FLEXI-N * STUBBLE - CSBP

YUNA

Department of Agriculture and Food

Property	*Stuart Smart, Chapman Valley*
Soil type	*Red loamy sand*
Crop & Variety	*Magenta wheat*
Treatments:	*Nil N, 80 L/ha Flexi-N IBS, banded and Z14, 80 L/ha banded + Z14 (+/- stubble)*
Replicates:	*3 reps of fertiliser treatments – stubble burnt on front half of site, retained on back half*
Sowing date	*14th May*
Seeding rate	*74kg/ha*
Fertiliser (kg/ha)	*Basal 100 kg/ha Big Phos; Flexi-N (0, 80 and 2 * 80L/ha)*
Paddock rotation	*2011 wheat, 2010 canola*
Growing Season Rainfall	*Apr to Oct 270 mm*

ABSTRACT

THIS TRIAL WAS ESTABLISHED TO COMPARE THE EFFECTIVENESS OF FLEXI-N APPLIED THROUGH THE BOOM BEFORE SEEDING, BANDED AT SEEDING AND APPLIED AT EARLY TILLERING – WHERE WHEAT STUBBLE WAS EITHER BURNT OR RETAINED.

TRIAL DETAILS

This site had high soil nitrate reserves (45 mg/kg Nit N in 0-10cm) but there were still very good responses to Flexi-N. Although there were no Flexi-N placement/timing or stubble effects on yield, an analysis of protein yield showed that stubble reduced N recovery in the grain by about 30 kg protein/ha or 5 kg N/ha – most likely due to increased immobilisation. Leaf disease symptoms were most severe where stubble was retained but they were less obvious where Flexi-N was banded. Hectolitre weights were 78 – 79 kg/hl and screenings were 2 -3% in all treatments.

RESULTS

Treatment						Harvest		
Trt	Stubble	Boom (L/ha)	Banded (kg/ha)	Z13/14 (L/ha)	N	Yield (t/ha)	Protein (%)	Prot. Yield (kg/ha)
1	Burnt	-	-	-	0	3.48	10.6	377
2	Burnt	80 FN	-	-	34	3.81	10.1	382
3	Burnt	-	80 FN	-	34	3.66	9.6	353
4	Burnt	-	-	80 FN	34	3.98	9.6	393
5	Burnt	-	80 FN	80 FN	68	4.04	10.9	440
6	Unburnt	-	-	-	0	3.21	9.6	297
7	Unburnt	80 FN	-	-	34	3.59	10.2	363
8	Unburnt	-	80 FN	-	34	3.70	10.4	381
9	Unburnt	-	-	80 FN	34	3.74	9.5	350
10	Unburnt	-	80 FN	80 FN	68	4.04	10.2	407
			Lsd N (P=0.05)			0.25	0.57	28
			Lsd Stb (P=0.05)			ns	ns	18
			*Lsd N * Stb (P=0.05)*			ns	0.8	40

TECHNICAL SUPPORT
James Easton, Ryan Guthrie and Rowan Maddern, CSBP Field Research

FUNDING SOURCE OR IN-KIND SUPPORT
CSBP

A NEFF PUBLICATION 2012 SEASON

2012 SEASON

TRIALS REPORTS

Shires of

CHAPMAN VALLEY MULLEWA MORAWA PERENJORI

Research and Development conducted and contributed by:

A NEFF PUBLICATION 2012 SEASON