

VERIGROW

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VERIGROW BROADACRE TRIAL RESULTS – EFFECT OF NITROGEN CONTENT ON WHEAT

Highlights:

- Verigrow 27%N applied twice, liquid banded in furrow at seeding and spray application 6 weeks after sowing via hand boom has shown improved vigour, higher yield and higher protein content in wheat compared to a single application of Verigrow 27%N liquid banded in furrow at seeding
- Verigrow 27%N applied twice has shown similar or better results to Flexi-N and Urea

Veratin Limited (**NSX: VTN**) (the **Company**) is pleased to announce broadacre trial results investigating the effect of nitrogen content on wheat.

On the 17th of February 2022, the company released an announcement to the market on broadacre trials results on wheat which have shown '17 units of N applied as Verigrow 35%N in-furrow at seeding was equal to or better than 59 units of N in the form of either Flexi-N (42% N) or Urea (46% N) on the growth, yield and grain quality of Scepter wheat.'

As a follow up to that study, the Company carried out further trials to optimise its broadacre product by reducing the nitrogen content of the product to reduce cost without compromising the effectiveness of the product. The aims of the current study were to: -

- 1) Evaluate impact of reduced nitrogen content in Verigrow product on wheat crop vigour plus grain yield and quality.
- 2) Determine the appropriate nitrogen content required in Verigrow to achieve similar wheat yield and quality results to other commonly used nitrogen fertilisers (Flexi-N and Urea).

The table below shows the average results from the trial.

Treatment	Rate	Application method	Vigour	NDVI	Yield (T/ha)	Protein (%)	Screenings (%)	Specific Weight (kg/hL)
Nil			-	0.61	2.81	7.55	2.74	78.30
Verigrow 20%N	48.2 L/ha	Liquid banded in furrow at seeding	107.25	0.63	2.98	7.60	3.87	76.16
Verigrow 20%N	48.2 L/ha	Liquid banded in furrow at seeding	112.50	0.69	3.02	7.98	3.57	75.58
	120 L/ha	Spray application at 6 weeks after sowing via hand boom						
Verigrow 27%N	48.2 L/ha	Liquid banded in furrow at seeding	106.50	0.63	2.92	7.53	2.83	77.17
Verigrow 27%N	48.2 L/ha	Spray application at 6 weeks after sowing via hand boom	112.00	0.68	3.35	7.80	3.03	76.46
	120 L/ha	Liquid banded in furrow at seeding						

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Flexi-N	40 L/ha	Liquid banded in furrow at seeding	113	0.68	3.11	7.53	3.60	75.01
	100 L/ha	Spray application at 6 weeks after sowing via hand boom						
Urea	36.7 kg/ha	Topdressed and incorporated by seeding	116.50	0.77	3.36	7.88	3.28	75.91
	91.7 kg/ha	6 weeks after sowing top dressed by hand						

The results have shown that Verigrow applications containing higher N content generally delivered better yields, and the treatments that included follow-up applications all produced higher yields than those treatments where only a single application of nitrogen at seeding was delivered. Treatments that included follow-up applications also delivered higher protein levels and lower screenings but also lower specific weights than treatments that only included a single application at seeding.

Finally, the results have shown that Verigrow 27%N applied at 13 Units of N at seeding and 32 Units of N 6 weeks after sowing is an optimal product equivalent to urea at 17 Units of N at seeding and 42 Units of N 6 weeks after sowing. Future trials will investigate the effectiveness of applying similar Units of nitrogen using Verigrow 12%N (the Company's current commercial product) as a concentrate, i.e. without addition of water, on wheat crop vigour, grain yield and quality.

The Company is currently undergoing a longitudinal study to investigate the impact of Verigrow application on soil.

Executive Chairman of Veratin, Dr Ramiz Boulos says, "The trials have demonstrated that it is possible to reduce the cost of the product without compromising on quality. We are now a step closer to launching a product for the broadacre market."

Background of the trial

This trial was conducted on the TrialCo Research Farm 5 km north of Katanning to evaluate the impact of nitrogen content in Verigrow on crop vigour, wheat yield and grain quality, and to determine the appropriate nitrogen content in Verigrow required to achieve similar wheat yield results to other commonly used nitrogen fertilisers (Flexi-N and Urea).

The trial was established as a randomized complete block of 9 treatments and 4 replicates in a quadruple bank with each plot 10 m long by 2 m wide.

On the 3rd of June 2022 the trial plot was sown to Scepter wheat at a rate of 96kg/ha to a depth of 3cm and the following treatments applied:

- Knockdown pre-seeding herbicide treatments of Glyphosate 450 (3L/ha), Trifluralin (2L/ha) and Mateno (750ml/ha) were incorporated by sowing (IBS);
- Uniform (400ml/ha) and Cruiser 350FS (200ml/ha) in furrow;
- Chlorpyrifos 500EC (1L/ha) post sowing pre-emergent (PSPE);
- Seeding fertilizer Mono-Ammonium Phosphate (MAP) was applied at 80kg/ha.

On 13th of August 2022 post emergent treatments of Velocity (800ml/ha), Axial Xtra (400ml/ha) and Hasten (0.5% v/v) were applied. On the 5th of September 2022 further post emergent treatments of Amistar Extra (400ml/ha), Alpha Forte 250 (50ml/ha) and Chlorpyrifos 500EC (150ml/ha) were applied.

Trial applications of Verigrow were administered via liquid banding in furrow at seeding, and spray application via hand boom at 6 weeks after sowing.

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Crop vigour assessments using vigour ratings compared to the UTC and NDVI readings, were taken on the 9th of August, 67 days after sowing and on the 13th of September, 102 days after sowing. The crop was plot harvested for yield and grain quality comparisons on the 20th December 2022, 200 days after sowing.

ENDS

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