

Over the fence

AUTUMN NEWSLETTER 2011

Ag Solutions

AUSTRALIA

Helping Australia Grow

FLOOD RECOVERY

Restoring soil health, structure and productivity



Chris Harvey: "Since using NatraMin, the friability of our soils has improved markedly, and we can now go back on the ground four days after heavy rain. Previously we had to wait for two weeks to get back onto our paddocks. In the same gear and revs, I have been able to travel at 12km/hr since using NatraMin Cal-S compared with the previous 8km/hr."

FARMERS across Queensland, NSW and Victoria are tackling the wettest conditions for decades, and are facing the cost of restoring their flood-affected and waterlogged soils.

For many years NatraMin soil amendments have proven their worth, helping to restore unproductive, hard, cloddy or crusted soils

and assisting farmers to get back onto their paddocks quicker after rain. Improved soil structure and fertility assists to restore crop and pasture productivity.

Lucerne growers Chris and Jan Harvey, Cunningham Pastoral Co, Aratula have been using NatraMin to successfully restore the condition of their heavy black soils.

NatraMin has been broadcast over all cultivation areas and existing lucerne stands on the property. They have found that soil structure and workability improved rapidly within eight weeks of application.

They have been particularly impressed with a 6-year old, grassy lucerne paddock that was restored with NatraMin Cal-S.

"With no irrigation, growth was tremendous throughout winter, with a cut of hay coming off in October, then another in mid summer."

Rain and more rain...

The Harveys have had their share of the rain with 36 inches falling on their property between late November 2010 and late January, but their NatraMin-treated country has quickly bounced back.

"Even with the heavy rainfall, it has continued to produce quality lucerne hay, growing well through summer."



Chris Harvey: "I have spent plenty of money and resources on the property in the past, but I have never had a response like this."



from the desk..

AS a result of the extreme wet conditions, the devastation to fencing and buildings as well as crop and stock losses has affected many.

The long term effect of waterlogging on soil health and structure will continue to affect crops for several seasons and will have an impact on your ability to recover.

Flood Recovery Assistance - up to \$25,000

These waterlogged conditions will have a huge effect on soil structure, with increased cultivation required to prepare a seed bed. Delayed planting, poor germination and loss of nutrients are also likely to reduce future crop yields.

Grants of up to \$25,000 are available to recover costs paid to repair flood damage.

Our early discussions with QRAA indicates that NatraMin may be an eligible product as a tool for repairing flood damaged soil.

If your soil has been affected, we encourage you to discuss your eligibility with a QRRR Liaison Officer on 1800 623 946 or www.qraa.qld.gov.au.



Understanding the impact of waterlogged soils



David Hall, R&D manager, Pathway Ag, Pittsworth

VERY few rural areas have escaped this summer's inundation of arable soils caused by prolonged rainfall, overland flows or rivers bursting their banks.

Soil has become saturated to the point where there is insufficient space in the soil profile for oxygen and just like humans, plants need oxygen for respiration and can only survive for a short period without it.

The impact on the plant depends on the duration and frequency of the waterlogging event; crop tolerance (eg rice is very tolerant, bean crops are more sensitive); crop growth stage (emergence and vegetative stage are likely to suffer the most dramatic yield loss).

Apart from the impact on crop and pasture growth, waterlogging can have a severe impact on soils, including:

- **Loss of top soil**
- **Increased compaction**
- **Increased soil salinity**
- **Dramatic changes to soil biology**
Under normal soil conditions, aerobic soil microbes depend on oxygen in the soil. In waterlogged soil these beneficial microbes can't exist. Anaerobic soil microbes, which can survive without oxygen, become dominant.
- **Changes to availability of soil nutrients**
With a changing population of soil microbes, some soil nutrients will be converted from plant-available into the unavailable form, and even into a harmful toxic gas.

For instance, Sulphur is converted to hydrogen sulphide (H₂S), giving off the characteristic post-flood smell. Other nutrients will be changed into forms that can be lost from the soil - such as Nitrogen via the denitrification process.

● **Loss of nutrients and organic matter**
Top soil and organic matter washed away in floods means reduced nutrients available for future crops. Mobile nutrients (Nitrogen and Sulphur) and immobile nutrients (Phosphorus, Potassium and most trace elements) can be lost. Soil testing is recommended to assess what soil nutrition remains.

To restore soil health, it is important to get a crop into the soil as soon as possible. An application of animal manure or composts can help to restore depleted organic matter.



Around the paddocks

with Gary Zerner, Senior Field Advisor

Managing waterlogged and flood affected soils back to health



Mineral Fertiliser & Soil Conditioner

DRIVING around the paddocks lately has been like witnessing a war zone. I've spoken to farmers from North Qld to Victoria, all affected by water damage.

Though many areas have dried out on the surface, we all know the clean up and rebuilding will go on for months. Likewise, under the surface, as the damage to our soil structure, biology and root zones will take time to recover.

Assisting you, our farmers and customers with advice on repairing cultivation and pastures is rewarding knowing that NatraMin fits part of a program to rebuild soil health, structure and biology.

With possible QRAA funding available to purchase NatraMin and other resources the repair bill will hopefully be a lot less. So what else can we, at AgSolutions, do to help you get the job done?

Regenerating anaerobic, lifeless, hard, flood affected or waterlogged soil can be fast-tracked with NatraMin.

Mark Muller (photo right) is just one farmer who has had previous experience of using

NatraMin as a soil amendment to regenerate flood affected soil two years ago.

In addition to replacing minerals and trace elements, NatraMin is formulated to stimulate the biology in your soil... helping to re-build humus levels, creating a sponge-like structure in the soil to improve both moisture holding capacity for the dry times and to improve drainage for the wet periods.

Chris Harvey (see front page) highlights how effective the use of NatraMin has been to avoid heavy losses of lucerne that would normally be associated with extreme rainfall.

Soil Test Service...

If you have time prior to planting, an important first step is to do a soil test. This is the best way to get a snapshot of soil health and the underlying factors contributing to soil structure problems.

A soil test will also provide a basis for a longer-term soil management plan.

If you would like to act more quickly, we can offer advice on the basis of soil and crop history or a previous soil test.

One of the most common comments from farmers who use NatraMin is that soil structure improves, and that soil life is stimulated, including a visible return of earthworms.

And remember, NatraMin is not water-soluble and will not leach away in the soil or volatilize into the air.



Mark Muller, Woodenbong: "When we lost soil due to flood damage, we used the NatraMin program to bring bare paddocks back into production.

Two years later, compared to unaffected areas, we couldn't pick the difference in the crop."

“I knew something was missing in our soil... and now I’ve found it!”

NatraMin

Dorrigo potato grower and cattleman Stan McGuire has found a way to regenerate his paddocks to the condition they were 50 years ago.



STAN McGuire: “Where was AgSolutions 20 years ago? I knew something was missing and now I’ve found it. Since using NatraMin I can grow things like I used to and our paddocks perform like new country.

Farming in the beautiful plateau country just behind Coffs Harbour NSW, Stan believes the area has some of Australia’s best farming soils, however the family were having difficulty with pastures not persisting in a potato and pasture rotation.

“We’ve used a lot of fertiliser over the years... one, then two, then three bags of high-analysis fertiliser per acre, without the response that we were looking for. There were no worms to be seen and the pastures planted after spuds weren’t persisting.”

Improved soil structure...

In 2008, Stan first applied NatraMin HI-Phos to a paddock that wouldn’t grow pasture.

This paddock has turned around and Stan’s sons have also experienced improvements since using NatraMin. The soil is softer and easier to work, and clods have disappeared, making a huge difference at potato harvest.

“Previously we had to use ‘clodders’ on the harvesters and needed extra staff but now this has been resolved because the soil is soft and friable.

“Also, water now soaks into the soil, whereas previously it used to run off. As a result, our soils aren’t washing anywhere near as much.”

Before trying NatraMin the McGuires used Superphosphate and regular applications of Lime - always trying to increase soil pH.

“Since using NatraMin HI-Phos the pH is holding well, eliminating the need for Lime and the extra clover has allowed us to eliminate nitrogen fertiliser. The pastures have never been better and the cattle are doing well.

“The spuds are even; yields are good and seeing worms back in the soil now when we dig the spuds tells me our soil has improved.

This country just needed ‘something else’ and I’ve tried a lot of things... NatraMin has delivered. I couldn’t be happier and I only wish that I had known about NatraMin 20 years ago.”

Our pastures were not responding to Super...



FARMING in the hilly Sunshine Coast hinterland, Pomona dairy farmers Neil and Glenn Maher switched over to NatraMin 4 years ago to replace their annual Super Phosphate program.

Neil Maher: “We had heard a lot about the results of NatraMin over the years and had used Super since the early 1960s. Because our pastures weren’t responding, we decided to move away from a full chemical fertiliser program.”

The family milk around 250 cows from 275 hectares of tropical pastures, plus 25 hectares of annual ryegrass.

Increased legume content in pasture...

“Due to the hills here, we use the plane to apply around 75 tonne (250 kg/ha) of NatraMin Cal-S each year. A second application of NatraMin is applied to ryegrass paddocks prior to planting.

Our pastures are looking good, and in particular we have seen a massive increase in the growth and proportion of legumes since using NatraMin.

We rely heavily on our Rye in the Winter. The NatraMin Cal-S acts as both a mineral fertiliser with trace elements and as a soil conditioner, helping to offset compaction.

The soil is improving in our cultivation. We still use a starter fertiliser with the rye, but have been able to cut back our top dressing fertilisers by 25%.”



MegaMin Extra Sulphur... the key to extra weight gain and reduced buffalo fly

THE benefits of supplementing livestock with Sulphur is gaining increasing recognition by producers.

Ballandean Station manager David Blackwood has seen the benefits of MegaMin supplements for several years and is a strong advocate for MegaMin Extra Sulphur at strategic times of the year.

Extra Weight Gain...

"For several seasons we've seen the benefits of supplementing with Sulphur in action. Last year, stock grazing silk sorghum with access to MegaMin Extra Sulphur performed better with improved weight gain and better utilisation of the paddock.

These steers grazed the sorghum to the ground, and ended up going over the intended weight for the feedlot market."



Sulphur is an important component in amino acids (the building blocks of protein) and is a key nutrient for wool growth.

Reduced Buffalo Fly...

"Last summer was the worst buffalo fly season we've seen. We had cattle on MegaMin Extra Sulphur running alongside cattle with no access to extra Sulphur.

There were clearly more buffalo fly on the stock with no Sulphur meaning they were more agitated, and not able to graze so well and could not put on the kilos."

"Cattle with the extra Sulphur still had a few fly, but with only a 4-strand barbed wire fence between them, we were amazed at how visible the difference was.

Now I'm a firm believer in using Sulphur to aid buffalo fly control and I also see potential benefits to help control internal and external parasites in sheep."

Previously sheep had been lost on the station through urea poisoning and MegaMin has provided a safe, economical and effective alternative to urea based supplements.

"MegaMin has proven itself in the performance of our livestock. The added bonus of the MegaMin supplements is that they benefit all stock, and with horses in the paddocks as well, we don't have to worry about any health issues with urea."

AgSolutions Note: The high Sulphur in MegaMin Extra Sulphur may cause toxicity for horses if excessive levels are consumed. All other MegaMin products are safe for horses.

MegaMin



Extra Sulphur
with
Phosphorus, Magnesium
and Trace Elements

Benefits of Phosphorus

When there is plenty of lush green feed during spring or a wet season, Phosphorus is likely to be the major limiting nutrient, especially in Phosphorus deficient areas.

Phosphorus deficiency can cause poor growth rates and low calving percentages.

Benefits of Magnesium

Magnesium is the only mineral absorbed in the rumen and is the second most limiting mineral for stock grazing lush green pastures. Lush fodder passes too quickly through the rumen to allow adequate absorption of Magnesium, which can lead to 'Grass Tetany'.

Plant uptake of Magnesium may also be reduced in the cooler months increasing the need for supplementation.

Benefits of Sulphur

Feeding Sulphur and salt helps detoxify prussic acid and increase weight gains in cattle grazing forage sorghum.

With adequate Sulphur intake, stock are able to graze more stalk and stem.

For best results, commence feeding MegaMin Extra Sulphur 2-3 weeks prior to grazing sorghum.

Sulphur is essential for rumen health.

Sulphur may assist with parasite

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LICK BLOCKS and loose supplement

For answers to your soil fertility and animal nutrition questions, give us a call and talk to one of our trained Field Advisors.

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