

Disclaimer:

This document is based on the results from an individual trial and may contain experimental use patterns that are currently off-label. **This document does not provide any interpretation and should not be taken as an endorsement of any unregistered use pattern.** Professional advice should be sought for specific recommendations to ensure access to the most up to date information and knowledge. **Any product referred to in this document must be used strictly as directed, and in accordance with all label or permit instructions. Always consult the label prior to use.**

Sorghum following Canola & Durum Wheat - Trial 1 Canola Stubble

Trial ID: AM1538 **Location:** Mullaley **Trial Year:** 2015
Investigator: Anthony Mitchell

Two separate sorghum trials were established at the same site, one planted into 2014 canola stubble and the other into 2014 durum wheat stubble, to compare the performance of sorghum following both rotations. The two trials were located within ~ 24 metres of each other in a paddock which had been managed as a single unit until winter 2014. Both trial areas were tested for nutrition, soil water, herbicide residues and arbuscular mycorrhizae prior to sorghum planting.

Mycorrhizae populations were the only tested factor that showed significant differences with lower levels following canola. Low levels of mycorrhiza can limit sorghum growth due to impact on the uptake of nutrients including P and Zn.

In each trial, two sorghum hybrids (G33 and MR Buster) were evaluated with four application rates of Granulock Z Extra. Urea was added to ensure all fertilizer treatments received the equivalent rate of Nitrogen. P rates were 4.5, 9 and 17 kg/ha.

There was no significant response to fertilizer rate in either trial. Sorghum growth was however slower in the trial following canola with yields ~1.4 t/ha lower than when following durum. In this situation, the addition of high rates of P or Zn had no impact on reducing the impact of low mycorrhizal levels.

Planting Date:	27/11/2015
Planting Equipment:	Small Plot Planter
Row Spacing:	1m
Planted Plot:	12m x 2m
Harvest Date:	5/04/2016
Harvested Plot:	10m x 2m
Average VAM % Dec 2015:	41.7%

Crop Name Description Rating Date Rating Type Rating Unit			Grain Sorghum				
			19/01/2016 EMERGENCE /m ²	19/01/2016 NDVI RATIO	Flowering Heads 9/02/2016 COUNT /m ²	Total Heads 8/03/2016 COUNT /m ²	5/04/2016 YIELD t/ha
Trt No.	Treatment	Product Rate					
1	MR Buster		4.29-	0.77-	3.67-	9.63-	6.81-
2	Granulock Z Extra Urea MR Buster	20kg/ha 15kg/ha	4.15-	0.80-	3.94-	9.73-	6.88-
3	Granulock Z Extra Urea MR Buster	40kg/ha 10kg/ha	4.29-	0.78-	4.20-	9.88-	7.20-
4	Granulock Z Extra MR Buster	80kg/ha	4.11-	0.79-	4.83-	9.49-	6.87-
5	G33		4.15-	0.79-	4.63-	9.96-	6.71-
6	Granulock Z Extra Urea G33	20kg/ha 15kg/ha	3.75-	0.78-	4.36-	9.86-	7.14-
7	Granulock Z Extra Urea G33	40kg/ha 10kg/ha	4.15-	0.79-	4.67-	10.45-	7.18-
8	Granulock Z Extra G33	80kg/ha	4.24-	0.79-	4.31-	10.58-	7.11-
LSD P=			nsd	nsd	nsd	nsd	nsd
CV=							
Treatment Prob.(F)=			0.7201	0.6291	0.3326	0.2474	0.8596

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P (F) is significant at mean comparison OSL.

nsd = No significant difference

Sorghum following Canola & Durum Wheat - Trial 2 Wheat Stubble

Trial ID: AM1539

Location: Mullaley

Trial Year: 2015

Investigator: Anthony Mitchell

Planting Date:	27/11/2015
Planting Equipment:	Small Plot Planter
Row Spacing:	1m
Planted Plot:	12m x 2m
Harvest Date:	5/04/2016
Harvested Plot:	10m x 2m
Average VAM % Dec 2015:	67.3%

Crop Name			Grain Sorghum				
Description			19/01/2016	19/01/2016	Flowering Heads	Total Heads	5/04/2016
Rating Date			EMERGENCE	NDVI	9/02/2016	8/03/2016	YIELD
Rating Type			/m ²	Ratio	COUNT	COUNT	t/ha
Rating Unit					/m ²	/m ²	
Trt No.	Treatment	Product Rate					
1	MR Buster		3.66-	0.82-	6.59-	10.5-	8.05-
2	Granulock Z Extra Urea MR Buster	20kg/ha 15kg/ha	4.15-	0.80-	7.16-	10.4-	8.77-
3	Granulock Z Extra Urea MR Buster	40kg/ha 10kg/ha	4.20-	0.81-	6.14-	10.2-	8.48-
4	Granulock Z Extra MR Buster	80kg/ha	4.11-	0.80-	6.70-	10.7-	8.20-
5	G33		3.57-	0.81-	6.67-	11.1-	8.03-
6	Granulock Z Extra Urea G33	20kg/ha 15kg/ha	3.84-	0.83-	6.44-	11.3-	8.25-
7	Granulock Z Extra Urea G33	40kg/ha 10kg/ha	4.06-	0.82-	7.66-	10.6-	8.58-
8	Granulock Z Extra G33	80kg/ha	3.93-	0.80-	7.55-	11.2-	8.53-
	LSD P=		nsd	nsd	nsd	nsd	nsd
	CV=						5.58
	Treatment Prob.(F)=		0.2042	0.3585	0.0941	0.0742	0.2913

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P (F) is significant at mean comparison OSL.

nsd = No significant difference

Rating Type

NDVI = Normalized difference vegetation index