MARCH 2022

Dear Readers,

In this month's newsletter:
-Increase in wheat protein with GOGO Juice
-Installation of the Buhler Coating Drum
-Neutrog's compost testing process to ensure biologically safe and consistent products
-Increase in oil production with at Hahndorf Lavender Farm.

To our viticulture clients, we wish you a successful grape harvest and to our broadacre clients, we hope the break arrives on time and seeding runs smoothly.

Kind Regards,
The Neutrog Team

Advanced Liquid Biological leads to protein increase in paddock wheat trial

John Paynter, a member of our Commercial team and Hazel Ashby Neutrog's Marketing Manager, recently made a trip to visit Brian Lund from ABL Agriculture and his client David Heinrich following the results of a 2021 trial of GOGO Juice on wheat. Brian and David are based at Coonalpyn an area 140km south-east of Adelaide, characterised by deep sandy soil. Farmers in this region typically run a mixture of stock and crops to achieve the delicate balance needed between productivity and soil/erosion management. Brian works with a range of clients and has particular experience and interest in fertiliser inputs. The challenging marginal country around Coonalpyn has led to his growing interest in biological fertilisers which Brian believes have potential benefits over the fertilisers traditionally used in the area.

When Brian broadly summarised what his farming clients are looking to achieve he said, "I think that fundamentally they're aiming to build the diversity and density of the soil biota over time, so that the ground is quicker to respond to rainfall events thereby encouraging quicker pasture responses as opposed to just chasing a one-season-response."

Second and third generation farmers David and Karen Heinrich and their sons Todd and Jordan run an 8,000 acre property, just outside of Coonalpyn and in recent seasons they have been actively exploring ways to improve their established cropping program of beans, canola, wheat and barley, to combat some of the challenges of the location which can include low rainfall, frosts, wind and overall soil quality.

Wanting to employ regenerative practices and improve the organic content of the soil, they have previously looked at using bulk compost but the volume required to achieve any substantial improvement was prohibitive due to freight. Looking at approaching the challenges from a different angle, the Heinrich's have been working with Brian, and in 2021 conducted a trial of GOGO Juice on 40ha of wheat.

Two side-by-side paddocks that had grown canola in 2020 were sown and the inputs for both were 85kg/ha of seed, MAP at 100kg/ha, liquid trace of Zinc, Manganese & Copper, a uniform fungicide of 300ml/ha and 150kg of Urea. The only difference was one paddock had 5lt/ha of GOGO Juice applied in August, approximately 10 weeks post seeding.

Through the growth phase and at harvest, there was no difference between the paddocks visually or in tonnes per hectare but when the wheat was delivered to the silo's, it was Brian who contacted Neutrog to pass on the results.

"The trial of GOGO Juice in the paddock-scale comparison achieved an impressive increase in protein levels of 1% that moved the wheat from an ASW grading to APW, with no reduction in yield per hectare. The only difference between the two paddocks was the application of the GOGO Juice."

Brian highlighted that Dr Farrell, Principal Research Scientist, CSIRO Agriculture and Food, has previously explained this as indicative of the results from the active biota in an inoculate accelerating nitrogen cycling which in turn means more of the soil nitrogen is converted to a form that plants can utilise earlier in the season. This increases the plant's opportunity to produce proteins.

Following the results in 2021, GOGO Juice is now being included in the Heinrich's 2022 program over a significantly bigger area to determine if this initial result will be replicated at scale. Tissue and soil samples will also be collected over this time to deliver further insight.

Buhler Coating Drum Installed in Neutrog Factory

Since it's arrival to the Neutrog factory in December 2021, the final installation of the Buhler Coating Drum to the Neutrog production line has officially begun.

Following a number of developments in the last 12 months with the identification and isolation of specific bacteria and fungi, this project progresses our commitment to creating products that give end users the convenience of our biological fertiliser pellets, but with the customised addition of beneficial microbes coated on those pellets - to order.

After getting a frame fitted by MECHVAC Engineering the drum is now being integrated into our existing plant. The frame sets the drum on a slope allowing uncoated pellets to enter at the higher end and be gravity fed through the chamber as they are coated.

Once installed, the Buhler Coating Drum will enable Neutrog to simultaneously coat our pelleted products with up to three different liquids. The drum will be able to coat up to 15 tonnes of pellets per hour.

The installation of this equipement represents an exciting opportunity for Neutrog to supply completely unique, customisable biological products.

Trials were conducted with coated pellets in 2021 and enquires about custom coating can be discussed with our team.

Compost Testing Processes at Neutrog

Neutrog customers rely on our highly level production protocols that ensure safe, consistent, uniform, biologically activated products for commercial production.

The raw chicken manure that forms the base of all Neutrog products, naturally contains a range of bacteria and fungi (both beneficial and pathogenic) which, if not composted and treated correctly, could be potentially harmful, which is why the processes we employ are so important to both our staff and our customers.

The Neutrog R&D Department is responsible for a number of those processes including regular testing of our compost piles.

All the manure in Neutrog products is composted on site using Thermophilic Deep Stacking to create a microbiologically diverse, nutrient rich base for our fertilisers. Each of these piles generate heat from the decomposition process, so piles need to be turned (swapping the hot manure in the middle of the pile with the cooler surface manure) to maintain an optimum composting temperature of 50-60°C.

Each time this happens, Neutrog's R&D team, Dr Uwe Stroeher and Juhee Hada, take samples from the compost piles.

"By testing the compost piles on a regular basis, we are able to identify the nutrient contents of the compost and make sure that the bacteria within the piles are balanced and not affected by pathogens" says Juhee.

With an average of over 30,000 tonnes of manure being composted by Neutrog in any given year, the volume of testing is significant, but absolutely fundamental in our commitment to a product range that commercial producers can rely upon to be nutritionally and biologically consistent – but more importantly – safe.

NOTE: The testing and sample collection of the compost is done in line with the schedules set out by the Australian Standard AS4454-2012. At Neutrog we exceed these guidelines by testing for additional pathogens to increase biological safety of our products.

THE PROCESS OF COMPOST TESTING

1. 2.5L samples are taken from random points on the compost piles. Piles of 1,000 cubic metres will need 16 samples taken, whereas a larger 2,000 cubic metre piles will need 23 samples.

2. The samples are mixed in a compost tumbler to break apart any clumps and improve the consistency of the samples.

3. Juhee conducts a moisture analysis using a Moisture Analyzer. Around 5g of the compost sample mixture is used to check moisture.

4. From this mix, one sample is sent to SA Pathology to check for the presence of pathogens such as E. coli, salmonella, listeria and legionella.

5. A second sample is sent to SWEP Laboratories to analyse the nutrient levels within the compost such as nitrogen, potassium and phosphate. They also test for the pH level and amount of organic carbon in the sample.

6. A third sample is refrigerated and kept in the Neutrog laboratory.

For more information about Neutrog products, please contact our team.

Neutrog products are also suitable for the home garden, and you can find out more by signing up to receive our monthly retail newsletter for stories from gardening experts, product profiles and seasonal fertilising guides for home gardens.

If you would like to receive this newsletter, please email marketing@neutrog.com.au

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