

Profitability of mating maternal composite and Merino ewe lambs

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Record livestock prices in Australia are providing incentive to increase the number of sale sheep and increase reproduction in the national flock. The reproductive potential of the flock can be increased if ewe lambs are mated successfully, however, there will be competition with the older reproducing ewes for high quality feed prior to joining and during gestation. This paper tests the hypothesis that farm profit is increased by mating ewe lambs.

The analysis was carried out using the south west Victoria (SW Vic.), the Great Southern of WA (GS WA) and the Central Wheatbelt of WA (CW WA) regional versions of the MIDAS model (Young *et al.* 2011, Thamo *et al.* 2017). SW Vic has a 9 month growing season with no crop, GS WA has a 6 month growing season with 40% crop and the CW WA has a 5 month growing season with 90% crop. The scenarios tested were region, breed (Merino and maternal composite) and time of lambing (early and late winter). Management was optimised for joining weight (% of standard reference weight - SRW), age at joining (7 or 8.5 months), proportion of the ewe lambs joined and management of the ewe lambs that did not conceive (retain or sell as a prime lamb). The price used was \$5.50/kg carcass weight for prime lamb and \$95 and \$100/head for Merino and maternal ewes sold at 5.5 years. Production responses relating to the effects of liveweight and age of ewe lambs at joining, birth type and liveweight change during joining on reproductive rate; effects of liveweight profile during pregnancy effects on progeny birth weight, survival and weaning weight; and lifetime performance of progeny from ewe lambs were adapted from data reported by Thompson and Young (2018).

Profit was increased by between \$6 and \$57 per ewe lamb mated or \$4 and \$102 per winter grazed hectare (Table 1). The increase was greater for the maternal breed, the longer growing season environments and when joining was delayed to increase the proportion of post-pubescent ewe lambs. If the number of lambs weaned from the ewe lambs could be increased by increasing the number of lambs born and/or increasing survival, then profit increased by between \$42 and \$75/extra lamb. In the shorter growing season environments joining Merino ewe lambs at 7 months of age reduced profit because the cost of feed was greater than the value of the lambs weaned.

| Breed | Region | TOL | Optimum system ¹ | | | | | | Profit \$ /lamb joined (\$/ WG ha) | Extra lamb (\$/lamb weaned) | |
|-----------|--------|-------|-----------------------------|----------------|----------|-----------|---------|------|--|-----------------------------------|---------|
| | | | Join wt, of SRW | Age, months | % joined | dry lambs | NLW, BE | | | | |
| Composite | SW Vic | May | 75% | 8.5 | (\$-1) | 100% | Sell | 83% | nc | 57 (90) | 49 |
| | | Aug | 70% | 8.5 | (\$-7) | 100% | Sell | 96% | nc | 56 (102) | 55 |
| | GS WA | May | 74% | 8.5 | (\$-11) | 100% | Sell | 81% | nc | 33 (59) | 58 |
| | CW WA | May | 72% | 8.5 | (\$-25) | 100% | Sell | 78% | nc | 31 (25) | 75 |
| Merino | SW Vic | Aug | 82% | 8.5 | (\$-21) | 100% | Retain | 87% | nc | 29 (69) | 47 |
| | | GS WA | May | 73% | 8.5 | (-) | 75-100% | Sell | 65% | 47% | 14 (22) |
| | Jul | 60% | 8.5 | (-) | 80-100% | Retain | 63% | 35% | 12 (25) | 42 | |
| | CW WA | May | 73% | 8.5 | (-) | 50-75% | Sell | 72% | 60% | 6 (4) | 56 |

¹ Optimum system is joining weight as a % of SRW, Age at joining and the reduction in profit (\$/lamb mated) if joined at 7 months, proportion of the ewe lambs that are joined, the optimum management of the dry ewe lambs, NLW (lambs weaned per ewe lamb joined) and BE (the breakeven NLW – nc is not calculated).

Table 1. The optimum management system when mating ewe lambs in each scenario (breed, region, TOL - time of lambing), the increase in profit achieved from mating ewe lambs in that system (\$ per ewe lamb mated and \$/winter grazed hectare - WG ha) and the value of an extra lamb weaned.

The hypothesis was supported with farm profit being increased by joining ewe lambs. The value of lambs from ewe lambs is less than from adult ewes (Young *et al.* 2014) indicating that mating ewe lambs is for those implementing best practice management for adult ewes who want further options to increase reproduction. The results indicate the industry potential from mating ewe lambs, however, adoption has been relatively poor. Developing a tactical decision tool to identify management targets and priorities which reflect the seasonal conditions faced in a given year is a suggested approach to facilitate adoption and capture the industry potential.

References

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