

Lamb feedlot cross sectional study: Current practices in the Australian lamb feedlot

T. P. Keogh^{A,B,F}, S. R. McGrath^{A,B}, V. H. Oddy^C, M. Hernandez-Jover^{B,D}, H. Dickson^E and M. B. Allworth^{A,B}

^AFred Morley Centre, School of Animal and Veterinary Sciences, Charles Sturt University, NSW 2650 Australia

^BGraham Centre, Charles Sturt University, NSW 2650 Australia

^CLivestock Industries Centre, NSW DPI, UNE Armidale, NSW 2350 Australia

^DSchool of Animal and Veterinary Sciences, Charles Sturt University, NSW 2650 Australia

^EAgriPartner Consulting, SA 5453 Australia

^FEmail: tkeogh@csu.edu.au

The sheep lot-feeding sector is rapidly growing in the Australian sheep industry. This survey study aimed to enhance the understanding of the Australian lamb feedlotting industry through a cross-sectional survey of owners and managers of current lamb feedlotting enterprises. Eighty-one participants from five states were recruited through industry contacts or via social media platforms and provided detailed information about their lamb feedlots and the performance and health of lambs in these environments. Descriptive statistics were produced using Excel.

Feedlot owners and managers from lower average annual rainfall regions (less than 500 mm per annum) tended to have greater experience in feedlotting lambs. Most feedlots operate mainly in summer and autumn and are described as opportunity feedlots used annually when pastures/crops are not available. The majority of respondents have less than five years' experience in feedlotting lambs and use the feedlot to add value to their existing cropping enterprise.

The majority of responses were from producers who operate small feedlots, finishing less than 4,000 lambs per year (Giason and Wallace, 2006). Seventy participants have not sought any approvals for their feedlot as feedlots with capacities of less than 4,000 lambs are not required to do so (Duddy *et al.* 2016). Small feedlots mostly breed and finish their own lambs which enables most participants to introduce lambs to grain prior to feedlot entry. Medium (4,000-15,000 lambs per annum) and large feedlots (greater than 15,000) source most of their lambs from saleyards or via on-farm purchases/direct contract.

The results indicate that only one lamb cohort is inducted into small feedlots as the number of lambs finished per annum is similar to the capacity of the feedlot. Medium and large feedlots finish two and four times as many lambs as their capacity, respectively. On average, most producers provide each lamb with seven square metres of space and each pen houses between 200 and 300 lambs. Trees, artificial shade and open sheds provide shade for most lambs however, eight percent of participants reported that lambs have no access to shade.

Lambs typically enter the feedlot at an average age of 20 weeks and average weight of 35 kg with entry age ranging from nine to 36 weeks and entry weight ranging from 20 to 50 kg. Lambs usually spend between seven and ten weeks in the feedlot with the largest proportion of producers targeting finish weights between 50 and 55 kg live weight. Common husbandry practices prior to feedlot entry include vaccination with a clostridial vaccine, drenching for gastrointestinal worms, shearing and drafting into weight groups.

The majority of lot-feeders use self-feeders to provide the major (grain) component of the ration with straw/grass hay provided separately. Five participants feed an all concentrate diet providing no roughage to the lambs during the finishing phase. Reported feed conversion ratios are mostly between 4:1 and 6:1 (feed intake:live weight gain) however, less than half of producers keep records of feed consumption. The reported average daily live weight gains ranged from 100 g/day to over 400 g/day with most responses between 250 and 400 g/day.

Shy feeders were reported to account for between 1% and 20% of lambs that entered the feedlot with most participants reporting incidence was less than 5%. The majority of producers reported a mortality rate between 1% and 3% with most deaths attributed to acidosis, pneumonia, prolapse and pulpy kidney in that order of frequency.

In this study, small feedlots were represented by 74% of respondents demonstrating their importance in the lamb feedlot sector. Given these feedlots finish their own lambs, these producers may be able to better manage the induction of lambs, and thereby reduce the incidence of shy feeders, in comparison to previously reported estimates (Jolly and Wallace, 2007; Duddy *et al.* 2016). It is therefore surprising that acidosis was the most frequently reported cause of death. There is a need for more in depth investigation into best practice induction protocols to further reduce these inefficiencies

References

Duddy G, Shands C, Bell A, Hegarty R, Casburn G. (2016) *NSW Department of Primary Industries*.

Giason A, Wallace A. (2006) *Meat and Livestock Australia Limited*.

Jolly S, Wallace A. (2007) *Meat and Livestock Australia Limited*.

This project is funded through the MLA Donor Company.