

# March 2011

## In this edition

- **2011 a Big Year for BioAgPhos**
- **Andrew Forrest Gets a Yield Benefit from Balance & Grow®**
- **If You Don't Measure it, You Can't Manage it!**
- **Woodlands Hill Sowing Trial Shows Great Results**
- **You're in Good Hands**

# BioAg COUNTRY

## 2011 a Big Year for BioAgPhos

After a year of preparation, our phosphate processing plant at Batesford (Vic.) is running at maximum efficiency and full capacity. Even the recent spell of heavy rain didn't slow us down for more than a few days. In that time, we've processed an entire shipload of Egyptian phosphate rock, and are now well into our second shipment which landed late last year.

Our new products BioAgPhos S10 (containing 10% elemental sulphur) and BioAg Superb (BioAgPhos blended with gypsum) have been tried out by farmers and well received, and have made a welcome addition to BioAgPhos in our solid products range.

In the 2010 spring we offered an "early bird" payment scheme, allowing growers to take advantage of generous discounts for



Converting phosphate rock to BioAgPhos at Batesford (Vic.)

payments made between December and April 2011. This has been well subscribed, but still has the months of March and April to run, so there is still an opportunity to make savings of around 25% per kg of phosphorus when compared with other phosphatic fertilisers. The key to the offer is "pay now and take delivery when you need the

product". In addition, we're giving a volume discount of 2% per 100 tonne purchased (up to 10% for 500 tonne) while the early bird offer is running. Given that we may be about to have our first decent cropping season in 10 years, it makes sense to get in early and take advantage of these substantial discounts.

## Andrew Forrest Gets a Yield Benefit from

Andrew "Rooster" Forrest of "Columbia Park" south of Narrandera NSW, who co-hosted a BioAg field day in October last year, has reported in on a wheat trial he conducted with wheat (we saw the trial in progress at the field day).

The wheat was sown on 19th May in a paddock which had a canola crop on it in 2009. The variety was Lincoln which was sown at 35kg/ha. The paddock was given a pre-planting application of 1 l/ha glyphosate, 1.5 l/ha Boxer Gold® (Sygenta) and 35g/ha Logran® (Sygenta), and was sown with 50kg/ha MAP. On 3rd August, the trial portion of the paddock received a spray application of 1.6l/ha BioAg Balance & Grow®, 4.5kg/ha calcium nitrate, 15l/ha Easy N® (Incitec Pivot), and 150g/ha zinc sulphate.

The crop was harvested in December (luckily, just before the heavy rains). The BioAg Balance & Grow treated portion of the paddock yielded 5.4 tonne/ha against 4.9 tonne/ha for the untreated portion, a gain of 0.5 tonne/ha.

## Balance & Grow®



High yielding wheat crop at Corobimilla, south of Narrandera

### Outcomes

The grain was graded H2/APH with 11.4% protein, a grain weight of 83.5kg/hl and screenings of 0.3%.

The cost of the BioAg Balance & Grow treatment was \$23.25/ha. The value of the additional yield, at \$400/tonne was thus \$200/ha, more than eight times the cost of the treatment.

# If You Don't Measure it, You Can't Manage it!

Someone famous (I can't remember who) once said "If you don't measure it, you can't manage it". So it is with soils. Fertilisers are expensive, and one needs to match soil nutrient deficiencies with fertiliser nutrient supply, in other words, putting the right amount of the right fertiliser products on to crops and pasture at the right time.

Regular soil testing might appear an unwarranted expense, but it is cheap insurance against poor crop yields, or unnecessary over-fertilisation. It is a good idea to have tests carried out every few years to monitor the changes occurring in your soil.

BioAg uses Reams and CEC test protocols. These analyses provide agronomists and farmers with much more information than offered by a typical soil test. The Reams test is unique as it measures the extraction of elements by the Morgan method which mimics the strength of both plant root exudates and soil biological digestion acids, thus providing information on the availability of the elements. From this information, and from a CEC ammonium acetate extraction, it is possible to measure the following parameters:

- How tightly an element is bound in the soil
- Where, when and how much of a soluble fertiliser application is likely to be bound
- How much of an element may already be in reserve to be made available to the plant
- Changes in the availability of elements over time
- The potential risk of "lock up" with antagonistic elements

In relation to the ever elusive and critical element phosphorus, the Morgan extraction, Bray 1, Colwell and Bray 2 tests provide great insight into its functionality. This allows agronomists and farmers to maximise phosphate efficiency in terms both of efficacy and economics.

Importantly, the Reams and CEC analyses, followed by a trace element extraction, provide a lot more information to support sound decision making, and therefore maximising fertiliser efficiency, element availability and grower returns.



**The agronomist's tools of trade for soil testing: the soil probe and ancillary equipment.**

Our soil tests are carried out to our specifications by the Environmental Analysis Laboratory at Southern Cross University, which provides accurate and timely results. Having regard to the transport time involved from some parts of the country, it takes approximately 10 days from the collection of the soil samples to the provision of the results. The cost of a Reams and a CEC test is \$110 (plus GST); an optional test for traces of molybdenum, selenium and cobalt costs an extra \$20. Our field agronomists all carry the tools necessary to collect

samples and record the details, and our Head Office collates soil samples for dispatch to EAL every Wednesday.

Given significant rainfall over Winter and Spring in both NSW and Victoria, it is sound practice to test soils leading into Autumn to ensure that elements are present in the correct concentrations, or to allow timely corrections to be made. Talk to your BioAg agronomist about the benefits of soil testing for your fertilisation program.

# Woodlands Hill Sowing Trial Shows Great Results



Australian Fodder Industry Association Member Bartyne (BJ) Dall is a substantial cropper and hay producer at "Woodlands Hill", Kybunga (SA). He has worked with BioAg since its inception, and with MD Anton Barton for a few years before that. Always experimenting to improve quality and production, this season he conducted a trial to compare different soil treatments at planting in terms of their effect on grain quality and yield.



**Control**



**Soil & Seed® Treated**

**Much improved head development.**

## Treatment

When planting Commander malting barley in May 2010 at 100kg/ha seed rate, he treated half of a paddock with 60kg/ha MAP, 3l/ha BioAg Soil & Seed®, 1kg /ha zinc sulphate and 500g/ha copper sulphate. The other half of the paddock (the "control") received the 60kg/ha MAP only.

Both the treated area and the control received a total of 125kg/ha urea in two applications - one at six weeks and the other at 14 weeks.

The entire crop was treated with 1.8 l/ha BioAg Fruit & Balance®, 300 gm/ha zinc sulphate, 150 gm/ha copper sulphate and 500ml/ha of Opus® (Nufarm fungicide) by aerial application during the second week of September.

## Outcomes

### Yield

The control yielded 4.2 t/ha and the trial area yielded 5.7 t/ha, a 1.5 t/ha yield increase.

### Grading

When the crop was harvested and delivered, it was graded F1 because of some black point caused by excess rain.

### Observations

Mr Dall's observations during the season were that the head size of the treated crop was significantly larger than that of the control, the vegetation was a lot fresher and

greener, the root system was much more developed and much harder to pull out of the ground. There was less disease in the treated crop, and about half the rye grass. In all, he was very satisfied with the outcome.

## Economics

The delivered to port price was \$291 per tonne with \$13 of freight included, yielding an on-farm price of \$278 per tonne. The cost of the additional treatment at sowing was approximately \$20/ha. The increased production of 1.5 tonne/ha yielded additional revenue of \$417/ha. The net benefit of the application is thus \$397/ha.



**The trial paddock – "control" on the left, treated area on the right.**

## Agronomist's Observations

The visual difference in the crop was observable from an early stage. From the initial emergence to when the crop had started to fill, the appearance of the grain

size and the vigour of the crop was "chalk and cheese". The ability of the treated area to resist disease pressure was also visible, with noticeably less leaf disease in the treated area compared with the rest of the crop, the main disease being a spot form of net blotch. With the early vigour, the weed pressure was also considerably reduced in the treated area.



**Comparing the root mass (treated crop on the left).**

Visual appearance does not always correlate to an increase in yield at harvest, but in this case the difference also showed up once the header was in the paddock. The size of the heads six weeks before harvest was 30% greater compared with that in the untreated area. This was supported by the 1.5 tonne per ha increase in yield.

This was one of those accidental trials which proved that for a small increase in initial cost, the rewards can be great.

Rob Calaby, Director, Mid North Ag Services, Clare, SA

# You're in Good Hands



**Relaxing after a hard day in the field: horticulturalist Daniel Hill (Ballarat) and agronomists Alan Spithill (Yarrowonga) and Arron O'Connell (New England).**

All members of the BioAg's team who provide agronomic advice to farmers are required to hold a university degree in a relevant branch of science (e.g. agriculture or horticulture) and undergo Fertcare® C training during their first year of service with us.

The Fertcare program is the core of the fertiliser industry's efforts to manage the issues of food safety and environmental risks associated with fertiliser use. These are issues of public concern and are the subject of public policy in which the industry bodies FIFA (Fertiliser Industry Federation of Australia) and AFSA (Australian Fertiliser Services Association) are actively involved on behalf of the industry.

The program is managed by Agsafe under its Accreditation and Training Program. BioAg is an accredited Fertcare organisation.

Every three months, our agronomists are brought together for two days of refresher training at our Narrandera Head Office, where they also share experiences from the field. This training is valuable in ensuring that the knowledge of our staff remains current and is shared by all field personnel.

Our aim is to provide our distributors and farmers with timely and accurate advice on the application of BioAg fertilisers.



**BioAg agent** Joe Romeo (Griffith Fertiliser Distributors) and horticulturalist Guna Gunawardena have been cooking up a storm in the MIA this season, focusing on wine grapes, citrus and horticultural crops to great effect. Here, Joe (left) is inspecting a shiraz crop with grower Tony Valeri. Although harvest is still some way off, Tony has noticed a substantial increase in yield and pigment accumulation since starting on a BioAg nutritional program this season. Joe can be contacted on 0412 267 444.



Better soils. Better crops. Better stock.™

**For more information,  
phone 1300 599 911 or visit [www.bioag.com.au](http://www.bioag.com.au)**

©Registered trademarks of BioAg Pty Ltd, ABN 58 086 880 211 ™Trademark of BioAg Pty Ltd, ABN 58 086 880 211