

15 February 2017

SUCCESSFUL OHD CEREAL CROP TRIALS

OHD FERTILISER PROVED TO INCREASE WHEAT YIELDS BY CIRCA 300%

Key Highlights

- ✓ **Initial cereal crop trials on wheat completed with positive results with potential to disrupt the wheat growing industry**
- ✓ **OHD usage confirmed to increase wheat yields by ~300% utilising OHD application rates of between 5L/ha and 35 L/ha**
- ✓ **Increased yield came from a greater number of heads per plant in the OHD liquor treated wheat plants versus control plants**
- ✓ **Wheat is the major crop grown in Australia with 23.7 million tonnes produced in the 2015 growing season with a value of A\$7.1 billion¹**
- ✓ **Production of OHD bio-stimulant fertiliser costed at 1/10th the cost of traditional bio-stimulant fertiliser manufacturing process**
- ✓ **The Company has fielded approaches by offshore and national grower groups seeking off-take and partnering opportunities**

Greenpower Energy Ltd (ASX: Greenpower, "GPP", "Company") is pleased to advise that, further to the agreement executed with Thermaquatica Inc to jointly test and develop the Oxidative Hydrothermal Dissolution (OHD) process for the conversion of coal into liquid fertilisers, the Company has successfully concluded its growth trials of wheat in conjunction with Monash University.

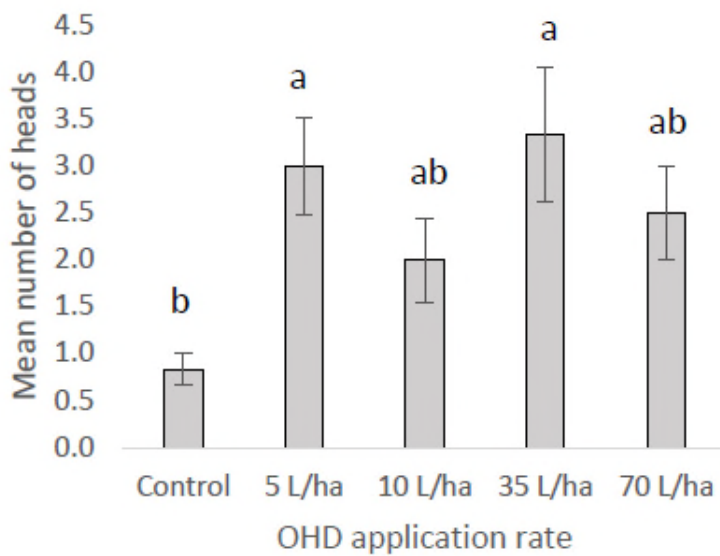
Plant Trials

Greenpower coal from the Gippsland Basin in Victoria was subjected to the OHD process and the resulting bio-stimulant fertiliser liquid was applied to test crops at application rates of 5L/ha through to 70 L/ha in addition to control plants. The results from the **trials on wheat were impressive** and were headlined by:

- With the application of OHD liquor, there **were significantly more heads of wheat per plant**, particularly at applications rates of 5L/ha and 35 L/ha which had 3.0 and 3.3 heads respectively compared to the untreated control of 0.8 heads.

¹ 2016 Australian Bureau of Statistics

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- Number of wheat heads (fully and partially emerged) per plant at harvest.
- 79 days post-seeding.
- Mean values are presented (n=6) and error bars represent \pm standard error.

- There was **increased plant total fresh head mass** with application of 5 and 35L/ha of OHD liquor with 2.9 and 3.2 grams respectively compared to 1.3 grams in the untreated control
- A similar trend was evident in the plant total dry mass per plant **with a higher yield** with application of OHD liquor at 5 and 35L/ha with 0.6 and 0.8 grams respectively compared to 0.3 from the untreated control

The impact of treating OHD liquor on the number of wheat heads produced by the plant (Image 1) was evident as was the total head mass (Image 2):

Image 1: Separated control plant versus an OHD stimulated wheat plant

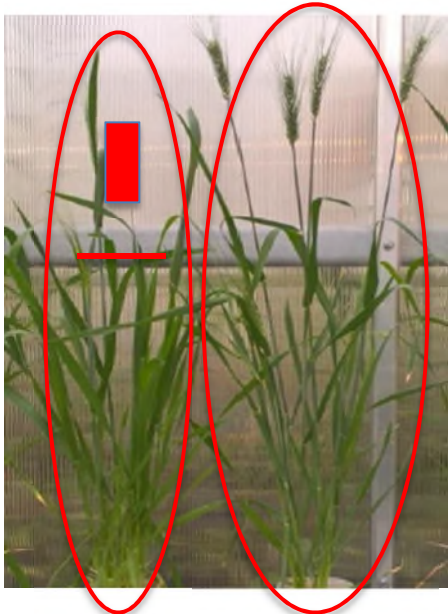


Image 2: Separated OHD bio-stimulant treated wheat head.



The Company in conjunction with Monash University is planning further trials with OHD bio-stimulant fertiliser to cover oil cereals with a focus on Canola and at the request of international parties' Palm Oil. Greenpower believes these trials should **deliver positive results as studies have concluded that the OHD bio stimulant fertiliser enhances reproductive activity in plants that produce flowers and seeds**. As confirmed in trials involving tomatoes an application of the OHD fluid causes the tomato plant to produce more flowers and [ultimately] more fruit which translates into more kg of fruit per plant. The same has now been confirmed with wheat and is anticipated will be confirmed at the completion of Canola and Palm Oil trials.

Further details on data analysis and application are included later in this release.

Competitive Advantage of the OHD Process & Unsolicited Interest

Bio-stimulant fertiliser (Fulvic acid) products for agriculture are proven however are expensive to produce and despite having demonstrated improved plant growth and nutrient uptake benefits, are **generally reserved for high value crops**.

In the residential market, Bio-stimulants are generally known by their market name of Seasol, Powerfeed, MegaKelp and SuperKelp and generally retail for \$3,500 to \$7,000 per 1,000 liters wholesale. The OHD process allows for the production of Bio-stimulant fertiliser at a **significant cost saving using coal as feedstock as opposed to seaweed and other decaying plant matter** with a production cost of circa \$350 to \$700 per 1,000 liters wholesale (1/10th versus traditional Bio-stimulants).

Greenpower retains the exclusive OHD rights to the **Australian and New Zealand Market for the next 15 years** where thus far it has spent in excess of \$4 million of shareholder equity developing and testing (research & extraction) the OHD project in conjunction with Thermaquatica Inc.

The Company is currently in discussions with international firms and national grower groups regarding off-take and partnering opportunities. The Company confirms it would look to agree to long term off-take contracts as an instrument to fund the construction of an OHD plant.

Greenpower Executive Director, Gerard King:

"Results of the trials involving wheat plants utilising Greenpowers OHD bio-stimulate fertiliser continue to impress and further enhance the view that it is a competitive substitute to the current expensive alternatives used by the horticulture and cereal cropping industry.

The trials and results to date will further enhance Greenpowers product credibility as it engages with potential partners as it looks to fund and finalise the costing of its Australian OHD bio stimulant fertiliser plant. Importantly whilst the Company holds the rights to manufacture bio-stimulant fertilisers in Australia it also owns the rights to distribute the Australian manufactured product internationally.

Given the inbound interest in potential off-take and partnering the company has sought to promptly undertake OHD trials on Canola and Palm Oil plants given the Global US\$100+ billion potential of these combined markets."

Additional Information

Additional information on the OHD Process is available in the ASX market release made on 21st October 2016.

ENDS

For further information:

Gerard King
Executive Director

Wheat Plant Trials – Further Information

Data Analysis

Wheat head number and mass and shoot and root biomass were analysed by one-way ANOVA.

Where significant differences were found, pairwise comparisons were made using Tukey's Honestly Significant Difference (HSD). Where appropriate, linear dependence between two variables was measured by Pearson product-moment correlation.

All data was analysed using IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp.

OHD Application

Wheat (*Triticum aestivum* cv Bolac) was grown in soil sourced from a wheat-growing property in Ouyen, Victoria.

Aside from soil application prior to planting, for a broad acre crop such as wheat, there is no option for a soil-only application of an amendment, unlike drip-feeding for horticultural crops. For this reason, the OHD liquor was applied to the wheat as a foliar spray with any excess or run off permitted to drip onto the soil.

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