

## **Assessing the profitability of native pasture grazing systems: a stochastic whole-farm modelling approach**

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**Table S1. Summary of variable costs sourced from the NSW DPI livestock budget for a 20-micron merino ewe, terminal sire operation (NSW DPI, 2011).**

<i>Item</i>	<i>Base price</i>	<i>Amount</i>	<i>Total</i>	<i>Notes</i>
Breeding ewe value <sup>a</sup>			\$80.00	\$/hd
Replacement rams			\$900.00	\$/hd
Cartage			\$2.00	\$/hd - replacement ewes
Ewe shearing			\$5.74	\$/hd - Adults
Ram shearing			\$7.82	\$/hd
Crutching			\$1.01	\$/hd
Wool tax	2%			Percentage of total sale value
Bale wt		130		CFW
Wool commission			\$42.99	\$/bale
Wool cartage			\$18.00	\$/bale
Wool packs			\$11.43	\$/bale
Drench BS - Young	\$0.24	3	\$0.72	\$/hd lambs
Drench BS - Adult	\$0.47	2	\$0.94	\$/hd Adults
Drench NS - Adult	\$0.37	1	\$0.37	\$/hd Adults
Drench - Young	\$0.20	1	\$0.20	
Dipping	\$1.10	1	\$1.10	\$/hd Adults
Jetting - Adult	\$0.59	1	\$0.59	\$/hd Adults
Jetting - Young		1	\$0.49	\$/hd lambs
Vaccinations - Adult	\$0.27	1	\$0.27	\$/hd Adults
Vaccinations - Young	\$0.27	1	\$0.27	\$/hd lambs
Marking	\$1.45	1	\$1.45	\$/hd lambs
Scanning	\$1.00	1	\$1.00	\$/hd Adults
Cartage	\$2.00	1	\$2.00	\$/hd
Commission livestock sales	5%			Percentage of total sale value
Yard Levies			\$1.50	\$/hd
Pasture maintenance cost			\$24.75	\$/ha

<sup>a</sup> Replacement ewe prices were a stochastic variable in the price model as outlined in the methods (see Table 2), however a static price of \$80 was used to for tax purposes when calculating livestock trading schedules and balance sheet asset values.

**Table S2. Summary of fixed costs provided at a farmer workshop held with eight farmers and advisors from the Central Tablelands of NSW.**

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<i>Item</i>	<i>Annual cost</i>
Administration (Office, Bank Charges)	\$4,000
Fuel	\$3,500
Insurance	\$3,300
Motor Vehicles	\$2,950
Rates	\$4,000
Repairs & Maintenance	\$5,000
Telephone & electricity	\$5,000
General Expenses	\$2,000

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**Table S3. Summary of annual depreciation on fixed assets based on asset values estimated at a farmer workshop held with eight farmers and advisors from the Central Tablelands of NSW.**

<i>SR</i>	<i>PS</i>	<i>Fencing Infrastructure</i>	<i>Water Infrastructure</i>	<i>Other Plant and Equipment</i>	<i>Total</i>
SR3	P01	\$2,229	\$300	\$17,518	\$20,047
	P04	\$4,269	\$300	\$17,518	\$22,087
	P20	\$9,369	\$1,800	\$17,518	\$28,687
SR4.2	P01	\$2,229	\$300	\$17,518	\$20,047
	P04	\$4,269	\$300	\$17,518	\$22,087
	P20	\$9,369	\$1,800	\$17,518	\$28,687
SR5.3	P01	\$2,229	\$300	\$17,518	\$20,047
	P04	\$4,269	\$300	\$17,518	\$22,087
	P20	\$9,369	\$1,800	\$17,518	\$28,687
SR7	P01	\$2,229	\$300	\$17,518	\$20,047
	P04	\$4,269	\$300	\$17,518	\$22,087
	P20	\$9,369	\$1,800	\$17,518	\$28,687

**Table S4. Summary of the starting asset values and debt structure of the twelve grazing system treatments at 90% equity.**

<i>SR</i>	<i>PS</i>	<i>Breeding Stock</i>	<i>Fencing Infrastructure</i>	<i>Water Infrastructure</i>	<i>Plant and Equipment<sup>a</sup></i>	<i>Land Value<sup>b</sup></i>	<i>Total Assets</i>	<i>Initial Debt</i>	<i>Initial Equity</i>
SR3	P01	\$117,600	\$78,000	\$12,000	\$404,150	\$1,559,100	\$2,170,850	\$217,085	\$1,953,765
	P04	\$117,600	\$118,800	\$12,000	\$404,150	\$1,559,100	\$2,211,650	\$221,165	\$1,990,485
	P20	\$117,600	\$220,800	\$72,000	\$404,150	\$1,559,100	\$2,373,650	\$237,365	\$2,136,285
SR4.2	P01	\$165,000	\$78,000	\$12,000	\$404,150	\$1,559,100	\$2,218,250	\$221,825	\$1,996,425
	P04	\$165,000	\$118,800	\$12,000	\$404,150	\$1,559,100	\$2,259,050	\$225,905	\$2,033,145
	P20	\$165,000	\$220,800	\$72,000	\$404,150	\$1,559,100	\$2,421,050	\$242,105	\$2,178,945
SR5.3	P01	\$208,300	\$78,000	\$12,000	\$404,150	\$1,559,100	\$2,261,550	\$226,155	\$2,035,395
	P04	\$208,300	\$118,800	\$12,000	\$404,150	\$1,559,100	\$2,302,350	\$230,235	\$2,072,115
	P20	\$208,300	\$220,800	\$72,000	\$404,150	\$1,559,100	\$2,464,350	\$246,435	\$2,217,915
SR7	P01	\$274,400	\$78,000	\$12,000	\$404,150	\$1,559,100	\$2,327,650	\$232,765	\$2,094,885
	P04	\$274,400	\$118,800	\$12,000	\$404,150	\$1,559,100	\$2,368,450	\$236,845	\$2,131,605
	P20	\$274,400	\$220,800	\$72,000	\$404,150	\$1,559,100	\$2,530,450	\$253,045	\$2,277,405

<sup>a</sup> The value plant and equipment excluding the value of fencing and water infrastructure.

<sup>b</sup> The value of the unimproved land and the value of a house (\$400,000), excluding the value of fencing and water infrastructure, plant and equipment, and farm buildings.

**Table S5. Mean aggregate 10-year totals for tax paid, interest on starting debt (initial loan) and interest on cash deficits (overdraft).**

	Tax (AU\$)	Initial Loan (AU\$)	Overdraft (AU\$)
P01-SR3	17,861	134,143	27,051
P04-SR3	14,379	136,660	33,950
P20-SR3	8,965	146,665	40,387
P01-SR4.2	51,663	137,051	11,000
P04-SR4.2	51,351	139,572	10,713
P20-SR4.2	39,446	149,588	15,406
P01-SR5.3	64,882	139,697	16,502
P04-SR5.3	64,496	142,219	18,077
P20-SR5.3	48,966	152,234	25,195
P01-SR7	46,686	143,776	59,252
P04-SR7	42,553	146,315	59,122
P20-SR7	26,989	156,308	83,359