

Supplementary material

Table S1. Total reproductive ewe flock numbers (no.) by breed and mating management practices of southern Australian sheep producers. Responses are recorded as counts (n) and overall percentage (%; to the closest integer) of respondents. A dash ('-') indicates no data.

Category	Breed				Overall %
	Composite (%)	Maternal (%)	Merino (%)	Shedding (%)	
Total sheep no. ($n = 52$)					
Up to 1000	2	3	5	-	19%
1001 to 2000	2	2	5	2	21%
2001 to 3000	3	2	3	2	19%
3001 to 4000	2	1	5	-	15%
4001 to 6000	2	2	4	-	15%
6001 and above	5	-	-	-	10%
Ewe replacement strategy ($n = 52$)					
Self-replace	16	4	20	4	85%
Purchase replacement ewes	-	6	1	-	13%
Both self-replace and purchase	-	-	1	-	2%
Maiden ewe mating month ($n = 50$)					
Spring	-	-	7	1	16%
Summer	7	7	8	1	46%
Autumn	9	2	6	2	38%
Maiden ewe mating length ($n = 52$)					
Under 5 weeks	1	1	-	-	4%
5 to 7 weeks	12	6	18	4	80%
7 to 10 weeks	3	1	3	-	14%
Over 10 weeks	-	1	-	-	2%
Teaser ram use ($n = 10$)					
	5	3	2	-	100%
Hormone use ($n = 4$)					
	2	1	1	-	100%

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Table S2. Management practices of southern Australian sheep by breed and mating season. Responses are recorded as counts (*n*) and overall percentage (% to the closest integer) of respondents. A dash ('-') indicates no data.

Management practice	Mating season			Overall %
	Spring (<i>n</i>)	Summer (<i>n</i>)	Autumn (<i>n</i>)	
Flushing length (mature ewe, <i>n</i> = 30)				
Composite (<i>n</i> = 8)				
Up to 2 weeks	-	2	2	50%
Up to 4 weeks	-	3	-	38%
No routine	-	1	-	13%
Maternal (<i>n</i> = 6)				
Up to 2 weeks	-	1	-	17%
Up to 6 weeks	-	2	-	33%
Up to 8 weeks	1	1	1	50%
Merino (<i>n</i> = 14)				
Up to 2 weeks	2	2	-	29%
Up to 4 weeks	-	1	3	29%
Up to 6 weeks	-	1	1	14%
Up to 8 weeks	1	-	-	7%
12 weeks or more	1	-	1	14%
No routine	1	-	-	7%
Shedding (<i>n</i> = 2)				
Up to 4 weeks	1	-	1	100%
Mature ewe mating length (<i>n</i> = 52)				
Composite (<i>n</i> = 16)				
Under 5 weeks	-	1	-	6%
5 to 7 weeks	1	7	7	94%
Maternal (<i>n</i> = 10)				
Under 5 weeks	-	1	-	10%
5 to 7 weeks	2	4	1	70%
Over 10 weeks	-	1	1	20%
Merino (<i>n</i> = 22)				
5 to 7 weeks	5	7	7	86%
7 to 10 weeks	2	1	-	14%
Shedding (<i>n</i> = 4)				
5 to 7 weeks	2	-	2	100%
Mature ewe shearing month (<i>n</i> = 48)				
Summer	4	4	7	31%
Autumn	1	5	2	17%
Winter	1	2	4	15%
Spring	3	11	3	35%
No routine	1	-	-	2%

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Table S3. Maiden ewe mating length of southern Australian sheep producers by breed and mating season. Responses are recorded as counts (*n*) and overall percentage (%; to the closest integer) of respondents. A dash ('-') indicates no data.

Mating length (<i>n</i> = 50)	Mating season			Overall %
	Spring (<i>n</i>)	Summer (<i>n</i>)	Autumn (<i>n</i>)	
Composite (<i>n</i> = 16)				
Under 5 weeks	-	1	-	6%
5 to 7 weeks	-	3	9	75%
7 to 10 weeks	-	3	-	19%
Maternal (<i>n</i> = 9)				
Under 5 weeks	-	1	-	11%
5 to 7 weeks	-	4	2	67%
7 to 10 weeks	-	1	-	11%
Over 10 weeks	-	1	-	11%
Merino (<i>n</i> = 21)				
5 to 7 weeks	5	7	6	86%
7 to 10 weeks	2	1	-	14%
Shedding (<i>n</i> = 2)				
5 to 7 weeks	2	-	2	100%

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Table S4. Feed sources used by southern Australian sheep producers when supplementary and/or containment feeding. Responses are reported as a percentage (%; to the closest integer) with count (*n*) in parentheses. Multiple feed sources were reported by some producers (total Response % exceeds 100).

Feed source	Response % (<i>n</i>)
Cereal grains	
Available grain	9 (4)
Barley	60 (26)
Corn	5 (2)
Corn based pellets	7 (3)
Oats	23 (10)
Triticale	2 (1)
Wheat	5 (2)
Wheat based pellets	2 (1)
Legumes	
Available beans	2 (1)
Faba beans (<i>Vicia faba L.</i>)	5 (2)
Lucerne	5 (2)
Lupins	19 (8)
Conserved forage	
Hay	14 (6)
Silage	7 (3)
Available supplement ^A	2 (1)

^A Available supplement is defined as using feed sources that are available at the time of supplementary feeding, having no specific preference.

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Table S5. Lambing management practices of southern Australian sheep producers by breed. Responses are recorded as counts (*n*) and overall percentage (% to the closest integer) of respondents. A dash ('-') indicates no data.

Category	Breed				Overall %
	Composite (<i>n</i>)	Maternal (<i>n</i>)	Merino (<i>n</i>)	Shedding (<i>n</i>)	
Mature ewes					
Single flock size at lambing (<i>n</i> = 37)					
Up to 100	1	-	2	-	8%
101 to 200	1	1	4	-	16%
201 to 400	5	6	6	1	49%
500 to over 1000	-	1	2	-	8%
DSE basis ^A	1	-	1	-	5%
Single flock	4	-	1	-	14%
Multiple/twin flock size at lambing (<i>n</i> = 37)					
Up to 100	3	5	9	1	49%
101 to 200	4	1	3	-	22%
201 to 400	3	1	3	-	19%
DSE basis	2	1	1	-	11%
Triple flock size at lambing (<i>n</i> = 5)					
Up to 50	2	-	-	-	40%
51 to 100	1	-	-	-	20%
101 to 200	2	-	-	-	40%
Maiden ewes					
Flock management at lambing (<i>n</i> = 9)					
Up to 200	1	1	1	-	33%
201 and above	1	-	-	-	11%
Separate singles and twins	2	-	1	-	33%
Separate triplets	1	-	-	-	11%
Lower DSE	1	-	-	-	11%

^A DSE = Dry Sheep Equivalent, a 50 kg dry sheep