

# Alternative nutrition trial

## SUMMARY

Alternative nutrition products have been tested for the last three years at several locations around Birchip and Donald. Two of the previous three years were very dry and frost (Oct 1998) also affected the yield. In the third year of the trial, the growing season rainfall was average at Birchip and still there was no significant yield response from the products used.

“Environmentally friendly” nutrient products are entering the market at an increasing rate. There are a number of claims made by the companies. Claims include improved plant health, yield, grain size, protein and lower screenings. It is often difficult to determine whether these are attainable under local conditions. The Birchip Cropping Group and Avon-Richardson Cropping Group have evaluated some of the products in the past, to determine if indeed the products perform in the area.

## METHOD

At the Birchip site, four alternative nutrition products (N Blast 42, Zinc PC, E2001, and RUM) were compared to Mallee Mix 1 and no fertiliser (control) on the yield of Barque barley. Barque was sown on June 23 with various treatments in a replicated (3), randomised block design. Subsequent foliar treatments were applied August 19 (Z13, 23). The trial was harvested on November 29.

Goldmark at 80kg/ha was sown at Donald on 25 Jun.

## RESULTS

**Table 4.20** The effect of alternative nutrition products on barley yield at Birchip

Product	Rate (/ha)	Application method	Cost (\$/ha)	Yield (t/ha)
No fertiliser (control)		-	0.00	2.56
MMI	40kg	Sowing	17.00	2.47
MMI	80kg	Sowing	35.00	2.95
N Blast 42	4L	Foliar (Z13, 23)	7.12 + 17.00	2.56
Zinc PC	2L	Foliar (Z13, 23)	5.58 + 17.00	2.80
E2001	100L + 40kg MMI	Bare earth	* + 17.00	2.37
E2001	100L + 80kg MMI	Bare earth	* + 35.00	2.58
RUM	4L/t	Seed treat	1.14 +	2.38
	3L/ha	Bare earth	12.00 + 17.00	
	2L/ha	Foliar (Z13, 23)	8.00	
<b>Significant difference</b>				<b>NS</b>

\*company no longer contactable

## INTERPRETATION

There was no significant difference in yield between the alternative nutrition products tested at Birchip and Donald.

## COMMERCIAL PRACTICE

Test the various products on your own farm before investing in alternative nutrition products. Test strips will clearly demonstrate whether these products are suitable to your local conditions. Ensure that when testing that cost comparisons are made. Including a treatment of your current fertiliser at a rate that is of equal value to the alternative product that you are testing, would help to observe whether the product adds value to your operation.

**Table 4.21.** The effect of alternative nutrition product on Goldmark yield at Donald

Product	Rate	Application methods	Yield (t/ha)	Protein	Screenings
No fertiliser (control)	0kg/ha	-	1.60	8.7	7.6
MAP	160kg/ha	Sowing	1.28	9.3	7.2
Poly wheat	4kg/ha	mid-tillering	1.52	8.8	5.6
N Blast 42	5L/ha	mid-tillering	1.40	8.8	7.0
RUM	5L/t	mid-tillering	1.31	9.1	8.4
E2001	1L/ha	Sowing	1.57	9.0	6.5
Jolynn seed life treatment	5L/t	Sowing	1.62	8.9	5.9
<b>Significant difference</b>			<b>NS</b>	<b>NS</b>	<b>NS</b>

\*company no longer contactable

#### Product description

Product	Description	Contact
Mallee Mix I (MMI)	(19-8-0-4 ) 2% Zn	Local Pivot dealer
Mono-ammonium phosphate (MAP)	(10-22-0-1)	Local Pivot dealer
N Blast 42	Blend of urea and Ammonium nitrate in liquid form that improves crop development when applied at the 4-6 leaf stage, should not be applied in the heat of the day	SprayGro, Pt Adelaide 08 8447 7266
Zinc PC	10% w/v fully soluble liquid that is easily applied at 2-3L/ha at 300L/ha water volume, compatible with most post-emergent pesticides	SprayGro, Pt Adelaide 08 8447 7266
E2001	Organic liquid compost concentrate that stimulates rapid bacteria and fungi development to improve nitrogen and other nutrient availability. It is recommended that conventional fertiliser be applied with is. E2001 can provide 130 kgN/ha/4 month period, which is equal to 1kgN/ha/day.	* unable to contact at publication printing
RUM	Bacterial worn extract with micronutrients. Has been known to increase crude protein in plant tissue and increase grain protein when applied at the boot stage.	Peter Cellier 1 800 240 624
Poly wheat	23-3-19 Dry crystalline, fully water-soluble NPK foliar fertiliser. Contains high concentrations of iron, manganese and cobber	Matt Thomas Multifert Agencies 03 9742 5888
Jolynn seed life treatment	1% nitrogen, 8% phosphoric acid and 5% potash. Various elements such as iron, manganese, zinc, cobber and boron	New Zealand group