

## Winter 2012

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# BioAg COUNTRY



## Get Set for Spring with Balance & Grow

As winter crops are beginning to emerge over the next couple of months, an application of **Balance & Grow**<sup>®</sup> will set them on the path to greater grain yields and quality.

BioAg liquid nutrients have been specially developed to improve the fertility of the soil. They are manufactured from a range of natural and organic ingredients. The BioAg system focuses on microbial activity and the availability of calcium, phosphorus and other nutrients. The result is a complete range of liquid cultures used in conjunction with the best components of a conventional fertiliser program. They contain complex and potent sources of vitamins, minerals, proteins, enzymes, amino acids, carbohydrates, beneficial organisms and growth promoters.

Whilst Soil & Seed<sup>®</sup> is applied at sowing (for cropping) and at pasture establishment or rejuvenation to deliver essential nutrients and metabolites

and stimulate soil microbial activity, **Balance & Grow** and **Fruit & Balance**<sup>®</sup> are applied during the growing season to promote vegetative growth and seed and grain development.

**Balance & Grow** has been developed to directly increase the vegetative growth energy of the plant, and to increase and expand the soil's beneficial microbial activity. The soil's capacity to utilise moisture and fertiliser for the purpose of feeding plants is enhanced as is the plant's capacity to utilise them.

**Balance & Grow's** benefits are that it reduces calcium deficiency in plants, facilitates vegetative growth and balances the plant's minerals and physiology. It provides the plant and soil with the appropriate nutrients to stimulate and support growth. It enhances the yield and growth potential of the crop and usually increases the plant's sugar (Brix) level.

### **Trials and Experience Confirm It**

As recounted in an earlier edition, Agrisearch Services Pty Ltd reported on an independent evaluation of BioAg products for improving crop growth and yield in wheat" near Balaklava (SA) in 2011. In its summary, the report notes that "All treatments...significantly increased yield. The mid-tillering application of BioAg Balance & Grow applied as a foliar application provided the greatest improvement in crop yield... The application of 3 L/ha of Soil & Seed at pre-sowing plus that of 2 L/ha Balance & Grow as a foliar treatment at mid-tillering produced the greatest improvement in crop yield (39%)."

Andrew "Rooster" Forrest of "Columbia Park" south of Narrandera NSW reported last year on a Balance & Grow trial he conducted with Lincoln wheat. The crop was harvested in December and 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 (10%). 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.

## Cotton Production Grows in the Murrumbidgee Irrigation Area

Cotton production in the Murrumbidgee Area (NSW) has grown from a few thousand hectares per year in the early 2000s to 16,000 ha last year and an estimated 35,000 ha in 2012, and is forecast to increase to more than 40,000 ha in 2013. The growth has been such that a group of local entrepreneurs, headed by brothers Roger and Tim Commins, are establishing a gin at Whitton in the centre of the area, which is due to be commissioned this harvest season.

The Commins brothers, who are major cotton growers, are long-time customers of BioAg and are conducting trials this year on the impact of our liquid nutrients on part of the crop. The paddocks for the entire crop were prepared with BioAgPhos<sup>®</sup>, and five ha trial plots have been

treated with Soil & Seed<sup>®</sup> just before emergence. **Balance & Grow**<sup>®</sup> (and **Balance & Grow** plus **Soil & Seed**) were applied to the trial paddocks at flower induction (30-45 days after sowing), and **Fruit & Balance**<sup>®</sup> at boll maturation a month later.

BioAg's Technical Director, Jep Gates, has been keeping a close eye on the crop as harvest time has approached. "On the basis of the boll counts and general observation of the quality of the bolls before harvest, it is clear that the liquid nutrients are going to have a positive impact on cotton yield and fibre quality" he said. "It will be some weeks yet before harvest data is available, but we will post the results of these trials on our website as soon as they become available."



**Cotton crop in the MIA close to harvest**



**Cotton bales awaiting transport to the gin**

# Featured Distributor - Tamworth Rural



Tamworth Rural's 2011 wheat trial on the Oxley Highway, west of Tamworth, testing the efficacy of BioAg's Soil & Seed and Fruit & Balance.

BioAg's distributor in the Tamworth area is Tamworth Rural, formerly the Tamworth Rural Co-op, which changed its name and corporate structure in 2008. Established in 1948, Tamworth Rural has been a respected rural merchant in the district for more than 60 years, with its Head Office in Tamworth and a branch in Moonbi, 20 km to the north east on the New England Highway.

The business focuses on high quality agronomic advice, and specialist skills in animal and equine health and nutrition. It provides animal health products, fertilisers, crop protection chemicals, stockfeed and general rural merchandise.

BioAg's Northern NSW Territory Manager, Arron O'Connell has been working with Tamworth Rural Senior Agronomist Russell

Ison for the past three years, establishing efficacy trials in cereal crops and pastures on a number of farms in the district. The results of these trials have been published in *BioAg Country* as they have come to hand.

In this edition, we report on lucerne trials with BioAgPhos S10, our sulphur enriched phosphate fertiliser, and in December 2011, we described the outcome of wheat trials on crops treated with Soil & Seed and Fruit & Balance.

When asked about his view of the collaboration between BioAg and Tamworth Rural on the trial program, Russell responded "We have been working closely with the BioAg group for a number of years conducting cropping and pasture trials. We have been gaining positive results



from our trials in both cropping and pasture situations. We are proud to be working with a company whom we see as being the one of the pioneers of biological farming."

For further information on the Tamworth Rural trials, contact Russell Ison on 0428 654 487, or Arron O'Connell on 0429 820 360.

## BioAg Pasture Nutrition Beats District Practice in New England

Recently, our Northern NSW Territory Manager, Arron O'Connell took part in a field day at Tamworth in which Tamworth Rural's Senior Agronomist, Russell Ison, presented the results of trials conducted during 2011 and 2012 on the topdressing of lucerne. Two of the products evaluated in the trial were BioAgPhos S10 and BioAg Soil & Seed. After a meeting at the Tamworth Towers Seminar Room to discuss the results of the trial, the participants visited Joe Madirazza's property in King George Avenue Tamworth to view the trial plots. Here, Arron gave a short presentation on the use and benefits of BioAg nutrition in pastures

In the Tamworth Rural trials, the lucerne was planted in May 2011 in an irrigated paddock. Each of the topdressing applications were applied to four replications in 18 m<sup>2</sup> plots and the weights of four cuts between November and March were measured. Both the BioAg treatments (BioAgPhos S10 and BioAgPhos S10 plus Soil & Seed) performed better than the control (district practice - SSP at 125 kg/ha), although BioAgPhos S10 alone gave the better result as shown in the following table.



Tamworth Rural's Senior Agronomist, Russell Ison (L) describing the lucerne topdressing trials.

BioAgPhos S10 trial plot.

Interestingly, Russell observed that the plants in the BioAg plots were in better health than those in the other plots, exhibiting less leaf spotting and less Lucerne Flea infestation.

For more information about this trial and BioAg nutrition programs for pasture, call Arron O'Connell on 0429 820 360.

Treatment	Cut 1	Cut 2	Cut 3	Cut 4	Total yield	Comments
<b>BAP S10 + S&amp;S</b>	2673	5181	5322	4780	17956	Less leaf spotting & Lucerne Flea infestation
<b>BAP S10</b>	2673	5232	5426	4904	18235	Less leaf spotting & Lucerne Flea infestation
<b>Single Super</b>	2621	5080	5218	4646	17565	

# Improving Seed Potato Production in India

During 2011/12 BioAg has been busy in India testing its programs on various crops, both in preparation for entry into the South Asian market, and also to add to its store of objective data for use in its home markets.

One of the major crops on which we commissioned independent trials was seed potatoes. Potatoes are an important crop in India, with 1.8 million ha being planted to this crop annually, requiring 2.7 million tonne of quality seed potatoes. However, at this time, there is only about 0.5 million tonne of certified seed tuber available and there is an imperative to increase supply as rapidly as possible. Trebling production is fraught with difficulties including soaring production costs, high disease pressures and difficult climatic conditions.

Potatoes are grown in the warmer states of Uttar Pradesh, West Bengal, Bihar and Gujarat which are subject to very high disease pressures and are not considered suitable for certified seed potato production.

On the other hand Punjab, Haryana, and Himachal Pradesh are cooler and are declared to be the major seed potato producing areas in the country. Thus, the major potato producing states depend entirely on seed tubers from Punjab and the adjacent states which are relatively free from soil borne and viral diseases affecting potatoes.

A factor affecting agricultural production in India generally, and potato production in particular, is the very high cost to farmers of chemical fertilisers, even after allowing for government subsidies. As a result, governments have encouraged farmers to incorporate biological inputs in their nutrition programs.

The trials just completed by the Centre for Strategic Studies in Kolkata on BioAg's behalf have demonstrated improved seed multiplication (tuber induction), improved dry matter content and specific gravity, and improved starch content.

## The Results

Trials were carried out on G0 to G1 and G1 to G2 production

### G0-G1 Production

Tuber germination of G0 seeds and the initial vegetative growth rate is generally slower than in subsequent generations, and in this trial the plants had a relatively small period (<30 days) of favourable abiotic conditions for tuber bulking. The frosty and foggy weather started earlier than in previous years and lasted longer resulting in a lower yield than normal. This factor and late planting adversely affected the yield in G0-G1 production

Nonetheless, the results are encouraging. The BioAg additions to the normal fertilisation regime led to higher yields, greater uniformity in tuber size, a higher percentage of seed size tubers and a lower cost of production.

G0-G1 Production Trial	Yield (T/Ha)	Tuber No./m <sup>2</sup>	G1 production cost/T (INR)	Seed size tubers (%)
Control	5.4	29	125,000	77%
BioAg Fertilisation Treatment	5.8	23	116,379	87%

### G1-G2 Production

This trial suffered the same abiotic problems as described above, but significant improvements in G1-G2 production were obtained with the BioAg nutritional applications.

G1-G2 Production Trial	Production cost per T (INR)*	Yield (T/Ha)	Tuber No./m <sup>2</sup>
Control	11,417	25.4	37
BioAg Treatment 1	10,691	27.1	56
BioAg Treatment 2	10,790	26.9	57
BioAg Treatment 3	10,478	27.7	44

(\* 1 AUD = 50 INR approx.)

The application of Soil & Seed (T1), Soil & Seed plus BioAgPhos (T2), and Soil & Seed plus BioAgPhos plus BioAg (T3) have demonstrated early vegetative growth and subsequent tuber production (T/Ha, and tuber numbers). In addition, the treatments had a positive response on tuber multiplication which is an important quality parameter in the seed potato industry.

Although this was an initial seed potato trial, carried out under adverse weather conditions, the results are quite encouraging, demonstrating improved production yields and quality, and an improvement in farmer returns. This has led us to consider continuing the trial program next season. For a copy of the full trial report, please contact Guna Gunawardena at BioAg.

These trials have produced similar results to those undertaken at Ballarat (Vic.) last year (see *BioAg Country*, June 2011)



BioAg's seed potato trial plots in Haryana State, in northern India.

# Upsizing the Narrandera Production Plant

With things back to relative normalcy after the long drought (not to mention the floods over the past two years), BioAg has embarked on an expansion plan, beginning with an extension to its Narrandera (NSW) liquid nutrients plant of some 50 per cent in floor area, comprising a new dry goods and finished products store, packing line and loading bay. Removing these activities from the main factory building gives us the capacity to double liquid nutrient production in a staged manner to meet the demands of our expanding markets, both in Australia and offshore.

We commissioned Telford's Building Systems of Shepparton to design and construct a shed to our specifications, and saw it erected on our



site in the space of a couple of weeks after the concrete panels and steelwork arrived on site. The final stage was the laying of the concrete floor which is now complete, and our factory staff are now busy moving stock and equipment into the new building from the factory.

"Things have come a long way since we started production in a farm shed at Yenda 13 years ago", says Managing Director Anton Barton.

"We have much greater capacity than we had then, and much greater control over quality and efficiency at the Narrandera factory. Our phosphate products plant in Geelong has the capacity to store and handle 30,000 tonne of material as well."



## Morellofert Moves

**BioAg's Mildura distributor David Marelo has branched out, establishing a new business Morellofert Pty Ltd.**

David has worked closely with BioAg's Sunraysia Territory Manager Marco Retamoza since 2007, establishing a solid business in our liquid nutrients in horticulture and tree crops supported by Marco's agronomic skills (Marco features in Morellofert's winter newsletter).

Morellofert has a new showroom at I welcome you to visit our new showroom at 28 Eighth Street Mildura, between San Mateo and Etiwanda Avenues (between Sprint Auto Parts and HESCO). Look for the BioAg Distributor sign out front. David can be reached on 0407 234 080.

## new [www.bioag.com.au](http://www.bioag.com.au) GOES LIVE

**Recently, BioAg went live with its updated website which contains a wealth of knowledge available to farmers, agronomists and distributors.**

With all of its product brochures, case studies and trial results on line, the site boasts more than 100 pages. There is an introduction to biological farming and the BioAg approach, and details of soil and leaf testing procedures, as well as the forms needed to have the soil testing done. Most importantly, there are details of the locations of our Territory Managers, so that advice can be sought from the one who knows the farming conditions in a particular region.

The site is presently being modified so that it can be viewed on smart phones.

Our thanks to Duncan Rorrison, who managed this six month project competently and with patience.



The BioAg webpage in its winter livery.

## BioAg Customers are NICE PEOPLE

As BioAg's Managing Director, Anton Barton, was travelling west from Inverell (NSW) on the Gwydir Highway recently, he got a flat tyre. As he started to jack up the wheel, a guy came along in a ute and offered to help change it over. It was not until the job was almost complete that Anton realised that his helper was a long-time customer - Bob Albinus who farms near Inverell. This just goes to show that BioAg customers are nice people. Thanks Bob.



Better soils. Better crops. Better stock.™

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