

Nutrisync D Lentil Nutrition Trial: Arthurton; SA



Aim:

To investigate a different application timings and rates of a new nutritional product Nutrisync D.

Details:

Location: Arthurton, Central YP

Researcher: Leighton Wilksch; Nick Polkinghorne; Paul Ackland

Co-operators: MA & KM Thomson

Sowing Date: **Arthurton** 22nd May

GSR: **Arthurton**, 288 mm (*Arthurton GSR Average, 370 mm*)

Trial Details: See below trial plans for specific details. Sown with Conserva Pak tynes on 260mm spacing. Replicated four times. Harvested plot sizes 11 x 1.5m

Results:

Table 1 : Summary Lentil yield - Arthurton.

PRODUCT	RATE	TIMING	YIELD T/HA	YIELD % OF FARMER PRACTICE	ROI \$/HA
Nutrisync D	365 mls/ha	Canopy Closure	2.47	107	2,212.05
Nutrisync D	730 mls/ha	Canopy Closure	2.39	104	2,129.10
Standard Farmer Practice			2.30	100	2,070.00
Nutrisync D	365 mls/ha	Canopy Closure	2.20	96	1,958.10
	365 mls/ha	Early Flowering			
CV			7.3%		
LSD			0.20		

*Lentils: \$900/T

*Nutrisync D: \$30/L

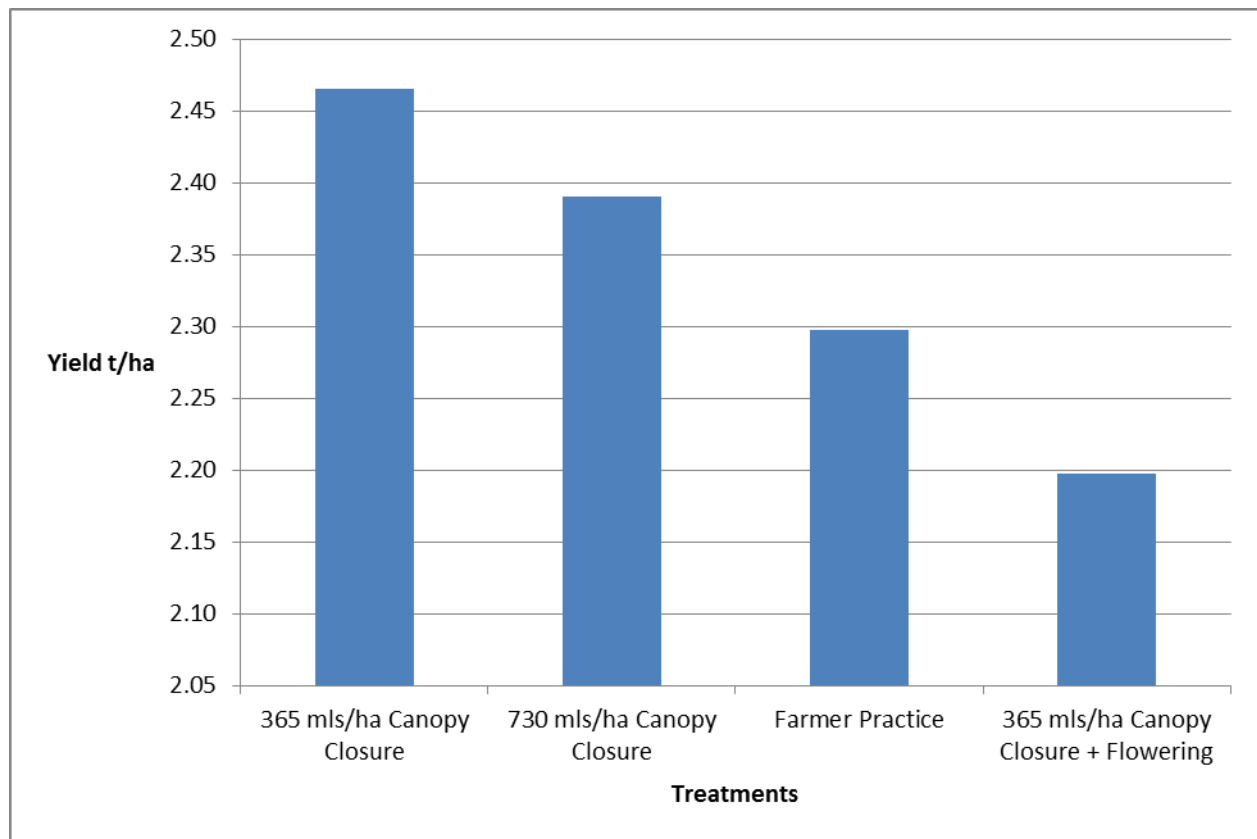


Figure 1: Mean grain yield of Nutrisync D treatments

Discussion:

Lentils have proven to be a productive and profitable crop for Yorke Peninsula grain growers for a number of years. Improved agronomic practices and varieties have enabled grain growers to now consistently grow productive lentil crops, growers are now asking what else can I do to maximise yield opportunities?

Many growers are starting to apply additional nutrients (in addition to Phosphorus and Zinc) to lentil crops in order to try and achieve maximum yields. These additional fertiliser applications often come in the form of products which contain a multitude of nutrients.

This trial concentrated on both rates and timings of applications of a nutritional product called Nutrisync D. Nutrisync D is a new product to Landmark from the Loveland nutritional range. Nutrisync D contains nitrogen, boron and molybdenum plus inositol.

Inositol - remobilizes nutrients that are in the plant.

Boron – required for the translocation of sugars; regulates cell division; salt absorption; flowering, fruiting, hormone movement, pollen germination, carbohydrate metabolism, water use and nitrogen assimilation.

Molybdenum – significant effect on nitrogen fixation which is critical for legume crops.

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Nutrisync D did provide an economic yield response, the highest yielding treatment Nutrisync D @ 365 mls/ha Canopy Closure provided a 7 % yield increase which resulted in a positive return of \$142.05/ha.

As in previous trial work the lower Nutrisync D rate giving a better yield response than the higher rate. Trial work over the last 3 years has consistently shown lower rates of Nutrisync D are providing consistent yield benefits in legume and canola crops.

Nutrisync D is a unique foliar nutritional liquid product specifically designed to enhance plant physiological activities and growth. Nutrisync D remobilises nutrients with the plant and moves nutrients to where the plant requires them.

Take Home Point:

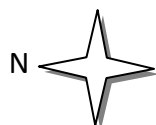
- Nutrisync D @ 365 mls/ha in Lentils combined with a canopy closure fungicide application if required should become part of a best management nutritional package for Lentils growers on the Yorke Peninsula.
- Further trial work will investigate if there is more yield gains possible with the addition of other nutrients in combination with Nutrisync D.

Thanks to MA & KM Thomson for allowing us to have Lentil Variety Trial on their property.

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2	3	4	1	B
3	4	1	2	B
4	1	2	3	B
1	2	3	4	B



Trt. No.	Pre-Plant Treatment	Rate /ha	Experimental Details
T1	Untreated		Location: Arthurton, Central Yorke Peninsula. Co-operators: Central Ag Solutions, Mal Thompson Plot Size: 13.5 x 1.5m Replicates: Four Planting date: 22 nd May Application Date 1: 1st August, Application Date 2: 17 th August. Soil moisture and type: Brown clay loam with high soil moisture at planting. General Comments: Sown with Conserva Pak tynes on 260mm spacings. Trifluralin + Avadex @ 1.5 + 1.6L/ha applied pre-planting. Herald XT planted @ 50kg/ha with MAP @ 90kg/ha. Metribuzin + Suprathion @ 60gms + 0.2L applied PSPE. Clethodim + Fastac @ 1.0 + 0.3 L/ha applied 13 th August.
T2	Nutrisync D pre canopy closure	0.365L	
T3	Nutrisync D pre canopy closure	0.73L	
T4	Nutrisync D pre canopy closure + early flower	0.365 + 0.365L	