Ovine Observer

Issue: 105
Date: April 2025

Contents

Sheep industry turn-off update

Kate Pritchett (DPIRD, WA)

Author correspondence: kate.pritchett@dpird.wa.gov.au

Domestic slaughter

In 2024, Western Australia's (WA) total sheep slaughter was 7% higher than 2023, an already elevated year.

Adult sheep slaughter totalled 2.1 million head, a year-on-year (YOY) increase of 12%. This is largely due to many producers choosing to reduce stock numbers in response to lower prices, poor seasonal conditions early in the year and uncertainty around the live export industry.

Lamb slaughter reached 3.1 million head, a YOY increase of 4% and the highest on record.

Table 1 Number of sheep and lambs slaughtered (thousand head) in WA (based on Australian Bureau of Statistics (ABS) data, DPIRD analysis)

Livestock slaughtered	Year			
	2022	2023	2024	YOY change
Sheep	1,180.9	1,906.6	2,134.6	12%
Lambs	2,574.7	2,973.7	3,103.8	4%
Total	3,755.6	4,880.3	5,238.4	7%

Sheep slaughter has been elevated for the last 2 calendar years as seen in the graph below. These sorts of numbers haven't been seen since the early to mid-2000s when the state flock was significantly larger, and are likely indicative of widespread destocking.

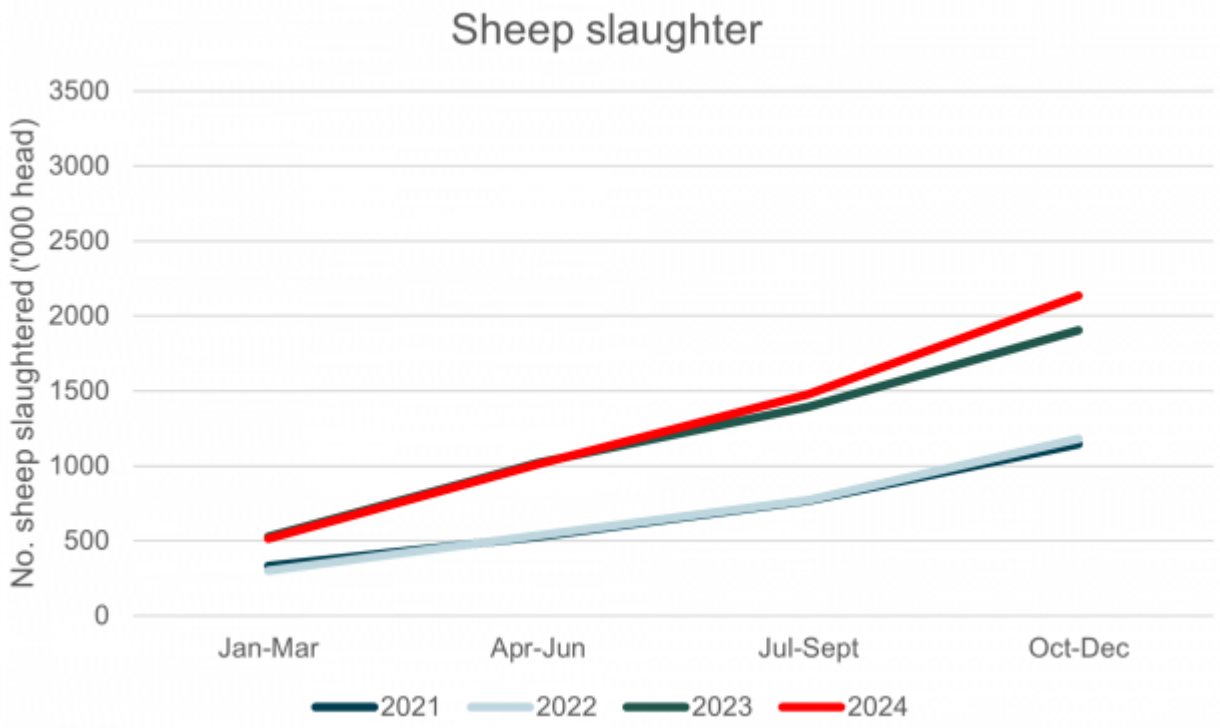


Figure 1 Cumulative WA sheep slaughter (based on ABS data, DPIRD analysis)

Lamb slaughter reached record highs in 2024 totalling 3.1 million. This follows high levels of slaughter in 2023 which may indicate a reduced availability of replacement ewes in the coming years.

Figure 2 Cumulative WA lamb slaughter (based on ABS data, DPIRD analysis)

Live export (by sea and air)

In 2024 WA live sheep exports totalled 423,300, down 37% compared to 2023 (Table 2). This has been due to reduced numbers heading to Kuwait and Israel; however Saudi Arabia re-entered the market, increasing their imports to 122,500 in 2024.There was also strong growth in the Jordanian market, increasing 248% YOY from 36,500 in 2023 to 127,000 in 2024. After a relatively strong first quarter in 2024, live exports slowed until the mid-year trade pause beginning in June. Trade resumed in September to reach 423,300 by year end (Figure 3).

Table 2 Number of sheep exported live (million head) from WA (based on ABS data, DPIRD analysis)

	Year			
Livestock type	**2022**	**2023**	**2024**	**YOY change**
Sheep	0.52	0.67	0.42	- 37%

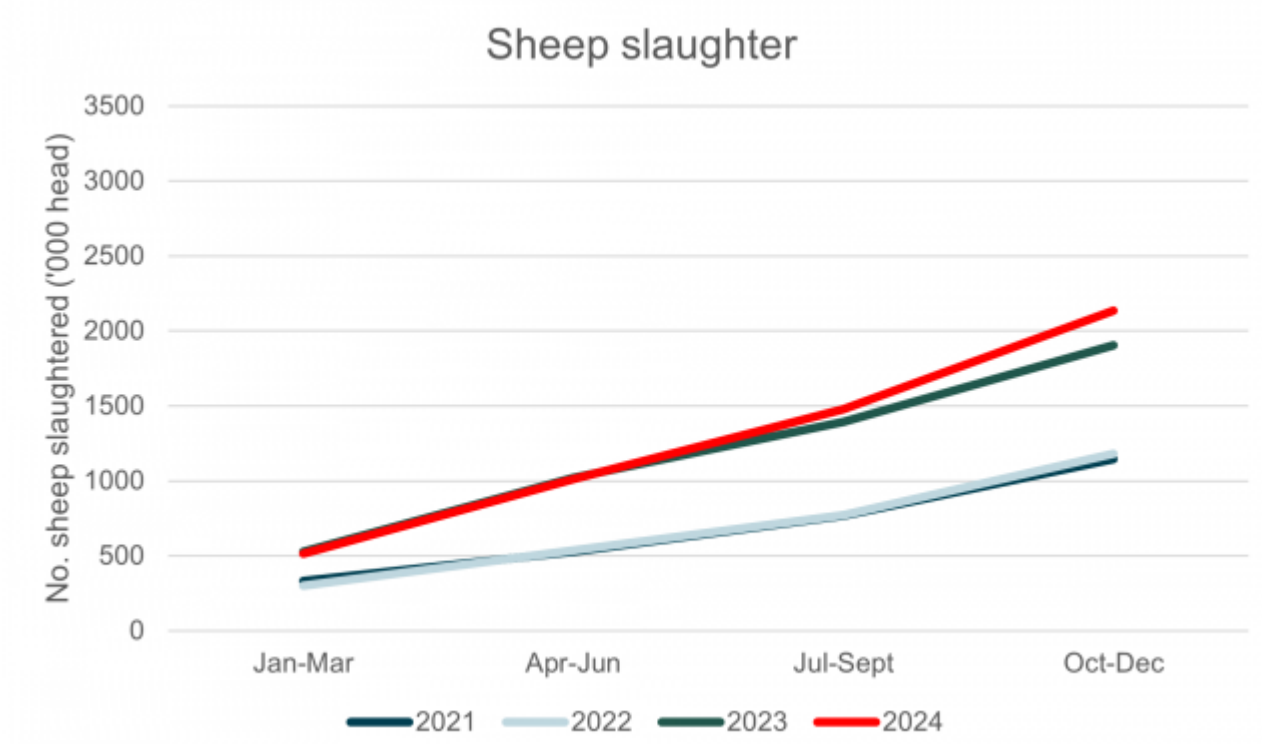


Figure 3 Cumulative live sheep exports from WA by sea and air (based on ABS data, DPIRD analysis)

Interstate transfers

The interstate sale of sheep from WA in 2024 was the third highest on record behind 2010 and 2020.

A total of 884,000 sheep and lambs were trucked east over the course of the calendar year, a sizeable increase on the 249,000 in 2023 (Table 3).

In 2024, more sheep were sold interstate than via live exports, which has only occurred twice previously; in 2020 and 2021. Interstate sales started the year very strongly. In the first 5 months of 2024, a total of 674,000 sheep and lambs were trucked east from WA. Numbers plateaued during the middle of the year before lifting again in spring to close the year out at 884,000 head (Figure 4).

This was largely driven by a strong price difference between the eastern states and WA, with WA at a sizeable discount for a portion of the year.

Table 3 Number of sheep and lambs sold interstate (thousand head) from WA (based on Primary Industries and Regions South Australia (PIRSA) data, DPIRD analysis)

Livestock type	Year			
	2022	2023	2024	YOY change
Sheep	121	88	408	362%
Lambs	247	161	476	196%
Total	368	249	884	255%

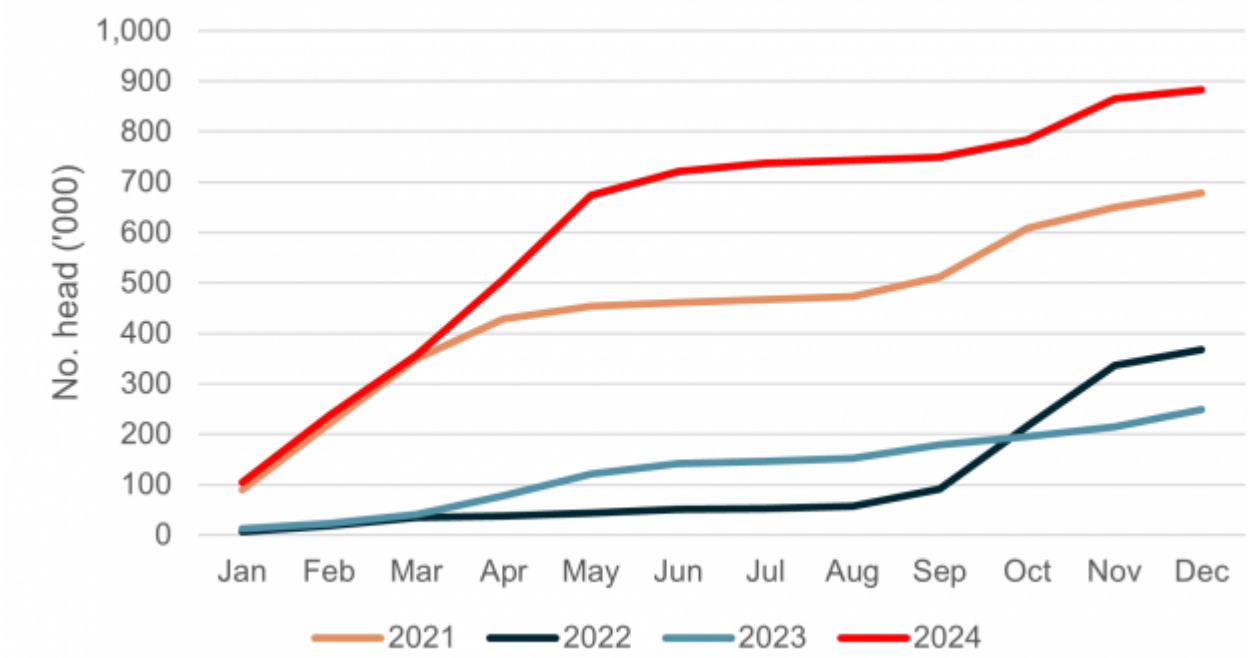


Figure 4 Cumulative number of sheep and lambs sold interstate (based on PIRSA data, DPIRD analysis)

Total sheep turn-off

In 2023 WA's total sheep turn-off reached 5.8 million, up 25% YOY from 4.65 million in 2022. This increased a further 13% in 2024 reaching 6.55 million, just slightly behind the 6.63 million in 2020.

Almost half, 47% (3.1 million) was made up of lamb slaughter, the highest on record.

Sheep slaughter reached 2.13 million and accounted for 33% of turn-off. This was the highest since 2008.

Live export was 0.42 million or 6% and interstate transfers totalled 0.88 million, 14% of turn-off (Figure 5).

Table 4 WA turn-off comparison 2022 to 2024 (million head) (based on data from ABS & PIRSA, DPIRD analysis)

Turn-off	Year			
	2022	2023	2024	YOY Change
Lamb slaughter	2.57	2.97	3.10	4%
Sheep slaughter	1.18	1.91	2.13	12%
Live export	0.52	0.67	0.42	-37%
Interstate transfer	0.37	0.25	0.88	255%
Total	4.65	5.80	6.55	13%

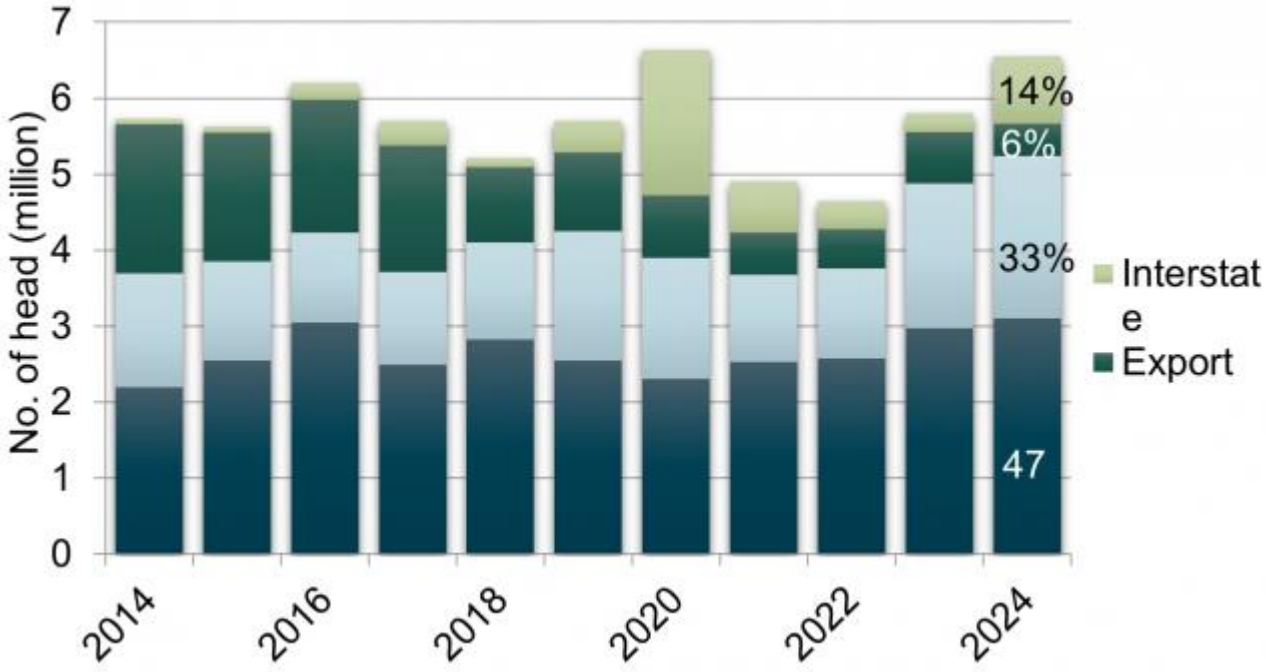


Figure 5 Total WA sheep turn-off including sheep and lamb slaughter, live export and interstate transfers per calendar year (based on data from ABS, PIRSA, DPIRD analysis)

Impact on the WA sheep flock

The WA sheep flock numbered 12.4 million as of July 2022 according to the ABS.

Industry confidence is low due to tough seasonal conditions, poor prices, and changes in government policy. This has led to very high rates of turn-off as producers reduce the size of their sheep enterprise. This has likely resulted in significant flock decline between 2022 and 2024 and will likely continue into 2025 unless the rate of sales slows significantly, and seasonal conditions are favourable. It is expected that the flock may have numbered around 9.5 million as of July 2024.

If current levels of turn-off are sustained for the remainder of 2024-25 the flock may decline further to between 8 and 8.5 million. However, if ewe joining rates and lamb marking are lower than expected the flock will reduce even further.

For further information contact:

Kate Pritchett, Senior Research Scientist, Livestock.

Kate.pritchett@dpird.wa.gov.au

2024 Southern WA sheep reproductive rates based on pregnancy scanning

Katherine Davies (DPIRD, Northam, WA)

Andrew van Burgel (DPIRD, Albany, WA)

Author correspondence: Katherine.davies@dpird.wa.gov.au

The benefits of pregnancy scanning

Pregnancy scanning ewes for multiple foetuses has shown to be a valuable tool in sheep enterprises. In the October 2022 edition of Ovine Observer, John Young reported that utilising pregnancy scanning information and adopting optimum management resulted in an average 400% return on scanning investment across all flocks and times of lambing.

Pregnancy scanning allows producers to identify the poor performing or dry ewes and remove them from the flock, reducing the flock's overall energy demand and conserving feed supplies for high performing stock.

Knowing the pregnancy status of ewes also means producers can implement different management strategies based on the number of foetuses a ewe carries. Highly productive, twin bearing ewes have a higher energy demand and should have priority access to feed and the best lambing paddocks, aiming for condition score 3.2 at lambing to reduce ewe and lamb mortality. Single bearing ewes have a lower energy demand than twins, requiring less feed and should be managed for condition score 3 at lambing.

Our supplementary feeding calculator for pregnant and lactating ewes can help producers determine the amounts of feed required to meet these condition score targets based on the number of dry, single and twin bearing ewes in the flock.

Sheep pregnancy scanning benchmark tool

Pregnancy scanning data (anonymised) for Merino and meat breed ewes is collected by the department annually from scanning providers across southern Western Australia (excludes any artificial insemination, embryo transfer and ewe lamb matings). The department has just over 3 million individual ewe scanning records from 2015 to the current season, with almost 2 million of those scanned for multiples.

The reproductive performance data is fed into our Pregnancy Scanning Benchmarks tool, which allows producers to compare their flock's reproductive rate against other Merino or meat breed flocks in the Cereal Sheep Zone (CSZ) and the Medium Rainfall Zone (MRZ) with the same time of lambing.

The tool has been updated with the latest pregnancy scanning data for multiples in 2024.

Pregnancy scanning data collected in 2024 stretches from Northampton in the north, through to Augusta-Margaret River, south to Albany and east to Ravensthorpe. Larger collections of pregnancy scanning data came from the shires of Williams, Kojonup, Dandaragan, and Cranbrook.

Conception and reproductive rates in 2024

Conception rate is the number of ewes scanned pregnant per 100 ewes joined and can be calculated when doing wet/dry scanning.

Reproductive rate is the number of scanned foetuses per 100 ewes joined, therefore the number of foetuses per ewe is counted. This can also be called scanning for multiples or litter size. Reproductive rate reflects the potential lambing percentage, and as mentioned above, provides valuable information to optimise management.

- Average conception and reproductive rates for 2024 were calculated by summing the number of ewes, dries, singles and twins across the properties. This method gives equal weight to ewes (rather than properties) and therefore higher weight to larger flocks, as well as reducing the impact of outliers that typically occurred in smaller flocks.

The 2024 pregnancy scanning dataset included a total of 453,000 scanned ewes across 249 properties.

Non-merino breeds accounted for 35,000 of these scanned ewes across 29 properties and had an average conception rate of 81%. For those properties that also scanned for multiples, the reproductive rate was 127%. Non-merino breeds were excluded from further statistical analysis between zones, time of scanning and years due to the smaller dataset.

The Merino conception rates outlined below are based on 418,000 ewes scanned across 220 properties. Of those, 237,000 Merino ewes across 122 properties were scanned for multiples and reproductive rates calculated.

The average Merino conception rate in 2024 was 85% with a reproductive rate of 124%.

The distribution of reproductive rates is summarised in Figure 1, with the highest proportion of Merino producers having reproductive rates between 110% and 150%.

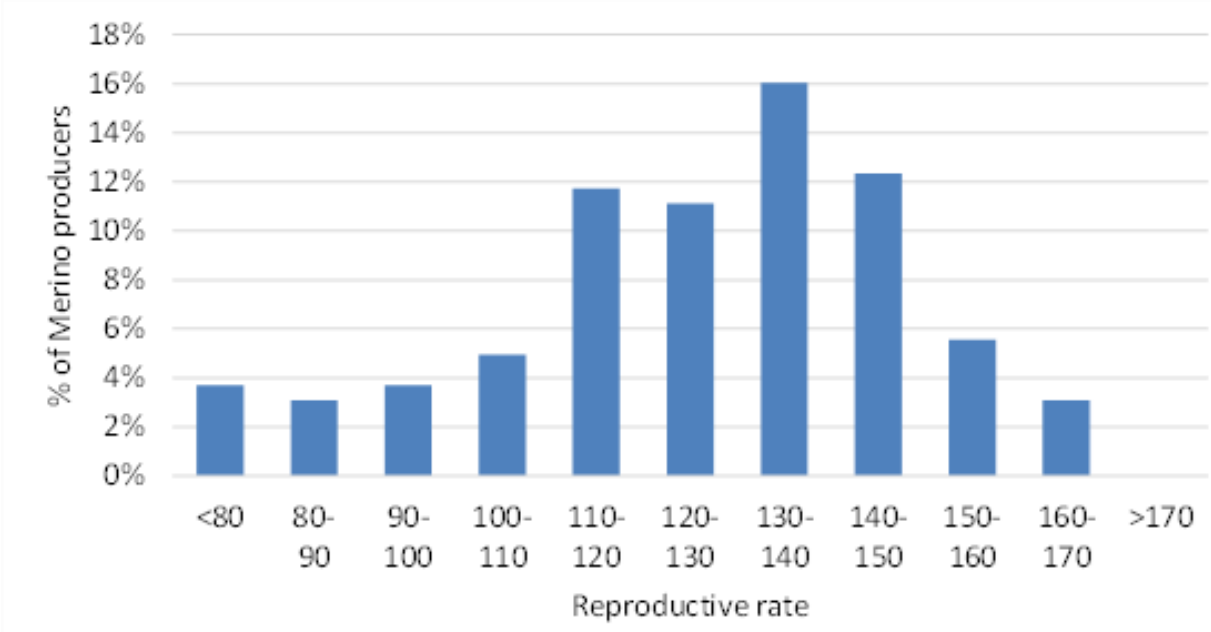


Figure 1 Reproductive rates for Merino ewes in 2024 (n=122 properties)

In previous years, there has been a difference between properties with larger flocks (>1000 ewes) having higher conception and reproductive rates, however there was no significant difference in the 2024 data.

Likewise, conception rates had previously been higher for properties who scanned for multiples versus those only scanning for pregnancy. However, there was no significant difference in the 2024 data.

In line with 2023, the 2024 reproductive rates between the CSZ and MRZ were not significantly different. In 2023, there were differences between zones in the proportion of dries, singles and twins, with the MRZ having more singles with less dry ewes and twins compared to the CSZ, however there were no significant differences in the 2024 data.

Month of scanning

Continuing the same trend, the time of scanning was earlier for the CSZ with 19% of ewes scanned by the end of February, compared to only 2% in the MRZ (Figure 2), indicating that the CSZ continues to have an overall earlier time of lambing than the MRZ. Over half of ewes in the MRZ were scanned in April.

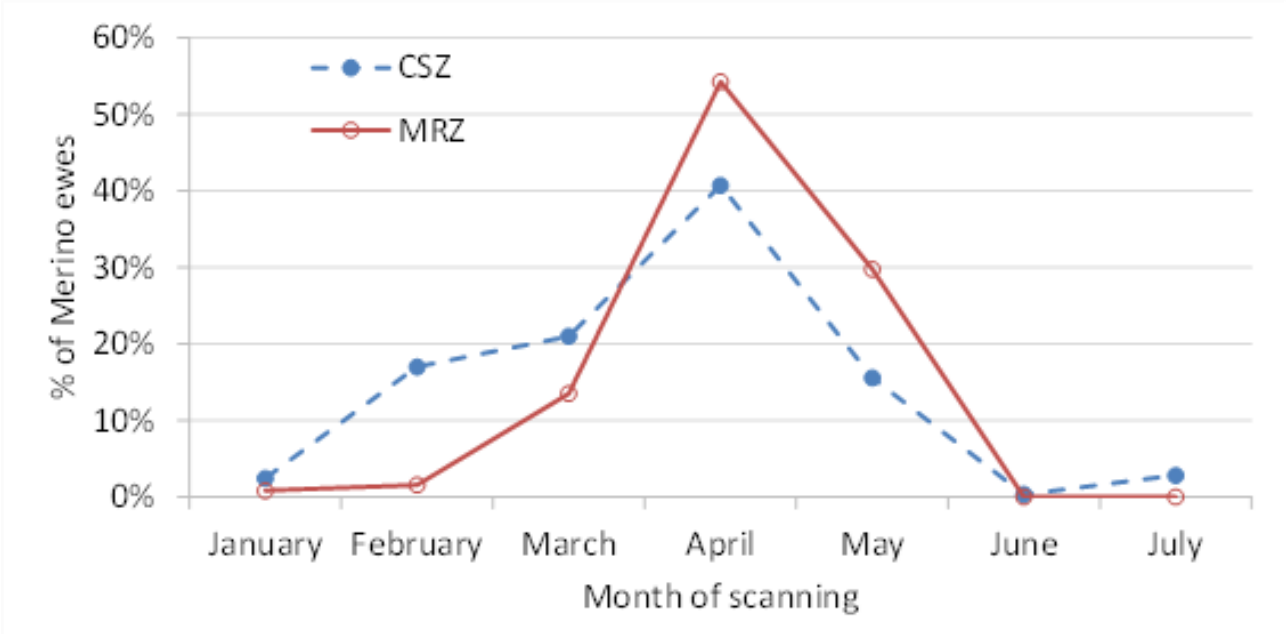
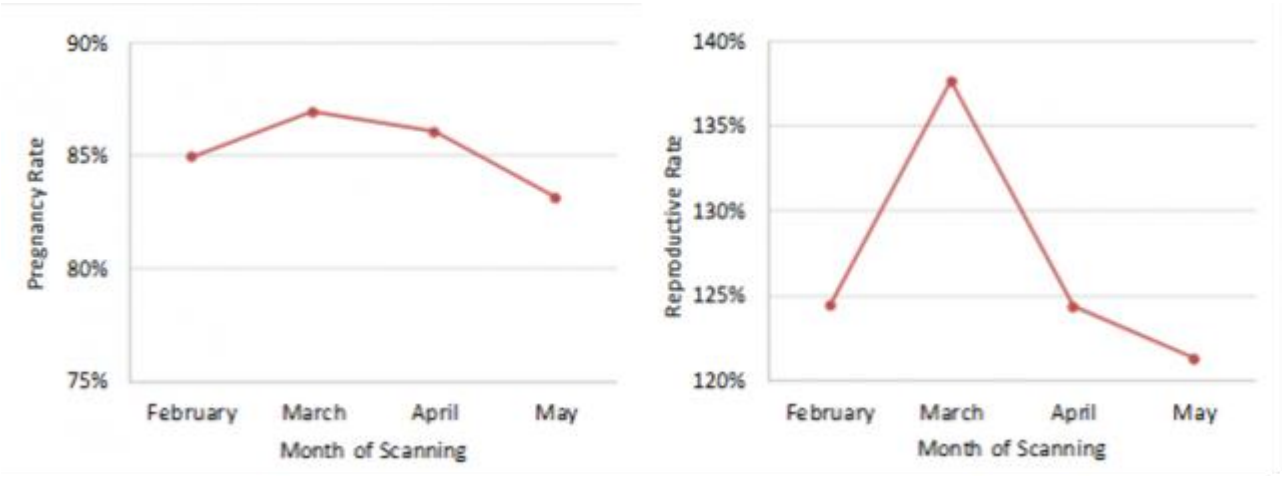


Figure 2 Month of scanning for Merino ewes in the Cereal Sheep Zone (CSZ) and Medium Rainfall Zone (MRZ) in 2024.



Figures 3a and 3b Conception rate and reproductive rate by month of scanning for Merino ewes in 2024

Figures 3a and 3b above illustrate the differences in Merino conception and reproductive rate as the month of scanning progressed.

January and June were omitted due to little data for these months.

The conception rates decreased as the month of scanning was delayed into May (83%) compared to the average of the previous 2 months (March and April, 86%) (Figure 3a).

The reproductive rate (Figure 3b) was significantly higher in March (138%) compared to February (124%, p=0.051), April (124%, p=0.057) and May (121%, p=0.014).

Results from previous years (2022, 2021, 2020) showed that both conception and reproduction rates generally increase as the month of scanning progresses, which is to be expected in Merinos due to their natural breeding season. However, in both 2023 and 2024 there was a significant decrease in reproductive rate after March scanning.

Reproductive trends over the years

As expected, the Merino ewe reproduction rate over time has varied depending on the season.

The reproductive rate of 124% in 2024 was lower than previous years due to the poor seasonal conditions in 2023 (Figure 4). A similar pattern was seen, to a lesser extent, in 2018 after the poor 2017 season.

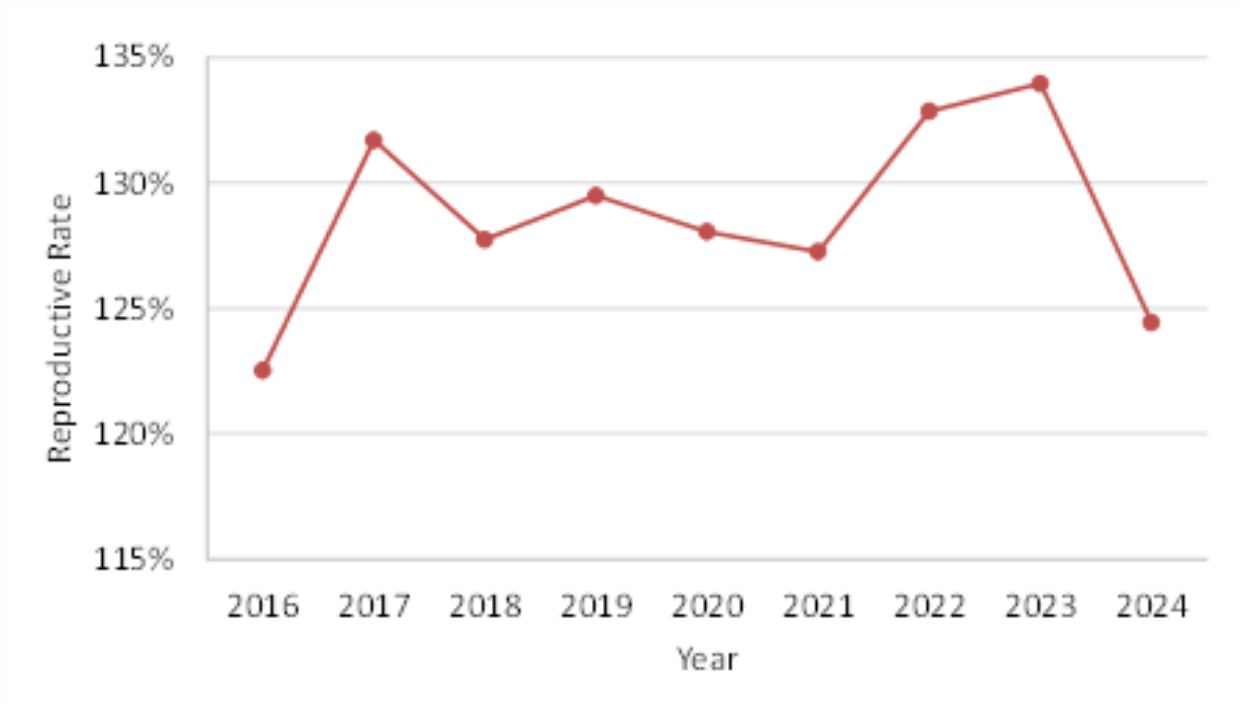


Figure 4 Merino ewes reproductive rates by year from 2016 to 2024

The percentage of twins has a large effect on the overall reproductive rate, with the pattern for reproductive rate over time closely following the pattern in percentage of twins.

In the 2022 and 2023 scannings, there was an increase in twins with less singles, however 2024 saw a decrease in the twin percentage.

The proportion of dries from 2016 to 2023 has hovered around 10%, however in 2024 there was a large increase in dries to 15% (Figure 5).

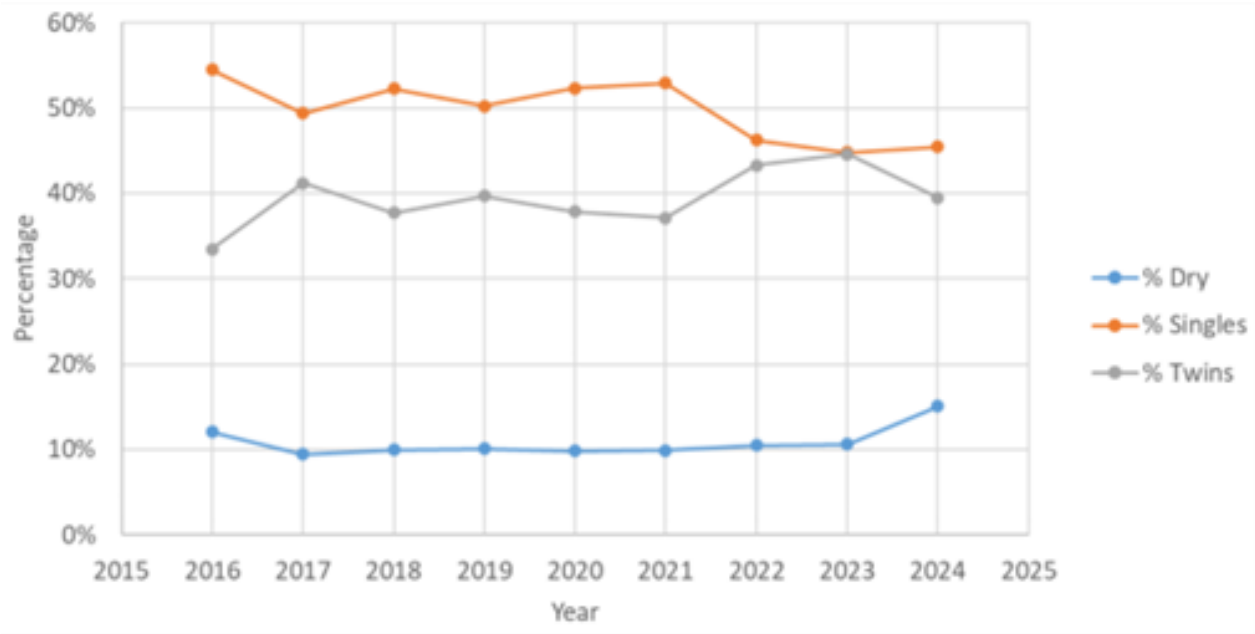


Figure 5 Merino percentage of dries, singles and twins from 2016 to 2024

Data will again be collected in 2025 which will reflect the dry seasonal conditions carried over from 2024.

Ewe nutrition and condition score at joining has a critical effect on conception and reproductive rates. Lifetime Wool data showed that for every increase of 1 condition score at joining, an extra 20 lambs are conceived (Figure 6).

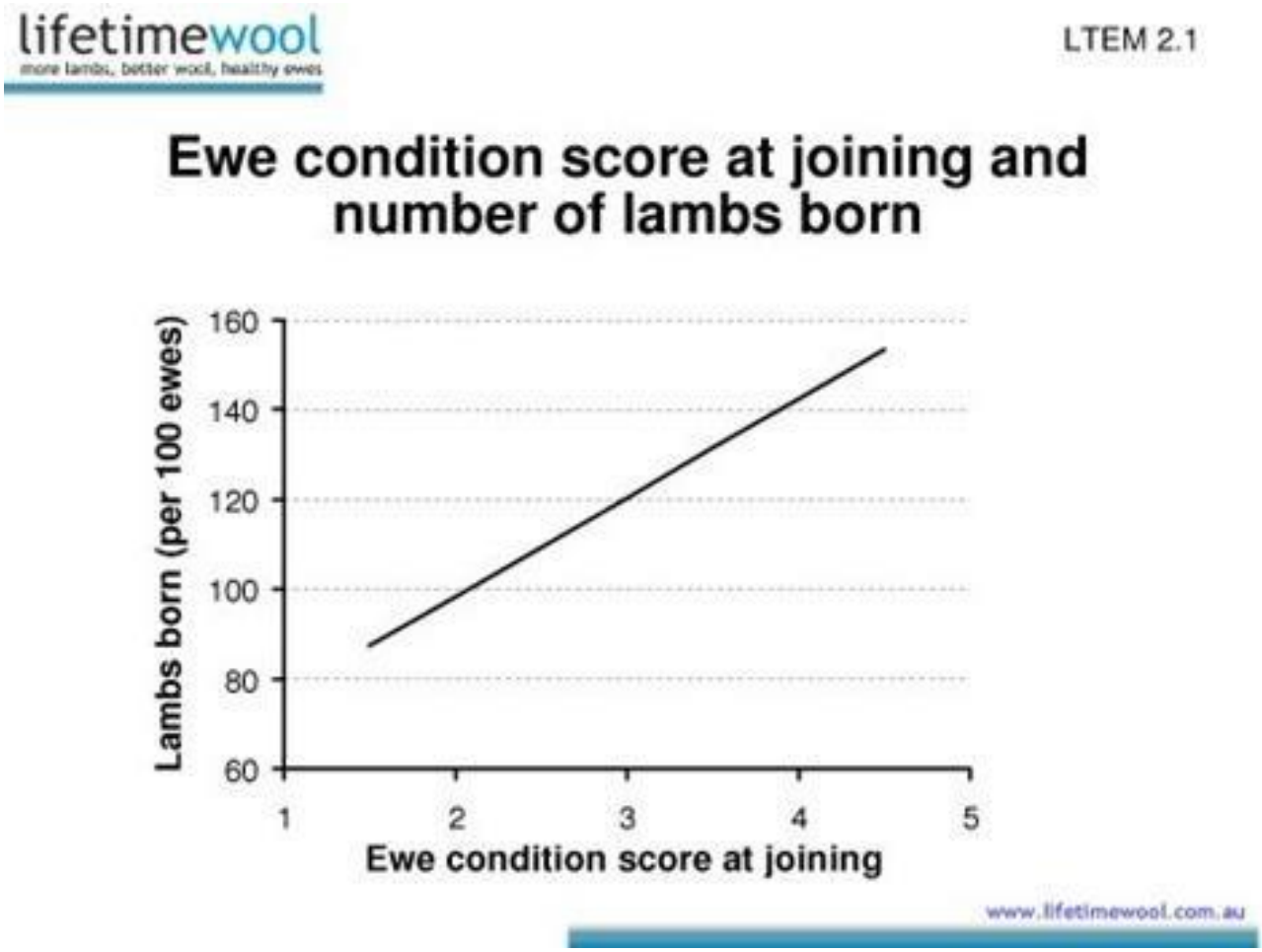


Figure 6 Ewe condition score at joining and number of lambs born (source: lifetimewool.com.au)

Condition score throughout pregnancy and at lambing also effects the number of lambs born and the lamb's chances of survival. In cases where feed is limited, supplementary feeding will be required to ensure ewes are in condition score 3 for lambing.

Work out a feed budget now and ensure supplementary feeding rates are adequate for ewes to reach or maintain condition score 3 at lambing. This is especially important for twin bearing ewes whose energy demand will increase severely in late pregnancy, so

these ewes need to be condition score 3.2 at lambing. It is much cheaper to maintain condition then it is to lose it and have to regain it for lambing.

Green pick may start to appear in areas that received rainfall in mid-late March. Be aware that this green pick will not provide the energy required for pregnant ewes. Ensure supplementary feeding is maintained until there is at least 800 kg DM/ha Feed on Offer (FOO) available in the paddock.

Pregnancy scanning ewes allows producers to revisit feed budgets, adjust accordingly and make decisions early on prioritising feed and lambing paddocks for highly productive stock for the season ahead.

Visit our Season 2025: Information for WA farmers webpage for further links to resources and calculators for feed budgeting and costing, supplementary feeding, condition scoring and confinement feeding.

eID traceability technology in the WA sheep industry for down-stream value creation project

Elizabeth Jackson (Curtin University, WA)

Author correspondence: elizabeth.jackson@curtin.edu.au

Curtin University, WAFarmers and Magnify Agriculture Global have joined forces in a Department of Agriculture, Fisheries and Forestry funded project entitled 'Enhancing producer trust and adoption of eID traceability technology in the WA sheep industry for down-stream value creation'.

On 9 September 2022, all Australian Agriculture Ministers agreed to the mandatory implementation of electronic identification (eID) traceability in the Australian sheep industry, commencing 1 January 2025.

This project aims to assist sheep producers in a smoother transition to eID through 2 concurrent research aims:

1. Enhance producer trust and adoption of eID by demonstrating value-add and return on investment through the development of support materials targeted at 'crossing the chasm' between early technology adopters and the early majority, and those that follow.
2. Research how traceability of sheep meat products and product labelling shapes consumer perceptions of quality and willingness to pay and provide these findings to producers to demonstrate value for money of technology traceability investment.

While the impetus to move to eID is for optimised biosecurity and traceability, the technology will have substantial commercial value throughout the supply chain, enhancing existing systems with more accurate data entry and maximised supply chain data flow.

The WA government committed $21.6 million, with an additional $4 million being provided by the Commonwealth Government, toward implementation of sheep and goat eID with the lion’s share of these funds going toward providing a 75-cent discount on the purchase of year-of-birth coloured eID tags at the point of sale. White eIDs are currently being subsidised in WA until 31 December 2025. Further education and negotiation are required to facilitate the smooth adoption of eID in sheep and enhance compliance with the traceability system generally.

In partnership with WAFarmers, the project will create and implement extension and support materials, including a 'telehealth' helpdesk. This pilot service will allow producers to access trained NLIS and eID personnel from within the WA sheep industry by phone, text, email or a video call and will assist them with understanding when and how to meet the requirements for traceability. The Helpdesk is designed to make it as easy as possible by providing the help conveniently on-farm and avoiding the stress of doing things at the last minute.

Best practice extension resources for the livestock sector, based on research by Magnify Agriculture Global, are being developed for delivery at regional WA industry events and will be accessible via the dedicated Helpdesk page on the WAFarmers’ website.

Evidence has been provided that, despite eID being mandated for improved traceability, a lack of understanding exists about the benefits of the technology at the farm, state and

national levels. The project's extension work aims to enhance existing education schemes that will help to drive improved acceptance of traceability policies.

Improved acceptance of eID technology fosters future adoption with easier extension to livestock supply chains, supporting regulatory and commercial compliance capability. The extension materials developed for this project can be re-purposed for dissemination to producers across Australia, as can the outcomes of consumer research.

The consumer research will focus on how value can be created in the supply chain through product labelling related to traceability and determine whether, and how, consumers perceive enhanced product quality through traceability labelling. These findings will be shared with producers to demonstrate the value of the technology (and the potential high efficiency gains when incorporated into on-farm stock management) and how it can increase consumer preferences and demand via visibility, awareness and recognition.

This project will determine the value creation potential for traceable sheep meat products, which can subsequently be extended to other Australian meat products such as pork and goat meat. The findings will also be applicable as future traceability technology emerges.

This is expected to further reduce barriers to adoption of agricultural traceability by determining the increased value consumers hold for fully traceable meat. It may also support processors' evidence-based decisions regarding product marketing and labelling, potentially adding value to existing products through consumer demand.

Acknowledgements

Magnify Agriculture Global is an independent consultancy working to better assist producers, industries and governments increase integrity of traceability systems, build capacity for compliance, maximise biosecurity outcomes and production efficiencies; working towards stabilising the long-term viability of the agricultural sector; And to increase the conscious recognition by consumers of the source of their food and fibre and the processes invested in to ensure its safety and availability.

The team is grateful to the Department of Agriculture, Fisheries and Forestry for its financial support of this project.

Edible Shelter: Shelter and lamb survival project EOI

Serina Hancock (Murdoch University, WA)

Georgia Welsh (Murdoch University, WA)

Author correspondence: s.hancock@murdoch.edu.au, 0403 570 823

georgia.welsh@murdoch.edu.au, 0409 833 036

Edible shelter: Shelter and lamb survival

Approximately 30% of lambs born will die before marking which costs the Australian sheep industry over $1 billion per year (Kubeil 2017; Young et al. 2014a).

Most lamb deaths occur within 3 days of birth and 30 – 50% of deaths are from starvation-mismothering-exposure. Hypothermia plays a major role in these deaths.

Providing effective shelter can reduce lamb mortality by up to 50%, particularly in high chill environments and for twin-born lambs (Donnelly 1984; Bird et al. 1984).

Previous studies have investigated the impacts of shelter on lamb survival, however a limited number of shelter options were considered, such as shelterbelts or tall wheatgrass, and additional benefits to the productivity and profitability of the whole-farm enterprise have not been identified. Currently there are knowledge gaps regarding (i) species of forages and shrubs that have capacity to provide shelter during lambing, and (ii) interactions between shelter and nutritional benefits from 'edible' shelter.

In the case of shrubs, producers are uncertain if they are better to use monocultures of relatively palatable shrubs, mixed plantations or relatively unpalatable shrubs.

There are questions regarding the design of shelter and the impact of using shrubs for lambing on feed-base utilisation across the enterprise.

Anecdotal evidence from producers regarding lambing ewes on crop is conflicting with some producers reporting reduced lamb survival due to possible metabolic disease in ewes whilst other producers report improved survival which is perceived to be the result of increased shelter and access to high quality feed.

This experiment will compare the survival of twin lambs that are born in paddocks with shrubs and/or crop with lambs born in the pasture paddock which traditionally provides the best lambing results for your farm. A total of 28 on-farm research sites will be established across WA and NSW between 2023 and 2025.

Requirements of research sites

- At least 150 twin-bearing Merino ewes which will be allocated into one of 3 treatments (shrub, crop or pasture paddock) at 130-140 days from the start of joining.
- One paddock with vegetative cereal crop and/or one paddock with existing shrubs plus your best pasture lambing paddock. Crops will need to be sown and managed to reach the desired crop height at allocation of ewes to treatments. Ewes will remain in these paddocks until marking.

- Minimum mob size of 50 ewes and maximum mob size of 200 ewes per paddock. Paddock and mob size must be similar across paddocks (10% variation permitted).
- Mineral supplement will be provided by the research team and must be offered to ewes that are grazing crop.

Data collected by the research team

- Ewe condition score (n = 50 ewes/paddock) and feed-on-offer in each paddock will be assessed before lambing and at lamb marking.
- Forage samples will be collected for nutritive value.
- Lambs will be counted at marking to determine survival per mob.
- Faecal samples from ewes which grazed shrubs will be collected at marking to measure the amount of shrub consumed.
- Temperature, wind speed and direction, rainfall, and the height, density and configuration of vegetation will be measured within each paddock using remote sensor technology.

Expressions of interest

Please contact the project contacts below to express interest in participating in the ‘shelter and lamb survival’ experiment or for further information.

Project contacts

Serina Hancock	**Georgia Welsh**
Murdoch University, WA E: **s.hancock@murdoch.edu.au** M: 0403 570 823 T: 08 9360 7394	Murdoch University, WA E: **georgia.welsh@murdoch.edu.au** M: 0409 833 036 T: 08 9360 7394

Lambing Planner app update – Android version live

Katherine Davies (DPIRD, WA)

Author correspondence: **katherine.davies@dpird.wa.gov.au**

Have you come across the upgrades to the Lambing Planner app yet?

The award-winning app, first launched in 2017, enables users to plan out sheep husbandry and nutrition tasks based on the year-long reproductive cycle.

Upgrades to the app were identified based on feedback from users and include the ability to receive notification reminders for upcoming tasks including ordering supplies, to save their seasonal plans to the cloud and to share plans via PDF or directly to another app user.

The recent update also significantly advances the app's user interface making it visually appealing and user friendly, and improves the app's calendar functionality, with users now able to add key task dates to iCal, Gmail and Outlook.

The update applies to both the Apple and Android versions of the app and improves the user experience for Android users who were still operating the original version of the app.

Illustration of the updated Lamb planner app

Tasks on the updated Lambing planner app

We always welcome further feedback on the app, including future upgrades you might like to see so please get in touch.

Important Disclaimer

The Chief Executive Officer of the Department of Primary Industries and Regional Development and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.