

# Spring 2012

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# BioAg COUNTRY



Well-developed wheat heads showing the benefit of a foliar application of Fruit & Balance

## Don't Leave Your Profit in the Paddock

"Food prices set to soar as worst U.S. drought for half a century forces corn farmers to abandon fields the size of Belgium and Luxembourg" trumpets Mail Online, the UK *Daily Mail's* online publication (11th August). The article goes on to say that food prices are expected to surge after the worst drought in the U.S. for half a century destroyed one-sixth of the country's expected corn crop over the past month.

The hottest July in U.S. history has caused irreparable damage to crops, forcing corn farmers to abandon fields greater in area than Belgium and Luxembourg. Soybeans, which are used for animal feed and to make vegetable oil, have also been affected, with this harvest likely to be the worst for five years. The crisis has prompted the US Department of Agriculture (USDA) to forecast record-breaking price rises, and some of the world's largest food manufacturers, including Kraft, Tyson and Nestle, have already indicated that they will pass on the increase to consumers. With grazing pastures also parched and feed prices at record highs, many ranchers are sending their animals to slaughter early because it is too costly to keep them until full size.

Similar stories (although not as severe) are also emerging from parts of the EU, Russia and Turkey. There has been a massive drought in the Black Sea region of Russia. Last year it exported nearly 62 million tonne

of grain, and that is expected drop to about 34 million this year. The prices at the moment are higher in the Black Sea than they were in 2010 when the region had the disastrous drought which led them to ban exports. (*Farm Weekly*, 16 Aug.)

The United States is usually the world's largest exporter of corn, wheat and soybeans, thus the US dry conditions are expected to reduce the global availability of exportable grain in 2012-13, especially corn. World grain prices have risen significantly over the past few months in response to the outlook for lower US grains production.

In mid-June, ABARES forecast the Australian 2012-13 winter wheat crop production to be around 38.5 million tonnes. If this is achieved, it will be around 24 per cent higher than the average of 31.1 million tonnes over the five years ending 2010-11. (*Weekly Australian Climate, Water and Agricultural Update*, ABARES, 16 August).

Although it's ironic that one region's disaster provides opportunities for another, the high prices being offered this year represent an opportunity for Australian farmers which must not be lost.

There's no denying that the moisture profiles of soils in the cropping belt are variable, and that there are quite a few farmers hanging out for a good spring, but if you've got moisture, or can irrigate, you have the opportunity to

get the maximum yield from your crops with an application of Fruit & Balance. "The window of opportunity is short, and it's now!" says BioAg's Managing Director, Anton Barton. "There are only a few weeks left to get this extra value from your cereal crops by applying Fruit & Balance, and it will be a pity to miss out," he declares.

BioAg Fruit & Balance is formulated to increase flowering, fruit set and soil microbial activity. It delivers a rich source of plant-available phosphorus when the plant is under peak load, stimulating strong fruiting and enhancing yield potential. Fruit & Balance also enhances the nutritional value and quality of grain by increasing sugar levels in the plant.

There's plenty of evidence that it works; see, for example, the Tamworth independent wheat trial report (April 2012), which showed a 12% increase in yield, and *Fruit & Balance Delivers at Nyngan* (BioAg Country, June 2011), where the farmer achieved a 1% increase in protein and a 28% increase in yield for very little additional cost. Both of these articles can be found on our website.

If you're thinking about putting out a bit more nitrogen, put out the Fruit & Balance with UAN, or put it out with fungicide. It'll work under pretty well all conditions.

Most importantly, **don't leave your profit in the paddock!**

# University Trials Show Great Yield Gains in Maize

In the Winter 2010 edition of *BioAg Country* we reported on a trial we were conducting with the University of Peradeniya in Sri Lanka, applying various BioAg biotech nutrition programs to maize.

"The treatment showing the greatest improvement comprised BioAgPhos as the phosphorus fertiliser, Soil & Seed as the soil conditioner, and two BioAg foliar applications. The combined effect of these nutrients produced yield, revenue and quality benefits in maize cultivation over the conventional Sri Lankan practices applied in the control" the researchers reported. "The results indicate that the BioAg treatments have diverted most of the energy towards reproductive growth, thus the BioAg treated plants had lower vegetative growth".

The trial showed that the BioAg fertiliser applications provided benefits in crop yield (11% increase), revenue and quality. An additional investment of approximately \$33 per ha on BioAg fertiliser has increased the value of the crop revenue by \$121 per ha over that of the conventional Sri Lankan practice used in the control plots.

In 2011/12 we again engaged the University to undertake another trial on maize to confirm the results. In this series we used the Sri Lankan Department of Agriculture recommended fertilisation practice (urea, TSP and MOP) as the control.

The researcher concluded that "there is a significant fertiliser treatment effect on root, stem and grain development". The BioAg treatment adding BioAgPhos, Soil & Seed and Balance & Grow to the conventional practice "demonstrated significantly better results in respect of these three parameters.



**BioAg Technical Director Jep Gates at the trial site at the Dodangolla Research Station at the University of Peradeniya, Sri Lanka, 2011**



**The trial plots at Dodangolla Research Station**

(particularly P), is important for maize crops. This study has shown that (this treatment) had the highest AUE-P (Agronomic Use Efficiency - Phosphorus) at 99.5 kg/Ha, which was 74% better P uptake than the control. A similar trend was demonstrated with AUE N (78% higher) and AUE-K (79% higher). The enhanced root development facilitated efficient nutrient uptake, leading to a 25% better yield than that of the control.

Two of the BioAg treatments, one comprising 25% P from TSP and 75% P from BioAgPhos, Soil & Seed and Balance & Grow and the other containing 100% P from BioAgPhos, Soil & Seed, Balance & Grow and Fruit & Balance have demonstrated overall better performance data when compared with the control treatment.

In summary, the researcher found that "the BioAg products tested improved the Agronomic Use Efficiency of N, P, K fertilisers; two of the BioAg treatments exhibited the best grain yields (best result 25% higher than the control). The best of the BioAg treatments consistently demonstrated better vegetative growth, root development, and reproductive maturity data, than the other fertiliser treatments, and the two best BioAg treatments produced better results (vegetative growth and the yield) than the 100% soluble form of phosphate (TSP)".

These results are consistent with those obtained in farm trials with maize in Australia, namely that BioAg nutritional programs offer substantial measurable improvements on grain yield.

The full reports can be viewed at [www.bioag.com.au](http://www.bioag.com.au) (Products & Programs, Trial Data).

... It is therefore possible to conclude that the fertiliser combination ... is more favorable for better yields in maize crops, than the standard fertiliser application.

Previous studies by the researcher have shown that BioAg products generally enhance initial root growth, which was confirmed in this trial. Enhanced hairy root growth, which enhances the nutrient uptake



**See Us at  
Henty & Elmore  
This Spring**

**As in previous years, we will have a tent at the Henty and Elmore Machinery Field Days. Henty runs from 17th to 20th September and we will be at a new site D109. Soon after we'll be at Elmore, from 2nd to 4th October, at Site 159.**

**If you're visiting either of these field days, drop by our tent; we'll be happy to see you.**

# Local Trials Show BioAg's Biotech Nutritional Programs Produce Big Yield Increases



*Trials in the Murrumbidgee and Namoi Valleys this season have demonstrated that BioAg's biotech nutritional programs for cotton have produced yield increases of 8-9%. At prevailing prices, this represents an extra \$300-400 per ha.*

Harvesting the 2012 cotton crop at Whitton in the Murrumbidgee Valley

## Murrumbidgee Valley Trials

Major cotton growers in the Murrumbidgee Valley, and long-time customers of BioAg, Roger and Tim Commins conducted trials this year on the impact of our biotech nutrients on part of their crop of 74BRF variety cotton. The paddocks for the entire crop were prepared with BioAgPhos®, and 3-4 ha trial plots were treated with Soil & Seed® just before emergence. Balance & Grow®, and Balance & Grow plus Soil & Seed®, were applied to the trial paddocks at flower induction (30-45 days after sowing), and Fruit & Balance® at boll maturation a month later.

### The Results

In both trial plots, there was a significant increase in boll counts and in yields. The lint and yield increase in each case was 9% (0.9 bales) over the control plots. Agronomically, the plants were more compact, with the spacing of the first and second fruiting nodes closer to the plant, and the soil after picking was more friable.

## Namoi Valley Trial

Tamworth Rural Consultants agronomist Russell Ison conducted replicated trials, commencing in October 2011, on a five ha site on the Breeza Plain in the Namoi Valley (NSW), comparing BioAg's cotton nutritional program with district practice as a control on Sicot 71 BRF cotton. Each trial was designed as a randomized complete block design.

There was a significant difference in post planting vigour between the BioAg treatment and the control. The Leaf Area Index was 12% higher in the BioAg plot and 8% difference in plant height four weeks after planting. By mid-January, although there was less vegetative growth on the BioAg plants, the root system was more developed. The plants in the BioAg plot were more compact with reduced node spacing, and the boll counts were higher.

The BioAg treated plants were more mature at defoliation time, and there was less vegetative growth. Had it been practical, the BioAg treated cotton could have been defoliated 8-10 days before the conventionally treated plants. The reduction in rank growth saw an improved defoliation result in an area where cold weather often causes problems.

### The Results

In this independent trial, the BioAg treatment produced a yield increase of 8% in lint yield and bale harvest (0.7 bales) over the conventionally grown cotton.

### More Details

For more details contact Phil Kelly on 0438 269 939 or go to [www.bioag.com.au](http://www.bioag.com.au)

### Commins Trial Boll Counts

Variety: 74BRF		Count Date: 7th May 2012		
	Trial Paddock 1.		Trial Paddock 2.	
	Control	BioAg Treatment	Control	BioAg Treatment
Av. Boll Count	113.3	145.3	121.7	143
Increase		<b>28.2%</b>		<b>17.5%</b>

### Commins Trial Harvest Results

Variety: 74BRF		Harvest Date: 6th July 2012		
	Trial Paddock 1.		Trial Paddock 2.	
	Control	BioAg Treatment	Control	BioAg Treatment
Area (ha)	3.80	2.97	3.07	3.07
Total Vol. (bales)	37.0	31.4	30.2	32.7
Av. Yield (bales/ha)	9.7	10.6 <b>9% increase</b>	9.8	10.7 <b>9% increase</b>
Lint Wt (kg)	8,049	6,833	6,570	7,130
Lint Wt kg per ha	2,119	2,301 <b>9% increase</b>	2,140	2,323 <b>9% increase</b>



Early plant vigour in the Namoi Valley trial

# Agent Profile - Andrew and Rhonda Watt



Andrew & Rhonda Watt outside their new premises in Trangie.

Andrew and Rhonda Watt are agents for BioAg in the Central West of NSW where they work closely with BioAg's Territory Manager, Phil Kelly in servicing the area.

The Watts have been BioAg agents since the company began in 1999. Agriculture in their territory includes cereal crops, cotton, pasture and livestock production. "Back when we started, we were looked upon as 'alternative' and even 'strange' because we saw that soil and plant health was so important" says Rhonda.

A farmer with many years of practical experience, Andrew is known as a 'quiet

performer' in the paddock, producing successful crops in marginal country under a variety of climatic conditions, something he has found to be interesting and rewarding.

Quite a number of BioAg's long standing customers are based in the Central West and are serviced by the Watts. They include Bill Fergusson of *Dunedin*, Wayne Brabrook of *Tallangar* and Paul Kerin of *Fairfield* at Trangie.

Because of the growth in the market, the Watts decided this year to buy premises on the Mitchell Highway at Trangie in which to store BioAg products for local delivery.

The availability of local supply has been quite a hit with our customers in the area.

Rhonda's role in the business is that of freight logistics, stock management and looking after the accounts. She and Andrew work well together, complementing each other to run a successful and well organised business from their home in Cumnock. "Operating from home, we are able to talk to customers outside of normal office hours" says Rhonda. "We're happy to chat with farmers at any time".

Andrew and Rhonda can be contacted on (02) 6366 1638 or 0429 661 638.



## New Trial Results at [www.bioag.com.au](http://www.bioag.com.au)

**Since the last edition of BioAg Country was published, a number of reports have come in from the various trial sites we have established in Australia and off-shore.** For those interested in the hard data and the science, these may be found at our website. The most recent trials posted include:

- Cotton production - Tamworth (NSW)
- Maize production - Sri Lanka
- Potato production - India
- Banana production - India

The Tamworth cotton trial is described on page 3. The Sri Lankan maize trial produced a 25% increase in yield over district practice; the Indian potato trial yielded an additional 3% of much higher quality tubers, and the banana trial an increased yield of 22% and

a huge increase in fruit price - between 22% and 39% at different market.

If you'd like to know more, read the reports at Products & Programs - Trial Data, and call us if we can help you further.



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