Appendix

Appendix A – Eastern Wheatbelt

Table A1 – Eastern Wheatbelt 100% Cropping Summary Outputs.

	Crop	Wheat	Barley	Pulses	Oilseeds	Total
	Outputs	t CO2e/farm	t CO2e/farm	t CO2e/farm	t CO2e/farm	t CO2e/farm
Scope 1 Emissions (on-farm)	CO2 - Fuel	88.42	31.83	17.68	35.37	173.31
	CO2 - Lime	0.40	0.40	0.00	0.00	0.79
	CO2 - Urea	45.83	16.50	0.00	18.33	80.67
	CH4 - Field burning	6.21	39.42	0.00	37.57	83.20
	CH4 - Fuel	0.13	0.05	0.03	0.05	0.25
	N2O - Fertiliser	292.02	105.13	0.00	116.81	513.96
	N2O - Atmospheric Deposition	32.12	11.56	0.00	12.85	56.54
	N2O - Field Burning	2.26	16.71	0.00	20.48	39.44
	N2O - Crop Residues	162.43	58.96	37.43	67.17	325.99
	N2O - Leaching and Runoff	60.30	21.83	9.88	24.70	116.71
	N2O - Fuel	0.44	0.16	0.09	0.18	0.87
	Scope 1 Total	**690.56**	**302.55**	**65.12**	**333.50**	**1391.72**
Scope 2 Emissions (off-farm)	Electricity	2.07	0.414	0.414	1.242	4.14
	Scope 2 Total	**2.07**	**0.41**	**0.41**	**1.242**	**4.14**
Scope 3 Emissions (pre-farm)	Fertiliser (urea + Superphosphate)	266.47	95.93	42.92	106.59	511.90
	Herbicides/pesticides	112.26	40.41	35.80	78.21	266.69
	Electricity	0.12	0.02	0.02	0.07	0.24
	Fuel	4.55	1.64	0.91	1.82	8.93
	Lime	0.01	0.01	0.00	0.00	0.03
	Scope 3 Total	**383.42**	**138.02**	**79.66**	**186.69**	**787.78**
	Carbon sequestration in trees	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Net Farm Emissions	**1076.05**	**440.98**	**145.19**	**521.43**	**2183.64**
	Emissions intensity t CO2-e/t crop	**0.29**	**0.31**	**0.24**	**0.70**	

Table A2 - Eastern Wheatbelt 100% Cropping GHG summary.

Summary	t CO2e/farm
CO2	998.67
CH4	113.43
N2O	1058.23

Table A3 – Eastern Wheatbelt Mixed Farm Summary Outputs.

	Crop	Wheat	Barley	Pulses	Oilseeds	Sheep	Total
	Outputs	t CO2e/farm	t CO2e/farm	t CO2e/farm	t CO2e/farm	t CO2e/farm	t CO2e/farm
Scope 1 Emissions (on-farm)	CO2 - Fuel	77.81	26.53	14.15	30.06	8.57	157.12
	CO2 - Lime	0.40	0.40	0.00	0.00	0.00	0.79
	CO2 - Urea	40.33	13.75	0.00	15.58	0.00	69.67
	CH4 - Field burning	5.46	32.85	0.00	31.94	0.00	70.25
	CH4 - Fuel	0.11	0.04	0.02	0.04	0.02	0.23
	CH4 - Enteric	0.00	0.00	0.00	0.00	511.90	511.90
	CH4 - Manure Management	0.00	0.00	0.00	0.00	23.29	23.29
	CH4 - Savannah Burning	0.00	0.00	0.00	0.00	0.00	0.00
	N2O - Fertiliser	256.98	87.61	0.00	99.29	0.00	443.87
	N2O - Urine and Dung	0.00	0.00	0.00	0.00	31.31	31.31
	N2O - Atmospheric Deposition	28.27	9.64	0.00	10.92	3.29	52.11
	N2O - Savannah Burning	0.00	0.00	0.00	0.00	0.00	0.00
	N2O - Field Burning	1.99	13.92	0.00	17.40	0.00	33.31
	N2O - Crop Residues	142.94	49.13	29.95	57.09	0.00	279.11
	N2O - Leaching and Runoff	53.06	18.19	7.91	20.99	20.66	120.82
	N2O - Fuel	0.39	0.13	0.07	0.15	0.06	0.80
	Scope 1 Total	**607.74**	**252.19**	**52.09**	**283.47**	**599.09**	**1794.59**
Scope 2 Emissions (off-farm)	Electricity	2.07	0.41	0.41	1.24	1.04	5.18
	Scope 2 Total	**2.07**	**0.41**	**0.41**	**1.24**	**1.04**	**5.18**
Scope 3 Emissions (pre-farm)	Fertiliser (urea + Superphosphate)	234.49	79.94	34.34	90.60	0.00	439.37
	Purchased feed	0.00	0.00	0.00	0.00	0.00	0.00
	Herbicides/pesticides	98.79	33.68	28.64	66.48	0.00	227.59
	Electricity	0.12	0.02	0.02	0.07	0.06	0.30
	Fuel	4.01	1.37	0.73	1.55	0.44	8.10
	Lime	0.01	0.01	0.00	0.00	0.00	0.03
	Purchased livestock	0.00	0.00	0.00	0.00	4.46	4.46
	Livestock on agistment	0.00	0.00	0.00	0.00	0.00	0.00
	Scope 3 Total	**337.42**	**115.02**	**63.73**	**158.70**	**4.97**	**679.84**

Net Farm Emissions	947.23	367.62	116.24	443.41	605.10

Table A4 – Eastern Wheatbelt Mixed Farm emission intensity summary.

	Wheat	Barley	Pulses	Oilseeds	Sheep Meat	Sheep Wool
	t CO2-e/t crop	t CO2-e/t crop	t CO2-e/t crop	t CO2-e/t crop	kg CO2-e / kg LW	kg CO2-e / kg greasy
Emissions intensity	0.29	0.31	0.24	0.70	8.10	29.40

Table A5 - Eastern Wheatbelt Mixed Farm GHG summary.

Summary	Crop	Sheep	Total
Outputs	t CO2e/farm	t CO2e/farm	t CO2e/farm
CO2	856.26	8.57	864.83
CH4	96.14	535.21	631.35
N2O	910.07	55.31	965.38

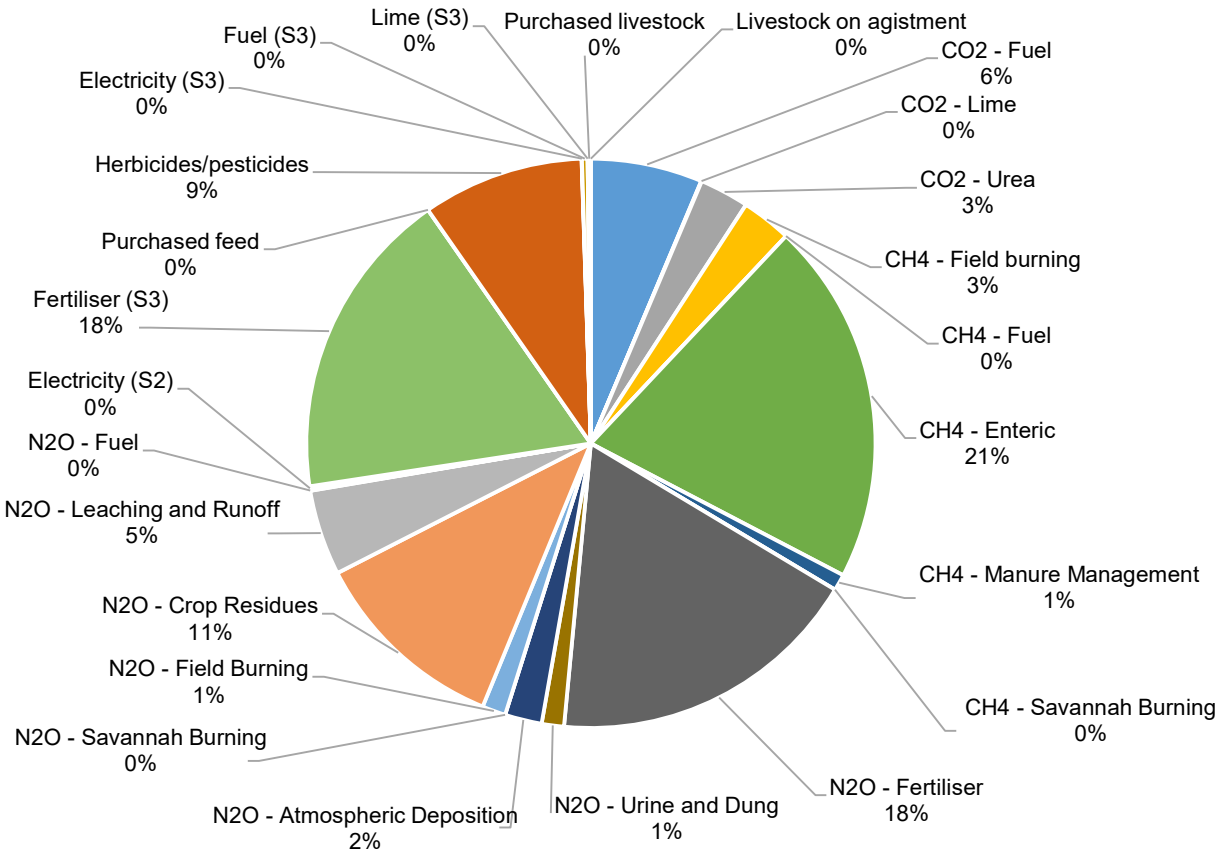

Figure A1 – Eastern Whetbelt Mixed Farm total emissions breakdown.

Appendix B – Geraldton Medium Rainfall Region

Table B1 – Geraldton Medium Rainfall 100% Cropping Summary Outputs.

	Crop	Wheat	Barley	Pulses	Oilseeds	Total
	Outputs	t CO2e/farm	t CO2e/farm	t CO2e/farm	t CO2e/farm	t CO2e/farm
Scope 1 Emissions (on-farm)	CO2 - Fuel	180.17	39.04	48.05	60.06	327.31
	CO2 - Lime	0.11	0.00	0.00	0.11	0.23
	CO2 - Urea	96.80	20.97	0.00	32.27	150.04
	CH4 - Field burning	0.00	0.00	0.00	0.00	0.00
	CH4 - Fuel	0.26	0.06	0.07	0.09	0.47
	N2O - Fertiliser	570.66	123.64	0.00	190.22	884.52
	N2O - Atmospheric Deposition	62.77	13.60	0.00	20.92	97.30
	N2O - Field Burning	0.00	0.00	0.00	0.00	0.00
	N2O - Crop Residues	181.92	31.93	44.92	53.73	312.51
	N2O - Leaching and Runoff	82.06	15.80	11.86	25.53	135.25
	N2O - Fuel	0.90	0.20	0.24	0.30	1.64
	Scope 1 Total	**1175.66**	**245.24**	**105.13**	**383.23**	**1909.27**
Scope 2 Emissions (off-farm)	Electricity	2.07	0.621	0.621	0.828	4.14
	Scope 2 Total	**2.07**	**0.621**	**0.621**	**0.828**	**4.14**
Scope 3 Emissions (pre-farm)	Fertiliser (urea + Superphosphate)	181.56	39.34	19.21	60.52	300.63
	Herbicides/pesticides	134.72	29.19	57.28	78.21	299.39
	Electricity	0.12	0.04	0.04	0.05	0.24
	Fuel	9.28	2.01	2.47	3.09	16.86
	Lime	0.00	0.00	0.00	0.00	0.01
	Scope 3 Total	**325.68**	**70.57**	**79.00**	**141.88**	**617.13**
	Carbon sequestration in trees	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Net Farm Emissions	**1503.41**	**316.44**	**184.76**	**525.93**	**2530.54**
	Emissions intensity t CO2-e/t crop	**0.36**	**0.41**	**0.26**	**0.88**	

Table B2 - Geraldton Medium Rainfall 100% Cropping GHG Summary.

Summary	t CO2e/farm
CO2	1047.98
CH4	26.60
N2O	1434.72

Appendix C – Central Woolbelt

Table C1 – Central Woolbelt Mixed Farm Summary Outputs.

	Crop	Wheat	Barley	Sheep	Total
	Outputs	t CO2e/farm	t CO2e/farm	t CO2e/farm	t CO2e/farm
Scope 1 Emissions (on-farm)	CO2 - Fuel	20.87	31.30	15.00	67.16
	CO2 - Lime	0.00	0.00	0.00	0.00
	CO2 - Urea	7.33	11.00	0.00	18.33
	CH4 - Field burning	25.83	0.00	0.00	25.83
	CH4 - Fuel	0.03	0.04	0.03	0.10
	CH4 - Enteric	0.00	0.00	2804.88	2804.88
	CH4 - Manure Management	0.00	0.00	128.10	128.10
	CH4 - Savannah Burning	0.00	0.00	0.00	0.00
	N2O - Fertiliser	42.48	63.71	0.00	106.19
	N2O - Urine and Dung	0.00	0.00	172.35	172.35
	N2O - Atmospheric Deposition	4.67	7.01	18.10	29.78
	N2O - Savannah Burning	0.00	0.00	0.00	0.00
	N2O - Field Burning	9.38	0.00	0.00	9.38
	N2O - Crop Residues	33.79	56.01	0.00	89.79
	N2O - Leaching and Runoff	11.86	19.20	113.75	144.81
	N2O - Fuel	0.10	0.16	0.09	0.35
	Scope 1 Total	**156.34**	**188.43**	**3252.30**	**3597.07**
Scope 2 Emissions (off-farm)	Electricity	1.38	1.38	3.45	6.21
	Scope 2 Total	**1.38**	**1.38**	**3.45**	**6.21**
Scope 3 Emissions (pre-farm)	Fertiliser (urea + Superphosphate)	11.75	17.63	0.10	29.48
	Purchased feed	0.00	0.00	0.00	0.00
	Herbicides/pesticides	17.96	26.94	0.00	44.90
	Electricity	0.08	0.08	0.20	0.36
	Fuel	1.07	1.61	0.78	3.46
	Lime	0.00	0.00	0.00	0.00
	Purchased livestock	0.00	0.00	37.20	37.20
	Livestock on agistment	0.00	0.00	0.00	0.00
	Scope 3 Total	**30.87**	**46.26**	**38.27**	**115.40**
	Net Farm Emissions	188.59	236.07	3294.02	3718.69

Table C2 – Central Woolbelt Mixed Farm emission intensity summary.

	Wheat	Barley	Sheep Meat	Sheep Wool
	t CO2-e/t crop	t CO2-e/t crop	kg CO2-e / kg LW	kg CO2-e / kg greasy
Emissions intensity	0.29	0.31	7.63	28.54

Table C3 – Central Woolbelt Mixed Farm GHG Summary.

Summary	Crop	Sheep	t CO2e/farm
CO2	141.01	15.09	156.11
CH4	29.24	2933.01	2962.25
N2O	248.80	304.29	553.10

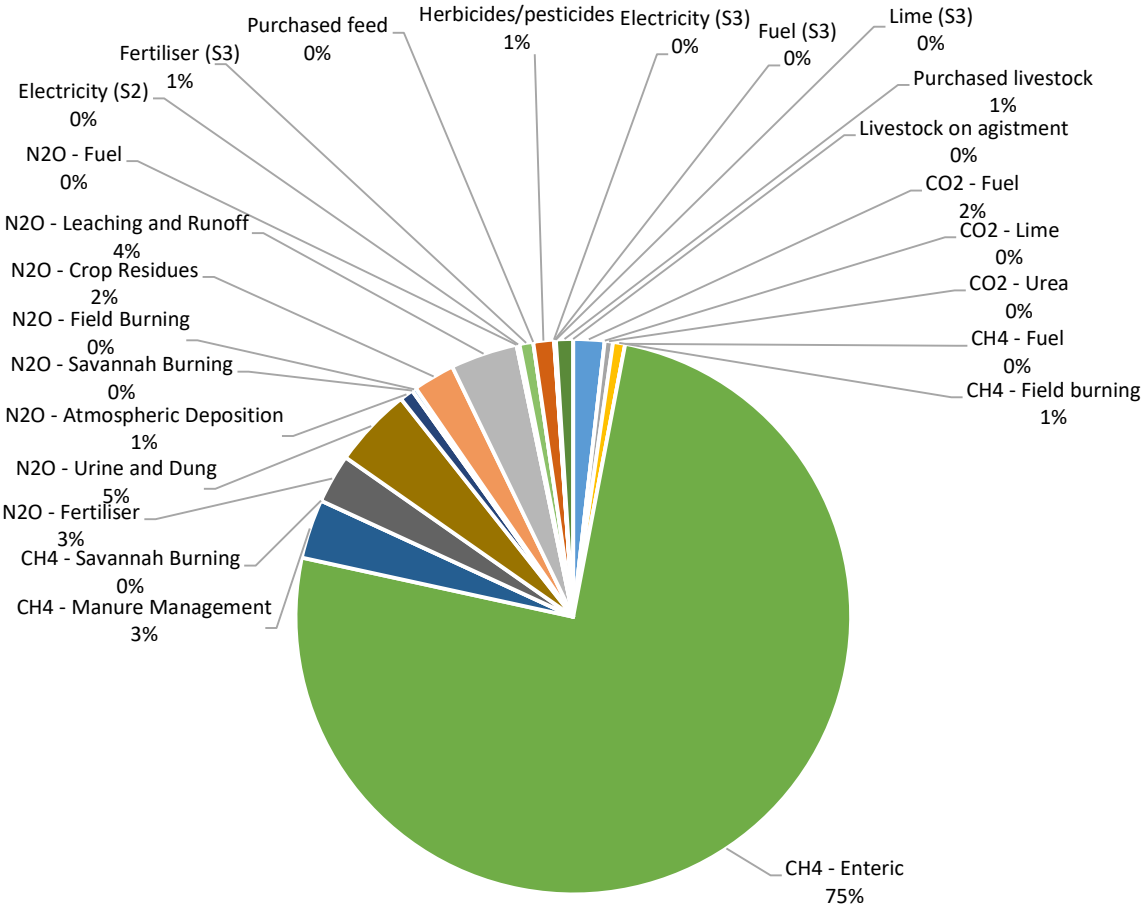

Figure C1 – Central Woolbelt Mixed Farm total emissions breakdown.