### **FEBRUARY 2023**



#### **Dear Readers**,

In this months newsletter:

A new appointment to Neutrog's new Biological Advisory Board Welcoming David Yang into Neutrog's R&D team Armillaria samples arrive from the Royal Botanic Gardens Cranbourne Successful trials with POPUL8 at South African College High School The sea and vines with Seamungus

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



We are excited to announce the appointment of Professor Paul Manning D.Sc. PhD. FASM FRMS to Neutrog's newly formed Biological Advisory Board (information about Neutrog's Biological Advisory Board, can be found below).

Paul completed a Bachelor of Science (Hons.) from Flinders University in 1973, followed by a Ph.D from the University of Adelaide in 1977. He was subsequently awarded a D.Sc. (Doctor of Science of the University).

Between 1977 and 1998 Paul worked at the University of Adelaide, including a Fellowship from the Max-Planck Society and sabbaticals in Germany sponsored by the Alexander von Humboldt Foundation. Throughout this time, his research focussed on infectious diseases including cholera which led to him becoming one of the foremost experts in the world. It was in this specific field, whilst at the University of Adelaide, that Paul mentored Dr Uwe Stroeher, Neutrog's R&D Manager.

In 1998 Paul moved to the US where he commenced a role as the Director of Microbiology & Molecular Biology at Astra Research Center Boston, and following the merger with Zeneca in 2000, Paul assumed the role of Head of Molecular Sciences in Boston at the newly formed AstraZeneca. Paul remained with AstraZeneca in this role until 2007.

On returning to Australia, Paul consulted in the biotechnology and pharmaceutical industries before completing a teaching degree.

Paul has spoken throughout Europe, North America, Asia and Australia and been published 195 times and has over 3,900 citations. Paul is a Fellow of the Royal Microscopical Society (FRMS) and the Australian Society for Microbiology (FASM) and a Member of The Society of General Microbiology (UK) and the American Society for Microbiology (USA).

We are looking forward to utilising and benefiting from, Paul's vast and diverse, worldwide experience in R&D.



### About Neutrog's Biological Advisory Board

Neutrog's Biological Advisory Board has been developed to provide Neutrog's R&D Management team with access to a vast array of world-wide experience in biological research, soils and plants and in product development. It has been designed so that the individual Biological Advisory Board Members not only pass on their experience but are also provided the opportunity of challenging and shaping the thinking of Neutrog's R&D Team.

Once established, the four-five Member Board will only rarely meet as a collective — rather, each of its individual Members will meet with Neutrog's R&D Management Team on a quarterly basis.

### Armillaria Samples from Royal Botanic Gardens Cranbourne



Situated in Melbourne's southeast, the Royal Botanic Gardens Cranbourne is an award-winning, contemporary botanic garden that celebrates the beauty and diversity of Australian landscapes and flora.

Various areas of the garden however have been impacted by a pathogenic fungus called Armillaria, which has been responsible for plant decline and mortality. Our R&D team recently received samples of the fungi to research ways to reduce and control the impacts of the pathogen and ensure the future health of the Garden.

Team Leader of Horticulture at the Royal Botanic Gardens Cranbourne, Russell Larke says, "We are really excited about the new partnership between the Royal Botanic Gardens Victoria and the Neutrog R&D team to explore opportunities to reduce the impacts of Armillaria.

Armillaria species are recognised as significant garden pathogens and are responsible for plant health decline and mortality within the living collections at Cranbourne Gardens. Currently, there is limited research into the effective treatment of Armillaria and we are hoping that the team at Neutrog can identify potential controls for the treatment of Armillaria.

This research has potentially industry-wide applications not only for botanic gardens but more widely throughout horticulture, agriculture, and forestry."

"Armillaria is a very aggressive fungi which forms thick bundles of fungal hyphae known as rhizomorphs which is what you see as the tendril like structures on the growth media plate. These allow the fungi to not only grow on the surface of the media, but also allows it to push through the solid media.

When it infects plants, the rhizomorphs spread rapidly to find new food sources by pushing itself under bark and through areas that other fungi cannot. The rhizomorph also makes the fungi more resistant to treatment as they have a sheath structure acting as a protective layer.

Now that we have isolated and identified Armillaria in these samples sent to us, we will now look for biological control agents to if not kill at least stop the spread of this fungi."



## Successful POPUL8 Trials at South African College High School



Following the success of many trials with commercial growers in horticulture, viticulture and broadacre across Australia, our Advanced Soil Biological, POPUL8, is now being trialled in South Africa where it will be known at 'WATERM8'.

South African College High School boasts world class facilities at its Cape Town campus including a variety of sports fields for hockey, rugby, and cricket. The wicket area of one of the cricket fields has been dealing with patches where grass struggles to establish, resulting in uneven ground for players.

Charles Bertram, Director of Neutrog South Africa, recommended an application of POPUL8 which was added to the pitch early in December, and after six weeks, the results have been significant.

Kevin Ervine, the Grounds Keeper at South African College High School, says "As you can see in the photos, the grass has re-established itself on the affected area and the whole wicket now has uniform grass cover ready for the season ahead – a great result with an extremely quick turnaround! We look forward to seeing what other results we can attain with POPUL8 on other troublesome areas on the school grounds."

POPUL8 is our most advanced biological product to date, and as the name suggests, it literally populates the soil with individually chosen beneficial bacteria and fungi. The high number and wide diversity of specific purpose microbes in POPUL8 have been chosen to maximise the range of functions it can perform, including the producing growth hormones, liberating nutrients, and protecting plants against pathogens.



#### **Application Rates**

Use 5 litres per hectare of POPUL8. Dilute POPUL8 at a rate of 1:100, however the higher the dilution the better. Spray or apply this during a time of low UV or prior to a rain event if possible. (UV and extreme hot and dry conditions will kill many of the microbes). Water in after application if possible (not required when applying via fertigation).

POPUL8 is available in 5L, 20L and 1000L. For more information about POPUL8, contact your local Elders distributor or Neutrog representative



# THE SEA AND VINES A perfect combination

The combination of three individual types of seaweed in Seamungus, combined with fish, humic acid and manure makes it a potent biological fertiliser, perfect for grape growing.

Fantastic for water retention and managing frost and other fertiliser inputs such as Calcium and Potassium.

Seamungus is available as both pellets and liquid.

TUE

Biological 💀 Fertiliser

Product development can come in many forms. Sometimes from a specific identified need, other times from a discovery in our R&D lab and, in the case of Seamungus, an event occurs that presents an opportunity that spurs a new product into life.

In April 1996, in Boston Bay, South Australia, organic wastes and nutrients from the caged tuna farms contributed to a phytoplankton bloom. This large-scale bloom - or "Red Tide" reduced oxygen levels and caused extensive gill damage to the tuna. This bloom, together with weather events that stirred up the waste, resulted in 75% of the tuna stock being killed.

As a result of this catastrophic event for the then \$90 million dollar tuna industry based in the area, the Port Lincoln council set up a process to compost the tuna with the aid of Flinders University and the late Dr Nick McLure. Neutrog sourced and utilised some of this tuna compost and combined it with poultry manure, humates, seagrass and kelp to produce a product to be known as Seamungus.

The combination of ingredients created a product that delivered a diverse range of nutrients with numerous natural growth stimulants. Stimulants that encouraged growth both above and below the ground. Following product development and testing, the first batches of Seamungus were produced in the early 2000's and it has since become one of our most widely used products in both home garden and commercial applications.

Seamungus will hold up to 70% of its own weight in moisture - significantly increasing your soils ability to retain water and nutrients. Fantastic for managing frost and heat stress while assisting to unlock other fertiliser inputs such as Calcium and Potassium.

Seamungus is available as both pellets and liquid.

Seamungus is compatible with Post Em Products, however, Neutrog recommends that a jar test be done prior to tank mixing to ensure no compatibility issues.