

Products & Advice for Soil Regeneration & Animal Nutrition



Message from the Directors

With the striking of a clock, yet another year has passed. For us, it's a quick reflection on what we, and indeed our customers,

managed to achieve despite the challenging financial and environmental conditions within which we work. Likewise, it is an opportunity to set some achievable and rewarding New Year's Resolutions.

In 2005, why not consider Improved Profits?

Obviously, to reach this goal it would require either an increase in production or a reduction in costs... or hopefully a combination of the two.

In order to offset rising costs, many farmers have increased the amount of fertilizer they are using to increase yield, however it is not logical to expect to be able to continue to increase crop yield every year.

To increase profit, it is essential to look at reducing costs while improving soil fertility and production.

The use of Natra Min mineral fertilizer and soil conditioner, coupled with a soil management program, can help you to reduce the amount of water soluble fertilizer required and increase yield through regeneration of your soil fertility.

Natra Min is also an economical alternative to the use of Gypsum and Lime in your soil management program.

Small crops producer Derek Schultz's success in improving profits is testament to the benefits of Natra Min. Read more about Derek's accomplishments, the experiences of grain grower Roland Teakle, and Santa Gertrudis breeders, Colin and Sue Anderson, in this edition of our newsletter.

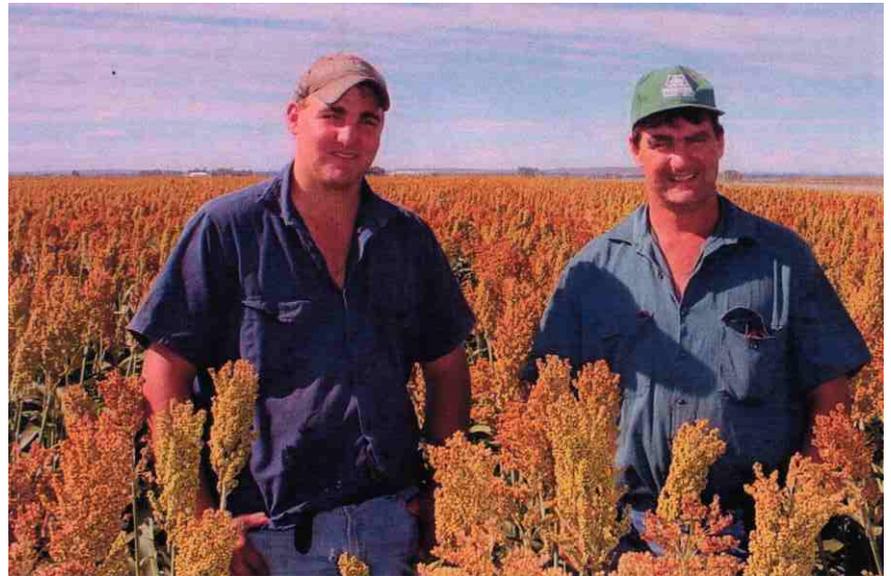
So, with the beginning of a new year, now is the time to consider "is there a better alternative" to what you may have done in the past?

A better alternative to the rising costs of water soluble fertilizers? Improved soil condition? Better animal health, production and reproduction?

Call us now on 1800 81 57 57 for an obligation free assessment on how the team at Ag Solutions can help to ensure 2005 is a Happy New Year after all!

Warm regards, **Trevor and Wendy Zerner**

NATRA MIN improves yield for Grain Grower

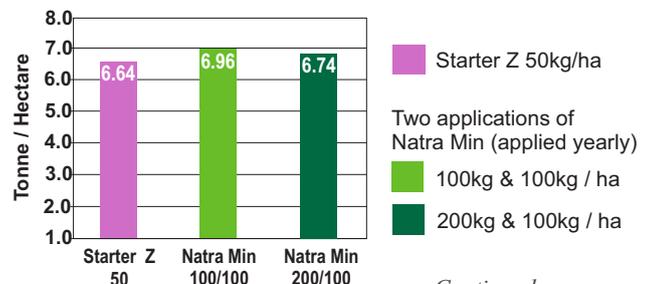


Jondaryan dry land grain grower Roland, Anne & Adrian Teakle have been applying Natra Min HI-Phos for over 4 years to wheat, sorghum and corn crops. As a result, Roland has witnessed an improvement in yield and crop condition ... and now even Anne's garden is enjoying the benefits of Natra Min!

Teakle's 2500 acres are split into thirds, with Natra Min applied to the entire property over 3 applications, using a Gyral air-seeder. However, conscious of the need to increase productivity cost effectively, Roland conducted his own trials comparing the use of Natra Min to Starter-Z.

TRIAL RESULTS

Hybrid or Variety	Moisture Corrected Yield T/Ha	Moisture Corrected Yield T/Ac	No. of Rows Harvested	Harvest Length (m)	Harvested Yield (kg)	Test Weight (kg/hl)	Moisture %
Starter Z	6.641	2.687	12	110	647.0	78.0	10.7
NM 100/100	6.961	2.817	12	110	679.0	79.0	10.8
NM 200/100	6.741	2.728	12	110	656.0	78.0	10.6



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In this Edition...



GYPSUM - reduce costs

Find out more about how Natra Min can provide you with an effective and economical alternative to the use of Gypsum to condition your soil.

NATRA MIN



GRAIN: 300kg/ha increased Yield *(continued from previous page)*

Natra Min HI-Phos applied at 100 kg/ha yielded 300kg/ha more than Starter-Z applied at 50kg/ha.

“With the cost of both products being similar, the increased yield where Natra Min was used has certainly shown that it is economically viable to use Natra Min over Starter-Z”.

Improved Crop Health and Quality...

Since using Natra Min the Teakle family has performed well in various Darling Downs grain competitions despite the challenging dry years.

2001	Wheat	2 nd , 3 rd	(Oakey Show)
2002	Wheat	2 nd , 4 th , 5 th	(Oakey Show)
2003	Sorghum	2 nd	yield of 8.39 t/ha (Toowoomba Show)
2004	Millet	Champion Sheaf	(Oakey Show)

“We’ve also tested our crops with Brix meters. The crop where Natra Min HI-Phos was applied at 200 kg/ha had a higher brix reading and was a far healthier plant than the Starter-Z crop.” (Brix gives an indication of sugars, amino acids, vitamins and mineral levels in the plant.)



Married to the Job!

As daughter of Company Directors, Julie along with her husband Andrew, joined the management team in January 2002 with Julie holding a pivotal role as Executive Officer. Between them they bring

additional knowledge and skills to the business, plus a fresh perspective.

Many men would balk at the idea of working 6 days a week with their wife... let alone with the ‘in-laws’. Throw into the formula a 2 year old daughter, plans to expand production facilities, the responsibility of overseeing the company’s entire operation, plus of course a “needy” set of golf clubs... and you have a man very much in demand! Meet Andrew Williams - General Manager of **AgSolutions**.

Previously both from teaching backgrounds, Andrew has completed a four-year Bachelor of Applied Science Degree at the University of Queensland, working his way to the position of Area Coordinator within two years. Julie also completed a Bachelor of Education (Business Management) at the Queensland University of Technology.

Andrew & Julie - So how have you made the transition from teaching to the agricultural industry?

Andrew - I’ve found a science education has been extremely useful... particularly when it comes to understanding soil and crop requirements.

Julie - My love of teaching has now been applied in a different context. Here it’s about re-educating people to consider minerals over chemicals, and in doing so preserving the land for the next generation. I’ve always had an affinity with the agricultural industry, with both my grandparents and parents raised on dairy farms.

Andrew - Best Film...

Have you ever seen the movie “Meet the Parents” ... it’s a comedy-come-horror movie about the in-laws.

Andrew - Dumbest Moment...

Admitting to my wife that I loved her so much I now considered her number 4... Succeeded only by my Mum, Brad Fittler and my motorbike. I now know I never should’ve mentioned the motorbike!

“Visibly we’re noticing an improvement in the crop - even at a foot high the sorghum is markedly better in colour and health.

Even the neighbour commented on our corn crop ... it’s certainly the best cobs I’ve seen, they were parallel and square which is essential for yield”. Corn yielded 5.75t/ha where Natra Min HI-Phos was applied at 125kg/ha with 80 units of N.

Inspired by the results of using Natra Min on his crops, Roland decided even the garden could do with a little “rejuvenation”, adding “the ground is definitely softer and easier to work. Despite using harsh bore water, the lawn and plants are now thriving too!”

NATRA MIN the economical alternative to GYPSUM

The benefits of Natra Min as a soil conditioner have been proven over the past 14 years and it is now increasingly used to replace lime and gypsum throughout Queensland and New South Wales.

Many farmers choose Natra Min over Gypsum because it offers so much more for your money. As a broad-spectrum mineral fertilizer with trace elements and a microbial stimulant, Natra Min improves soil pH and nutrient availability as well as the traditional benefits to soil structure that results from the use of Gypsum.

Gypsum supplies Calcium and Sulphur and requires high application rates of up to 5 tonnes/ha.

With increasing awareness of the dangers of heavy metals in Phospho-Gypsum, most farmers are turning to the use of natural Gypsum which, depending on proximity to the source, is priced between \$60 and \$90 per tonne. An application of Gypsum at 2.5t/ha would cost \$150 - \$225 / ha (+GST). The high costs for natural gypsum has resulted in more farmers looking for a cost effective alternative.

Natra Min - the economical alternative

Natra Min contains the broad spectrum of minerals and trace elements to create a nutritionally balanced approach to improve soil structure and pH, as well as helping to reduce sodium and chloride levels in the soil.

The low cost and rate of application of Natra Min provides farmers with an economical and effective alternative to Gypsum. Depending on soil structural problems, the application rate for Natra Min is 250-300 kg/ha for pasture and broad acre farming and between 400-600 kg/ha on small crops and cotton.

In comparison with costs of at least \$150 / ha for Gypsum, the cost of **Natra Min at 250kg/ha would be \$55 - \$70/ha***. (*Prices include \$40 / t freight. Natra Min price \$55, Natra Min HI-Phos \$70)

Natra Min also contains high levels of Silica which is essential for the functioning of cellular metabolic processes, helping to strengthen plant cells, improve plant growth and yield, reduce lodging in grasses and cereal grains and can be helpful to reduce pest and disease problems.

Why not consider the change now? Call us on 1800 81 57 57 for an obligation free assessment of your soil requirements.

Feed Your Soil... and Your Soil will Feed Your Crop

SMALL CROPS: Reduced Disease and Improved Keeping Quality in Lettuce, Cabbage and Cauliflowers.

Grantham small crop producer Derek Schultz has tried numerous products on his farms but is quick to point out that Natra Min has delivered the best results in terms of crop health, reduced costs, and increased production.



Second generation farmer, Derek Schultz has spent his whole life in the industry with his father and uncle, beginning with cabbages and potatoes in 1960. Derek's main crops are now cabbages, cauliflowers and lettuce.

Derek has a motto: “the world must go backwards to go forwards” in other words... we seem to mess things up first... then we look to fix them.”

“I look at our soil as something we've been given but have unfortunately abused. I like the challenge of leaving the land in a better state for the next generation and believe that looking after the soil is the key to this.”

Encouraged by the number of other small crop producers enjoying success with Natra Min, Derek first looked to Natra Min as a sustainable means of not only improving production, but of reducing disease.

“We were looking at the whole 'Integrated Pest Management' scenario and seeking long-term viable options, not just for a quick-fix for the grub situation” stated Derek.

“I trialed Natra Min HI-Phos on one 3 Ha paddock. We had high sodium, chloride and salt and could never get phosphorous uptake in the leaf despite throwing “bags” of phosphorous products such as Triphos on the ground.”

Nutrient availability improved with Natra Min

“After the next three crops in this paddock we found that where Natra Min HI-Phos had been applied, soil tests did not get any worse and leaf tests started to show increasing levels of Phosphorus and Potassium. In the remaining paddocks soil tests kept getting slightly worse with increasing levels of Sodium and Chloride.”

In effect, the Natra Min HI-Phos helps to “unlock” the supply of nutrients that are present in the soil, increasing their availability for crops.

Mindful that reversing or improving soil condition can take 2-3 years, Derek chose to heed **AgSolutions'** advice and has used repeat applications of Natra Min to gradually improve the health of his soil.

Earthworms are now in abundance, whereas these were previously non-existent. Similarly, Derek's local Agronomist has witnessed the improvement in his soil and has commented on the difference Natra Min has made in comparison to other farms.

Soil improvement reduces irrigation requirements

Derek adds: “our soil is definitely better now. We've been confidently using Natra Min over both farms for about 5 years. We can physically see a difference in our soil. It breaks down quicker and doesn't take as much water to wet it. I'd estimate about a 20% saving in water as 80 points of water does what an inch used to do.”

Reduced disease

“We're currently cutting lettuce on ground that has had Natra Min applied for 5 years and there is **no disease**. On our other farm the lettuce has some disease in it, however, here Natra Min has only been used for 3 years, which once again supports the advice that a long-term approach delivers better results.”

Savings

“**AgSolutions** had recommended that I could reduce water soluble fertilizer after my first application of Natra Min, however I chose to use the product as an extra for several years. We have now made an overall reduction in the use of water soluble fertilizer by approximately 25%.”

Increased Production & Quality

“In terms of increased production our crops certainly have more uniformity in size and appearance. Another key improvement is that the **shelf life of our produce has increased** with the use of Natra Min, and this is of course a critical factor in the small crops industry. Our marketers and wholesalers have given us this positive feedback.”

Natra Min - Rate of Application

Due to the intensive production levels of his farms, Derek Schultz has been applying Natra Min HI-Phos at 500kg/Ha. Based on the improved condition of the soil and its nutrient levels, this rate of application could now be reduced.

Cal: Mag Ratio improvement

As Derek Schultz states: “seeing the Phosphorous becoming more available to the plant and more available in the soil has impressed us. Our Calcium to Magnesium ratios have increased and there have been improvements in the level of all elements in the soil tests with Phosphorus and Potassium being the biggest increases in availability so far”.

Nuffield Scholarship Recipient

Derek was chosen as a recipient of the Nuffield Scholarship in 2000 and in 2001 this scholarship enabled Derek to travel extensively through Asia, America, Canada, UK and Europe, giving him the opportunity to observe and learn from farmers in other countries. Derek was also able to evaluate the market trend and requirements for the export of vegetable crops to these countries.

Prior to this study tour, Derek was considering the introduction of organic farming practices and this opportunity enabled him to clarify that a “low chemical” approach coupled with intergrated pest management practices would be in his best interest.

“Since taking a ‘low chemical’ approach, I have observed a definite improvement in the overall health of my crops. My soil is more friable and less tillage is now required for crop preparation. I was extremely happy to see the return of the earth worm and considered that this was a definite turning point.”

For further information on Natra Min and its ability to assist with small crop production, please call us on 1800 81 57 57.

Colin and Sue Anderson of 'Windmalee Pastoral Company' run their EU accredited Santa Gertrudis commercial herd near Woodenbong, NSW.

When the Andersons first relocated their breeders to the Woodenbong district eleven years ago, they discovered there was a copper deficiency, and had the herd blood tested to investigate deficiencies further.

"It was interesting when our vet told us that so much chemical fertilizer had been used here that it had bound up the nutrients."

"I was looking for an alternative fertilizer and soil conditioner and heard about Natra Min through my local rural store. I understand that Natra Min helps not only to improve soil structure, but also acts as an agent to stimulate soil microbes and 'unlock' mineral elements to provide a constant supply of nutrients to plants."

"Soil tests were performed to assess crop requirements and AgSolutions provided us with information on how best to use the various blends of Natra Min to fit with our farm management practices."

All of the Anderson's oats (Taipan), millet, cow pea, and improved pasture paddocks were planted with Natra Min HI-Phos and a reduced amount of water soluble fertilizer.

"When planting we'd normally use CK88, but now we plant with Natra Min HI-Phos (220kg/ha) and CAL-AM (110kg/ha.)"

The colour and growth of our oats was exceptional despite the lack of rain and cold weather. We could see the difference between our oats and our neighbour's in terms of productivity."

Production Increase

"Improved clover and soil condition aside, ultimately it is animal health and production that is the driving decision behind which products to apply to our pasture.

In the oats paddock (9 ha) we had 3.5 head/ha for 38 days with an average weight gain of 1.41 kg/day and a top weight gain of 2.35 kg/day for 8 to 10 month old weaners. These have been sold as around 400kg EU steers to be finished. After having 34 cows and calves on it for several months, this paddock is still going in December (fourth grazing) when we now have weaner steers again."

Difference in Soil Structure

"It's hard to define, but where Natra Min has been used we can see and feel a difference when working the ground. The soil is already better but we realize it may take several years. We will continue to use Natra Min to achieve more friable and softer ground.

Overall the production from our oats paddocks where Natra Min was applied this year has been exceptional despite weather conditions and we're definitely noticing an improvement in our soil condition on the dark soil flats."

The Andersons have adopted a strategy of rotationally grazing their flats, to ensure the pasture has an opportunity to rejuvenate itself. However, they haven't simply concentrated their efforts on the soil's deficiencies, ensuring also that their cattle also receive 're-mineralisation'.



Col Anderson
Windmalee Pastoral Company

"The cattle had been licking the mud in the soak out the back indicating a deficiency, so we're now using AgSolutions Mega Minerals lick blocks as well to cater for this. Mega Minerals provide a broad spectrum of mineral elements essential for animal health, production, and reproduction. We found that once these minerals were available, the cattle stopped licking mud within a very short period."



Are you part of a group?

We often provide presentations on soil health and animal nutrition to groups such as Landcare, farm walks and other industry meetings.

Here at AgSolutions, we place a great deal of emphasis on the 'common sense' approach when dealing with the various aspects of plant and soil nutrition. We believe that any changes you make to your property management need to be both economical and effective.

If you would like us to attend one of your meetings to assist your group, or you would like to gather together a group of interested farmers, whether it be in a hall or on a bale of hay in your shed, we are only too happy to help. Topics we can cover could include...

Soil and Crop production

- ▶ How to balance your soil pH without the use of lime.
- ▶ The importance of soil microbes.
- ▶ Do you have a super phosphate bank in your soil?
- ▶ Practical ways to increase the nutrient value of your crop.
- ▶ Discover the one ingredient in soil to make it drought resistant.
- ▶ How to improve you soil fertility through following a simple management plan.

Animal Nutrition

- ▶ Winter supplement - a safe and effective alternative to urea.
- ▶ Natural acidosis preventative for grain fed cattle.
- ▶ How cell grazing can increase your stocking capacity.