

## Autumn 2013

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# BioAg COUNTRY

## BioAg Rice Trial

### PRODUCES 40% YIELD INCREASE IN INDIA

BioAg is delighted with the results of the latest independent trial carried out at the West Bengal Government Chinsurah Rice Research Station, which produced a 40% higher crop yield than that achieved using standard district practice.

Since 2010, BioAg has been carrying out trials on the efficacy and efficiency of its biological fertilisers on various crops of major importance to the Indian economy including bananas, sugarcane, maize and cotton. Perhaps the most important crop of all is rice upon which much of the population of Asia relies as a staple. Accordingly, almost all the countries in this region have special agricultural model to handle rice cultivation. Our project has been to determine if applying BioAg biological nutrients to the standard fertilisation practice will lift grain yields and quality and provide a net economic benefit over standard district practice (fertilisation practice recommended by the Agriculture Department of the Government of West Bengal).

In the 2012 autumn-winter rice production season (June/Aug sowing - Nov/Jan harvest), we commissioned a trial at the Chinsurah Rice Research Station, operated by the Government of West Bengal, in the north east of the country. In this trial, as with previous trials in the same region, we have used the flood and salt tolerant rice variety *Swarna* which is very popular in Gangetic plains for these reasons.

As rice is grown under submerged conditions, nutrient efficiency is very low. This growing system leads into high nutrient leaching, particularly of nitrogen, phosphorus and sulphur. This high nutrient leaching has significant consequences for rice yield, water quality of major river systems, and the economics of rice production.

The typical district fertilisation practice in that area is to apply urea, di-ammonium phosphate (DAP), muriate of potash (MOP)

and zinc sulphate at sowing and more urea 50 days after planting. In all of our trial plots, our biological phosphate fertiliser *BioAgPhos* and our soil additive *Soil & Seed* were applied as well, and our foliar treatments *Balance & Grow* and *Fruit & Balance* were applied later in different concentrations. Although the concentrations of the inputs changed (e.g. by substituting part of the DAP with *BioAgPhos*), the overall levels of nitrogen, phosphorus and zinc were maintained; that of potassium was reduced by 25%.

The control plot was treated with 135 kg/ha urea, 272 kg/ha DAP, 133 kg/ha MOP and 12 kg/ha zinc sulphate. The best result was achieved on a plot treated with 213 kg/ha urea, 68 kg/ha DAP, 100 kg/ha MOP, 6 l/ha *Soil & Seed*, 346 kg/ha *BioAgPhos*, 12 kg/ha zinc sulphate, 2 l/ha *Balance & Grow* and 2 l/ha *Fruit & Balance*.

Compared with the control plot, the best BioAg treatment showed an increase in plant height at harvest of 43%, 5% more tillers, 5% greater panicle length and 33% more grains per panicle. Importantly, the grain yield was 40% higher than in the control crop (6.3 t/ha compared with 4.5 t/ha).

At a domestic rice value of around A\$181 per tonne, the yield per ha of the BioAg crop was A\$1,139, compared with the control at A\$ 814 - 40% more. The fertiliser input cost per ha of the control was approximately \$182 and that of the BioAg treatment was \$240. The practical implication of the increased yield is that an additional input cost of \$58 per ha produced an additional \$325 per ha, returning more than 5.5 times the additional input cost.

This trial has served to confirm the results of earlier trials by demonstrating that under warm, moist soil conditions, BioAg technology promotes high nutrient performance. *BioAgPhos* is a slow release



Planting out the paddy at Chinsurah Rice Research Station



The yield is influenced by panicle size. The highest yield came from trial T3, incorporating *BioAgPhos* and the BioAg liquid fertilisers.

form of phosphate fertiliser, improving phosphorus uptake efficiency, and the liquid fertilisers release metabolic amino acids which promote plant nutrient uptake.

For further information, call BioAg agronomist Guna Gunawardena on 0488 593 536.

# BioAg Establishes Base in **GUNBOWER**

Rich River Seeds & Fertiliser was appointed a BioAg distributor in Gunbower in 2012. Gunbower is a community in Northern Victoria between Echuca and Kerang, in the territory managed by BioAg agronomist Daniel Hill.

Proprietors Stuart and Wendy Rowsell began their careers 28 years ago growing lucerne for seed and hay, and cereal and legume crops. They came from Keith in South Australia which styles itself "the lucerne capital of Australia". Moving to Gunbower in 1997 and continued growing pastures of lucerne, clover and grasses on their property.

Seeing the opportunity to capitalise on their skills and knowledge assisting farmers to manage and develop better pastures Stuart and Wendy established their business Rich River Seeds & Fertiliser to supply farmers in the district with a wide range of seeds and fertilisers, spreading services, friendly advice and reliable service.

"Rich River Seeds & Fertiliser has operated in the area for the past seven years and supplies an extensive range of pasture and forage seeds, fertilisers and chemicals", says Stuart. "We also provide strong agronomic support services including soil testing, crop inspections, product recommendations, trials and research and development activities. Strong partnerships have been built up with reputable companies to enable us to provide quality products and services."

Stuart and Wendy also use their property as a demonstration site for seed varieties and an assortment of fertilisers. "It is important to us to provide a prompt and reliable service to customers to help them establish high yields from sustainable pastures." observed Stuart.

"In recent years the market has been growing for biologically active fertilisers that feed the soil as well as feeding the plant. In order to service this requirement we decided to supply a range of biologically active products that include BioAgPhos®, Pasture Primo® and BioAg Superb®.



**Stuart & Wendy Rowsell (kneeling) with the Rich River Seeds & Fertiliser team.**

In the first year we worked together with BioAg on a number of dairy properties in the area, with the soil types ranging from Cohuna clay loams to Macorna clays. Having demonstrated improvements in soil health, and increases in pasture production, the number of clients we are working with is increasing. The soils in this area are generally always lacking calcium, but have moderate levels of phosphorus, and Pasture Primo® represents a great option at 4% phosphorus and 39% calcium."

For further information contact Rich River Seeds & Fertiliser on 03 5487 1269, or Daniel Hill on 0448 453 412.



**Early stage root development - BioAg treated plant on the right.**

## Return on Investment Doubled

### Dryazel barley trial 2012

Mid North Ag Services (Crystal Brook, SA) customer, Roger Burt at Mundoora ran his first trial on a BioAg program in the 2012 season and was delighted with the results.

The Burt family have been farming 3,000 acres (1,200 ha) on *Dryazel* at Mundoora, between Clare and Port Pirie, for the past 30 years. On advice from Mid North's Merchandise Manager, Ben Hook, and BioAg's Daniel Hill, they decided to a 100 ha farm trial against a control on Fleet barley in sandy soil which had previously been planted to wheat.

Both the treatment area and the control area of the trial received 60 kg/ha of 23:16:0 NPK "down the tube". The treatment comprised 2 l/ha of Soil & Seed (mixed with Treflan® and Roundup®) prior to planting, and 2 l/ha Balance & Grow at the mid-tillering stage.

Roger observed that the treated area yielded 300 kg/ha more grain than the control area, an increase of 10%. The treated area returned an additional \$75/ha (at a barley price of \$250 per tonne) for an additional on-farm cost of \$30 per ha. "In a year of low growing

season rainfall, I more than doubled my return on investment by using the BioAg liquid products," he said.

Mid North's Ben Hook, examining the early season root development photos, remarked "the Soil & Seed showed magnificent root establishment and development, right up to the dividing line between the two areas."

For further information, contact Phil Toy on 0458 440 225.

# BioAgPhos S10 Shows its Worth in the Sulphur Deficient Coastal Areas of Northern NSW



Barrington farmer Eric Leslie with Gloucester Rural Supplies' Troy Higgins in a BioAgPhos S10 treated paddock.



Gloucester Rural Supplies Manager Troy Higgins (R) with BioAg Area Manager, Northern NSW, Arron O'Connell.

Eric Leslie of *Roadsview* at Barrington NSW first applied BioAgPhos S10 to his pasture two years ago and has seen the results in more prolific grass growth, especially in clover. "It was obvious where the spreader truck applied the product, with a significant improvement in growth compared to the areas of the paddock that were not treated," said Eric. "The stock have shown a big improvement in condition, and with the added sulphur in BioAgPhos S10 I've noticed very few ticks". At the end of September 2011, Eric applied 250 kg/ha of BioAgPhos S-10 to his pastures - enough to last two years. This is possible because of its resistance to leaching and locking up.

Gloucester Rural Supplies at Gloucester NSW (south west of Taree) stocks the high sulphur blend BioAgPhos S10. It contains 11.7% phosphorus, 31% calcium and 10% elemental sulphur. About 40% of the phosphorus content is available immediately for plant use, while the remainder is slowly digested by micro organisms and added to the nutrient reservoir in the soil. The improved microbial activity also

unlocks phosphate, calcium and sulphur already in the soil, leading to long term benefits in soil structure and fertility.

BioAg's Northern NSW Territory Manager, Arron O'Connell observes that BioAgPhos S-10 suits the high rainfall acidic coastal soils as it is not water soluble and won't leach out or 'lock up', and thus will keep working for much longer than conventional fertilisers, doing a much better job than single superphosphate. It can be easily mixed with lime, gypsum, manure, ammonium sulphate or elemental sulphur and applied with a belt spreader or spread by air."

Gloucester Rural Supplies has represented BioAg in Gloucester and the surrounding districts for the past three years, distributing its biologically active solid and liquid nutrients for agriculture.

Contact Arron O'Connell on 0429 820 360, or Troy Higgins on (02) 6558 1500 for further information.

## Welcome McGeechan Farm Supplies

We welcome our newest distributor, McGeechan Farm Supplies, the CRT dealer in the historic town of Crookwell on the Southern Tablelands of New South Wales, not far from Goulburn.

The present owner, John McGeechan, started in the farm merchandise business when his father and brother bought the retail business in Crookwell in 1982. John officially took control of the enterprise, which has always been a CRT franchise, in 1983. Including John, McGeechan Farm Supplies employs four people, and focuses on the sheep, beef and wool industries, which are the lifeblood of the agricultural sector in the region.

Concerning BioAg, John says "I like what BioAg offers. They have alternative products that look at building the natural fertility of the soil while also supplying key nutrients. They have great technical support, and offer a good business model that fits in with our concern here in Crookwell. They only deal with independents and I like that."

To contact McGeechan Farm Supplies, call John and the team on (02) 4832 1066.



The McGeechan Farm Supplies Team. From left Mick Carlon, John McGeechan, James Fraser, Gearin Price. Photo courtesy of the Crookwell Gazette

## BioAg Liquids Lift Yield and Oil Content on Irrigated Canola in the MIA



BioAg treated canola from the MIA showing excellent pod development.

We've just received the results from one of the farm trials conducted with *Soil & Seed* and *Balance & Grow* on irrigated canola grown in the MIA in the 2012 season.

A plot of 220 ha of clay soil, previously sown with rice was planted with Hyola 50<sup>®</sup>, a mid-season maturity hybrid canola, bred by Pacific Seeds.

The crop was planted with 125 kg/ha urea, 60 kg/ha MAP and 5l/ha *Soil & Seed*. At the cabbage stage, it received 2l/ha of the foliar *Balance & Grow* and 60 kg/ha urea as a side dressing. The crop received two waterings during the growth period.

The farmer was delighted with the results. "The crop went 3.12 tonne/ha with an oil content of 46.9%" he said, "far higher than what I usually get with conventional fertiliser alone. I attribute the higher yield and extra yield to the addition of the *Soil & Seed* at sowing, and the *Balance & Grow* foliar application at the cabbage stage." Normally, crops in the district return about 2.5 tonne/ha at 44% oil content.

The economics are certainly favourable. The return per hectare was \$1,512 for a fertiliser cost of \$204, of which the BioAg inputs represented \$42.

For further information about growing canola under BioAg nutrition programs, call Guna Gunawardena, Area Manager and agronomist for the Murrumbidgee Valley and the MIA, on 0488 593 536.

# New Area Manager Strengthens Agronomic Support in South Australia



**Phil Toy -  
Area Manager  
South Australia**



**Richard Chibnall -  
Area Manager SE  
South Australia,  
Southern Victoria  
& Tasmania**



**Daniel Hill -  
Area Manager  
Northern &  
NE Victoria  
and Southern  
Riverina**

BioAg is pleased to announce the appointment of Phil Toy as Area Manager South Australia. Phil is based near Gawler and took up his position in early February. He is responsible for the management of BioAg's business in the whole of South Australia except for the south east (south of Keith and Bordertown) which continues to be managed by Richard Chibnall.

A Roseworthy Agricultural College graduate with a family farming background on Eyre Peninsula, Phil has knowledge and practical experience which provide an understanding of the key constraints to production and profitability. Through a long career with agricultural chemical and fertiliser companies that has included state managerial roles, he knows the importance of taking an holistic approach. This normally starts with the soil and considers a range of influences

such as microbial activity and links between soil health, moisture and nutrient availability, and plant growth. Phil is working with our distributors and their clients to produce the best economic returns from crops and pastures in his territory.

Daniel Hill, who managed South Australia prior to Phil joining us, has added North Eastern Victoria and Southern Riverina to his Northern Victoria portfolio.

To discover your nearest BioAg territory manager, go to the *Contact Us* page on our website and click on *BioAg Territory Managers*. There you will find a map showing the areas managed by each of our people and contact details for them.

## BioAg Nutrition Programs Perform on **DAIRY PASTURE**

There was a nice article written by Emma Field and published in *The Weekly Times* in January about a client of our long-time agent, **Ivan Mitchell** of Deniliquin.

**Shawn and Tracey Hollingworth** came down from Sydney to Kerang approximately 10 years ago and began dairy farming near Kerang (Vic.). They moved to Koonwarra in South Gippsland (Vic.) in 2011 in search of a better climate for milk production and now milk 180 cows on 64 ha.

For health reasons, they became interested in biological farming and worked with Ivan to produce their first biological irrigated millet crop in 2004, comparing it with a conventional crop alongside. The first thing they noticed was increased palatability, with the cows much preferring the biological pasture.

Pasture testing on the property showed that there was plenty of phosphorus in the soil, but little was getting through to the pasture resulting in lower than desirable dry matter production through phosphorus deficiency (this phenomenon is known as "lock-up"). The biological approach overcame this problem.

During the drought years they were striving to improve their water use efficiency and observed that the biological crops achieved greater root depth and increased nitrogen fixation from the clovers which had previously

been suppressed. They also noticed a reduction in soil compaction and an increase in plant tissue sucrose levels (Brix) "which went from four to 11 in three years".

Shawn attributes an improvement in animal health, and an increase in the AI in-calf rate from 50% to 92% to the move to the biological system. He also ascribes an increase in milk production to his biological system, as well as to improvements in genetics on which he has been working during their time in Kerang and Koonwarra.

To read the full *Weekly Times* article, go to [www.weeklytimesnow.com.au/article/2013/01/30/558013\\_on-farm.html](http://www.weeklytimesnow.com.au/article/2013/01/30/558013_on-farm.html)

Ivan Mitchell can be contacted for more information about BioAg's nutritional programs on 0428 147 116 or [ivan@ivagco.com.au](mailto:ivan@ivagco.com.au).



**Jess  
Trengrove  
A New Face  
at BioAg**

*When calling our Head Office to place orders or arrange transport, many of you have spoken to Erin Bolton who has been with us for the past three years. Erin is leaving us shortly to start a family, and she and her husband will reside in Howlong on the Murray River.*

*Jess Trengrove has been engaged to take over her role and is presently learning our systems under Erin's tutelage. She joins us from the farming community of Morundah in the Riverina (NSW), and she is the person you will probably meet first when you call us, as she answers your phone calls, takes your orders and deals with the logistics of supply.*

*We bid Erin a fond farewell and thank her for her hard work in customer service and administration, and we wish Jess well in her career with us.*



Better soils. Better crops. Better stock.™

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