Newsletter

EDITION 57, JANUARY 2017

FERTILISER CONSIDERATIONS FOR NEXT SEASON

What constitutes a good fertiliser? The most amount of phosphorus and nitrogen you can get for your dollar? How cheap can you buy MAP? Yes, that is certainly a big part of it. However there is more to the story.

The ability of a fertiliser to supply all required nutrients, and supply them efficiently to the plant whilst improving soil biological health is also of utmost importance to improving yields and quality in your crop.

Nitrogen and phosphorus are the two nutrients we tend to focus upon the most, however, thousands of soil and leaf tests tell us that zinc, copper, molybdenum & boron are also very deficient in our soils and crops. Each year these essential trace elements are exported out the front gate in grain, meat and wool. However our cropping nutrition programs seldom allocate budget towards these critical elements. So the question becomes, should we? I believe there is no question….we definitely should. Why? Because these elements are so important to the health and productivity of the crop, and the quality and quantity of grain that is grown. If we don't plan to include these trace elements in our cropping program, we are planning to run crop deficiencies and reduce yield potential. It's that simple.

The critical role of trace elements

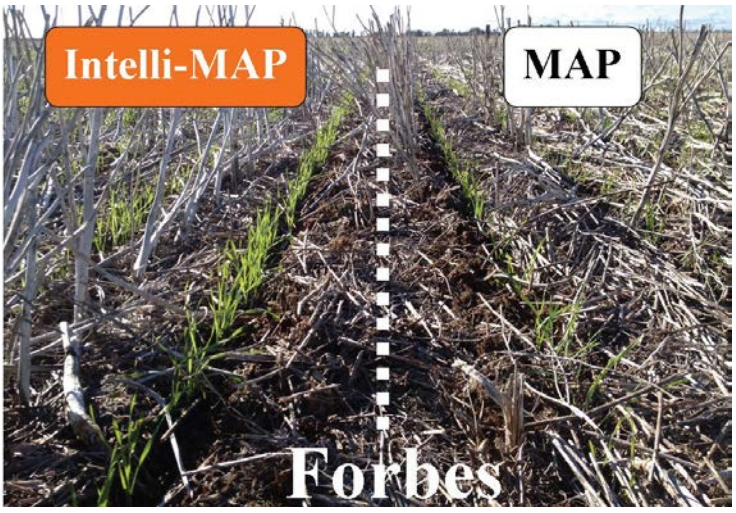
Zinc – Controls plant auxins – the hormones that make the plant grow. Zinc is particularly important in early root development and plant disease resistance through the season. Critical in nitrogen efficiency.

Copper – Controls water use efficiency in the plant (drought tolerance), pollination, seed set, straw strength, fends off disease attack and is critical in nitrogen efficiency and protein formation in the grain.

Molybdenum – Essential for nitrogen efficiency. Nitrogen needs moly to make proteins. Wheat yields can be reduced by up to 30% before physical symptoms can be seen.

Boron – Essential for pollen viability, water use efficiency and disease resistance.

AgriWest offer a trace element coating service onto your MAP called **Intelli-MAP.** zinc, copper, moly at crop replacement levels and supplementary boron are coated onto normal MAP at Newcastle as it is loaded into the truck. This is the easiest and most efficient method of getting these essential trace elements into your soil and into your crop.



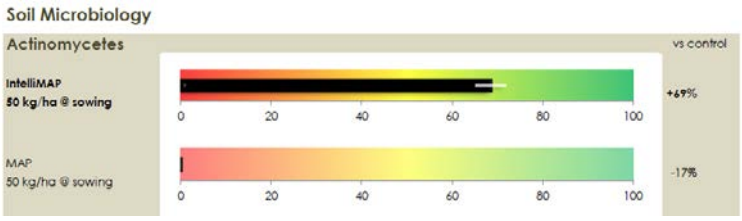
Intelli-MAP improves early seedling vigor (left) and supplies trace element nutrition for the season.

Chelation is the key

The trace element coating uses an advanced chelation technology to 'stick' the trace elements onto the MAP. This chelation agent has been thoroughly tested in the field and over 30 trials reveal a consistent 6% yield improvement (95% confidence interval). This means the yield improvement associated with the chelation agent alone more than pays for the inclusion of the crop replacement trace elements in the coating. For around $10/ha in a typical program, Intelli-MAP makes sound agronomic and financial sense.

Soil microbes are important

Recent studies carried out by GAIA 2112 comparing MAP to Intelli-MAP reveal that the activity of important soil microbe groups such as Actinomycetes (important for N mineralization and disease prevention) are improved by nearly 86% in favour of Intelli-MAP (normal uncoated MAP actually significantly inhibit these valuable microbes). This means Intelli-MAP enhances the soils natural ability to produce nitrogen and to fend off disease for the crop. (See graph below)



Intelli-MAP improves key beneficial soil microbe species in the root zone.

GIVE AN AGRIWEST AGRONOMIST A CALL AND ASK HOW INTELLI-MAP CAN WORK FOR YOU IN YOUR CROPPING ENTERPRISE.

IN THIS ISSUE

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TARGET 100% OF WEEDS IN STUBBLE SPRAY

In crop stubble, spray coverage will often be compromised and growers need to be attentive to every detail of the spray application to ensure the highest possible weed control.

Growers who focus on using the best herbicide formulations available, coupled with correct sprayer set-up, sprayer operation, actual spray coverage, product application rate and favourable environmental conditions will have the greatest chance of reaching 100% weed control, leading to cleaner crops, less herbicide resistance and higher yield potential.

Water volume and spray quality

Water volume and spray choices depend on the target weed (e.g. grass vs broadleaf, age). The industry standard Area Fraction Coverage is 8-10% and 20-30 droplets/cm2. Where large stubble loads are present, use higher water and product rates to compensate for interception. Using larger droplets also requires higher water volumes for deposition onto smaller targets.

Table 1: Spray quality and water volume requirements for glyphosate*

Spray quality	Small Grass	Tillered Annual Ryegrass	Summer Broadleaf Weeds
Medium	70-100 L/ha	70-100 L/ha	Not recommended
Coarse	70-100 L/ha	70-100 L/ha	50-100 L/ha
Very Coarse	Not recommended	-	50-100 L/ha

*always check specific product specifications before use

Timing and product rate

Very small grass weeds will always be difficult to control in thick stubbles and require high product rates and water volumes. Alternatively, delaying control results in loss of moisture and nutrients, potentially leading to larger, stressed, 'harder to control' weeds.

Nozzle and boom spray set up and travel speed

Ideally sprayer height should operate 50cm above the target weeds or the top of false targets (i.e. stubble). Spraying with larger droplets and faster speeds will increase the interception on one side of plants. Shadowing will be accentuated behind stubbles and boom height will need to be increased. GPS guidance along with sowing and spray 'up and back', has produced a secondary benefit of minimising stubble interception and better inter-row weed control. Always follow the manufacturer's specifications and check actual application coverage by using water sensitive paper.

Travel speed and water volume have the greatest impact on achieving good coverage. With increased speeds, generally greater then 20km/hr, there will be fewer droplets retained on targets. Higher working speeds also result in increased dust in wheel tracks and losses to the environment leading to poor efficacy.

Environmental conditions

Spray conditions are crucial when targeting 100% weed control. A useful tool for determining optimal spray conditions is Delta T. A low Delta T may increase the chance of drift, and a high Delta T can lead to high droplet losses from evaporation, both resulting in poor efficacy. Ideal conditions are when Delta T is between 2 and 10. Aim to spray when wind speeds are 3-15 km/hr to reduce chances of spray drift.

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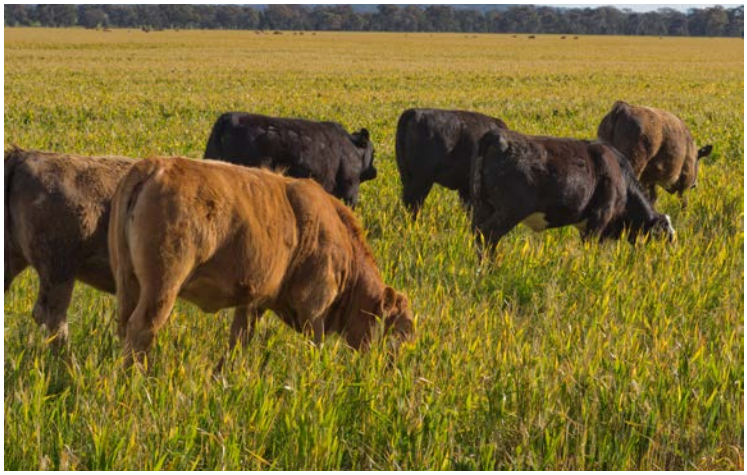
FEED MANAGEMENT OF DAMAGED CROPS

The weather over the last few months has rendered many crops damaged, meaning they are either unable to be harvested, or have a lot of dropped heads. This increases the grain component of stubbles substantially, so careful management of livestock nutrition is very important. High amounts of residual grain left in crops has the potential to cause grain poisoning, resulting in a loss of production and/or stock losses. However, if managed correctly, the grain can be utilised to boost production in your livestock!

Generally, livestock will clean up residual grain in a crop quite quickly. However, it is important to have a source of buffering available to the animals to help prevent the onset of grain poisoning. Even when not causing deaths, grain poisoning significantly affects production, causing a decrease in feed conversion, growth rates and overall health.

There are some simple, and highly effective techniques available that can boost your livestock production and profits through the summer period. Specialised loose licks that contain both buffers and a comprehensive blend of essential starch, vitamins and minerals provide a source of protection against grain poisoning, whilst also providing the nutrition required for maximum feed conversion efficiency. This product has been formulated to be highly effective, low cost and simple to implement.

Turn those damaged crops into productive feed today. To find out more and get a plan in place for your summer nutrition needs, please contact our AgriWest animal production specialists today!



FACEBOOK: MONTHLY RECAP

Looking for more insights? Our Facebook page is a great way to stay informed. Regular product information and specials, seasonal insights, community events and branch updates – it's all there at your fingertips!

Last month alone we posted about Pest Control, ProLube Agency, cotton field awareness, Agfarm Advantage harvest programs, Mongrel and Blundstone boots, irrigation products, Agfarm's Fast Cash and more... Check us out today!

Contact an AgriWest specialist today for more information.

Agronomy

Forbes:
Guy Webb
M: 0422 806 325

Parkes/Peak Hill:
Luke Wood
M: 0427 691 633

Animal Health

Forbes:
Em Wollen
M: 0427 523 601

Parkes/Peak Hill:
Dave Rathbone
M: 0428 515 405

Pumps & Water

Forbes:
Brett Rout
M: 0408 571 134

Parkes/Peak Hill:
Mitch Leckie
M: 0422 213 443

Finance

All Branches:
Ryan Thornberry
M: 0408 742 521

AgriWest Parkes
20-22 Clarinda Street, Parkes NSW 2870
T (02) 6862 1066 **F** (02) 6862 1583
E parkes@agriwestrural.com.au

AgriWest Forbes
6-8 Camp Street, Forbes NSW 2871
T (02) 6851 4200 **F** (02) 6851 4338
E forbes@agriwestrural.com.au

AgriWest Peak Hill
110 Caswell Street, Peak Hill NSW 2869
T (02) 6869 1449 **F** (02) 6869 1592
E peakhill@agriwestrural.com.au