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Dear Readers,

In this months newsletter:

Soil Science Australia Masterclass at Western Sydney University Re-Gen Multispecies Pasture Trial in the Adelaide Hills Freshwater Farm 18 months on from Phytophthora trials Jujubes SA use POPUL8 for seedling success Ace Ohlsson's Emily Greer shares veggie patch results

If you are interested in more information about Neutrog, please let us know at <u>marketing@neutrog.com.au</u> to make sure you receive both our monthly newsletters.

The one you're reading now is commercially focused, while we also put together a newsletter dedicated to growing plants at home. Each month we collate seasonal advice from experts, product profiles and garden features with a full insight into Neutrog.

Kind Regards, The Neutrog Team



Soil Science Australia Masterclass at Western Sydney University





A team from Neutrog, along with key distributor Farmer Johns, attended a four day Masterclass and Accreditation at Global Centre for Land-Based Innovation at Western Sydney University in August, where R&D Manager Uwe Stroeher was one of the key speakers.

Facilitated and led by world-leading soil ecologist Professor Brajesh Singh FAA, the course was attended by approximately 70+ soil scientists, agronomists, farmers, researchers and consultants.

Along with lectures and group based learning, tours were also conducted in the Western Sydney University greenhouses and also at the nearby EucFACE (Eucalyptus Free Air CO2 Enrichment) Trial site. Throughout the four days, one of the most valuable aspects was hearing the perspectives and experiences of those consulting to farmers how have been using traditional farming methods and seeking the information to transition to a more biologically driven practice – that is still commercially viable.

The scope and diversity within agriculture means it is clear there is no one 'fix-all' solution. However the work being conducted to help educate growers and farmers and create reasonable, achievable, sustained improvements, was a key takeaway.

While it would be impossible to accurately relay the breadth of the content covered across the four days, our Marketing Manager Hazel wrote some key facts and quotes that stood out to her:

- Peak phosphorus (the point at which we reach the maximum global production of phosphorus) is expected in 2033, driving a need for more efficient use, alternatives and means for accessing the phosphorus currently 'locked-up' in soil.
- Fixing nitrogen by biology, is the most energy intensive biological reaction, on the planet
- Soil is the most biodiverse ecosystem on earth, home to approximately 59% of all global species
- Definition of healthy soil: "Healthy soils minimise annual variations in farm productivity by providing resilience to biotic and abiotic stress" Prof. Brajesh Singh
- "If I could recommend that you do just one thing to encourage microbial activity in soil, it is increase the organic matter" Prof. Brajesh Singh
- Fungal diversity drives soil physical health, while bacterial diversity drives chemical health
- Indicators of soil heath are aggregate stability (soil architecture), water holding capacity and microbiome attributes

At the conclusion of the four days, attendees completed an exam (the first exam in some time for most of us!) and subsequently received a certification in Soil Biology and Health.





Adam Krahnert, from Coopers in Mount Torrens is into the second year of a re-gen multispecies pasture trial based in Mount Pleasant.

In 2021, the site previously had phalaris, cocksfoot and clover-based pasture. In 2022, it was sprayed with Crucial at 2.5lt/ha + Pyrinex Super at 900ml/ha before being sown at 50kg/ha in June with a 3m seed drill - twin disc + press wheels at 25cm row spacing.

The site was sown to a cool cover blend from AGF seeds including 12 species from 5 different family groups.

The site was split into two areas with the top or southern 10-15mt strip top dressed with Coopers starter fertiliser 21/12/0/5 and the rest of site received Coopers bio booster at 200kg/ha – biologically based fertiliser.

Why sow multi species?

- Reduce the use of herbicides, insecticides and acidic fertilisers
- Improve soil and root structure
- Increase soil carbon
- Improve soil micro biological activity
- Improved production /palatability
- Increased stock gains meat / wool
- Improve pasture persistence
- Interrupt weed, pest and disease cycles
- Prevent soil erosion
- Improve moisture holding capacity
- More efficient water and nutrient use
- Increase nitrogen with added legumes
- Prepare or prime the soil for a following crop

What's in the mix and why?

- Forage Oats Poaceae family reliable, high yielding late winter early spring, highly palatable
- Rye Corn Poaceae family fast establishment, early grazing potential, source of fibre
- Vetch Fabaceae legume family quality high protein feed, improves palatability of cereals, nitrogen fixing potential
- Annual Ryegrass Poaceae family fast establishment, high quality, highly palatable short term grass option
- Winter wheat Poaceae family long winter gene stays vegetive for longer offers longer grazing potential
- Forage rape Brassicacae family high yielding quality feed. Taproot busts open ground, bio fumitory properties, insect attractor
- Leafy Turnip Brassicacae family fast establishment, early grazing option, deep rooted, nutrient cycling properties
- Linseed / Flax Linaceae family fibrous root system, good source of energy / essential fatty acids, potential to reduce soil borne diseases
- Crimson Clover Fabaceae Family Nitrogen fixing properties, adds protein and palatability, insect attractor
- Peas Fabaceae Family nitrogen fixing properties strong relationship with rhizobia, adds protein and palatability,
- Chicory Asteraceae family deep rooted perennial herb, relatively high in protein, spring summer growth
- Tillage radish Brassicacae family short term fodder option, fast establishment, deep rooted, nutrient cycling, busts open compact ground

In spring 2022 the site was grazed heavily from resident sheep, who had a preference for radish first, then brassica, then other components. Flail mower application in mid october to reduce any remaining biomass.

In mid-late October 2022, the site was over sown with AGF warm cover blend - 11 species + added plantain + chicory. The summer establishment wasn't great due to existing competition from the cool cover blend, with the best establishment being from chicory and plantain.

In autumn 2023, the plan was to contiune to follow the re-gen (Ag program of reducing/removing traditional herbicides, insecticdes and synthetic fertilisers) so therefore no knockdown herbicdes or insecticides were applied.

Prior to sowing, an organic foliar spray of mollasas + kelp + fish hydrolysate + humic acid to stimulate soil microbes and boost soil health + separate application of phos life to boost calcium and phosphorus levels. The aim is to get away from repetitive seeding that comes with a traditional multispecies program (typically being an annual mix suited for winter or summer production). So the demo site has bee split in half:

The top half being sown to Barrenbrugs bare uncoated regenerator multispecies blend at 50kg/ha containing 10 annual winter – spring active species. The bottom half had a perennial multispecies sown at 25kg/ha with the aim to have a mix of summer and winter active long term perennials.

In winter 2023, Adam approached Neutrog to include POPUL8 and also PROLIFER8 in these trial sites and we look forward to following along as the trial progresses.







Operating a commercial plantation comes with challenges that Managing Director of Freshwater Farms, Allan Hutcherson knows better than most. Having been in operation since 2018 growing a variety of oil producing plants such as tea tree, salt bush and lemon myrtle for their range of luxury hair and body care products, it wasn't until 2021 that one of their biggest challenges emerged.

With over 2,000 plants in their care with 2,000 more, Allan notices some of the existing trees had begun to deteriorate is various areas of the plantation. The trees were in significant distress with discoloured leaved and low foliage volume and quality. Soil samples examined by the Department of Primary Industries determined that the root cause was the presents of Phytophthora cryptogea, a species of water mould that poses a significant risk to plants.

Freshwater Farm were among the first group of growers to trial Neutrog's Advanced Soil Biological, POPUL8 and GOGO Juice Advanced Biological Formula. The results of these trials showed a swift turnaround of the health of the plants, with discoloured foliage returning to its natural shade of green with increased quality and density.

Neutrog's Julie Walker paid a visit to the farm last month to see the progress with Farm Manager, Rick Tobin. 18 months on from the trial and plant numbers have now doubled with more plans in place for additional plantings.

Most significantly, plant losses to Phytophthora and fungal pathogens have reduced dramatically, and overall plant health has exceeded expectations and increased oil yields.

The farm continues to use POPUL8, GOGO Juice and Gyganic for both their greenhouse and field plantings.

Jujubes SA Cambrai Nursery uses POPUL8 for seedling success





Based in Cambrai in South Australia, Jujubes SA operate one of Australia's first high-density jujube orchards. With over 25 years of experience, Jujubes SA offer popular varieties of trees for the Australian market, recently selling 50,000 trees to a Victorian client from their Cambrai nursery.

Jujubes are often referred to as a superfood with their high vitamin B and C content. There are approximately 40 different cultivars of jujube in Australia, including Li, Li 2, Shanxi Li and Chico available through Jujubes SA.

The consensus is that Australia is one of the best countries in the world from growing jujubes due to our dry climate conditions. They are very hardy trees and can withstand extreme conditions.

To ensure they are delivering strong and high quality trees, co-founders Jody and Marcus Miltenoff have been using POPUL8 throughout the nursery. By adding a wide diversity of bacteria and fungi with POPUL8, they are protecting the seedlings from diseases while also time stimulating and enhancing healthy plant growth, both above and below ground.

Jujubes SA will be continuing their use of POPUL8, and will also be trialling Gyganic as part of their fertilising program.

Ace Ohlsson's Emily Greer shares her home garden success



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There is something about growing your own produce that creates excitement in the garden. Taking your garden from a bare piece of soil to a productive vegetable patch is a journey, and one that Emily from Ace Ohlsson McGraths Hill is enjoying all the benefits of.

As a member of the Ace Ohlsson team, Emily knows all too well the importance of good nutrition for a quality crop, no matter what their customers are growing. The same goes for the home garden where a healthy soil is essential for a thriving garden.

These principles were applied to Emily's home vegetable patch, where she regularly feeds her garden with Gyganic, mulches with Whoflungdung, and treats with POPUL8 with great results.

She now proudly shares her veggie gardening experiences (and produce) with her Ace Ohlsson colleagues and customers, and happily recommends the Neutrog range in store.