

AN INITIATIVE OF

Making More From Sheep



Department of
Primary Industries and
Regional Development



Australian Wool
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Making sheep easier to manage and more productive

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GOVERNMENT OF
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EVENT SUPPORTERS:



Labour saving tools



Labour saving tools



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MEAT & LIVESTOCK AUSTRALIA

Sheep handler case study

Scott Newbey

Case study focused on:

Are there benefits from saving time?
Is it easier and less stressful?

Husbandry tasks

Weaning

Crutch and weigh crossbred lambs

Drench and vaccinate ewes

Improvement in ease of task completion



Influence of changing flock size on the return on investment

Flock size

	1500	2000	2500	3000	4000
BCR	0.6	0.8	1.0	1.2	1.5
Years to payback	>10	10	8	7	5

Cost of sheep handler = \$17,000

Additional gains from better management decisions

Improvement in management and flock gain

	0%	0.5%	1.0%	1.5%	2.0%
BCR	0.6	1.0	1.5	1.9	2.3
Years to payback	>10	8	6	5	5

Interaction between improvement in management/flock gain and flock size on BCR

Flock size

		1500	2000	3000	4000
Management and flock gain	0%	0.6	0.8	1.2	1.5
	1.0%	1.5	1.9	2.8	3.8
	2.0%	2.3	3.0	4.5	6.0

Human benefits that are important but not considered in analysis

- Reduced physical toll and operator fatigue
- Lower risk of injury
- Improved animal welfare
- Easier for non-skilled staff to learn husbandry tasks
- Better application efficiency



Electronic identification case study

Clayton South

Analysis focused on:

Improved reproductive performance

Improved lamb weighing benefits
(and mating ewe lambs)

Fleece weighing



Electronic identification case study

EID is just a tool used to achieve a well-defined breeding objective

EID makes it easier for each sheep to be managed individually

More accurate, easier, faster and more likely to happen

Influence of human nature – we know it's worth doing something but don't do it because it takes too long or is unpleasant

Improvement in flock benefits from using EID are both flock gain and genetic in nature

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Cost of equipment



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Flock structure

	Dohne flock	Terminal flock
Dry ewes	Terminal flock or culled	Sold straight away
Early twin ewes	Core of main flock	Remain in terminal flock
Late twin ewes	Retained and decision made using other data	Remain in terminal flock
Early single ewes	Retained or bottom % moved to terminal flock	Retained if not needed in main dohne flock
Late single ewes	2018 onwards moved to terminal flock	Most likely to leave after dry terminal sold

Investment return on EID investment in scanning only

	10 years	15 years	20 years
0.25% per year			
BCR	0.7	2.9	5.5
Payback	10	10	10
0.33% per year			
BCR	1.7	4.8	8.5
Payback	8	8	8

The impact of the EID ear tag cost on pregnancy scanning return

Ear tag cost	\$0.80	\$1.00	\$1.20	\$1.40
BCR	3.9	3.0	2.3	1.7
Payback	6	7	7	8

Impact of the number of lambs mated on return from ewe lamb weighing

Number of lambs mated	200	260	390	525
Percentage of lambs mated	8%	10%	15%	20%
BCR	1.0	1.5	2.6	3.8
Payback	9	7	5	5

EID - The full operation

Capital cost	\$19,500	\$34,500
NPV	\$109,000	\$92,000
BCR	6.6	3.5
Payback	5	6

Summary

- Spend time getting the inflow and lead-up race right
- Know the specific tasks you want to use it for
- The real value is in:
 1. Reduced fatigue. Improved OSH
 2. Combining tasks and saving time/labour
 3. Improving your management
- Using EID has made it easier to improve the flock management for:
 1. Reproductive performance
 2. Genetic weight gain and opportunity to mate ewe lambs when conditions allow
 3. Improve the fleece weight
- During a poor season, benefits of EID and individual management become more significant
- While upfront costs are high, genetic gain is cumulative over time

Conclusion

Labour efficiency in a sheep enterprise starts with well-designed and maintained infrastructure

A sheep handler can be a worthwhile investment but consider flock size, the tasks you will be using it for and potential improvements to your management

Electronic identification is a great tool to improve the efficiency of running sheep provided it fits with your breeding objective

Running sheep doesn't need to be hard work

More information

New on-farm technology case studies webpage
agric.wa.gov.au/sibi

‘Easy sheep management’ webpage
(found under Making more from sheep ‘Hot Topics’ module)

Kondinin Group July 2015 Sheep Handler review (to be repeated in 2017)

Cost benefit analysis of labour saving tools

- Pilot group assisted in case studies
- Partial discounted cashflow analysis
 - NPV
 - BCR and Payback period
- Wages: \$46/hr. Farm manager/worker \$87,000/yr or \$38/hr plus on costs
- Cost of capital (Planfarm Bankwest benchmarks)

Cash return on capital: 4.3%

Change in land value: 2.0%

Assumed cost of funds: 6.0% (risk rate)

Assumptions

- Wages \$46/hour or \$87,000 per year
- Discount rate: 6%
- Inflation: 2%
- Lambing percentage: 105%
- Twinning percentage: 45%
- EID ear tag cost: \$1.40 each
- Visual ear tag cost: \$0.35 each
- Lambox: \$1500
- Lupins cost: \$250/t
- Meat value per kg: \$2.10 (5 year average to June 2017)
- Wool value per kg: \$8.30 (5 year average for 19 micron wool in WA)

Value of fleece weighing with EID

Term	10 years	15 years	20 years
BCR	3.5	20.8	47.0
Payback	9	9	9