

Lamb survival – A Critical Issue



There is a great deal that can be done from both a genetic selection and management perspective to influence both conception and lamb survival. An increase of around 10% in conception rates will provide an additional 2-6% gross margin (\$/Ha) depending on property location and enterprise mix whereas increasing lamb survival by the same margin will increase gross margins by around 4-12%. There is no benefit

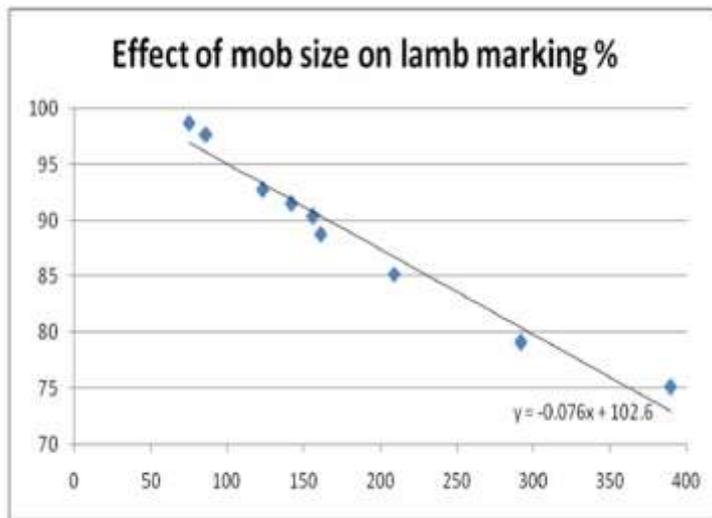
increasing conception rates if management strategies are not in place to ensure that additional gains are realised. It could be argued that potential gains in conception rates through genetic selection have not been matched by management strategies to take full advantage of those gains.

Most deaths of new born lambs occur within the first 48 hours with starvation and mismothering the major contributor (59%) followed by dystocia problems at birth (17%). Both these issues can be addressed through genetic selection and management with significant gains achievable. Increasing genetic fat through selection using ASBV's has the effect of boosting the resilience of the new born lamb and increasing lamb birth weights especially under feed limiting conditions. Results from the Sheep CRC showed significantly higher lamb birth weights and a subsequent increase in lamb survival simply by using sires with higher ASBV's for fat. Similarly, analysis done on the 2009 drop lambs at "Pendarra" showed a difference of 12% in lamb survival between sires with PFat ASBV's leaner than -0.6 compared to those that were fatter than -0.6. Under low nutrition, higher levels of genetic fat increases birth weight which is the main driver of lamb survival, especially in twin lambs.

Selection for sires with genetically lower birth weights is an undisputable approach to reducing problems associated with dystocia. As breeders have selected for higher growth rates, we have also potentially increased birth weights. The use of breeding values to strategically select sires with lower birth weights will result in fewer problems at lambing and more live lambs to weaning.

It is through management that significant gains in lamb survival can be made. The condition score of the ewe is critical in ensuring high weaning rates and this is not an assessment done at 50 paces from the ute window. Condition score is not ewe weight, it is an assessment of the fat and muscle reserves the ewe can rely on to buffer against any drain on body reserves whether in the last trimester of pregnancy or during early lactation. Condition score can only be assessed by yarding the ewes and feeling for the amount of tissue and fat over the short ribs and a minimum condition score of 3 to 3.5 is essential in ensuring good lamb survival. While a good condition score at all times during pregnancy is crucial, it is during the last trimester that the highest demand for reserves is required by the developing foetus with 70% of the growth occurring during this period. If ewes are not at the required condition score entering the last trimester, feeding to correct the problem will have limited success. Feeding to maintain weight is much more efficient than feeding to increase weight during this period and a 10Kg gain in body weight of the ewe will only result in around a 0.5 Kg gain in lamb birth weight.

Scanning of ewes for multiples 40 -50 days after ram removal is an important tool that will allow a range of management techniques to maximise lamb survival. Book your scanner the day you remove the rams as any delay in scanning will limit the accuracy of identifying multiple bearing ewes. Separation of multiple bearers allows a range of management options to ensure that your overall weaning percentage is above the 100% level. Single bearing ewes require little additional management to ensure good levels of survival and even at slightly sub optimal condition scores will have acceptable lamb survival rates. The same cannot be said for multiple bearing ewes and it is very difficult to over feed these ewes for the simple fact that the uterus takes up substantial space in the abdomen. High quality feed should be available for these ewes to ensure good birth weights of multiples as lamb birth weight is the main driver of lamb survival (around 70% of the effect) with energy levels of feed being critical.



Mob size is another easily implemented management practice that will ensure higher rates of lamb survival. Findings from a PIRD case study conducted in Victoria (Burnside) found a linear relationship between lamb survival and mob size and in this trial, multiple bearing and single bearing ewes were not segregated.

Recommendations for ideal mob sizes vary depending on ewe age as maiden ewes tend to have more issues with mismothering in more

condensed lambing situations. Once again, scanning to identify conception status of your ewes is essential in management of mob size. Recommendations are;

SINGLES - MATURE EWES	400
SINGLES – MAIDEN EWES	300
MULTIPLES – MATURE EWES	200
MULTIPLES – MAIDEN EWES	150

Sheltering is an important consideration as you never know what is likely to confront your flock weatherwise once lambing commences. Obviously lambs with higher birth weights and more genetic fat will have higher resilience to chill factor issues but provision of shelter can reduce lamb mortality by up to 40%, especially in multiple bearing mobs. Even without any substantial increases in lamb survival, research conducted in Hamilton (Vic) found lambs that had shelter resulted in higher weaning weights.

Ewe Condition score is critical to ensuring higher lamb birth weights, scanning for multiples essential in allowing the full range of management options and selection of the right genetics will result in lambing percentages that will ensure a higher profit margin. Aim for 90% survival in singles and 75-85% in multiples. Given the average conception rate nationally of 130%, this will boost lamb survival to well over the 100% level which is essential in maintaining good profitability and high genetic gain.