testing the genetics which work best at McPiggery, and data on all progeny – particularly the visually classed ‘tops’ which will be utilised in the enterprise. Other benefits are the increased networks of livestock professionals, ram breeders and other farmers with an interest in the trial and, importantly, the trial has allowed the McPiggery flock to be benchmarked against industry.

Further Implementation of Individual Animal Recording

In future, Duane plans on using eID to identify individual animal performance for carcass/meat traits using data collected through scanning for eye muscle and fat depth particularly in his ram breeding flock.

Further Information

This case study is an initiative of the Red Meat and Wool Growth Program of Primary Industries and Regions SA, supported by Meat and Livestock Australia, SA Sheep and Cattle Industry Funds and SheepConnect SA.

For more information visit pir.sa.gov.au/redmeatandwool or contact the Red Meat and Wool Growth Program via phone (08) 8429 0360 or email redmeatandwool@sa.gov.au.

¹ SA Merino Sire Evaluation Report April 2020 https://merinosuperiorsires.com.au/wp-content/uploads/2020/05/SA-2019-Drop-Yearling-Assessment-Sire-Evaluation-Site-Report-FINAL_sml-1.pdf