



Reducing mob size at lambing improves lamb survival

Amy Lockwood

National lambing density project

- **On-farm research: 2x2s**
 - 70 research sites across WA, SA, VIC and NSW
 - Twin-bearing Merino or non-Merino ewes

<p><i>Paddock 1</i></p> <p>High Mob Size High Stocking Rate</p>	<p><i>Paddock 2</i></p> <p>Low Mob Size High Stocking Rate</p>
<p><i>Paddock 3</i></p> <p>Low Mob Size Low Stocking Rate</p>	<p><i>Paddock 4</i></p> <p>High Mob Size Low Stocking Rate</p>

High mob size = 240 ewes

Low mob size = 100 ewes

High SR = 7-8 ewes/ha

Low SR = 5-6 ewes/ha

National lambing density project

- **On-farm research: Mob size at low stocking rates**
 - 15 research sites across WA and NSW
 - Twin-bearing Merino ewes at SRs of 0.3 – 3.8 ewes/ha

<i>Paddock 1</i> High mob size	<i>Paddock 2</i> Low mob size
<i>Paddock 3</i> High mob size	<i>Paddock 4</i> Low mob size

WA

High mob size = 300

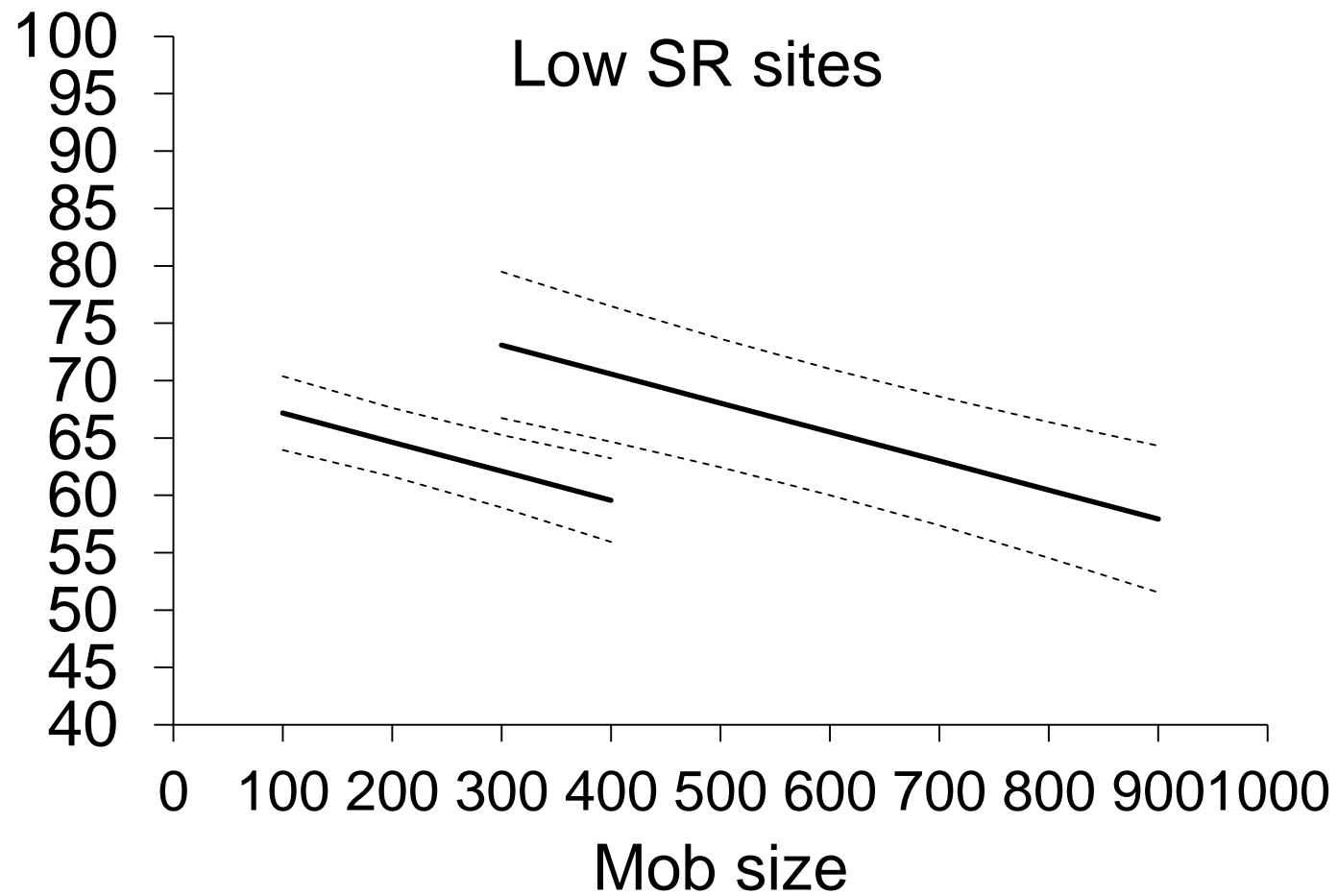
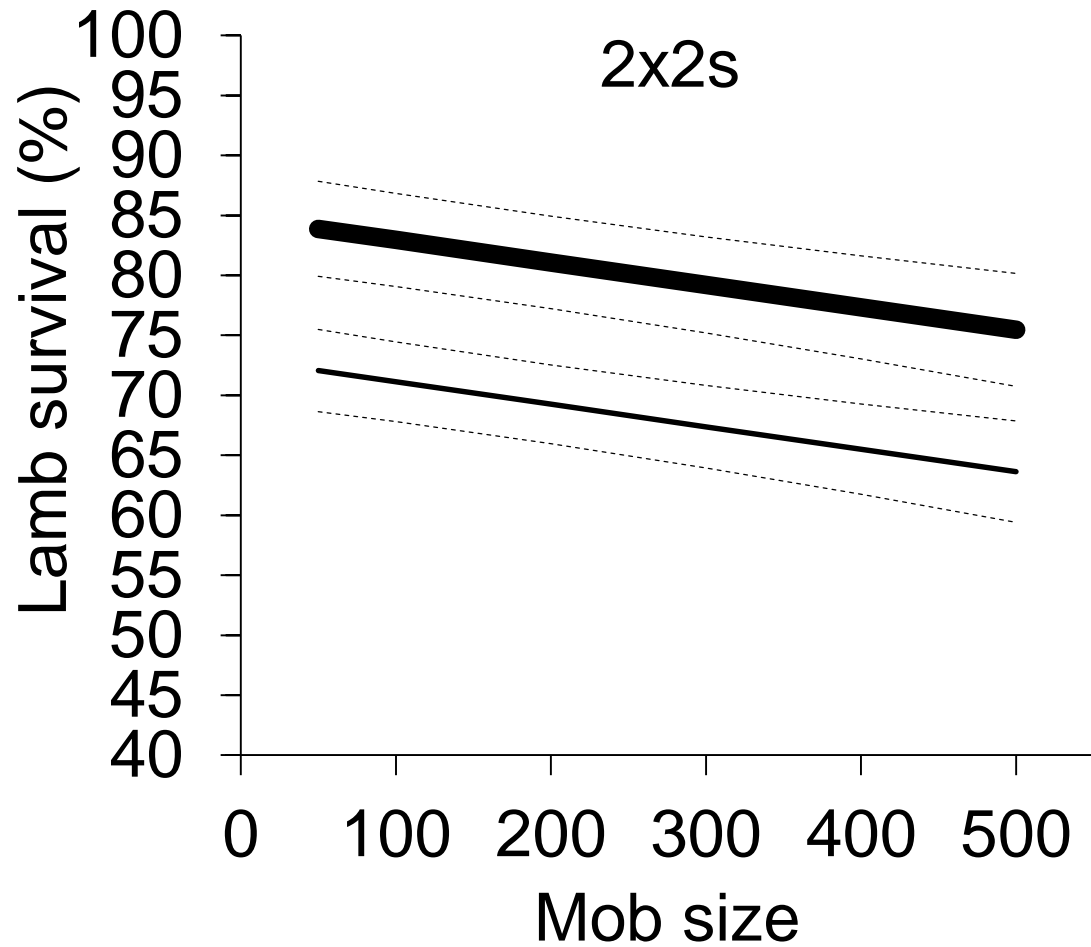
Low mob size = 115

NSW

High mob size = 760

Low mob size = 435

↓ mob size by 100 ewes = ↑ 2 – 2.5% lamb survival



■ Non-Merino – Merino

Results

- Relationship between mob size & lamb survival was not influenced by:
 - **Stocking rate** (0.3 – 12 twin ewes/ha)
 - **Merino or non-Merino ewe breed**
 - **Ewe condition score at lambing** (ave. 3.1 & 3.2; range 2.4 – 3.9)
 - **FOO at lambing** (ave. 1600 & 700; range 120 – 4200 kg DM/ha)
 - **Paddock characteristics**

Summary of research findings

- Greater effect of mob size in twins compared with singles → prioritise smaller paddocks for twin-bearing ewes
- Potential for greater benefits when lambing onto limited FOO and supplementary feeding (autumn lambers, poor seasons)
- Economics?

Optimum mob sizes for scenario using permanent fencing, improved pasture utilisation capitalised and lamb price of \$6/kg

		Twins		Singles	
Return on investment		20%	50%	20%	50%
Years to breakeven		5	2	5	2
Merino	3.6 DSE/ha	54	90	65	108
	7.2 DSE/ha	60	100	75	125
	14.4 DSE/ha	71	118	99	165
Non-Merino	3.6 DSE/ha	41	68	57	95
	7.2 DSE/ha	50	83	75	125
	14.4 DSE/ha	62	103	89	148

Pregnancy status:
 Optimum mob size for twins is 40-50% that for singles

DSE rating of 1.5 for singles and 1.8 for twins

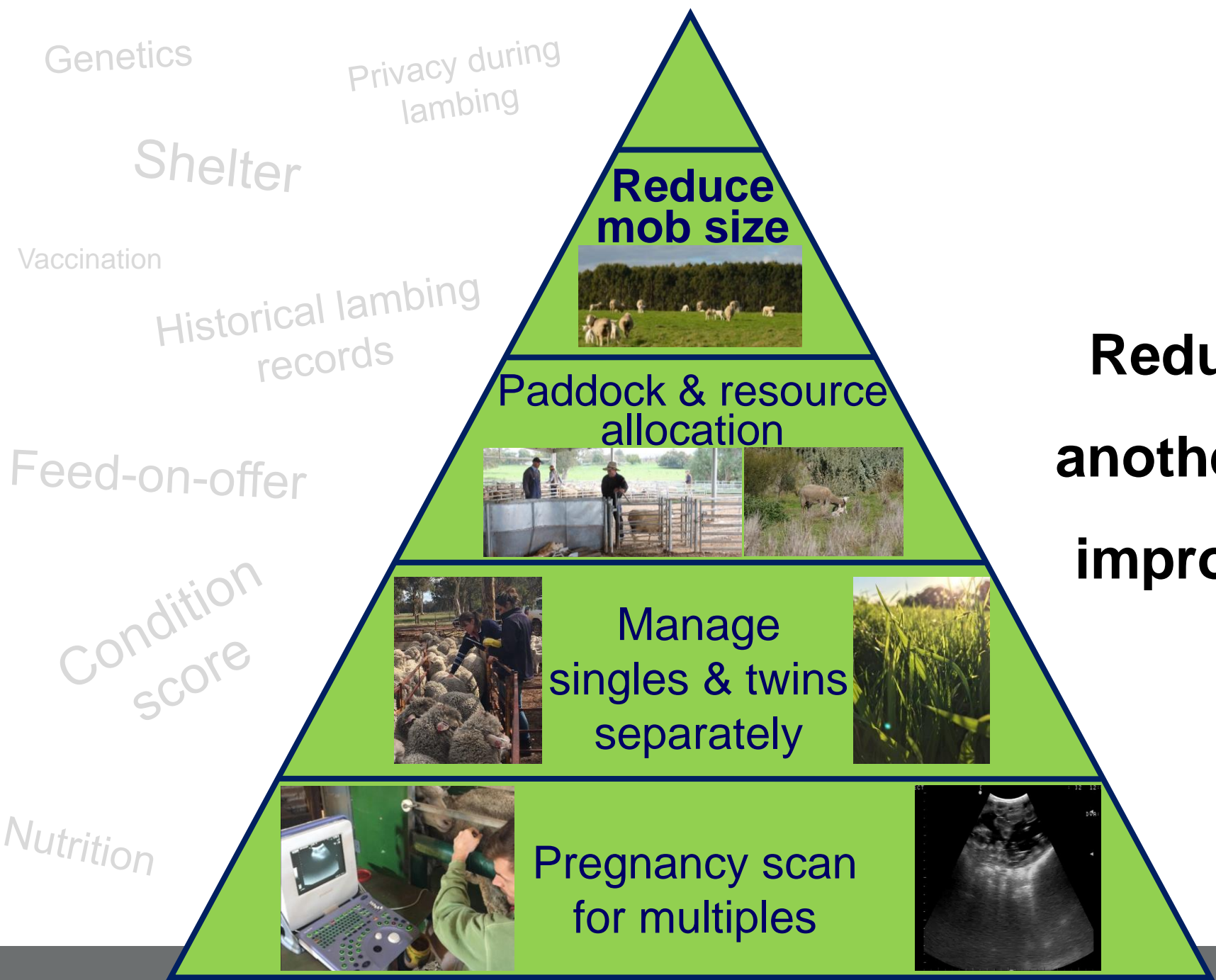
Optimum mob sizes for scenario using permanent fencing, improved pasture utilisation capitalised and lamb price of \$6/kg

		Twins		Singles		Wet-dry (118%)	
Return on investment		20%	50%	20%	50%	20%	50%
Years to breakeven		5	2	5	2	5	2
Merino	3.6 DSE/ha	54	90	65	108	36	60
	7.2 DSE/ha	60	100	75	125	51	130
	14.4 DSE/ha	71	118	99	165	98	163
Non-Merino	3.6 DSE/ha	41	68	57	95	45	75
	7.2 DSE/ha	50	83	75	125	45	75
	14.4 DSE/ha	62	103	89	148	71	118

DSE rating of 1.5 for singles and 1.8 for twins

Scenario: Splitting mob of 320 twin Merino ewes at 5.3 ewes/ha (60ha) in half with lamb at \$7/kg

	Permanent with water	Temporary without water	Temporary with water
Profit from extra lambs – maintenance costs (\$/paddock)	1910	1877	1857
Extra profit from higher SR (\$/paddock)	2717	-	-
Costs of subdivision (\$/paddock)	4566	465	1175
Livestock purchase cost (\$/paddock)	7051	-	-
ROI (%)	40	359	148
Annual equivalent (\$/ewe)	12.21	5.74	5.5
Years to break-even	3	1	1



Reducing mob size is another tool in the kit to improve marking rates

Acknowledgements



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Producers who hosted the 85 research sites + provided their lambing data to the producer network



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Scenario: Splitting mob of 320 Merino ewes at 5.3 ewes/ha (60ha) in half using permanent fencing + water with lamb at \$7/kg

	Wet-dry (118%)	Single	Twin
Profit from extra lambs – maintenance costs (\$/paddock)	932	483	1910
Extra profit from higher SR (\$/paddock)	2437	2264	2717
Costs of subdivision (\$/paddock)	4566	4566	4566
Livestock purchase cost (\$/paddock)	6325	5876	7051
ROI (%)	31	26	40
Annual equivalent (\$/ewe)	8.39	6.52	12.21
Years to break-even	4	5	3