

Appendix 11. Characteristics of the locations, land resources and livestock production systems used in the GrassGro modelling of climate change impacts and adaptations

The tables in this Appendix detail the inputs used in the modelling analyses presented in Appendices 5, 7 and 8.

Table A11.1. Clean fleece price as a function of average fibre diameter. The same values are used for all sheep enterprises.

Fibre Diameter (micron)	Clean Fleece Price (\$/kg)
17	14.56
18	13.29
20	9.81
21	9.36
22	9.07
26	6.14

Table A11.2. Monthly livestock sale prices in each enterprise. Values are in \$/kg carcass weight; sale prices for male and female young stock in the two ewe enterprises are the same. P_{main} is the sale price for cast-for-age stock; P_{male} and P_{female} are the sale prices for male and female young stock, respectively.

Month	Merino Ewe		Crossbred Ewe		Wether	Beef Cow			Steer
	P_{main}	P_{male}, P_{female}	P_{main}	P_{male}, P_{female}	P_{main}	P_{main}	P_{male}	P_{female}	P_{main}
Jan	2.39	3.60	2.39	4.15	2.39	2.70	3.50	3.31	3.50
Feb	2.44	3.74	2.44	4.32	2.44	2.77	3.58	3.39	3.58
Mar	2.61	3.78	2.61	4.36	2.61	2.81	3.63	3.44	3.63
Apr	2.68	3.78	2.68	4.36	2.68	2.76	3.57	3.39	3.57
May	2.85	3.89	2.85	4.48	2.85	2.78	3.60	3.41	3.60
Jun	3.03	4.07	3.03	4.69	3.03	2.80	3.61	3.42	3.61
Jul	2.61	3.78	2.61	4.36	2.61	3.01	3.89	3.69	3.89
Aug	2.48	3.56	2.48	4.11	2.48	3.06	3.96	3.75	3.96
Sep	2.24	3.42	2.24	3.94	2.24	2.98	3.85	3.65	3.85
Oct	1.99	3.10	1.99	3.57	1.99	2.80	3.62	3.43	3.62
Nov	2.09	3.13	2.09	3.61	2.09	2.77	3.58	3.39	3.58
Dec	2.14	3.31	2.14	3.82	2.14	2.67	3.45	3.27	3.45

Table A11.3. Enterprise-specific costs, prices and multipliers used in the financial calculations

	Unit	Merino Ewe	Crossbred Ewe	Beef cow	Wether	Steer
Ratio of average wool price to fleece price	\$\$	0.92	0.92		0.92	
Carcass:live weight ratio – main flock or herd	–	0.42	0.42	0.46	0.43	0.52
Carcass:live weight ratio – male young sale stock	–	0.43	0.47	0.52		
Carcass:live weight ratio – female young sale stock	–	0.42	0.46	0.52		
Skin price – main flock or herd	\$/head	5.00	5.00	0.00	5.00	0.00
Skin price – young sale stock	\$/head	5.00	2.00	0.00		
Husbandry cost - main flock or herd (annual)	\$/head	3.75		9.20	2.00	9.20
Husbandry cost – young stock (birth to sale)	\$/head	4.50		5.73		
Cost of shearing sheep in the main flock	\$/head	6.00	6.00		6.00	
Cost of shearing young stock	\$/head	6.00	6.00			
Variable costs of wool sales (commissions etc)	\$\$	0.04	0.04		0.04	
Fixed costs of selling stock	\$/head	2.00		37.00	2.00	37.00
Variable costs of livestock sales	\$\$	0.05	0.05	0.05	0.05	0.05
Capital value of livestock	\$/head	125	125	670	90	500

Table A11.3. Costs of supplementary feeds.

Supplement	Cost (\$/kg fresh weight)
Wheat	0.280
Barley	0.255
Oats	0.275
Sorghum	0.240
Lupins	0.320
Hay	0.095
Pea straw	0.095

Table A11.5. Locations and their land resources. Climate statistics are for the period 1970-1999. The “Stubbles?” column gives times of year when stubbles were deemed to be available for grazing.

Location	State	Latitude/Longitude	Annual Rainfall (mm)	Proportion of Rainfall Nov-Mar	Annual Mean Temperature (°C)	Proportion of Area	Soil Description	Pasture	Stubbles?
Armidale	NSW	30°31'S 151°40'E	778	0.56	13.9	0.5	Prairie soil	Phalaris-annual grass-subterranean clover	Nil
Bakers Hill	WA	31°46'S 116°29'E	594	0.14	17.3	0.5	Lateritic podzol	Native pasture (<i>Bothriochloa macra</i>)	15 Nov-15 Jan
						0.8	Deep sand	Annual grass-subterranean clover	
Birchip	Vic	35°59'S 142°55'E	403	0.32	15.6	0.2	Deep sand	Lucerne-perennial ryegrass-annual grass	1 Dec-15 Jan
						1.0	Clay loam	Barley grass-annual medic	
Colac	Vic	38°17'S 143°40'E	699	0.30	13.8	1.0	Gradational clay	Perennial ryegrass-sub. clover-annual grass	Nil
Condobolin	NSW	33°04'S 147°14'E	470	0.44	17.2	0.8	Red brown earth	Barley grass-annual medic	15 Nov-31 Dec
						0.2	Red brown earth	Lucerne-barley grass-annual medic	
Cootamundra	NSW	34°38'S 148°01'E	671	0.38	15.4	1.0	Duplex soil	Phalaris-annual grass-subterranean clover	1 Dec-31 Dec
Cummins	SA	34°16'S 135°44'E	408	0.18	16.3	1.0	Clayey red brown earth	Barley grass-annual medic	1 Dec-15 Jan
Dalwallinu	WA	30°17'S 116°40'E	366	0.24	19.1	1.0	Red clay	Annual grass-subterranean clover	15 Nov-15 Jan
Ellinbank	Vic	38°15'S 145°56'E	1091	0.34	13.6	1.0	Red Ferrosol	Perennial ryegrass-white clover	Nil
Esperance	WA	33°36'S 121°47'E	507	0.25	16.4	1.0	Deep sandy duplex	Annual ryegrass-subterranean clover	1 Dec-31 Dec
Goulburn	NSW	34°49'S 149°44'E	668	0.45	13.1	1.0	Shallow yellow-grey duplex	Phalaris-annual grass-subterranean clover	Nil
						1.0	Silty clay loam over clay (white)	Perennial ryegrass-sub clover-annual grass	
Hamilton	Vic	37°39'S 142°04'E	663	0.29	13.2	1.0	Silty clay loam over clay (white)	Perennial ryegrass-sub clover-annual grass	Nil
Katanning	WA	33°41'S 117°33'E	471	0.21	15.9	1.0	Sandy duplex	Annual ryegrass-sub clover	15 Nov-31 Dec
Kyancutta	SA	33°08'S 135°33'E	299	0.27	17.2	1.0	Grey calcareous sandy loam	Barley grass-medic	1 Dec-15 Jan
						1.0	Yellow shallow sandy duplex	Annual ryegrass-sub clover	
Lake Grace	WA	33°06'S 118°28'E	352	0.27	16.8	1.0	Yellow shallow sandy duplex	Annual ryegrass-sub clover	1 Dec-15 Jan
Lameroo	SA	35°20'S 140°31'E	386	0.29	16.0	0.5	Sandy loam over poorly structured brown clay	Barley grass-medic	1 Dec-15 Jan
						0.5	Sandy loam over brown clay	Barley grass-medic	
Launceston	Tas	41°32'S 147°12'E	641	0.33	11.6	1.0	Shallow duplex	Perennial Ryegrass-sub clover-annual grass	Nil
Lucindale	SA	36°58'S 140°22'E	588	0.22	14.8	1.0	Sandy loam on clay loam	Phalaris-sub clover	Nil
Mansfield	Vic	37°03'S 146°05'E	735	0.34	13.7	0.6	Deep yellow-grey duplex	Phalaris-sub clover-annual grass	Nil
						0.4	Deep yellow-grey duplex	Native pasture (<i>Microlaena</i>)	
Mt Barker	WA	34°38'S 117°38'E	693	0.22	15.0	1.0	Loamy sand over medium clay	Annual ryegrass-sub clover-capeweed	Nil
Narrandera	NSW	34°45'S 146°33'E	485	0.36	16.5	1.0	Red duplex	Annual ryegrass-sub clover	1 Dec-31 Dec

Location	State	Latitude/Longitude	Annual Rainfall (mm)	Proportion of Rainfall Nov-Mar	Annual Mean Temperature (°C)	Proportion of Area	Soil Description	Pasture	Stubbles?
Stawell	Vic	37°04'S 142°47'E	574	0.29	14.1	0.6	Fine sandy clay loam over heavy clay	Annual ryegrass-sub clover	
						0.4	Fine sandy clay loam over heavy clay	Phalaris-annual ryegrass-sub clover	1 Dec-31 Dec
Swan Hill	Vic	35°20'S 143°33'E	379	0.36	16.5	1.0	Sandy clay loam	Barley grass-sub clover	1 Dec-15 Jan
Tatura	Vic	36°26'S 145°16'E	488	0.35	14.8	1.0	Sandy loam over clay loam	Barley grass-sub clover	1 Dec-15 Jan
Wellington	NSW	32°30'S 148°58'E	610	0.45	16.7	0.2	Sandy clay loam over clay	Lucerne- annual grass	Nil
						0.5	Sandy clay loam over clay	Phalaris-annual grass-sub clover	
						0.3	Red duplex	Native Pasture (Bothriochloa (beta))	

Table A11.6. Management of the Merino ewe enterprises at each of the 25 locations. S.R. = stocking rate in ewes per hectare immediately after replacement. Except as noted, a “flexible” grazing management scheme was used in which animals were moved weekly to the paddock that would provide the highest rate of weight gain.

Location	Optimal Sustainable S.R.	Ewe Shearing Date	Average Lambing Date	Earliest Lamb Sale Date	Final Lamb Sale Date	Maintenance Supplement	Grazing Management
Armidale	4.0	15 Feb	1 Oct	28 Feb		Wheat, whole	Ewes graze native pasture 15 Jan-31 Mar
Bakers Hill	13.1	30 Sep	1 May	1 Oct	30 Nov	Lupins/oats	Lucerne paddock closed 15 Aug-14 Oct
Birchip	4.6	1 Nov	9 Apr	1 Nov		Barley, whole	
Colac	16.3	25 Nov	28 Aug	1 Feb		Barley, whole	
Condobolin	1.4	1 Oct	11 Jun	1 Nov		Wheat, whole	
Cootamundra	7.9	15 Mar	20 Jul	30 Dec		Barley, whole	
Cummins	2.4	1 Nov	15 May	1 Nov	30 Apr	Barley, whole	
Dalwallinu	1.9	30 Sep	1 Jul	15 Dec		Lupins/Barley	
Ellinbank	20.6	25 Nov	13 Sep	1 Feb		Barley, whole	
Esperance	2.0	1 Nov	29 May	1 Nov	15 Mar	Lupins/Barley	
Goulburn	5.9	15 Nov	31 Aug	20 Nov		Wheat, whole	
Hamilton	12.0	25 Nov	13 Sep	1 Feb		Barley, whole	
Katanning	2.1	15 Jan	12 Jul	10 Feb	1 Nov	Lupins/Oats	
Kyancutta	1.0	1 Nov	15 May	1 Nov	30 Apr	Barley, whole	
Lake Grace	0.8	1 Nov	29 May	1 Nov	15 mar	Lupins/Barley	
Lameroo	2.2	1 Nov	9 Apr	1 Nov		Barley, whole	Weekly Rotation
Launceston	8.3	1 May	6 Sep	31 Dec		Wheat, whole	
Lucindale	6.6	15 Nov	12 Jun	1 Oct	1 Jan	Barley, whole	
Mansfield	8.1	15 Nov	29 Jun	15 Nov	1 Jan	Barley, whole	Ewes graze native pasture 1 Oct-30 Nov
Mt Barker	10.5	1 Feb	8 Jul	30 Nov		Barley, whole	
Narrandera	5.9	15 Apr	28 Apr	10 Nov	31 Dec	Wheat, whole	
Stawell	7.6	15 Jun	18 Jul	20 Feb		Wheat, whole	1 Sep-14 Nov Ewes graze perennial pasture 2 days on 3days off
Swan Hill	3.6	1 Nov	9 Apr	1 Nov		Barley, whole	
Tatura	6.3	15 Jun	15 Jul	20 Feb		Wheat, whole	
Wellington	4.0	15 Nov	1 Aug	1 Dec	30 Apr	Wheat, whole	Lucerne paddock ewes >1yr excluded 1 Oct-31 Dec

Table A11.7. Management of the crossbred ewe enterprises at each of the 25 locations. S.R. = stocking rate in ewes per hectare immediately after replacement. Except as noted, a “flexible” grazing management scheme was used in which animals were moved weekly to the paddock that would provide the highest rate of weight gain.

Location	Optimal Sustainable S.R.	Ewe Shearing Date	Average Lambing Date	Earliest Lamb Sale Date	Final Lamb Sale Date	Maintenance Supplement	Grazing Management
Armidale	3.8	15 Feb	15 Jun	1 Jan	31 Jan	Wheat, whole	Perennial pasture grazed 16 Jan – 31 Mar
Bakers Hill	8.5	15 Feb	1 Jun	16 Sep	31 Jan	Lupins/Oats	Lucerne pasture closed 15 Aug – 14 Oct
Birchip	3.3	1 Nov	1 Jun	16 Sep	28 Feb	Barley, whole	
Colac	11.1	25 Nov	1 Jul	16 Oct	28 Feb	Barley, whole	
Condobolin	1.1	1 Oct	1 Jun	1 Oct	28 Feb	Wheat, whole	Weaners to lucerne 1 Mar-31 Oct; lucerne closed to ewes 15 Sep -31 Dec
Cootamundra	5.5	15 Mar	1 Jun	1 Dec	28 Feb	Barley, whole	
Cummins	2.0	1 Nov	1 Jun	1 Nov	31 Jan	Barley, whole	
Dalwallinu	1.5	30 Sep	1 Jun	1 Nov	28 Feb	Lupins/Barley	
Ellinbank	13.0	25 Nov	1 Jul	1 Dec	31 Mar	Barley, whole	
Esperance	2.4	1 Nov	29 May	1 Oct	31 Jan	Lupins/Barley	
Goulburn	5.4	15 Nov	15 Jun	1 Dec	15 Feb	Wheat, whole	
Hamilton	7.6	25 Nov	15 Jun	1 Dec	15 Feb	Barley, whole	
Katanning	1.2	15 Jan	12 Jul	1 Oct	31 Jan	Lupins/Oats	
Kyancutta	1.0	1 Nov	29 May	1 Oct	31 Jan	Barley, whole	
Lake Grace	0.4	1 Nov	12 Jul	1 Oct	31 Dec	Lupins/Barley	
Lameroo	1.4	1 Nov	1 Jun	1 Oct	28 Feb	Barley, whole	Weekly rotation
Launceston	5.7	1 May	6 Sep	1 Dec	31 Mar	Wheat, whole	
Lucindale	4.9	15 Nov	1 Aug	15 Nov	28 Feb	Barley, whole	
Mansfield	5.2	15 Nov	15 Jul	15 Nov	31 Mar	Barley, whole	Ewes to native pasture 1 Oct-30 Nov, weaners exclusively on perennial pasture
Mt Barker	8.2	1 Feb	15 Jun	30 Nov	28 Feb	Lupins/Oats	
Narrandera	4.2	15 Nov	1 Jun	1 Nov	28 Feb	Wheat, whole	
Stawell	6.1	15 Jun	15 Jun	1 Nov	28 Feb	Wheat, whole	1 Sep–14 Nov perennial pasture grazed 2 days on/3 days off
Swan Hill	1.1	1 Nov	15 Jun	1 Oct	28 Feb	Barley, whole	
Tatura	5.0	15 Jun	1 Jul	1 Nov	28 Feb	Wheat, whole	
Wellington	3.9	15 Nov	1 Jun	1 Nov	28 Feb	Wheat, whole	1 Oct-31 Dec ewes and 1 Aug-7 Nov weaners graze improved pastures only

Table A11.8. Management of the beef cow enterprises at each of the 25 locations. S.R. = stocking rate in cows per hectare immediately after replacement. Except as noted, a “flexible” grazing management scheme was used in which animals were moved weekly to the paddock that would provide the highest rate of weight gain.

Location	Optimal Sustainable S.R.	Average Calving Date	Earliest Steer Sale Date	Final Steer Sale Date	Target Steer Sale Weight (kg)	Earliest Heifer Sale Date	Final Heifer Sale Date	Target Heifer Sale Weight (kg)	Maintenance Supplement	Grazing Management
Armidale	0.60	25 Aug	30 Jun			30 Jun			Wheat, whole	
Bakers Hill	1.08	1 Apr	30 Nov			30 Nov			Lupins/Oats	Lucerne paddock closed 1 Aug-30 nov
Birchip	0.30	15 Aug	30 Sep (+1)			30 Sep (+1)			Barley, whole	
Colac	1.94	23 Feb	15 Dec			15 Dec			Barley, whole	
Condobolin	0.15	15 Jun	1 Jun	30 Nov	400	1 Jun	30 Nov	340	Wheat, whole	Weaners only on lucerne pasture from weaning to 30 Apr
Cootamundra	0.79	12 Jul	10 Nov (+1)			10 Nov (+1)			Barley, whole	
Cummins	0.33	15 Jul	30 Nov (+1)			30 Nov (+1)			Barley, whole	
Dalwallinu	0.26	1 Apr	15 Jan			15 Jan			Lupins/Barley	
Ellinbank	2.08	15 Aug	15 Jan (+1)			15 Jan (+1)			Barley, whole	
Esperance	0.47	18 Apr	15 Jan			15 Jan			Lupins/Barley	
Goulburn	0.55	11 Aug	30 Jun			30 Jun			Wheat, whole	
Hamilton	1.18	1 Sep	15 Jan (+1)			15 Jan (+1)			Barley, whole	
Katanning	0.30	15 Mar	15 Feb			15 Feb			Lupins/Oats	
Kyancutta	0.10	15 Jul	30 Nov (+1)			30 Nov (+1)			Barley, whole	
Lake Grace	0.04	1 Apr	15 Jan			15 Jan			Lupins/Barley	
Lameroo	0.17	15 Jul	15 Jan (+1)	15 Jul	400	15 Jan (+1)	15 Jul	350	Barley, whole	
Launceston	1.19	1 Sep	15 Jan (+1)			15 Jan (+1)			Wheat, whole	
Lucindale	0.73	15 Jul	15 Jan (+1)			15 Jan (+1)			Barley, whole	
Mansfield	0.85	25 Jul	10 Nov	10 Dec	420	10 Nov	10 Dec	400	Barley, whole	Yearlings finished on phalaris pasture from 15 Sep to sale
Mt Barker	1.18	1 Apr	30 Sep (+1)			15 Dec			Lupins/Oats	
Narrandera	0.62	15 Jun	1 Sep (+1)	30 Nov	450	1 Sep (+1)	30 Nov	380	Wheat, whole	
Stawell	0.89	15 Jul	30 Nov (+1)			30 Nov (+1)			Wheat, whole	
Swan Hill	0.21	15 Aug	30 Nov (+1)			30 Nov (+1)			Barley, whole	
Tatura	0.62	15 Aug	30 Nov (+1)			30 Nov (+1)			Wheat, whole	
Wellington	0.50	15 Aug	1 Sep (+1)	31 Jan	450	1 Sep (+1)	31 Jan	380	Wheat, whole	Only cows graze native pastures.

Table A11.9. Management of the wether enterprises at each of the 25 locations. S.R. = stocking rate in wethers per hectare immediately after replacement. A “flexible” grazing management scheme was used in which animals were moved weekly to the paddock that would provide the highest rate of weight gain.

Location	Optimal Sustainable S.R.	Purchase Date	Purchase Age (months)	Sale Date	Sale Age (years)	Maintenance Supplement
Armidale	8.4	1 Mar	5	1 Mar	5	Wheat, whole
Bakers Hill	13.8	1 Oct	5	1 Oct	5	Lupins/Oats
Birchip	3.1	1 Nov	7	2 Nov	5	Barley, whole
Colac	18.0	1 Feb	5	26 Nov	5	Barley, whole
Condoblin	3.4	30 Nov	5	2 Oct	5	Wheat, whole
Cootamundra	10.0	30 Dec	6	16 Mar	5	Barley, whole
Cummins	3.3	30 Apr	11	2 Nov	5	Barley, whole
Dalwallinu	2.5	15 Dec	5	1 Oct	6	Lupins/Barley
Ellinbank	22.6	1 Feb	5	25 Nov	5	Barley, whole
Esperance	3.5	1 Nov	5	2 Nov	5	Lupins/Barley
Goulburn	7.4	20 Nov	14	16 Nov	6	Wheat, whole
Hamilton	12.0	1 Jan	18	31 Dec	4	Barley, whole
Katanning	2.9	10 Feb	6	16 Jan	6	Lupins/Oats
Kyancutta	1.5	30 Apr	11	2 Nov	5	Barley, whole
Lake Grace	1.0	15 Mar	9	2 Nov	6	Lupins/Barley
Lameroo	2.2	1 Nov	6	2 Nov	6	Barley, whole
Launceston	13.6	31 Dec	16	2 May	5	Wheat, whole
Lucindale	8.1	1 Jan	7	16 Nov	5	Barley, whole
Mansfield	9.0	1 Jan	6	30 Nov	5	Barley, whole
Mt Barker	12.6	1 Dec	5	2 Feb	5	Lupins/Oats
Narrandera	7.5	1 Jan	8	16 Apr	5	Wheat, whole
Stawell	9.0	20 Feb	7	2 Dec	5	Wheat, whole
Swan Hill	3.2	2 Nov	7	2 Nov	5	Barley, whole
Tatura	7.4	20 Feb	7	2 Dec	5	Wheat, whole
Wellington	5.4	30 Apr	9	30 Nov	5	Wheat, whole

Table A11.10. Management of the steer enterprises at each of the 25 locations. S.R. = stocking rate in steers per hectare immediately after replacement. A “flexible” grazing management scheme was used in which animals were moved weekly to the paddock that would provide the highest rate of weight gain.

Location	Optimal Sustainable S.R.	Purchase Date	Purchase Age (months)	Purchase Weight (kg)	Earliest Steer Sale Date	Final Steer Sale Date	Target Steer Sale Weight (kg)	Maintenance Supplement
Armidale	1.26	1 Apr	8	206	1 Nov	15 Jan	420	Wheat, whole
Bakers Hill	1.45	1 Nov	7	275	1 Oct			Lupins/Oats
Birchip	1.24	1 May	8	180	1 Dec	1 Jan	400	Barley, whole
Colac	2.42	1 Dec	9	320	15 Oct	30 Nov	500	Barley, whole
Condoblin	0.34	1 Mar	9	242	15 Dec	15 Jan	400	Wheat, whole
Cootamundra	2.24	1 Apr	7	210	20 Dec	20 Jan	400	Barley, whole
Cummins	0.82	1 May	10	219	1 Nov	1 Dec	400	Barley, whole
Dalwallinu	0.51	1 Jan	10	278	1 Oct	1 Nov	400	Lupins/Barley
Ellinbank	3.97	1 May	9	243	1 Dec	28 Feb	450	Barley, whole
Esperance	0.81	15 Jan	9	287	1 Oct	1 Nov	420	Lupins/Barley
Goulburn	1.30	1 Mar	7	193	1 Dec	1 Jan	420	Wheat, whole
Hamilton	3.38	1 Jun	9	197	15 Dec	15 Jan	450	Barley, whole
Katanning	0.55	15 Nov	8	283	15 Oct	14 Nov	500	Lupins/Oats
Kyancutta	0.37	15 May	9	191	1 Dec	31 Dec	400	Barley, whole
Lake Grace	0.14	1 Jan	9	255	1 Dec			Lupins/Barley
Lameroo	0.48	15 Mar	8	220	15 Nov	15 Dec	420	Barley, whole
Launceston	3.18	1 Jun	9	251	1 Nov	31 Dec	400	Wheat, whole
Lucindale	2.01	1 Mar	8	236	1 Oct	15 Dec	420	Barley, whole
Mansfield	1.66	1 Feb	7	220	1 Oct	15 Jan	400	Barley, whole
Mt Barker	2.02	1 Jan	9	322	1 Oct	31 Dec	500	Lupins/Oats
Narrandera	1.74	1 Mar	8	242	15 Oct	15 Jan	420	Wheat, whole
Stawell	1.75	1 Apr	8	218	15 Nov	15 Jan	400	Wheat, whole
Swan Hill	0.90	15 Apr	8	173	15 Nov	15 Dec	420	Barley, whole
Tatura	1.60	1 Apr	7	196	1 Nov	31 Dec	400	Wheat, whole
Wellington	0.93	1 May	8	204	1 Nov	28 Feb	420	Wheat, whole

Table A11.11. Location- and paddock-specific values used in financial calculations. Property areas are used to convert the operator allowance to a per-hectare basis. Maintenance fertilizer cost per dry sheep equivalent for each location and paddock has been derived from the P requirements calculator of Cayley and Quigley (2005); the pasture class, soil loss factor and animal loss factor for each paddock are inputs to that calculation.

Location	Property Area (ha)	Replacement Cost (\$/head)			Paddock	Pasture Class	Soil Loss Factor	Animal Loss Factor	P Fertilizer Requirement (kg P/DSE)
		Crossbred Ewe	Wether	Beef Cow					
Armidale	1100				1	Improved	Medium	Medium	1.06
					2	Poor	Medium	High	1.10
Bakers Hill	430				1	Improved	High	Low	1.05
					2	Improved	High	Low	1.05
Birchip	1300				1	Improved	Medium	Low	0.75
Colac	400				1	Improved	Medium	Low	0.88
Condobolin	1900				1	Improved	Low	Low	0.57
					2	Improved	Low	Low	0.57
Cootamundra	620				1	Improved	Medium	Low	0.86
Cummins	1200				1	Improved	Medium	Low	0.75
Dalwallinu	2100				1	Improved	High	Low	0.92
Ellinbank	400				1	Improved	Medium	Low	1.04
Esperance	1200				1	Improved	High	Low	1.00
Goulburn	750				1	Improved	Medium	Medium	1.00
Hamilton	430				1	Improved	Medium	Low	0.86
Katanning	1300				1	Improved	Medium	Low	0.78
Kyancutta	2600				1	Improved	Low	Low	0.52
Lake Grace	2500				1	Improved	High	Low	0.91
Lameroo	1800				1	Improved	Low	Low	0.55
					2	Improved	Low	Low	0.55
Launceston	570				1	Improved	Medium	Medium	0.99
Lucindale	650				1	Improved	Medium	Low	0.83
Mansfield	770				1	Improved	Medium	Medium	1.04
Mansfield	500				2	Poor	Medium	High	1.08
Mount Barker	500				1	Improved	High	Medium	1.13
Narrandera	940				1	Improved	Low	Low	0.58
Stawell	810				1	Improved	Medium	Medium	0.96
					2	Improved	Medium	Medium	0.96
Swan Hill	2100				1	Improved	Low	Low	0.54
Tatura	1100				1	Improved	Low	Low	0.58
Wellington	1300				1	Improved	Medium	Low	0.72
					2	Improved	Medium	Medium	0.84
					3	Improved	Medium	High	0.95