Field Notes

Ezyflow Nano Zinc a Nutritional Seed Dressing in cereals for early root development.

Trace element seed coatings deliver precise quantities of nutrients close to the seed to enhance the seedling nutrient status. Application of zinc on seeds effects germination and on the initial growth of seedlings, as well as favours physiological quality of the seeds produced (Santos, 1981).

Benefits of nutritional seed dressings:

- 1. An easy and effective way to apply micronutrients for the emerging seedling.
- 2. Provide early nutrition of soil immobile trace elements that help support root and plant growth
- 3. Can improve leaf emergence and elongation rate, number of leaves, tiller appearance rate, plant height, crop growth rate, leaf growth rate, leaf area index and specific leaf area in wheat cultivars.

Recent trials conducted by Loveland Agriproducts at Charles Sturt University Growth Chambers in November/December 2021, compared untreated wheat seed (Beckom) to seed treated with 2L/tonne of Ezyflow Nano Zinc.

Figure 1 shows a visual and statistically significant difference, Figure 2 in root growth between the control (left) and the Ezyflow Nano Zinc treatment (right).



Figure 1: Early root development- treated seed (right)

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Field Notes



Trt. No.	Treatments	Rate L/ha kg/ha	Сгор	Plant root weight (ave/plant)
T1	Control	Nil	Wheat	
1.1				0.10
1.2				0.09
1.3				0.11
1.4				0.07
T2	Ezyflow Nano Zinc	2L/tonne	Wheat	
2.1				0.26
2.2				0.24
2.3				0.19
2.4				0.22
P(T<=t) one-tail				0.00005
P(T<=t) one-tail				0.00011

Figure 2: Plant root and shoot weights

The practice of adding zinc to seeds favours uniformity of application and places the element in immediate contact with the first emitted roots (Barbosa-Filho et al., 1982). This makes nutritional seed coating a good option as an addition to, or alternative for, trace elements applied with granular fertiliser.

Micro nutrients applied to seed gives the crop an immediate source of nutrition from the point of germination. Consider the following scenario:

MAP Zinc Fertiliser Granule

25cm row spacing; 50 kg/ha MAP+Zn = 50 granules per meter of row

- 100 gm zinc over 50 points
- 15-20% water soluble
- Risk of Zinc Phosphate precipitates
- Spread between the seeds

Zinc Seed treatment

25cm row spacing; 25,000 seeds/kg a 50kg/ha = 120plant/m2 = 30 plants per meter of row

- 65g zinc over 30 points
- 100% water soluble
- Concentrated at the seed
- $\bullet \quad \hbox{Compatible with fungicides and insecticides} \\$



Speak to your Nutrien Ag Solutions or CRT agronomist about the nutritional seed dressing options available from the Loveland Agri Products range or visit www.lovelandagriproducts.com.au for more information.



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