Smaller mobs deliver ‘lotsa’ lambs

Producer case study: Andrew & Maria Kitto and Nathan & Rachel May

Name:	Andrew and Maria Kitto and Nathan and Rachel May
Location:	Gladestone, SA
Area:	830ha owned and 200ha of agistment (plus additional opportunistic agistment)
Enterprise:	Sheep and cropping
Pastures:	20% grazing (hills country with perennial pastures plus sown pastures on some arable country), 80% cropping (cereals, lentils, vetch)
Soils:	Red clay/loamy
Rainfall:	**435**mm average annual

A quest to implement best practice in their sheep enterprise led Andrew Kitto and his family to join an MLA-supported Producer Demonstration Site (PDS), where they saw the on-farm benefits of lambing twin-bearing ewes in smaller mobs.

The ‘Lotsa Lambs’ PDS was run by Upper North Farming Systems, with a goal to improve reproductive success in mixed farming businesses.

Andrew and his wife Maria run a mixed enterprise with their daughter and son-in-law, Rachel and Nathan May, at Gladstone in the mid-north of South Australia.

Their sheep enterprise focuses on breeding prime lambs with high growth rates and high lambing percentages. They purchase Merino ewes to join with White Suffolk rams and also operate a small White Suffolk stud to breed rams for on-farm use and to sell.

Ewe management

When Nathan completed a Lifetime Ewe Management (LTEM) course in 2020, he was inspired to implement many of the best practice principles presented in the program.

The family introduced pregnancy scanning the following year. They use electronic identification (eID) tags to collect pregnancy status data and to identify the ‘doers’ to retain when culling ewes. They also collect data on lamb weights at marking and weaning.

Rams are provided with a protein flush – usually lupins – prior to joining in January. The family aims for the rams to have a condition score of 3.75 at joining.

Image 1 Andrew Kitto and Deb Scammell condition score ewes as part of the PDS. Image: Rachel Trengove, UNFS

They preg-scan at 90 days and use this as an opportunity to condition score ewes again. Ewes are drafted into single and multiple bearing ewes and run in specific paddocks based on their pregnancy status.

Around 20% of the family's farm is hills country for grazing and 80% is cropping, which also provides stubbles for grazing over summer.

While the hill country offers good protection for lambing with tussocky grasses, this is offset by poorer nutrition, combined with practical challenges of supplementary feeding in these paddocks. It's also difficult to run smaller mobs in the hills, so preferential paddocks are allocated to multiple-bearing ewes based on feed-on-offer, but this often comes at the cost of less shelter.

Ewes receive barley and hay through pregnancy and lambing, depending on the quality and availability of feed, as well as licks providing mineral supplementation.

Challenges

The Kittos had identified some challenges in their flock, so participating in the PDS was an opportunity to dig deeper into these issues.

In particular, they wanted to:

- investigate why pregnancy toxicity was occurring
- adjust supplementary feeding to prevent ewe condition score slipping as it was difficult to regain condition
- fine-tune grain rations to prevent birthing problems as a result of larger lambs.

"We were experiencing ewe mortality up around 8-13% in a bad year, and we were keen to decrease this," Andrew said.

"We thought this could be achievable by monitoring condition score, aided by having a younger flock with a new line of hoggets introduced in 2021, but we also wanted to introduce other practices to reduce ewe mortality."

Infrastructure for smaller mobs

Previously, the Kittos would run ewes with multiples in mobs of around 300 head, but for the PDS they reduced this to 120 multiple-bearing ewes per mob.

This required some investment in temporary water troughs (with water pipe running on top of the ground) and electric fencing to split paddocks up for these smaller twinning mobs.

Andrew plans to further reduce twin-bearing mob size after hearing livestock consultant Nathan Scott of Achieve Ag Solutions present as part of the Lotsa Lambs project. Their ideal would be 60 head/mob but this isn't commercially viable for the business, so the family will target 100 head for multiples moving forward.

Maintaining conditions

A core focus of the Kittos' demonstration site was on maintaining optimal condition scores during gestation to target a lambing rate of 130% across the flock.

SA-based consultant Deb Scammell of Talking Livestock provided guidance to achieve this through:

- supplementary feeding
- feed budgeting
- condition scoring.

Over the three-year PDS, the family lifted condition scoring at lambing from 3.2 in 2022 to 3.5 in 2023 and 2024. While the average was good, they faced a challenge of how to reduce the range in mob condition scores.

In the first year of the PDS (2022), they achieved 89% lambing for singles and 88% for multiple-bearing ewes.

This was the lowest result across the three years and was attributed to:

- a lower-than-ideal condition score
- a high proportion of older ewes
- challenging seasonal conditions with cold, wet weather during lambing.

With condition scores ranging from 2.6 to 4, Deb advised Nathan and Andrew to use the LTEM condition score graph to track this range to understand the impact it has on lambing percentage, especially on multiple-bearing ewes.

"Deb suggested we aim to keep variation in the mob within around 0.5 of a condition score, especially during late pregnancy," Andrew said.

“If we’re getting a large range, it’s best practice to draft ewes in mid-pregnancy based on their condition score and feed the tail slightly more.

“Often ewe mortality and decreases in lamb marking percentage is due to the ewes that are below the average of the mob, so drafting these off can make a significant difference to your overall result.”

Another strategy was to allocate two feeders per 100 ewes, to reduce mismothering and prevent ewes rushing the feeder.

Image 2 Andrew Kitto condition scores ewes as a strategy to lift reproductive performance. Image: Rachel Trengove, UNFS

Reducing mob size

The more favourable conditions in 2023 delivered a good early season break which provided green feed for ewes at the end of pregnancy and into lambing (compared to the dry start in 2022).

Pregnant ewes were on vetch stubble and grain supplements until 20 May, when they were split into four 10ha paddocks with vetch and barley for lambing in June.

Scanning results were inaccurate this year as lots of multiples were in the single mobs – resulting in lambing rates of 141% for singles and 155% for multiples. Some of the mortalities may have been because twin-bearing ewes were underfed in the single mobs, and vice versa for the single-bearing ewes being overfed in twin mobs.

However, the 2023 lambing results were excellent overall, which was attributed to the earlier seasonal break, feed-on-offer at lambing and smaller mob size. Undulation in the hills provided shelter, and ewe mortality dropped to just 2% during lambing.

In 2024, the Kittos split an undulating paddock into three (using electric fencing) for multiples and ran mob sizes of just under 100 ewes.

This was labour intensive, with two people setting up approximately 10km of electric fencing over three days. It also took about one hour each day to rotate mobs through the paddocks and provide supplementary feeding to the smaller mobs.

“Mild weather at lambing in 2024 gave an advantage to lamb survival compared to the 2022 season, when there was a cold snap at lambing time,” Andrew said. “We also had an ideal condition score of 3.25 during pregnancy and, importantly, had less variability in the condition score range.”

Managing the dry

The final year of the Kittos’ demonstration site (2024) was the driest season on record for the region.

“Conditions were very challenging for both cropping and grazing,” Andrew said. “We had a very late season break after lambing, with just 28mm on 26 May, followed by 50mm in early June and then ongoing very dry conditions throughout late winter/spring.”

Lack of feed on offer meant splitting mobs into the 10ha electric fenced paddocks was not an option, so multiple bearing ewes – still in mobs of less than 100 head – remained in larger paddocks sown to barley and vetch (which had limited germination).

The very dry conditions required additional supplementary feeding, which increased the risk of mismothering due to the ewes walking back to the same area to feed.

Considering the season, lamb percentages were good (95% for singles and 140% for multiples). Ewe mortality was also relatively low (2.3%), aided by small lamb size.

In years like this, to ensure high marking percentages in twin mobs Deb’s advice was to further reduce mob size and provide supplementary feed at a few different feed stations.

“When there isn’t adequate feed on offer, the more feeding stations you can have per mob the better,” Deb said. “For a mob this size, two self-feeders and two different hay feeding sites is preferable.”

Outcomes

By implementing these practices, the Kittos lifted lambing percentages from their historical average of 110% to about 130%, which improved their business' profitability and efficiency. Improving lamb and ewe survival was also important outcome at an industry level for markets and consumers.

One of the biggest learnings was the importance of condition scoring.

"Ideally, doing a score around joining and during early, mid and late pregnancy gives us something to look back on, and allows us to realise if they are slipping or getting too fat before it's too late to correct," Andrew said.

The Kittos will also take on board Deb's advice to split lambing groups by pregnancy status instead of into age groups, as a strategy to reduce the range of condition scores within a mob and support tailored feeding.

The benefits of dividing up paddocks to run smaller mobs were also clear:

- lamb survival lifted by an estimated 30%
- feed utilisation improved
- more ground cover was maintained compared to grazing one large area.

"After the guidance from this project, we've now got the confidence to continue lambing multiple-bearing ewes in smaller mobs," Andrew said.

The family is conscious that higher lambing percentages could lead to overstocking, so will be vigilant in culling the bottom 30% of performers each year.

Specific challenges arose from the mixed farming enterprise, including trying to juggle the timing of grazing and cropping activities, as well as not having permanent lambing paddocks with appropriate infrastructure such as fencing, water points and shelter belts.

Lamb mortality was higher in paddocks with little or no shelter, and although planting shelter belts would be ideal, this is not practical in paddocks which are rotationally cropped and not permanently allocated to lambing.

Reducing mob size also required investment in additional feeders. Looking ahead, the Kittos will explore other feed options such as:

- **managing excess quantities of spring feed** - splitting some of the grazing areas into smaller paddocks with electric fencing and increased stocking rates. This could also provide an extra paddock to crop and cut for hay or grain, providing an extra fodder reserve for summer/autumn feeding
- **considering silage to reduce grain feeding** – although the cost of silage is double that of hay, it's also double the nutritional value of hay, so it's a good option when barley prices are high
- **grazing cereals destined for harvest for six weeks before nodes to avoid yield penalties** - cereals at this stage are a good source of feed, with 20% protein.

Future plans

Andrew and Nathan are now equipped with strategies to adopt, and benchmarking figures to work towards with lamb survival.

"We will continue preg-scanning and running mobs separately, with multiple-bearing ewes in smaller mobs," Andrew said.

"The more precision we have in our flock management, the easier it is to make decisions with confidence. For example, when we sold lambs early in 2024 because of the dry, we found that knowing what condition ewes and lambs were in and what we were aiming for lead to improved decision making."

Andrew's lessons learned

- Supplementary feeding, feed budgeting and condition scoring are important strategies to maintain lambing rates.
- Condition scoring ewes at joining and at key times throughout pregnancy helps identify if nutrition needs to be adjusted before it's too late to correct.
- Providing extra feeding stations helps prevent lamb mortality from mismothering at crowded feeders

	Number of lambs	Number of ewes	% Lambing	*CS at Preg scanning*	*Ewe mortality*	Lambing % prior to preg scanning and smaller mobs
Kitto						
Singles 2022	124	139	89%			110%
Multiples 2022	198	225	88%	3.2	4.0%	
Overall %	322	364	88%			
Kitto						
Singles 2023	327	232	141%			
Multiples 2023	453	292	155%	3.5	2.0%	
Overall %	780	524	149%			
Kitto						
Singles 2024	158	166	95%			
Multiples 2024	245	175	140%	3.5	2.4%	
Overall %	403	341	118%			

Figure 1 PDS results for Kittos' trial site

Additional information, resources & training

MLA's Producer Demonstration Site Program

Visit the **Lotsa Lambs PDS project page** for more information, including additional producer case studies and insights from the project.
mla.com.au/extension-training-and-tools/search-pds/pds-data/lotsa-lambs---improving-reproduction-success

Explore **MLA's PDS Program**, discover how producers are improving productivity and profitability.
mla.com.au/pds

MLA's Containment feeding hub

Access MLA's Containment Feeding Hub for a comprehensive collection of resources to support producers. Find national procedures and guidelines for intensive sheep and lamb feeding systems, along with practical information on containment feeding.
mla.com.au/containment-feeding

Lifetime Ewe Management (LTEM)

The Lifetime Ewe Management (LTEM) training program was developed by the AWI-funded Lifetime Wool project and Rural Industry Skills Training (RIST) and commenced in 2005/06.

The nationally accredited Lifetime Ewe Management course allows sheep producers to monitor and demonstrate the effects of nutrition and management on a mob of their own ewes in their environment.
wool.com/ltem

For further information:

Rachel Trengove, Upper North Farming Systems **M** 0438 452 003 **E** rachel@unfs.com.au