

How to get more from your Lucerne

Lucerne is a versatile crop. With adequate soil moisture, it provides good grazing and feed quality. With spring in the air, it's time to start planning, whether it be for hay and/or seed production.

The first key step is understanding your soil nutrient status. A soil test is a low-cost and highly effective management tool that will identify impediments to your production goals.

Irrigated lucerne and paddocks targeted for hay production may well require an application of *PotPhos* (10.0% Phosphorus, 10.0% Potassium, 5.0% Sulphur, 26.0% Calcium). The consumption of potassium from previous lucerne hay crops and possible leaching of the phosphorus through the soil profile over winter makes *PotPhos* a worthy consideration. The ideal application time is September to early October.



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The first of the hay cuts is likely to be late October. To improve lucerne production and quality, trace element deficiencies should be addressed in September. Trace element status may vary by location. Simple to do, a low-cost tissue test will confirm your crops nutrient status. It usually only takes a few days to get the results making it an excellent tool for refining foliar trace element applications.

Foliar applications often include Manganese, Zinc and Copper. These are often sulphate based powders. As sulphate plant uptake may be limited, tangible benefits are achieved by including *Balance & Grow* in a tank mix with these trace elements.

Balance & Grow is a natural chelator, improving the uptake of trace elements, and providing amino acids to the lucerne, crucial for improved vegetative production. Trials and demonstrations have shown improved protein and metabolised energy in lucerne after using *Balance & Grow*, important in production of high quality feed.

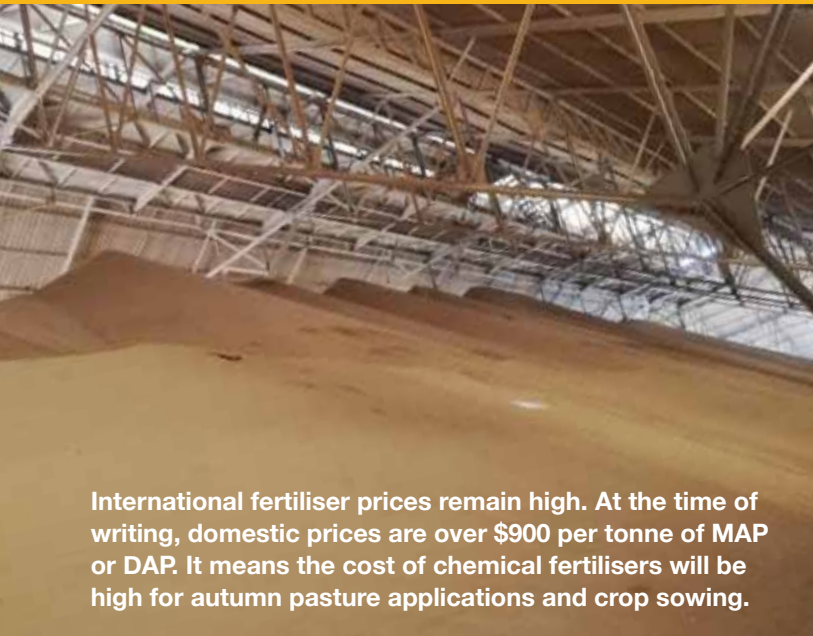
After the first cut and once sufficient leaf area has grown back a second application of *Balance & Grow* with trace elements is applied to improve yields of the second cut.

After the second hay cut, when the paddock is locked up for seed, *Balance & Grow* plus trace elements are applied again. At first flower of the lucerne, an application of *Fruit & Balance*, again often tank-mixed with trace elements, will stimulate and support the lucerne during seed set and reproduction.



Scan for more information
on BioAg biostimulants

High cost Phosphorus in 2022 season



International fertiliser prices remain high. At the time of writing, domestic prices are over \$900 per tonne of MAP or DAP. It means the cost of chemical fertilisers will be high for autumn pasture applications and crop sowing.

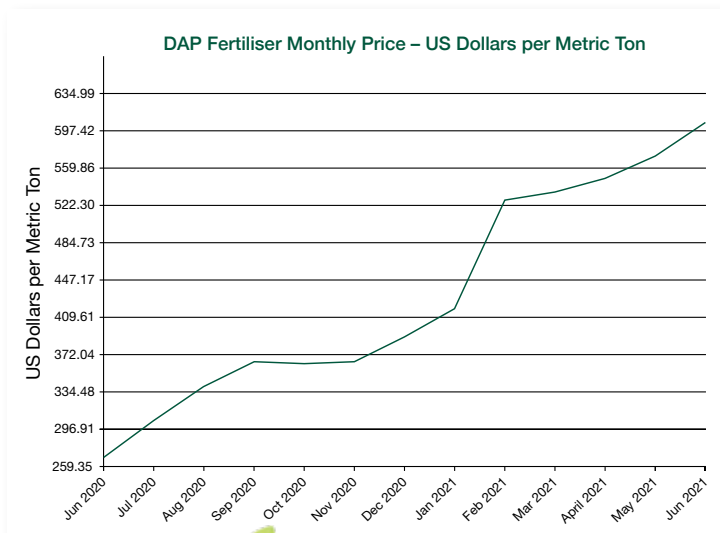
At these prices, growers need to be aware of the cost of P lock up with water-soluble fertilisers and the alternatives available.

If your soil is low in organic carbon or high in P antagonists, you could lose 10% or more of your applied P, which adds over 10% to the cost of fertilising your crop.

BioAgPhos provides a sustained release of 100% plant-available P fertiliser. An ideal source of capital P (base level) in cropping or as the P fertiliser in irrigated permanent plantings and pasture.

BioAgPhos and its blends are ideally suited to blending on-farm and spreading with gypsum, lime, or compost. In addition, BioAgPhos used as a source of capital P in a cropping rotation can displace a portion of your starter fertiliser, where rates can be reduced by 30% to 50% depending on soil and crop types.

Contact your BioAg representative to discuss your needs.



Improving your Broadacre Crops

- ✓ Improve the benefits when applying broadacre chemicals
- ✓ Maximise profitable yields

In broadacre cropping, fungicides are sprayed to reduce the impact of disease in growing crops. This provides an obvious benefit to a crop, but it is possible to get added benefit by feeding and stimulating the crop at the same time as applying the fungicide.

Specifically:

- Including liquid macro or micronutrients in the application, where deficiencies have been identified by crop evaluation or leaf tests.
- Including a growth or fruiting biostimulant that supplies important metabolites, enzymes, vitamins and sugars to support plant growth.

Fungicide protects your crop from disease while BioAg's *Fruit & Balance* stimulates crop growth. Mixing *Fruit & Balance* with your fungicide spray supplies essential trace elements and organic compounds and sugars that will assist flowering, seed set and seed fill.

A good moisture profile, supporting an application of fungicides and trace elements, will support your crop and give you the best opportunity to lift yields.

BioAg *Fruit & Balance* should be used as part of an integrated BioAg Fertility Program to rejuvenate soil fertility. Your nearest BioAg Representative can develop a custom-made fertility program for each paddock or crop using advanced analytical and prescriptive services.

Contact BioAg today.



Customers interested in securing products early should contact their BioAg representative to discuss pre-payment and early contract offers.

Maximising Nutrient Use Efficiency – minimising costs while fertiliser prices are high

Prices for most agricultural commodities and inputs are close to record highs.

As such, it pays to maximise the effectiveness of crop nutrients that you apply, be it a winter crop, summer crop or perennial system. This is referred to as maximising Nutrient Use Efficiency (NUE).

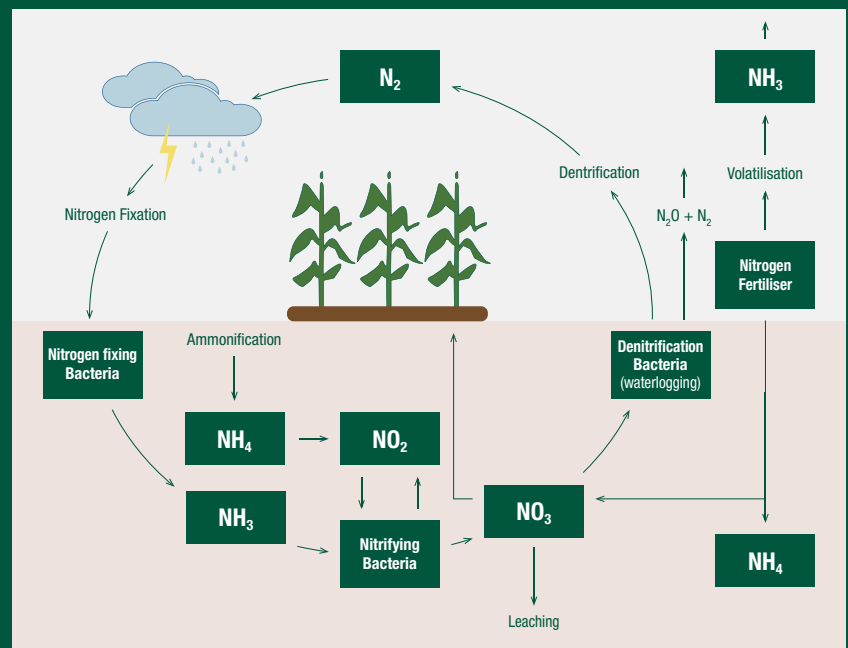


The best way to improve NUE is to reduce waste and losses to the environment that are inevitable whenever using fertiliser. This is especially the case with nitrogen fertilisers, be it granular urea or a liquid nitrogen fertiliser. There are also long-term negative impacts when overusing N fertilisers—in particular, loss of carbon and degradation of soil structure, resulting in even more N required to maintain yields. It is essential to consider all the needs of your crop, trees or vines to break this degrading cycle and provide nutrients in a timely manner and form.

One method to optimise N use efficiency, particularly in high input perennial horticulture systems, is to use *Soil & Seed* in combination with fertigated N. *Soil & Seed* provides labile carbon and a range of microbial metabolites and food web nutrients that improve rhizosphere function and consequently nitrogen uptake.

Soil & Seed promotes root growth that increases nutrient accessibility and facilitates plant uptake by triggering physiological processes. It encourages the growth and maintenance of the soil microbiome, enhancing N cycling, including N immobilisation and mineralisation, which fix N and reduce losses to the environment, while retaining N in plant-available forms for when required. *Soil & Seed* also feeds soil biology that improves soil structure, soil carbon accumulation and water infiltration.

Strategic foliar fertilisation can be spectacularly rewarding, supporting the plant through periods of peak stress and physiological demand. BioAg's *Balance & Grow* supports crops and perennial plants through the vegetative production cycle, assisting flowering and fruit set in perennials. Improved growth enhances the resilience of plants and crops to stresses like frost, heat and other environmental shocks. *Balance & Grow* is an excellent carrier of other foliar nutrients as it provides a range of natural chelators that aid nutrient uptake and translocation within the crop.



By improving nutrient uptake, BioAg's *Balance & Grow* reduces losses to the environment.



Typically, *Balance & Grow* can be foliar applied in combination with an N source such as calcium nitrate and micronutrients such as boron.

Whilst this is a very efficient and cost-effective method of balancing the nutrition of plants and crops, it is important for informed prescription to be undertaken by an experienced BioAg agronomist or horticulturist for maximum results and benefits.

**Contact your BioAg
agronomist today to
optimise your foliar
nutrition program.**



Clean Coastal Catchments Project



BioAg is participating in the Livestock Fertiliser Stewardship Group for the NSW Government funded Clean Coastal Catchments (CCC) project. The project addresses the management of excess flows of fertiliser, nutrients, and effluent into our coastal waterways and how this can be reduced. It is being run and coordinated by the NSW DPI over a ten-year lifespan, ending in 2028.

BioAg Area Manager Peter Emerson recently attended a virtual forum on the subject, which focused primarily on the management of Nitrogen, Phosphorus and other nutrients, particularly in dairies and intensive livestock systems. It included a review of Fert\$mart for NSW dairies in helping create a whole of farm nutrient management plan.

Emphasis was on better nutrient cycling and the use of built-up Legacy P to reduce environmental impacts, and how regenerative farming takes a whole ecosystem approach in helping with this process.

Importantly, a lot of work is still to be done on measuring and quantifying nutrient cycling in the soil between plants and microbes. It also highlighted that balancing all nutrients, not just N and P, to get production gains particularly where macronutrients are in excess.

A BioAg program using fertilisers and biostimulant fits perfectly into this model, as the nutrients are supplied in a non-water-soluble form, reducing the risk of runoff and losses from leaching, as well as activating and feeding the natural beneficial micro-organisms in the soil and plant rhizosphere. This then increases nutrient cycling, soil structure, and overall soil and livestock health.

BioAg will continue to work with the CCC program to keep abreast of the latest findings and to see which methods can best be adopted to minimise environmental impacts, while at the same time boosting production and whole-farm health.

**More information can be found at:
[Clean Coastal Catchments \(nsw.gov.au\)](https://nsw.gov.au)**



Farewell to Ivan Mitchell

Ivan Mitchell, one of two agents who have been with BioAg for our entire journey since the company was founded in 1999, retired at the end of June. He leaves a number of long-term customers who have been with him, some for the entire 22-year period, and they are as sad as we are to see him go.

I first met Ivan back in 1994, soon after he started working with me as an agent. In the 27 years that we have worked together, neither can remember ever having exchanged a cross word. Ivan's strength and integrity have always guided his conduct, one of the reasons he will be so sorely missed.

Now well into his 70s, Ivan can feel like his retirement has been well and truly earned. However, I suspect some of his customers will still seek his counsel when required, and good on them. Ivan's knowledge and experience of managing soils, along with his ability to build biological and organic programs that produce exquisite outcomes for his customers and own farmlet, is the stuff of legend.

From all at BioAg, we wish Ivan and Coral a long, happy and peaceful retirement; well, until he gets bored and goes back to doing what he knows and does best.

– Anton Barton



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