

## Summer 2017-18

### In this edition

- Crookwell Pasture Trial
- Moving to Electronic Newsletters
- Summer Fertiliser Deals
- Using Soil Biota to Deliver Productivity
- P Prices Higher
- Christmas close-down

# BioAg COUNTRY

**Phosphate prices higher  
– see page 3**

**Ground being prepared for more  
BioAg treated cotton in the Riverina,  
NSW. November 2017**



## CROOKWELL PASTURE TRIAL

The McGeechan Farm Supplies/BioAg Phosphate Fertiliser Trial started with the mission of finding the best fertiliser solution for local pastoralists.

Along with measuring production, the trial also sought to compare the effectiveness of various fertilisers using larger gaps between application and reapplication.

The fully replicated trial compared treatments spread either annually or biennially (spread every second year) against control plots, and was replicated four (4) times.

It has been running since 2014, with the first cut taken in May of that year.

The trial is now in its final year and 19 cuts have been taken to date. Cut 19 represents the second Spring cut for 2017.

The following results highlight some of the most capable and versatile fertilisers on the market. **Continued page 2**

## Moving to *Electronic Newsletters*

After a long tradition of producing our printed newsletters (a product we have been very proud of), BioAg has finally made the decision to move to electronic newsletters.

**This means that this issue (Summer 2017) will be our final printed newsletter.**

The main reason for the change is we are finding the timing of a quarterly newsletter does not align with the news content we have to share with you. A monthly newsletter that can be produced and sent as required seems more logical.

### **Monthly electronic newsletters**

Starting in January 2018, we will be producing monthly newsletters which we will share both via email and on the BioAg website.

**This means it is important that we have everyone's email address.**

### **Do you need to update your email address with BioAg?**

So that you can continue to receive BioAg newsletters, you can provide your preferred

email address to us and we will make sure you continue to receive it.

We exercise a strict *no sharing* policy, meaning we never provide any of your details to other parties. Providing your details to BioAg, means you only ever hear from BioAg.

To update your email address, send an email to our Marketing & Administration Manager Michael Douglass at michael@bioag.com.au.

We hope you will stay with us as we embark in this new form of news sharing.



## Greatest dry matter production

To date, the annual application of BioAg Superb has outperformed all other treatments to produce the greatest dry matter (Chart 1).

In fact, this treatment had been producing the most dry matter from early on in the trial, since commencing in December 2014.

In October 2015, the biennial application of Superb overtook the annual application of SSP to consistently produce the next greatest dry matter production. The biennial treatment of Superb is now producing the greatest amount of feed.

While none of the dry matter production results are statistically significant between the top 3, the economics of these results are simple in that:

1. Both an annual and a biennial application of a sustained release form of P can out-produce SSP, a 100% water-soluble form of P,
2. Biennial applications of Superb can produce more dry matter than annual applications of SSP, while saving on spreading costs, and time for the farmer.

## Cost

While obtaining the most production possible is important, fertiliser programs must be also be cost effective to become preferred options for farmers.

This component of the trial measured the actual cost of each of the top 3 performing treatments, including product cost, freight, and through to spreading to arrive at a final cost to the farmer.

Choosing a fertiliser that is effective and able to be spread every second year edges out annual fertiliser applications in terms of cost to the farmer (Chart 2). This does not take into account the added time and angst saved for the farmer by spreading every second year, which further increases the benefits of biennial applications.

Eliminating the risk of contaminating waterways, dams and streams with water soluble P, along with the side effects of algal blooms caused by eutrophication is an added bonus.

## Cost effectiveness

Here we wanted to analyse the cost of each application against the amount of dry matter production in order to ascertain which application produced the cheapest feed.

Out of all the comparisons in this trial, this is possibly the most important as it shows the true cost to the grower of producing dry matter.

Again, the Superb (biennial) came out in front, producing dry matter slightly cheaper than Superb (annual), and two cents/kgDM cheaper than SSP (annual) (Chart 3).

## Other comments on the trial

**Effect of long term use** – The longer the trial has run the better Superb is doing, highlighting the benefits of slow release reactive rock phosphate fertilisers and our microbial inoculation of this nutrient.

**Sulphur** – All of the top three applications contain sulphur, showing the importance of maintaining this nutrient for good pasture production (the difference between Superb and BioAgPhos is the addition of sulphur).

**Nil treatment** – The production from the nil treatment continues to drop off quickly.

## Conclusion

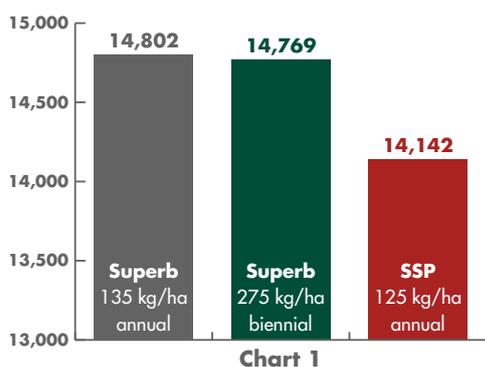
When purchasing fertilisers, often the easiest criteria to base the purchase on is the cost/tonne, but as this trial shows, this measure is not always the cheapest or the most cost effective option over a longer term.

Whilst the default pasture fertilisation has been SSP, these trials along with many growers' experiences demonstrate that BioAgPhos-based pasture fertilisers (Superb and BioAgPhos S10) perform better.

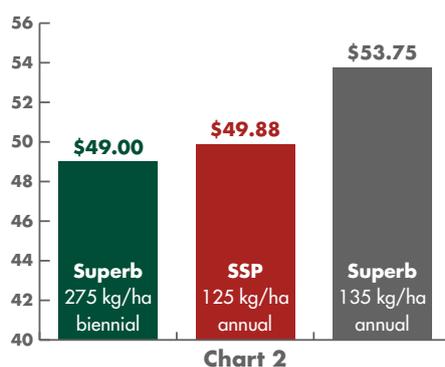
Complete trial reports can be found at [www.bioag.com.au/trials-case-studies](http://www.bioag.com.au/trials-case-studies).

For more information on this trial, contact McGeechan Farm Supplies or David Phelps from BioAg on 0438 269939.

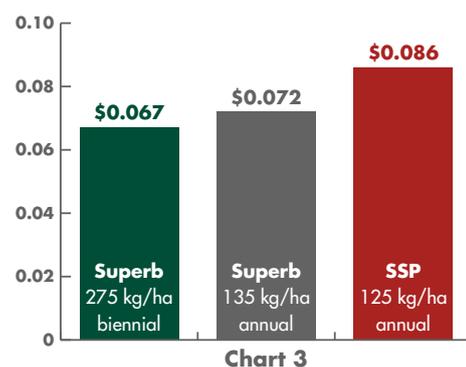
**Greatest dry matter production (kg/ha)**  
May 2014 - Oct 2017



**Cost (\$/ha)**



**Cost effectiveness (\$/kg of DM produced)**



# Summer Fertiliser Deals

- Discounted price for early payment, or deferred terms
- Avoid the Autumn rush
- Contact your BioAg Area Manager

BioAg traditionally offers Summer fertiliser deals, and this is just a reminder that we are again offering deals to our new and existing customers over Summer 2017/18.

The main benefit of taking part in our Summer deals is that it means you are not trying to buy, transport and spread fertilisers during the Autumn rush, often incurring premium prices or finding trucks unobtainable in the process.

This makes life easier for all involved.

Like lime and gypsum, BioAgPhos and most of BioAg's fertilisers are able to be stored outdoors on farm without risk of spoiling.

They can also be spread early and they will work their way into your soils without loss of efficacy.

## The two deals are:

1. A discounted price for product collected and paid for prior to the end of December 2017, and
2. Take delivery of product by Christmas with payment to be made by end of March 2017.

For further information, contact a BioAg Area Manager.

# Using Soil Biota to Deliver Productivity

For the past 18-years, BioAg has been designing fertiliser programs that combine the best practices of conventional fertilisers with modern technologies and techniques, and they all start with an understanding of the crucial role our soils play in delivering optimum production to the farmer.

A common fertiliser program often focuses on fertiliser + other inputs = plant growth, when the focus should be soil + fertiliser/inputs + moisture = plant growth. Apart from the use of common ameliorants, the vital role that the soil plays in delivering optimum production is often ignored.

Soil, via the complex biology it houses, is the sole vehicle that retains, converts and delivers nutrients and moisture to plants. The healthier and better functioning the soil biology, the more efficiently these processes will occur, hence the importance of maintaining your soils health *while* you are addressing crop or pasture needs in your fertiliser program.

Biologically enhanced systems deliver the nutrients typically provided in conventional programs, alongside biology and metabolites that assist soils to retain, convert and deliver nutrients to plants.

This is the foundation for strong, sustainable and efficient pasture and crop production.

Typically, these systems start to become self-sustaining after 3-5 years, but producers notice visible differences in the health and biota of their soils during the first year.

## BioAg fertiliser programs have been designed to:

- Produce soils that contain healthy and balanced populations of beneficial soil biology.

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## P Prices Higher

Every season farmers try to predict the price for phosphate fertiliser and the right time to buy.

Key indicators for fertiliser costs in Australia are global prices.

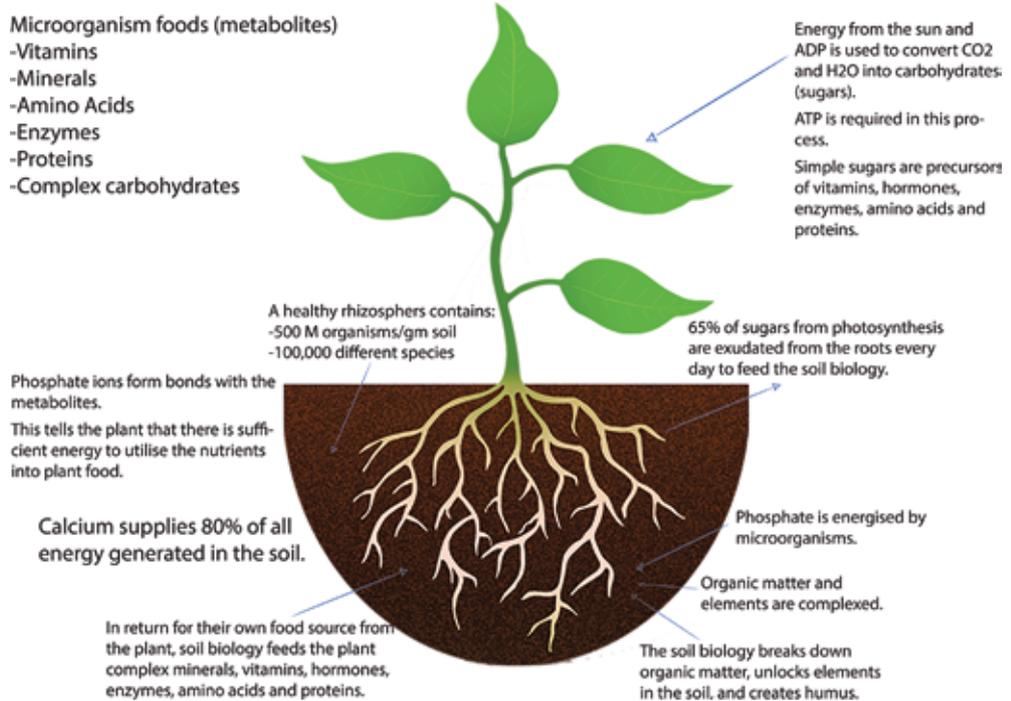
The overseas purchase of phosphate fertilisers for importation into the Australian market occurs mainly in the period November to January each season.

Year on year we are looking at benchmark prices being higher for both phosphates and sea freight, while the Australian dollar is slightly stronger than last year against the US dollar.

The recent increase in phosphate prices is underpinned by a step up in the cost of sulphur (a key raw material in the manufacture of phosphate fertilisers) and the idling of capacity in the USA. It is likely these will remain through the import period.

Given this, importers are likely to pay higher prices for their imports this coming season, and so will the domestic supply chain.

**Figure 2.0: The complexity of soil and plant interaction where photosynthesis produces energy and the conversion of CO<sub>2</sub> and water to sugars which are exuded from the roots to feed soil microbes, which in turn feed the plant nutrients from the soil.**



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# Using Soil Biota to Deliver Productivity. *Continued*

## This is a key driver towards:

- Improving production
- Improving quantity and quality of yield, and
- Developing fertiliser use efficiencies

## Benefits of BioAg Fertiliser Programs include:

- Improved soil structure,
- Improved water infiltration and retention,
- Reduced stubble retention,
- Improved germination and crop establishment,
- Reduced competition from weeds and disease,
- Improved populations of beneficial insects,
- Improved resistance to insect pests, disease and climate extremes,
- Improved crop yields and grain quality.

Understanding the interaction between physical, chemical and biological pathways and the influence of carbon over these properties is the key to delivering productivity.

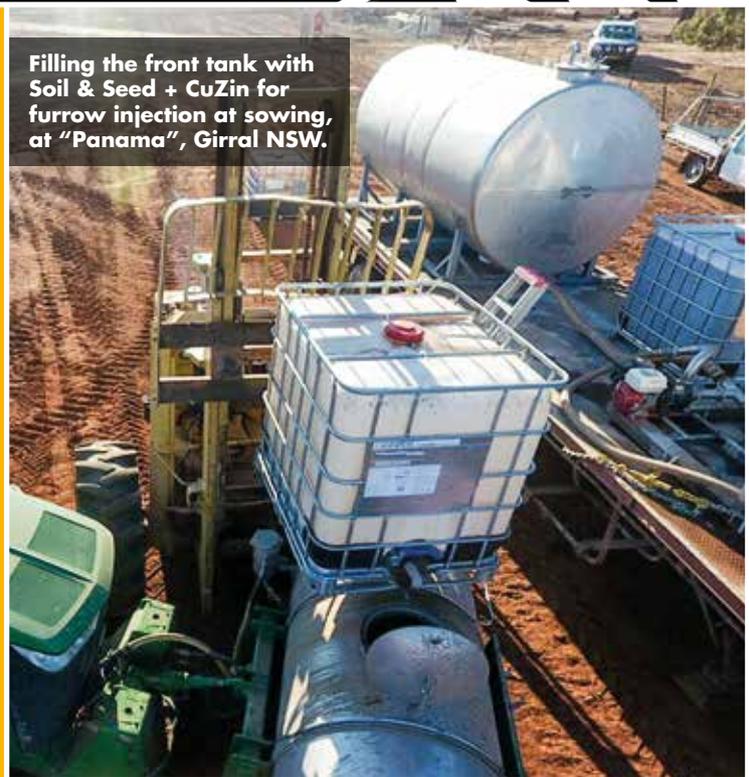
Over the past decade, the understanding and acceptance of the connection between microbes and phosphorus availability has increased. Richardson and Simpson (2011) showed increased root growth is achieved through mycorrhizal association and hormonal stimulation.

Solubilising and mineralising phosphorus from labile and non-labile fractions has been proven through exudation of organic acids in the study, while improved phosphorus cycling through biomass and organic turnover in soils is showing up in research trials worldwide.

Independent replicated trial work by Dr Bruce Kirksey and AgriCenter International (Memphis, TN) showed a significant ROI over 4 years of trial work (2013-16), as well as average yield increases of 22.1% in corn and 24.5% in soybean over the 4-years.

This is attributable to biological stimulation of phosphorus cycles aiding both energy and sugar production in crops or pastures.

An average increase of 20.7% above district standard practice was achieved over 4-years in seed cotton when AgriCenter used the BioAg microbial culture program of 9.4 L/Ha *Soil & Seed* at



Filling the front tank with *Soil & Seed + CuZin* for furrow injection at sowing, at "Panama", Giral NSW.

pre-planting injected + 4 L/Ha of the foliar *Balance & Grow* on growth stage 1 cotton + 5 L/Ha of *Fruit & Balance* applied as a foliar in growth stage two. This increase was achieved after the district standard practice for nitrogen use had been reduced by 15%.

2017-18 large-scale cotton crop trials have been established to mirror this work locally, with local crops having seen excellent emergence and plant development at this early stage.

Anyone interested in comparing BioAg treated crops to their own cotton program can contact SW-NSW BioAg Agronomy Manager, Robert Gill on 0427 247 844.

Guided tours are recommended, and can be scheduled to suit interested parties.

By Robert Gill,  
SW NSW Agronomy Manager

Ph: 0427 247 844  
Email: robert@bioag.com.au

## Christmas *close-down*

BioAg will be closing its doors over the Christmas/New Year break. We will have staff available for contact in emergencies or for urgent product pick-ups.

The closing times for the Head Office, the Liquids Plant in Narrandera, and the Solids facility in Geelong will be as follows:

### HEAD OFFICE (NARRANDERA)

Closes Sat 23/12  
Re-opens Mon 8/1

#### Emergency contact:

Anton Barton  
T: 0418 367 326

### SOLIDS (GEELONG QUARRY)

Closes Sat 23/12  
Limited pickups available from Wed 3/1  
Re-open for normal business Mon 8/1

#### Emergency contact:

John Beckley  
T: 0418 868 370

### LIQUIDS (NARRANDERA PLANT)

Closes Sat 23/12  
Limited pickups available from Wed 3/1  
Re-open for normal business Mon 15/1

#### Emergency contact:

Barry Knight  
T: 0407 593 888



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For more information,  
phone 02 6958 9911 or visit [www.bioag.com.au](http://www.bioag.com.au)