

Summer 2012

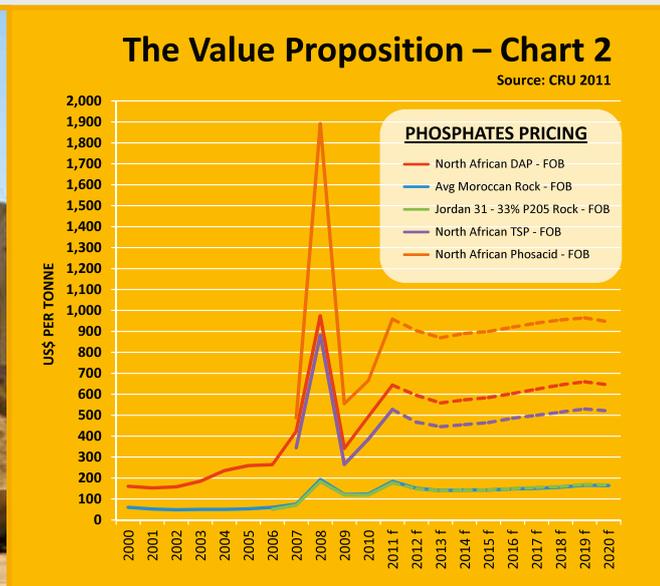
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BioAg COUNTRY



Unloading phosphate rock at Geelong for quarantine inspection and cartage to Batesford Quarry for processing



World price movements in phosphate fertilisers

We're pleased to advise our loyal customers that we have a shipment of reactive phosphate rock leaving Egypt in December, and we will have our quality phosphate fertilisers, BioAgPhos and BioAgPhos S10, and their derivative blends available in time for the autumn application season.

The phosphate business has been extremely complex this year, as we forecast this time last year. The aftermath of the Arab Spring has led to supply disruptions across the whole of North Africa, leading to massive price increases, which are only beginning to stabilize now. The problem has been exacerbated by unprecedented demand in India, where phosphorus and nitrogen fertilisers supplied to farmers are heavily subsidised by the central government.

After negotiations lasting several months, we have secured our Egyptian phosphate rock supply for 2013, meaning that the BioAg phosphate products will remain at the same high quality that farmers have been able to rely on over past years. We use Egyptian rock phosphate in these products because we have found that it possesses the best combination of high reactivity and low heavy metal (cadmium) content of all phosphate rocks on the world market, and is best suited to the BioAg biotech digestion process.

Our first ship is due to leave Egypt in December, and will arrive in Geelong towards the end of January, and we will be in full production for the 2013 autumn.

As has been the case in previous years, we'll be running our Early Bird Special before the start of the season to reward those who have a desire to get set early, and are able to pay in advance. This season's prices are shown in the table below. They apply for payment in the months shown; delivery can be effected whenever the product is needed.

For BioAgPhos and BioAgPhos S10, we are also offering a volume discount of 1% per 100 tonne ordered and paid for under the early bird arrangements, up to a 5% maximum discount for 500 tonne or more.

At an average price for BioAgPhos of \$355 per tonne, the price per kilogram of phosphorus in the product is \$2.73. This compares very favourably with an estimated price of \$3.37 in single superphosphate (based on industry intelligence at time of printing). With more and more trial data within Australia and overseas demonstrating its superior performance over that of single superphosphate, you can't go wrong with BioAgPhos!

	Price per tonne for each month of payment						
Product	Dec. 2012	Jan. 2013	Feb. 2013	March 2013	April 2013	May 2013	June 2013
BioAgPhos	\$340	\$345	\$350	\$355	\$360	\$365	\$370
BioAgPhos S10	\$365	\$370	\$375	\$380	\$385	\$390	\$395
Pasture Primo	\$125	\$127	\$129	\$131	\$133	\$135	\$137
BioAg Superb	\$250	\$253	\$256	\$259	\$262	\$265	\$268
RPR	\$330	\$335	\$340	\$345	\$350	\$355	\$360

All prices are ex Batesford Quarry, Geelong, in full truck loads, and exclude GST. Prices are subject to change. Fertiliser analysis may vary slightly.

BioAg Produces **MASSIVE** Increases in Sugar **RETURNS** in India



Monitoring the sugarcane trials in West Bengal, May 2012.

Independent efficacy trials commissioned by BioAg in West Bengal show that the use of BioAgPhos and Soil & Seed on sugarcane produced remarkably high increases in crop yields and net returns to growers. The best result was an increase in grower return of 55%.

India is the second largest sugarcane producing country in the world behind Brazil. It is the second largest agricultural industry in India. It raises over INR 22.5 billion (A\$400 million) in taxes for the commonwealth and state governments, and it plays a vital role in socio-economic development in the rural areas, mobilizing rural resources and generating high income for farmers and related industries as well as employment opportunities. About 7.5% of the rural population is involved in the sugarcane industry, including 45 million sugarcane farmers and their dependents, and a large number of skilled and unskilled workers.

A Few Facts about the Indian Sugar Industry

- 78% of sugarcane is used for sugar production
- 15% is used for the production of various other sweeteners
- 7% is used for bio-fuel production
- There are 468 functioning sugarcane mills in India
- Sugar production in 2010-11 was 24.4 million tonne compared with 18.5 tonne in 2000-01
- The sugar recovery rate is 10% compared with 14% in developed countries such as Australia

Brazil is the largest sugarcane producer in the world and the second largest producer of ethanol. Forty five percent of Brazilian motor vehicles use ethanol in their fuel, yet the Indian usage is less than 1% of vehicles. However, this industry has an enormous opportunity to develop. The whole sugarcane industry is seeking efficient fertilisers to reduce production costs.

Our Trials

We commissioned the independent NGO *Centre for Strategic Studies* in Kolkata to conduct our sugar cane trials on the Gangetic plains of West Bengal in North India, which is recognized as one of the largest sugarcane producing regions in the world.

The BioAg treatments were compared against the state's Agriculture Department standard practice for sugarcane fertilisation. The standard practice treatment comprised urea, single superphosphate, muriate of potash, zinc sulphate, boron and phosphor-bacteria.

The BioAg trials comprised (a) the addition of a Soil & Seed fertigation treatment to the standard practice, (b) the replacement of the single superphosphate with BioAgPhos and (c) a combined treatment comprising the application of BioAgPhos and Soil & Seed.

The trial demonstrated that the replacement of the single superphosphate with BioAgPhos effected a crop yield improvement of 28%, an improvement in the vegetative growth, and an increase in the net financial return to the grower of 33%.

The combined application of BioAgPhos and Soil & Seed produced even more beneficial results. The vegetative growth had improved by 44% and the cane diameter by 12%. The yield increased by 53% (up from 51t/ha to 78 t/ha) and the net financial return to the grower was up by a massive 55%. The complete trial report may be downloaded from www.bioag.com.au.



BioAgPhos Picks Up Pasture in Northern NSW

Soil & Seed and BioAgPhos S10 Get Results on Pasture in Northern NSW



Jared Doyle pictured beside a load of BioAgPhos S10 prior to application.

Jared Doyle runs a 1,550 ha property in partnership with his father, Peter, at Nundle, south east of Tamworth in northern NSW. The property *Coventry* covers 1,550 ha and is a cattle and sheep breeding and finishing operation. With the encouragement of agronomist Arron O'Connell, the Doyles have been running some on-farm trials with BioAg nutritional products over the past two years.

One trial was on a 140 ha crop of oats. In each of the two years, they applied BioAgPhos and sulphate of ammonia before sowing, and Soil & Seed and boron at sowing, with a small amount of MAP down the tube.

Over the period, Jared reports some major improvements. The plants have hung on

better during drier conditions due to stronger root structure, and the stock have performed well while appearing to graze for shorter periods indicating improved nutrient density in the plants. The oats under the BioAg program were not necessarily the greenest crops in the district, but the Doyles were very pleased with the performance of the stock grazing on them. They also observed more even regrowth after grazing, and better second grazing than in the past under a conventional program.

They also applied BioAgPhos S10 (sulphur enriched microbially digested phosphate fertiliser) to 250 ha of improved permanent pasture in late spring of 2011. The application rate was 150kg/ha on a fescue/clover mix. The result was a

noticeable improvement in growth and better plant density, and the fertiliser seemed to work for a longer period. Arron attributes this to the low water solubility allowing the BioAgPhos S10 to remain effective for much longer than single superphosphate.

Jared remarked that they liked the BioAg program because it both addressed nutrient deficiencies in the soil as well as improving the microbial activity to make the nutrients more plant-available. "They are not just relying on a miracle juice to fix everything" he said. "It's based on sound agronomy. "We also like the fact that BioAg still recommends the use of a small amount of conventional fertiliser, and doesn't advocate the view that all chemical fertilisers are bad; they offer the best of both worlds".

Pictured is Daniel Kermode who runs a cattle and sheep grazing enterprise of about 2,500 ha on *Orandumbie* and *Dumby Downs* south of Walcha which is east of Tamworth in northern NSW.

There is a mix of soil types across the property ranging from basalt to fine granite. He first applied BioAgPhos S10 to his pastures in the autumn of 2011 140 kg/ha, and followed this up the following autumn (2012) with an application of BioAgPhos at 125 kg/ha.

"The pasture improvement has been quite evident," says Daniel. "The pasture growth, including clovers, has been excellent". He reports that the stock have performed very well despite the tough winter and dry spring conditions.

**Daniel Kermode of Orandumbie and Dumby Downs south of Walcha NSW.
"The pasture growth has been excellent, and the stock have performed very well despite the tough winter and dry spring."**

BioAgPhos® is BioAg's famous phosphate fertiliser made from reactive phosphate rock treated with a proprietary microbial culture. Unlike conventional acidified fertilisers, BioAgPhos is not water soluble and therefore does not leach or become "locked up". Approximately 40% of the 13% P is citrate soluble and immediately available for plant use, with the remaining 60% releasing over the year, and into the year following application. The improved microbial activity in the soil after application also helps unlock previously applied nutrients. It is ground and air spreadable and is available in any size truck loads. **BioAgPhos S10** is a blend of BioAgPhos containing 10% elemental sulphur, for use in sulphur deficient soils.

Huge Response to Soil & Seed in Chickpea Crop in Queensland



Spot the BioAg Soil & Seed® plot.



We've just received this report from former colleague Andrew Hacker, whose parents, Jon and Kerri, farm on Summerhope at Muckadilla, some 40 km west of Roma (Qld).

"I have just taken some photos of some of the responses we have had to the BioAg program at home, in a chickpea crop (variety "Boundary").

"In the same paddock, we compared a BioAg nutrition program based on Soil & Seed, MAP and zinc sulphate against our own program (MAP, a bio-nutrient and zinc sulphate).

"As you can see from the photos there has been a huge response to the Soil & Seed as it is the green side of the photos. I have never seen such a response that is so clear. There is a huge quantity of pods on the BioAg side compared to the other program.

"We will certainly send down the yield map and results when we get them from the harvesting contractor."

JALGAON BANANA AND SUGARCANE GROWERS

In October, we hosted a delegation of agricultural cooperative leaders from the Jalgaon district of Maharashtra State (the capital of which is Mumbai). The delegation comprised 12 members and their wives, and was led by local parliamentarian Mr Haribhau Jawale who is also chairman of the Tapi Valley Banana Processing & Products Co-op Society. One of the major areas of efficiency loss in agriculture and horticulture in India is in the post-harvest period. The farms are very small by Australian standards, and the farmers rely on the cooperatives to either process their outputs or deliver them to market, and significant losses of produce occur during these operations due to logistics problems, even without taking into consideration farm to farm variations in quality. The main purpose of the visit of the delegation was to look at the wholesale marketing of horticultural produce, and the delivery of the produce to market.

The agricultural cooperative movement is very strong in India, as it appears to be the only viable means of dealing with the small farmers in terms of supplying their inputs and getting their crops to market. One of the delegates was CEO of a co-operative sugar mill with



The Jalgaon cooperatives delegation and their wives at BioAg's Head Office in Narrandera (NSW) during their visit to the Murrumbidgee Irrigation Area in October.

26,000 grower members. The district has 1.2 million ha of sugarcane and bananas under cultivation.

The delegation wanted to visit us to look at the work we have been doing with irrigation farmers in the Murrumbidgee Irrigation Area of NSW, but also to discuss the work we have been doing in India, particularly in banana and sugarcane production. (see the reports on these trials on www.bioag.com.au). They were impressed with the results we

have achieved in West Bengal, and are on the lookout for anything which will increase the returns on their members' crops. They visited our factory, and expressed interest in importing our fertilisers and distributing them in the region to their cooperative members. As this goes to press, BioAg MD, Anton Barton, and Market Development Manager (Asia) Guna Gunawardena are visiting India, and further discussions with the Jalgaon group are on the agenda.

Christmas Message

The Directors and Staff of BioAg Pty Ltd wish all of our Customers and Friends a very Happy Christmas and Prosperous New Year.

Our Head Office will close at noon on Friday 21st December, and open again on Monday 7th January 2013.



Better soils. Better crops. Better stock.™

For more information, phone 02 6958 9911 or visit www.bioag.com.au