

# INDEPENDENT TRIAL EVALUATION OF LIG-GRAIN IN WHEAT

CONDUCTED BY TONY MACKERATH  
IAMA TECHNICAL SERVICES, NARACOORTE SA, 1997

**Abstract:** A trial was conducted with wheat at Tintinara in 1997 to compare currently available micronutrient seed dressings to LIG-GRAIN, a zinc based product designed for application to the seed of various crops. LIG-GRAIN increased grain yield to a similar extent as Teprosyn Zinc. However, the higher rates of both products, and also other treatments which visually appeared to give greater plant biomass, tended to reduce yield. This is attributed to the dry conditions experienced towards the end of the growing season.

Experimental Details	
Location:	Tintinara, South East S.A.
Plot Size:	1.25 × 10 m
Replicates:	Three
Sowing Details:	Wheat (Buckley), 18th June, 1997
Soil Test:	Red loam over limestone, pH (CaCl <sub>2</sub> ) - 8.1, Organic carbon - 1.86, Phosphorous (Colwell) - 65, Free lime - high
Paddock History:	Barley - 1996, Beans - 1997
Fertilizer:	80 Kg/ha DAP with seed. Urea predrilled @ 100 kg/ha.
Herbicides:	Broadleaf weeds - Ally (7g/ha) + LVE MCPA (450 mL/ha) Grass weeds - Hoegrass @ 1.2 L/ha

## Treatment Details:

Treatment No	Treatment	Rate L/tonne seed	Actual elements applied per tonne seed (Kg/tonne)
1	Nil	-	-
2	LIG-GRAIN	8	0.71 kg Zn, 0.08 kg Cu, Mo
3	Teprosyn Zinc	4	2.4 kg Zn
4	K-Komplex	4	Various
5	Super Symcoat	4	0.2 kg Zn + 0.24 kg Mn

## Results:

Treatment	Rate (L/T seed)	Grain Yield (T/Ha)	Yield Increase (%)	Grain Protein (%)	Grain Screenings (%)
Control	-	3.65	-	10.99	0.88
<b>LIG-GRAIN</b>	<b>8.0</b>	<b>4.41</b>	<b>17.23</b>	<b>10.49</b>	<b>0.79</b>
Teprosyn Zn	4.0	4.38	16.67	10.42	0.92
K-Complex	4.0	3.65	0.0	10.76	0.98
Super Symcoat	4.0	4.21	13.30	10.45	1.00
<b>Standard Error (%)</b>		<b>0.45</b>	<b>-</b>	<b>0.32</b>	<b>0.17</b>
<b>Coefficient of Variation (%)</b>		<b>9.13</b>	<b>-</b>	<b>2.89</b>	<b>21.8</b>

# PHOSPHOROUS & ZINC RESPONSES IN WHEAT

CONDUCTED BY NICK DUANE  
SBS IAMA, ESPERANCE, WA, 1998

## TRIAL INFORMATION (SBS98E07)

**Location:** Scaddan Tech Site

**Date Sown:** 6/6/98

**Soil Type:** Grey Clay

**Soil Moisture:** Wet to Surface

**Crop Variety/Seeding Rate:** Bt Schomburg @ 70 Kg/Ha

**Basal Treatments:** Urea @ 80 Kg/Ha + TSP to make up phosphorous levels

**Soil Test:** P 15ppm, K 154ppm, S 56ppm, Cu 0.5, Zn 0.7, Mn 3.7, OC 1.1%, PRI 18, pH 7.3

**Rotation:** 97 Pasture, 96 Wheat, 95 Pasture

**Other Treatments:** 29/4/98 Roundup CT 800 mL/Ha + Logran 10 g/Ha + Glean 5 g/Ha  
6/7/98 Mantrac 500 mL/Ha



Treatment Number	Treatments	Yield % Control	Yield Kg/Ha
1	Control + 37 Kg N	100.0	3300
2	5 Kg P + 37 Kg N	104.8	3458
3	10 Kg P + 37 Kg N	111.8	3688
4	20 Kg P + 37 Kg N	117.6	3881
5	40 Kg P + 37 Kg N	117.7	3885
6	10 Kg P + 37 Kg N + Teprosyn Zn	114.2	3768
7	10 Kg P + 37 Kg N + <b>LIG-GRAIN</b>	<b>118.0</b>	<b>3895</b>
		<b>LSD (5%)</b>	<b>351</b>
		<b>LSD (1%)</b>	<b>504</b>
		<b>Coefficient of Variation</b>	<b>7.82</b>

**Comments:** This site has reasonable levels of phosphorous as well as a high PRI for the region. Yield has increased up to 20 Kg of P and then has leveled off somewhere between 20-40 units of phosphorous. The gross margin however drops back at around 20 units of P. The addition of Teprosyn Zn and LIG-GRAIN has increased yield by 3-7% and the gross margin \$10-\$30/Ha. Earlier in the year the site was showing signs of manganese deficiency, although the zinc seed dressings seemed to show less visual here. The site also showed signs of zinc deficiency, especially in the control plots.

# INDEPENDENT TRIAL ASSESSMENT OF LIG-GRAIN SEED DRESSING ON WHEAT

CONDUCTED BY MICHAEL MARCHANT  
TRIAL AGRONOMIST, IAMA MARINNA TRIAL SITE, NSW, 1998

**Location:** Marinna Trial Site, Southern NSW  
**Aim:** Assess the advantage of LIG-GRAIN as a seed dressing.  
**Sowing Date:** 12/6/98  
**Crop:** Diamondbird Wheat  
**Fertilizer:** D.A.P. @ 120 kg/ha  
**Sowing Rate:** 80 kg/ha

## Results:

<b>Treat No</b>	<b>Treatments</b>	<b>Rates L/tonne seed</b>	<b>Yield Tonnes/ha</b>	<b>Yield Increase</b>	<b>Protein %</b>	<b>Screenings %</b>
1	Control	-	6.12	-	12.3	1.4
2	LIG-GRAIN	4	6.32	3.2 %	12.8	1.3
3	LIG-GRAIN	8	6.45	5.4 %	12.7	1.2

# LIG-GRAIN BARLEY TRIAL WARRACKNABEAL 1999

Conducted By Simon Crane



**Research & Development**

**Horsham, Victoria**

## SITE INFORMATION:

**Crop:** Schooner Barley

**Sowing Date:** 03/07/99

**Plot Size:** 21.7 m<sup>2</sup>

**Fertilizer:** 100 kg/ha Urea + 100 kg/ha Granulock 15

**Chemical:** 650 mL/ha Triflur 480

**Soil Test:**

Soil Depth (cm)	pH (water)	Organic Carbon (%)	Available Nitrate kg/ha	Olsen P ppm	Potassium Meq/100g	Calcium Meq/100g	Magnesium Meq/100g	Sodium Meq/100g	EC dS/m	Boron ppm	Zinc ppm
0-10	6.5	0.6	17	9	0.53	7	1.9	0.53	1.6	1.5	0.3
10-20	8.3	-	5	-	0.99	12.1	10.8	3.67	2.3	4.5	-

## RESULTS:

Treatment	Yield % Untreated	Yield (T/ha)
Untreated	100	3.08
LIG-GRAIN @ 8 L/T Seed	107	3.29