

Products & Advice for Soil Regeneration & Animal Nutrition



From the Directors

Already winter is coming to an end and another financial year has passed. Spring is fast approaching along with the rain we hope!

We'd also like to express our thanks to you, our customers and rural stores for your enquiries and growing support during the past year.

We're proud to be Australia's longest manufacturer of mineral fertilizers as we enter our 17th year of production. In recent months our manufacturing team has been kept busy with the dry times and winter demands for animal supplements as well as the autumn applications of Natra Min. For the first time our factory couldn't keep up and for a short period our supplements were on back order, so we do apologise for any delays experienced.

Our manufacturing capacity has been further increased to meet growing demand for our products, however, to avoid disappointment we recommend that your next order is placed at your earliest possible convenience.

Again we have dispatched our supplements across Australia from WA to Tas and the NT. You may have also noticed our new packaging of Superior Minerals, now in an easily recognisable, white printed bag... but be assured the contents are still the same!

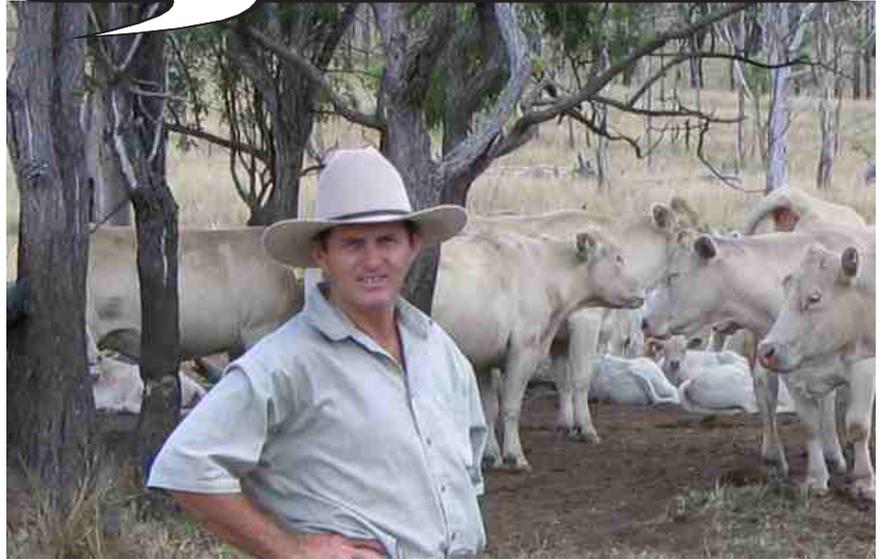
We always welcome your feedback and if there are particular topics about soil, plants or animal nutrition that you would like to read about, then let us know and we'll include these in our future newsletters. In this edition we focus on Sodium and associated problems as more and more soil tests reveal elevated levels.

Natra Min Cal-K is our latest development as a new blend of fertilizer and soil conditioner. It has already proven to be an effective input for dark soils with high Magnesium and low Calcium, Sulphur and Potassium levels, while still delivering key trace elements.

With the onset of Spring this is an ideal time to broadcast Natra Min on pastures to promote legumes and early growth for the season. Pre-plant applications for cropping ground as a fertilizer and soil stimulant should also be considered 4-8 weeks before planting where possible.

So enjoy a cuppa and if there's anything you would like to know more about then call us on 1800 81 5757.
Trevor & Wendy Zerner

I've used AgSolutions' Mineral Fertilizer and Animal Supplements for many years and this is what I have found...



Beef Breeders Buoyed by Natra Min...

John and Roslyn Mercer can lay claim to being one of the pioneering families to first conduct trials with Natra Min mineral fertilizers some 17 years ago - when AgSolutions initially appeared on the agricultural radar.

Today the Mercers have maintained the relationship with Natra Min and currently run 700 breeders, with a total of 1400 head of cattle comprised of Charolais, Charbray and Brahman. Cattle are spread over five properties in the Gympie district totalling 2500 acres with a further 2500 acre forest block at Tansey. From next year it is anticipated the Mercers will sell over 200 bulls annually.

A Perfect Balance - Minerals & reduced amounts of chemical fertilizer...

The Mercer's heavy irrigation country has Natra Min K-Phos applied twice a year to provide a boost to the rye grass in autumn and kikuyu in the spring. Since using Natra Min, kikuyu leaf tests have shown quite high Phosphorus levels. This spring Natra Min Cal-S will be applied on kikuyu based pastures as a source of Calcium due to Kikuyu not being able to accumulate Calcium.

According to John "balancing our pastures and soils with Natra Min has meant we get a better response when chemical fertilizer is applied. In addition to this, we now use half the amount of chemical fertilizer at planting and where possible try to avoid using Urea"

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John & Roslyn Mercer, Pasture & Supplements for stud cattle.
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Col & Jackie Clarke, Lucerne & Grain.

Minerals... essential for soil and animal production



Natra Min K-Phos had been applied to the Gatton Panic and Glycine pasture. (photo above) No other fertilizer has been applied for at least 12 months.

Pasture Improvement with Natra Min...

“Our hill country has also responded well to Natra Min when used strategically to boost the best paddocks.” As John adds, “the results are visible. Natra Min K-Phos had been applied to one paddock where sweepings had also been applied. The response was far better where K-Phos was used and in fact, the results were so outstanding that we applied K-Phos to the rest of that property.”

“Super Phosphate was applied to the better lower ridges and irrigated flats on our home property however despite both properties receiving similar rainfall, the results here have been very slow compared to where K-Phos was used. In general, where Natra Min has been used, the clover is excellent.”

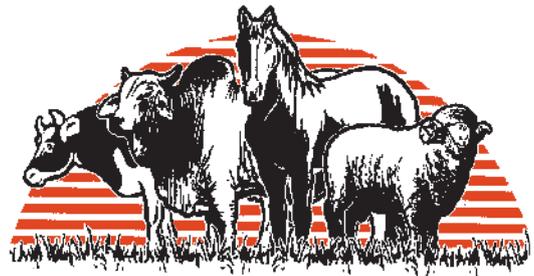
Improved Tillage...

Since the introduction of Natra Min the Mercers have also experienced cultivation improvements. Previously absent, worms are now plentiful. Ripping used to bring up clods of soil, however despite so many cattle being on the irrigated ground, Natra Min has helped soften the soil.



Fertile Soil = Fertile Cattle...

According to John, immediately following its application, cattle are attracted to pastures where Natra Min has been used, and tend to graze these areas heavily. “Our cattle fertility has been excellent this year and we haven’t had to use supplements on our Gympie properties throughout winter despite how dry it’s been. The pasture growth has been good there, and so has the condition of the cattle.”



SUPERIOR
MINERAL SUPPLEMENT

Stud Cattle supplemented with SUPERIOR...

John and Roslyn have also been long time users of Superior Mineral Supplement via their stud cattle feeding and supplementation programs.

“Superior allows us to present our cattle in good condition... SAFELY. We now feed a Riverina mix with Superior Minerals added to it. We’ve had no acidosis problems and their legs and feet are much better. When Superior was first introduced, the change in their manure was the first improvement we noticed immediately... with a good colour... no smell... and no scours.”

Dry Weather Supplement...

On their Tansey spear grass country, the Mercers mix Superior Minerals with molasses, which has delivered good results during dry weather. Taking into consideration that these are big stud cows, and that they have a high maintenance requirement, they’ve remained in very good condition leading up to calving. Calves are strong and healthy - a further reflection on the minerals.

As John adds, “preparing show and stud cattle means we need a lot of growth while producing an acceptable finished product. Superior allows us to push our cattle hard and keep them sound. Our buyers are happy as our bulls that have been on feed go out in the paddock and work... yet remain in good condition. We received this feedback from three clients at the Ekka recently. Superior keeps their gut and rumen right which allows them to function in the paddock”.

The Mercers again had success at this year’s Brisbane Exhibition, taking out the Grand Champion Charbray female and Charbray Exhibitors Group.

John and Roslyn are also proud to promote their upcoming annual stud sale on the 21 September where they’ll offer 82 Charolais and Charbray bulls and 19 females. To talk to John about his success with Natra Min and Superior Mineral Supplement, or for pre-sale enquires please phone 5484 3359 or 0427 448 668.

SUPERIOR MINERAL SUPPLEMENT is
also available in Lick Blocks...

MEGA MINERALS
LICK BLOCKS

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

Sodium... Challenges & Solutions

Many soils with high Sodium levels are also highly productive, particularly when properly managed. The use of soil conditioners such as Natra Min is one such method of vastly improving the friability and productivity of soil subjected to high Sodium levels.

Effect on Plants...

Sodium is readily available to plants and is easily taken up by them. When soil Potassium supply is low, plants may absorb Sodium as a replacement. Sodium in moderate amounts improves plant vigour, helps resist diseases, adds flavour and improves the keeping quality of many crops. Some vegetables, such as beetroot, seem to do better in the presence of Sodium.

If exchangeable Sodium percentage of cations is greater than 5% there is every possibility that Sodium will increase soil pH and interfere with nutrient uptake... resulting in stunted plant growth.

While high Sodium levels may occur naturally, many farmers are having to irrigate with bore water that is not only very high in Sodium but also high in Chloride, Magnesium and sometimes Calcium.

Effects on Soil...

The main interest in Sodium in plant nutrition is through the damage it can cause.



Hard, crusted soil is typical in high Sodium areas.

The soil becomes difficult to manage and develops coarse seed beds resulting in poor seed germination and plant growth.

Most Sodium salts dissolve readily and are easily leached, however leaching may be difficult since saline soils often have high clay content and set hard and crusty as they dry out. This hard surface crust prevents the downward movement of water.

The good news is soil structure impacted by high Sodium levels can be improved. Natra Min Cal-S and Natra Min Cal-K are formulated to provide extra Calcium and Sulphur as well as acting as a microbial stimulant in your soil, helping to reduce the negative impact of high Sodium levels.

Contact **AgSolutions Australia** now on 1800 81 57 57 and discover how you can minimise the challenge of high Sodium levels.

Managing High Sodium Levels...



Beetroot growers, Greg and Peter Lerch, have had to contend with the impacts of Sodium on their farm for two generations.

Whilst acceptable levels of Sodium are considered to fall in the range of 0.1 - 0.6 meq/100g, soil tests taken from the Lerch property reveal excessive levels of Sodium up to 5.3 meq/100g.

The Laidley beetroot growers are part of a large consortium that supply to Golden Circle. Beetroot is one of the most salt tolerant vegetables, and is widely grown in the valley.

Managing Sodium Levels...

In addition to high Sodium levels in their soils, Greg and Peter are forced to irrigate with water that also contains Sodium levels of over 5000 ppm, which further compounds the problem. As Peter reports, "in normal years good rainfall reduces our reliance on this irrigation water and also lets us use our dams, but given the dry season we rely heavily on our bores which means we can't escape from the salt".

Natra Min is one of the key tools used by Greg and Peter to manage their salt problems, having first applied the soil conditioner in 1999. An obvious advantage to its use has been the improvement in soil structure, with soil now soft and friable and far easier to plough.

"We use the Natra Min as a soil conditioner to assist with our soils that can be very cloddy and also crust," says Greg.

"All of our beetroot ground is treated with Natra Min as we can't afford not to use the product."

In recent years, the Lerchs have used Natra Min Cal-S as a higher Calcium and Sulphur blend to assist in displacing the Sodium.

Benefits to Barley...

Barley cover crops previously wouldn't grow in the heavy, high salt soil, however, recent soil tests recorded half the amount of Sodium levels after applying Natra Min and a good flush of rain. Recent leaf tests have also shown a reduction in Sodium levels.

Brighter Farming Future...

Regrettably for the Lerch family, high Sodium levels are synonymous with farming in the Laidley region, however, they acknowledge the challenge of farming with these elements has definitely eased through the use of Natra Min soil conditioners. As Greg says, "the surface still crusts but the soil is definitely better, and it should be far worse considering the poor quality of irrigation water used."

Their father who is 76 has witnessed an improvement since the use of Natra Min, in particular the ground now being fluffy when ploughing. As Greg concludes "if dad is noticing an improvement at his age and experience then you can't argue with that!"

NATRA MIN Cal-K

In our last Newsletter we explained the benefits of Natra Min Cal-S for dark or heavy soils. Now in 2006, AgSolutions has released Natra Min "Cal-K" to compliment our existing blends.

The Role of Potassium...

Potassium enhances the uptake of Nitrogen, helps legumes fix Nitrogen, as well as assisting the plant to utilize available soil moisture along with numerous other important functions.

In many dark soils it is common to have naturally higher levels of Magnesium and Sodium. High Magnesium levels reduce the availability of Potassium and Zinc while high Sodium levels impact on soil structure, germination and water quality. Sodium is also responsible for locking up Potassium and can raise pH levels in alkaline soils.

Like Cal-S, Natra Min Cal-K provides broad spectrum minerals with the addition of extra Calcium and Sulphur as well as increased levels of Potassium (K). Many soil tests in dark soils reveal low Sulphur and Potassium, making Cal-K the ideal choice.

What type of Potassium are you using?

Many farmers use blends of fertilizer that contain Muriate of Potash which is based on 50% Chloride. Chlorides are detrimental to your soil biology and with extended use, can elevate soil chloride levels.

Sulphate of Potash blends are preferred to Muriate of Potash for this reason. In addition, Sulphate of Potash provides the added benefit of Sulphur.

AgSolutions fertilizer blends contain Sulphate of Potash, the preferred blend of Potassium.

Natra Min K	providing extra Potassium and Sulphur
Natra Min K-Phos	extra Phosphorus, Potassium and Sulphur
Natra Min Cal-K	extra Calcium, Potassium and Sulphur

In addition to broad spectrum minerals, all Natra Min products contain a catalyst formulated to stimulate microbe and worm activity in your soil... helping to release "locked-up" elements and improve soil structure.

Natra Min provides a cost effective alternative to the use of Gypsum in cloddy, dark soils and can be used for all crops including pastures, lucerne and cropping.



Lucerne & Grain Benefit from Natra Min

Lucerne and Grain growers, Col and Jackie Clark, began using Natra Min in 1996. During this period the Clark's have experienced a vast improvement in soil condition, and subsequently, crop yield and resilience.

This paddock (photo left) had been laser levelled and germination and growth of Lucerne was extremely poor. The use of Natra Min and manure has transformed this paddock into one of the highest producing on the property.

Increased Yield & Resilience

In 2000 Col and Jackie started using 3.5t of beef manure combined with 100kg of Natra Min per acre. According to the Clarks, the results have been outstanding. Col reports, "For grain crops, we found that this out-yielded our chemical fertilizer by about 13%. The crop definitely hangs in there better when it turns dry... which is a reflection on the improved condition of the soil now."

This program has also seen a noticeable increase in Lucerne yield... from around 30 bales/acre to 40 bales/acre.

The Clarks practice zero till in their grain crops where possible and tram track in conjunction with furrow irrigation.

Allowing for seasonal variations, an overall yield increase of 20% has been achieved following the introduction of Natra Min. Col adds, "you can see it in the plant... especially the colour and size of the leaf. The Lucerne performs better with the plants showing a lot more vigour".

Improved Palatability of Lucerne...

"In the Lucerne we used to apply 2 bags/acre of the Bye blend (DAP, Muriate of Potash + Zinc) simply because we thought we should," Col says.

At one stage Col and Jackie were using a bag of Muriate of Potash per acre until they ran into palatability problems. Horses wouldn't eat the Lucerne which resulted in reduced demand for their produce.

Since incorporating Natra Min into their farming practices, the Clarks have been able to reduce the use of all other inputs, in particular potash. This has had a corresponding improvement on the palatability of their crop and the Clarks have received positive feedback from customers that purchase Lucerne for their horses.

Col and Jackie use AgSolutions soil testing service to stay on top of their soil nutritional needs and have used all five blends of Natra Min at some stage over the years. According to Col, "the soil is getting much softer resulting in better seed germination and increased seedling vigour".

At AgSolutions our research and development team always encourage customer feedback to help further refine our product lines ... however, Col's request that our "next blend of Natra Min needs to have rain in it", may require further work. Although we can add that our blends of Natra Min do help to increase water penetration and moisture retention in your soil... at least that's a start!

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A U S T R A L I A

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**CALL NOW for answers to your animal nutrition
and soil fertility questions.**

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