

Neutrog's Autumn 2019 Commercial Newsletter



Welcome to Neutrog's Autumn 2019 commercial newsletter - we trust you enjoy reading it. If you have a story you'd like to share, please [get in touch](#).

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In the Vineyard Tsharke Wines

Tsharke Wines is the vision of sixth generation vigneron Damien Tsharke (pronounced 'Sharkee'), and is home to Tsharke's estate-grown and crafted wines. Damien and his wife Eva opened their purpose-built cellar door in 2011, which houses a wonderful selection of their Mediterranean varieties and Barossa regional classics.



The Tscharke winery is perched on the slopes of Marananga in the Barossa Valley, and Damien has a keen focus on retaining purity in the wines and expressing their origin variety and vintage, combined with sustainable viticultural practices. He is a firm believer that winemaking is all about maximising yields and quality whilst minimising inputs.

All Tscharke wines are produced from vineyards planted by the Tscharke family, and cover 40 hectares over three estates, with each wine produced retaining the terroir of its origin. With some vines being over 140 years old, great care is taken to preserve what Damien's fore-bearers established.

After learning about Neutrog's extensive biological research and development from a business associate, last year Damien broadcast 25 tonnes of [Bounce Back](#) at 1 tonne to the hectare throughout the entire vineyard – both under-vine and mid-row. This was to support the growth of the cover crops and bolster the nutrient levels of the vines. Cover crops include triticale and saia oats (otherwise known as black oats) - the latter is a tall black-seeded grazing oat that is known to smother weeds and protect soil against wind erosion.

Composted chicken manure was used in previous years, however Damien is very pleased with the performance of Bounce Back, saying *"We have achieved much better vegetative growth and better overall performance this year compared to previous years, despite it being such a dry year."* Another bonus Damien found in applying Bounce Back is that it's so much easier to spread than the composted manure. Additionally, as the vineyard is NASAA-certified, Damien is convinced that Bounce Back is a long-term solution for Tscharke Wines.



If you're in the Barossa and appreciate a drop or two, we recommend a visit to Tscharke's Place. The tasting room is a beautifully crafted German-style timber building nestled within the family vineyards, and has a warm and welcoming ambiance. You don't need to look far online to find a huge number of positive reviews from delighted visitors.

The lovely gardens at Tscharke Wines are fertilised with Neutrog's Seamungus and Rapid Raiser, and Damien says that all visitors want to know what the secret is. Applied liberally early in Spring and again in Autumn, Damien says it's a simple approach to keeping the gardens looking amazing, but it *"definitely works"*.

Tscharke's Place is located at 376 Seppeltsfield Road in Marananga, South Australia, and is open from daily from 10am to 5pm except for Christmas Day, New Year's Day and Good Friday. For more information, visit www.tscharke.com.au or phone (08) 8562 4922.

What's brewing

Brooklyn Station Trial Update

A trial was started in late March 2018 to examine whether the application of the organic-based Neutrog product [Rapid Raiser](#) was commercially competitive with the application of 4:1 super:muriate potash in a pasture setting. The soil texture is sandy with a pH (H₂O) of approx 6.6, mean rainfall per year is approx 600mm.



Three areas were set aside of 13, 10 and 7 hectares (east, central and west respectively) to undertake this trial. All three sites consist of a hillock and a vale, with the central site having a large vale where moisture collects from both the eastern and western side of the trial area. A number of parameters were tested including germination and coverage of a pasture crop, the amounts of dry grazing material, as well as the biological activity of the soil and the nutrients in plant tissues.

Soil samples for baseline nutrients and soil microbial activity were collected in December 2017 prior to the start of the trial in March. Soil analysis revealed that the eastern side had considerably lower levels of available potassium, whereas the central and western sections had adequate levels. The eastern aspect also had the lowest level of microbiological activity, which may be due to the site being in a slightly more elevated position, thereby likely to be drier.

After the initial site inspection and sampling, the trial site was visited three times in May, August and October 2018 to examine factors such as soil biology, feedstock availability and the distribution and coverage of various pasture crops. The soil microbiology improved noticeably across all three sites - most likely due to the wetter conditions in August and October. **The most marked increase in soil microbial activity was seen on the site which had Rapid Raiser spread at 125kg per hectare, where the activity increased by over 45%.** The increase in microbial activity in the control area (central) which had 120 kg/ha of 4:1 super:muriate potash was 12%, whereas a competitor's product spread in the western section increased soil microbial activity by just 15%.



The level of coverage and composition of coverage is virtually identical between all treatments, with legumes and annual grasses accounting for over 60% of the coverage. The amount of available dry matter was marginally higher in the eastern section for both August and October compared to the other treatment groups.

The analysis in legume leaf tissue revealed that the area which had received Rapid Raiser had a significantly higher level of nitrogen, potassium and phosphate in the leaves when compared to legumes leaves in areas which had been given super:muriate potash or a competitor's product. This is perhaps a surprising result considering initial soil tests had shown that the plot on which Rapid Raiser was applied had significantly lower levels of potassium.

Analysis of the metabolisable energy of a random collection of plant material in these areas showed that both the competitor's product and Rapid Raiser resulted in 9.2 megajoules/kilogram versus 9.4 MJ/kg for the area given super:muriate potash.

Overall, after one year of this five-year trial, Rapid Raiser has been shown to be as effective as super:muriate potash for coverage and composition of the pasture. Furthermore, the application of Rapid Raiser resulted in a small increase above the other treatments for dry matter.

Given that the eastern plot on which Rapid Raiser was applied was the worst in respect to both nutrient and soil microbial activity, the most interesting result so far is that Rapid Raiser has been able to mitigate both of these effects, and in fact improve the soil microbiology to a greater extent than the other treatment groups.

About Rapid Raiser - Rapid Raiser is a unique blend of organic materials specially formulated for all your fertilising needs. A highly concentrated natural product, Rapid Raiser also promotes faster, healthier, sustained growth for all plants. Rapid Raiser encourages the development of earthworm and microbial activity leading to healthy, well-structured soils.

Certified organic by the ACO, Rapid Raiser is composted, steam-treated and then pelletised for easier and cleaner handling. These processes stabilise the nutrients, maximise nutrient availability and ensure the product is free of any parasites, pathogens and weed seeds. Most importantly, the resultant product retains the microbiology necessary to provide a 'living' fertiliser. It is widely used by professional horticulturalists throughout Australia in the successful production of commercial crops of vegetables, flowers, fruit and plants.



L to R: Tim Prance (Agronomist), Drew Maxwell (Station Manager) & Neutrog's Dr. Uwe Stroehrer

CSIRO Bute & Waikerie Trials

Last year the GRDC Sandy soils project established trials to test the impact of boosting deep profile nutrition on crop water-use and yield. Approaching Neutrog, the researchers were looking for a versatile chicken litter product that could be metered out at known rates to carry out a 3-year cropping research trial at Bute and Waikerie; two areas with significantly different rainfall amounts.

The trial was designed to examine the benefits of deep placement of a pelletised product to a negative control, and also to examine the effect of a surface application of loose non-pelletised product compared to fertiliser rates typical of the regions.



July 2018: In-season monitoring of plant growth in control (unrippled, left) and deep placed (50 cm) Neutrog's Bounce Back (right)



The GRDC Sandy Soils Team checking seeding depth after ripping at Bute

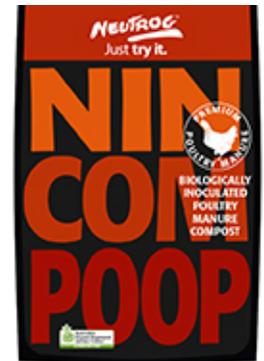
The trial was undertaken as there is growing interest in strategic deep ripping to improve rooting depth and increase crop access to deeper soil moisture. Recent research under the GRDC Sandy Soils program has found that most sands have strong physical constraints to root growth within the top 30cm of the surface. Physical interventions such as deep ripping have been shown to increase crop yields in the low to medium rainfall environment, and to help crops access deeper soil moisture in dry years.

Application of the fertiliser is on a nutrient-for-nutrient basis, which essentially means the same amount of either compost (surface) or pellets (deep placed) are applied to any given area. As well as monitoring yield, the CSIRO are assessing crop water use, crop lower limit and rooting depth. Use of nitrogen efficiency and nutrient carryover will also be assessed from season to season, which is important information for understanding the longer-term benefits of this type of fertiliser application. The project is also exploring how increased ripping gains might be obtained by deep nutrient placement. As many sandy soils contain less than 0.7% organic matter, their ability to supply and retain nutrients is limited, therefore the use of chicken litter is a popular choice to boost this nutrient supply in regions where it is available.

Applying Neutrog's pelletised product provides an opportunity to test whether placing nutrients deeper in the soil profile has an advantage over a surface application. One major advantage of a pelletised product used in this project is that it has allowed the deep placement of nutrients in a controlled and precise manner.

Under water-limited conditions and 2018 being an extremely dry season, results were not huge, however even in these early stages, the photo (at top) shows that the deep-placed pelletised chicken compost is showing better results than the un-ripped control plot. In Waikerie, the improvement for ripping was marginal and placement of nutrients did not improve this. This is in large part due to the extremely dry conditions at this site where water was more likely to be a constraint on growth than nutrient accessibility.

For the site at Bute, ripping alone increased yield by 0.4t/ha, whereas the placement of nutrients further enhanced this yield gain to 0.9t/ha above the control of 3.8t/ha. Both deep and surface placement resulted in the same yield gains at this site. Since placement of nutrients at the surface compared to deeper placement revealed similar yield gains, the question must be asked whether deep placement per se is required, or whether surface application with ripping is a more cost effective approach.



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Around the Grounds

Links Lady Bay Golf Course

Five kilometres south of historic Normanville in South Australia is 'Lady Bay' - the colloquial name given to a settlement of shacks built half a century ago. Lady Bay is also home to the very impressive nationally-recognised Links Lady Bay Golf Course, featuring spectacular coastal views, and is considered one of South Australia's best.



Having been the Course Superintendent at the Balaklava Golf Course for 21 years, Steve Guy moved to the Lady Bay course a year ago. *"We were using Neutrog products at Balaklava for a long time. After good results we recommended to management to experiment with the Neutrog Range at Links Lady Bay"* says Steve. Neutrog's Blade Runner fines in crumble form are used on the tees, fairways and greens twice a year in Spring and Autumn. It is applied directly after the course is cored - this is the process of extracting plugs or 'cores' of soil at 2 to 3-inch intervals, to a depth of around 3 inches. As these plugs are mechanically removed, they create a vessel through which oxygen, water and nutrients can penetrate at a deeper level. After the Blade Runner has been applied and rubbed in at 500kg per hectare, sand is then used to top up the holes.



The 9 tonne of Blade Runner is delivered in a bulka bin through FPAG in Yankalilla, and Steve said it was a simple matter of backing a Dakota spreader under the bin, opening it up and filling the spreader (which can fit about half a tonne), and then towed behind a small turf tractor and spread where required.

Additionally, GOGO Juice is used on the greens. Steve says they use Blade Runner and GOGO Juice for two reasons. *"Firstly, we wanted to go with a more natural, organic way of doing things, and the second reason is cost. To fertilise our fairways with a slow release chemical fertiliser is very expensive. I can afford another application of Blade Runner later in the growing season knowing it gives a good range of secondary and micro nutrients as well. Even months after coring we can still see Blade Runner mixed with the sand in the core holes."* Another benefit Steve has discovered with using Neutrog products is better soil health. *"As we use Neutrog we don't seem to have as much fungal disease. Don't get me wrong, it doesn't get rid of them, but we don't get them as much".*

Even though he says the application of GOGO Juice doesn't give any visual effect as to whether it's worked or not, Steve knows the science behind how the added microbes in GOGO Juice are benefiting the soil and therefore the health of the turf. It has been applied to the greens twice since renovations, however the current lack of ground moisture means that he is waiting for a good rainfall before applying it to the fairways. *"For no other reason that we haven't had the rain, we haven't actually put the GOGO Juice on our fairways yet because we don't think we'd get the majority of the benefits out of it."* Steve concludes *"As I've said, we were using Neutrog products at Balaklava for a long time, and we'll definitely be using them a lot more here"*.

Whether you are a golfer or not, the Links Lady Bay Resort is definitely worth a visit - sand dunes, sweeping beaches, a day spa, tennis courts, conference facilities and beautiful food. Additionally, the quaint town of Normanville has a village atmosphere, is home to the Leafy Sea Dragon, and is 30 minutes from the McLaren Vale wine region and charming local markets. It's only one hour by car from Adelaide, yet far enough away to enjoy the tranquility and brilliance of the Fleurieu Peninsula. [Click here](#) for more information on the Links Lady Bay Resort.



Broadacre Martindale Farm

After running a successful agricultural business in Adelaide for many years, Graeme & Dianne Johnson retired, but then decided that they needed to do something more...to give back to the agricultural industry, which, as Graeme says, "was very good to us". Subsequently, a family decision was made 7 years ago to purchase some farming land at Mintaro, in South Australia's Clare Valley. Together with daughter Kara, son-in-law Travis and four grandchildren, Graeme and Dianne made the move. Since then, they have purchased additional adjoining land, increasing their holdings to 2500 hectares.



Dianne, Graeme and Travis had a very clear vision of where they wanted to take this new venture, and have developed Martindale Farm to be a combination of mixed cropping and sheep, with 2000 hectares under crop, and the remainder being pasture for the nearly 2000 Merino ewes and 500 young ones as replacement stock for older ewes.

Animal husbandry is critical to the running of their farm, and the Johnson family are very analytical in their practice - ewes are scanned and subsequently fed differently and housed separately whether they carry single lambs or multiples. The area is frost-prone and can be wet and windy at lambing time, so the extensively-treed paddocks make a real difference at lambing, and offer protection for the stock.



The family are concerned about the over use of chemicals on the farm, so they are trying for a more balanced approach. The decision was made to move away from a chemical fertiliser to a more natural option - they felt it was a better fit for the livestock and the soil biology.

Improvement to their soil and stock is based on a more sustainable long-term strategy. "We have used chicken manure in the past, but it hasn't always been fully composted, so we had concerns about potential risks in the form of pathogens and weeds, which we could be bringing onto the farm" said Graeme.

Graeme, Dianne and Travis are very interested in organic matter and soil biology; and the benefits of building up the microbiology in the soil. "The sheep are always standing over those areas where the soil is healthiest. We're certainly not 'greenies' and do understand that the pendulum can't immediately swing the way we are heading, but a balanced approach moving forward can only be of benefit to us, our farm land and our plans for the future" says Graeme.



Did you know?

Neutrog can create prescription mixed products to suit your specific requirements.

Look no further when it comes to creating the right balance for your plants and soil - enquire about creating your own prescription mix today.

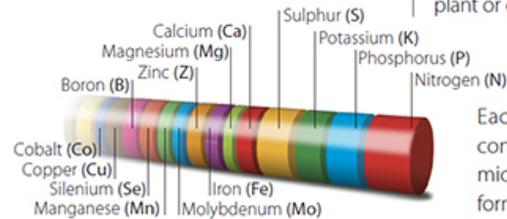


Liebig's theory

Liebig's Law of the Minimum, a principle developed in agricultural science, is what sits at the core of Neutrog's philosophy.

Liebig's Law states that growth is controlled not by the total amount of resources available, but by the scarcest resource or limiting factor.

This concept was originally applied to plant and crop growth, where it was found that increasing the amount of plentiful nutrients did not increase plant growth. Only by increasing the amount of the limiting nutrient (the one most scarce in relation to "need") was the growth of a plant or crop improved.



Each pellet of Neutrog Fertiliser contains a full range of macro and micro plant nutrients and its pellet form allows for uniform application.

By using Neutrog fertiliser you reduce your risk and increase your potential by covering more bases.

Do you have questions about Liebig's theory? Have a chat to us today!

International Update Exports

Our export market grows stronger each year - Neutrog packed and shipped 25 containers (500 tonne) to Vietnam during April alone.

Depending on the customer's requirements, product is either air-blown into the container, or shipped in 20kg bags.



South Africa

We recently hosted our South African business partner Charles Bertram along with Bryan Christophers and Vicus De Beer, Directors of Gromor, the South African company who have recently been awarded the license to manufacture Neutrog's products at their new purpose-built factory in Durban, South Africa. Ironically back in 1996, Gromor were the first company in South Africa licensed to produce Neutrog products - they did so for a few years before the license was transferred to a manufacturer in Cape Town.

The Neutrog brand, and in particular our product Bounce Back, quickly became one of the highest selling, most recognised, organic fertiliser brands in South Africa with in excess of 20,000 tonnes being produced and sold each year - supplied to the retail home garden and commercial markets within South Africa along with being exported to many surrounding countries.



One of three Gromor factories in South Africa



During their visit, Charles, Bryan and Vicus spent time in the commercial and retail home garden markets, as well as viewing Neutrog's manufacturing processes, gaining a more in depth understanding of the lengths Neutrog goes to in order to ensure a consistent, quality, high performance product is produced. They were captivated by their discussions with Dr Uwe Stroehrer and fascinated by the transition Neutrog has made from organic to biological.

Since their visit, the South African factory has been busy manufacturing the very popular Bounce Back, and the team has been busy getting it into retail stores. Plans are already well underway to commence the development and production of GOGO Juice and Whoflungdung in South Africa - these, along with Bounce Back will be sold in the home garden market before expanding into the commercial market.

Welcome to Tiffany Gordon

In March we were sad to see Shane Baker (our Victorian-based commercial Customer Relationship Manager) leave Neutrog. Shane is a great guy who did a terrific job in growing the Neutrog business in Victoria and beyond, but we congratulate him wholeheartedly for landing a more senior National role with E&E Muir.

On the other hand, we are pleased to announce the appointment of Shane's replacement, Tiffany Gordon. Having spent a majority of her working career based around the many facets of animal health and with a strong link to the dairy industry, she has welcomed a change in direction that brings her into another field of agricultural industries with Neutrog. *"I have spent time out on farms assisting with multiple variations of animal nutrition and welfare, as well as a regular face within the retail/commercial outlets, assisting with staff training and product placements etc. I look forward to the diversity this time at Neutrog will provide, and I'm excited to be a part of such a welcoming and friendly environment!"* says Tiffany.

For any commercial enquiries in Victoria, NSW and Tasmania, Tiffany can be contacted on 0488 254 550 or via email tiff@neutrog.com.au

A Biological Approach

Nitrogen Fixation by Bacteria



Plants require approximately 17 different nutrients, of which three are considered macronutrients - nitrogen, potassium and phosphorus. Of these three, nitrogen is generally required at the highest concentration. Nitrogen is essential for plants to make proteins, and is also required for DNA synthesis.

Although our atmosphere consists of approximately 78% nitrogen, unfortunately in its atmospheric form it is not available for plants to use. In the atmosphere, nitrogen exists as a molecule of two nitrogen atoms strongly bound together. This nitrogen molecule needs to be split in order for the nitrogen to combine with elements such as hydrogen or oxygen to make ammonia or nitrate; it is these forms of nitrogen which can be used by plants for growth.

So considering there is more than enough nitrogen in our atmosphere, how is this made available for plant use? In effect there are four main ways in which plant-available nitrogen can be made. The first is by chemical reactions carried out by man - the most widely used of these is the Haber-Bosch process, which combines nitrogen with hydrogen to generate ammonia. There is also some plant-available nitrogen produced by combustion and lightning strike, but together these three processes account for only about 30% of the total nitrogen requirement by plants on this planet. This is where the role of bacteria in fixing nitrogen into a plant-available form is critical.



The ability to fix nitrogen is not limited to a few bacteria. In fact, there are significant numbers of bacteria which can do this; some of which are symbiotic and live within plant tissues, and others which are free living in soil and water. The most well-known are the bacteria of the Rhizobium genus - these associate with plants such as legumes, and form the nitrogen-fixing nodules on the roots of plants such as clover, pea and the like.

The interaction between the Rhizobium and the plant is very specific, which means those bacteria which associate with clover won't form a symbiotic relationship with peas or beans and vice versa. This means for nitrogen fixation to occur in these plants, the specific bacteria need to be present.

Under ideal conditions, legumes in association with Rhizobium can fix up to 200kg of nitrogen per hectare (which would equate to over 400kg of urea), however free-living bacteria are limited by their ability to fix nitrogen to about 30-40 kg per hectare. Nitrogen fixation - either chemically or biologically - is an extremely energy-intensive process. From a biological perspective it is the most energy-intensive biological reaction, so the fixing of nitrogen is not something done by bacteria on a whim, and nitrogen fixation is regulated by certain factors, including the level of available biologically-usable nitrogen.

Due to the high energy cost which cannot be readily covered by the bacteria's own metabolism, plants and bacteria work together. Whether within nodules or free-living bacteria in the soil, bacteria provide the metabolic machinery to break apart the nitrogen molecule, which then combines with hydrogen to form ammonia.

For their part, the plants provide the bacteria with sugars, which serve as the energy source required for the reaction.



An exception to this method of fixing nitrogen is seen in the cyanobacteria (blue green algae) which, due to their ability to photosynthesise, are not dependent on plants to provide a source of energy. Nevertheless, Cyanobacteria are critical in nitrogen fixation, especially in wet soils and in agricultural practices such as in rice paddies.

The ability to fix nitrogen occurs only in the absence of oxygen. This is achieved in nodules by the production of a plant-produced iron containing a protein called leghaemoglobin which gives nodules the reddish pink colour, and is a good indicator of whether nitrogen fixation is occurring. Other bacteria not associated with plants often produce a slime layer, specific structure or cysts to lower the level of oxygen within the cell, thereby allowing nitrogen fixation to occur. So by working together in a mutualistic manner, both the bacteria and the plant obtain nitrogen in a form which can be used by these organisms.

As a result, having a diverse and active microbial population in the soil ensures you get the benefits of free nitrogen by bacterial nitrogen fixation, and the diversity enhances the possibility of having the most efficient plant colonisers and free living bacteria to fix nitrogen under differing conditions.

Organic fertilisers such as Rapid Raiser, Seamungus and even Bounce Back contain a wide variety of microbes, and as such can be thought of as seeding the soil with life to help in nutrient cycling.

This leads to a cascade of nutrients which in turn increases both the microbial population but also plant growth - the plants will then secrete more sugars into the soil for yet other microbes already present in the soil to multiply. Some of these bacteria which will increase in numbers are likely to have the ability to fix nitrogen, as there are many that have this ability.



New investments at Neutrog

It was great to see the first new 10,000 litre stainless steel tanks arrive on site recently for our expanded biological brewery. These tanks will be going into a new warehouse, which we hope to have completed within the next 3 to 4 months.

This expansion not only allows us to cope with the significant increase in demand we are seeing for our current liquid biological products such as GOGO Juice, but will provide greater capacity to produce a wider diversity of such new and innovative products.

Under the guidance of senior microbiologist Dr. Uwe Stroeher, Neutrog is continuing its research into gaining a broader and deeper understanding of the microbiology within GOGO Juice and our many other biologically-active organic products and materials.

DNA extraction and other complex testing methods are being utilised to further identify fungal and bacterial types, diversities and concentrations thereof – these tests will be carried out both during the



Amongst many other benefits, being able to test and monitor such will ultimately enable Neutrog to set and establish strict quality control measures to better ensure biological consistency across all products and materials. Further identification of the specific bacteria and fungi present will allow us to gain a greater understanding of the beneficial roles each play in optimising soil and plant health.

ABOUT GOGO Juice - GOGO Juice is literally teeming with beneficial micro-biology and is essentially a pro-biotic for your soil and plants. GOGO Juice combines the “catalytic” power of providing a wide diversity of beneficial bacteria and fungi with the well documented benefits of applying kelp and humates. Applications of GOGO Juice provide a huge boost of the living micro-biology necessary for your soil and plants to perform at their optimum level, increasing their ability to resist pest and disease and to withstand &/or recover from, heat stress and frost.

Stay tuned for further updates on the progress of this project in future newsletter editions, or [like our new commercial Facebook page](#) ‘Neutrog Commercial’.

Alan Rochford - Reaping the Rewards

Alan Rochford purchased his property at Kuitpo in South Australia 45 years ago. Alan says that what he knew about farming (or agriculture in general) could have been written on the back of a matchbox.

"I was an idiot" he says. "Nor did I have anyone in the wider family whose knowledge I could draw on. We were a bunch of collective idiots as far as farming went. I was also almost broke - I had just enough money to have a tenuous hold on the land but little else left over, and I worked several jobs at once to scrape up enough money to pay the mortgage and renovate a crumbling 100-year-old cottage on the property. We now live in a 'renovated' crumbling 145-year-old cottage".

At various times over its life before Alan bought the property, the farmland had been used for potatoes, apples and cattle, and very little had ever been put back into the land as far as fertiliser goes.

Alan applied a very occasional dusting of superphosphate during the first 20 years whenever he could afford it; however about 10 years ago when his bank balance was a little healthier, Alan decided to think more about what he was doing. He had soil tests done, and found out what the land was lacking – which was just about everything, including (according to Alan) shortage of a competent person in charge. So...he started to read a bit. Fairy stories mostly, about very productive farms.

As a result, he applied trace elements. Then he had the soil tested again. It needed the addition of more stuff (not the technical term), so he gave it more stuff. After further tests it still needed more stuff. He could see a pattern emerging - money out, money out, money out.

"I finally realised it will ALWAYS need more" says Alan. "No amount of soil testing would ever show perfection. The composition of my land changed every hundred metres or so. Shallow, poor sandy loam over ironstone on the ridges to deep clay loam in the damp valleys, so the best I could hope for was a good average reading. Furthermore, if I took hay off or produced and sold a lot of livestock in any particular year, then I would need to boost the amount of nutrient I returned to the land the following season. Fairly simple really. Even for a thick person like me".

Changing the soil and improving the continuous productivity of a farm takes a long time, and because we all seem to expect instant rewards nowadays, today's farmers can easily suffer despondency when their expectations are not met (after sinking what we consider to be a large chunk of money into it in any one year). We might even give up - Alan knows he nearly did...several times.



However, following the addition of trace elements (after getting regular soil tests), plus a regimen of very light, single-super dustings before each rain event in autumn, early winter (weather permitting) and throughout spring, Alan found the soil to be responding like never before. He then started to add as much potassium as he was legally allowed to, mixed in with the single super dustings.

"The response was amazing" said Alan. "It started to look like a real farm. With real grass. But then the magic really happened - I applied Neutrog's composted chicken manure - about 50 tonnes over the last 3 years. The result - lots and lots of real grass and lots and lots of real clover".



This year - the driest on record – Alan told us that he is amazed with the productivity of his property now. *“The results speak for themselves and I’m happy to show anyone how their land can be changed with just the simple addition of a massive amount of time, effort and money...and of course, Neutrog’s chook poo”* says Alan.

Alan and Sarah also run a bed & breakfast on their property, which is available if anyone wants to book in for a weekend and take the opportunity to talk to Alan about how he has turned his property around. *“I may not be the best farmer in the world, but I have certainly learned a lot over 45 years, and if I can help shortcut anybody’s learning curve by a couple of years, I believe I will have accomplished something”*. If you’d like to take Alan up on his offer of advice, he can be contacted at <http://www.forestgateg cottages.com.au/>.



**BULK MANURE...
HERE NOW!**

Neutrog now supplies bulk chicken manure... from raw to composted and screened or unscreened. We can also create custom blends to include any added requirements such as kelp, seaweed and carbon. So whatever you require, we have your bulk chicken manure needs covered.

Please call Neutrog on 1800 656 644 to speak to one of our reps for further information.

*Currently this service is only available to our South Australian customers.

Research & Development

Litterbugs

In March we were visited by Professor Kapil Chousalkar & Dr Nicky-Lee Willson from the University of Adelaide, who presented some eagerly awaited trial results from our first stage, efficacy and safety tests on our new, high tech, biological product, 'Litterbugs' - a journey that has already taken us well over two years.

The \$80,000 cost of the initial trial was funded equally by Neutrog and a Federal Government 'Innovation Connections Grant', and was carried out over a 3-month period from September to December 2018 at Roseworthy Agricultural College, where Litterbugs was applied to the bedding material of broiler chickens.



Young chicks were introduced into the pens and monitored for their health, weight gain and feed conversion for a period of 42 days. Several critical outcomes were archived during this trial - one was that the application of Litterbugs did not in any way negatively affect either the health or the ability of the birds to grow and gain weight. Another was a significant drop in the level of ammonia in the litter in the first two weeks of rearing.

In presenting the research findings, Dr Willson advised that the positive results should allow us to proceed to second stage field trials in commercial broiler chicken sheds. The idea of a larger scale trail was also supported by the veterinarian who represents a large chicken meat producer, who was present during the discussions. We are certainly excited about the potential world-wide application of Litterbugs.



Our Products

Learn more about the incredible range of commercial products available from Neutrog.



Application Rates

Click to view application rates for broadacre, horticulture, viticulture and turf, parks & gardens.