

# GRDC Grains Research Update



## **Pastures Benefiting the Cropping Phase**

**Braden Johnston**

# North Nyabing Medium-low rainfall zone



- 4300 ha
- 350mm rainfall average
- 70% crop
- 30% pasture

# Key Focus

- 1 Weed control
- 2 Fixing nitrogen
- 3 Sheep production



# Setting up Paddocks



Pasture  
manipulation

Crop grazing



# Free Nitrogen



Analytes	Long Hill		Micks Dam		
	1	2	1	2	3
Soil Texture (Northcote)	1.500000	1.500000	1.500000	1.500000	1.500000
pH (1:5 CaCl2)	5.0	5.4	4.8	4.4	4.8
pH (1:5 H2O)	5.7	6.3	5.7	5.3	5.8
EC (1:5 H2O) dS/m	0.10	0.10	0.16	0.16	0.12
Organic carbon (Walkley Black) %	2.18	1.60	1.61	1.27	1.47
Nitrate nitrogen (KCl) mg/kg	28	25	51	51	31
Ammonium nitrogen (KCl) mg/kg	9	6	8	10	6
Phosphorus (Colwell) mg/kg	40	30	38	31	53
Phosphorus Buffer Index (PBI)	61.2	71.0	29.4	20.6	34.2
Potassium (Colwell) mg/kg	204	239	114	80	88
Sulfur (KCl-40) (mg/kg)	11.3	10.7	12.5	13.0	8.3



# Sheep Production

LIVESTOCK REPORT			
For the 2015 Season			
Property: FOURWINDS, HILLSIDE, SPRINGFIELD			
<u>Feed Costs</u>	Tonnes	Price	Cost
Lupine	0	\$0	\$0
Hay	0	\$0	\$0
Oats	0	\$0	\$0
Other	70.56	\$350	\$24,696
			\$24,696
	Feed Cost per DSE		\$5.83
<u>Lambing</u>	<u>Mering</u>	<u>X-Bred</u>	
	700	1950	Ewes
	850	1950	Lambs weaned
	121%	116%	Average
		3.3	Lambs/WGHa
		3.7	Lambs/Ewe grazed ha
<u>Winter Stocking</u>	4259	DSE's	
	640	Area (WGHa)	
	5.0	DSE/Available WGHa	
<u>Target Stocking</u>	6.3	DSE/Available WGHa	
(based upon 2016 8mm growing season rainfall)			



Wool Sales: \$108/WGHa  
 Sheep Sales: \$417/WGHa

2015 sucker lambs  
 Born 24<sup>th</sup> March to 31<sup>st</sup> of April  
 80% sold in 1<sup>st</sup> draft on 10<sup>th</sup> of august  
 \$135 per head

# Crop Production



**PRODUCTION RECORDS**  
For the 2015 Season  
Property: FOURWINDS, HILLSIDE, SPRINGFIELD

	Estimated							
	2016	2015	2014	2013	2012	2011	2010	AVG.
Total Farm Area	4442	4442	4060	4060	4060	4060	4060	
Total Arable Area	4060	4060	4060	4060	4060	4060	4060	
Perm. Labour Units	3	2.5	0	0	0	0	0	2.5
Seas. Lab. (MnWks)	0	8	0	0	0	0	0	8
Annual Rainfall (mm)	0	380	430	408	365	528	227	384
Grow Season (mm)	0	210	328	312	216	342	160	261
Wheat Ha	875	1030	1765	1172.72	594.73			1091
Wheat Yield	2.50	2.82	3.01	2.74	2.28			2.88
Wheat WUE	0.00	15.87	12.57	11.40	10.50	0.00	0.00	12.83
Barley Ha	847	830	832	725.7	687.42			770
Barley Yield	2.50	3.43	2.78	3.30	3.89			3.35
Barley WUE		20.54	11.80	13.75	17.93			15.85
Canola Ha	639	580	580	640.52	542.32			588
Canola Yield	1.20	1.52	1.17	2.54	1.76			1.75
Canola WUE		8.11	4.88	10.68	8.11			8.17
Field Peas Ha	40	130	140	0.00	79.1			118
Field Peas Yield	1.00	0.62	1.00	0.00	0.00			0.81
Field Peas WUE		3.73						
Lupins Ha	100	0						
Lupins Yield	1.20							
Lupins WUE		0.00						

# Where to for Pastures?



MLA Pasture trial  
Nyabing





# Bladder Clover



# Conclusion



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## Questions?