

BETWEEN YEAR DIFFERENCES IN 18 YEARS OF LAMBING DATA FROM A COMMERCIAL PROPERTY

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The number of lambs marked affects the economics of sheep production and is a result of twinning percentage, number of dry ewes and lamb wastage. Flocks with poor reproductive performance were the subject of considerable research activity in the 1970s (Plant *et al.* 1976) but investigations were mostly confined to less than two year's study.

This paper presents 18 years (1973-1990) of lambing data (Table 1) from a commercial Merino (Wonga bloodline) property located at Trundle, New South Wales. In each year 2300 to 3800 ewes of mixed ages lambed in August - September producing data on 55 857 ewes. Meteorological data for that period were fitted to a subclover growth model (G. Murray, pers. comm.) which provided annual estimates of dry matter production (DM) and timing of the onset of autumn rains, both being measures of the seasonal affects on lamb production.

Table 1. Values for lamb marking, twinning, lamb deaths, forage production and grazing days

Year	No. of ewes ('000)	Lamb marking %	Twinning %	Lamb deaths %	Grazing days ^A	Dry matter t/ha Current	Previous
1983	2.6	85	94	9.7	120	9.2	0.5
1973	4.2	86	99	13.2	108	2.0	2.0
1980	2.6	86	98	11.9	114	1.8	2.3
1987	3.7	88	107	17.8	117	6.9	1.9
1975	3.6	93	117	20.6	54	6.3	11.4
1974	3.8	96	119	18.7	138	11.4	2.0
1989	3.8	96	122	21.3	116	7.5	7.6
1988	3.8	98	118	17.4	97	7.6	6.9
1979	2.7	99	113	12.3	128	2.3	7.0
1986	3.2	100	121	17.3	17	1.9	7.0
1985	2.7	102	117	12.5	67	7.1	4.4
1981	2.6	103	128	19.7	87	3.3	1.8
1984	2.7	105	130	19.5	109	4.4	9.2
1978	2.7	106	124	14.6	143	7.0	5.6
1990	3.5	106	130	18.6	87	7.9	7.5
1982	2.3	107	130	17.5	123	0.5	3.3
1977	2.6	110	129	14.4	176	5.6	11.5
1976	2.7	110	131	15.8	175	11.5	6.3
Mean		98.7	118.2	16.3	109.8	5.8	

^A Number of days from germination of subclover to first lamb

Table 1 shows the considerable variation in lamb marking percent, twinning percent and percent of dead lambs. High lamb marking percentages were dependent on high twinning percentages ($P < 0.001$) and there was a significant ($P < 0.01$) effect of previous year's nutrition on twinning perhaps through preventing ewe weight loss over lactation (Egan 1984). There were insufficient 'early seasons' to determine the effect of current year's nutrition on twinning. Number of lambs dying was directly related ($P < 0.05$) to the number of twins up to 120% but thereafter losses were no greater. The results indicate that to achieve high lamb marking percentages the ewes need to have adequate liveweights at joining.

EGAN, A.R. (1984). In 'Reproduction in Sheep'. (Eds D.R. Lindsay and D.T. Pearce) p. 262 (Australian Academy of Science: Canberra).

PLANT, J.W., FERGUSON, B.D., O'HALLORAN, W.J. and MARCHANT, R. (1976). *Proc. Annu. Conf. Aust. Vet. Assoc.* **53**, 189-90.