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AG NOTE

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Introduction

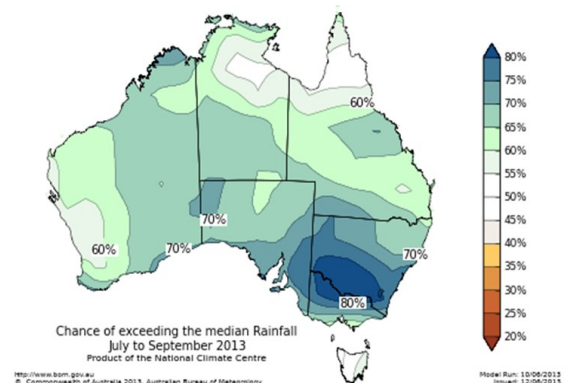
From everyone at Western AG, it is a warm welcome to this year's winter edition of our newsletter. Articles include seasonal and regional updates, the importance of nutrients, broadleaf control in crop, winter management of pastures and B12 livestock benefits. We hope you enjoy the read.

The start to the 2013 season has been later than in previous years, however, we have been fortunate to receive solid rainfall events in May to enable full germinations of sown crops and pastures, weed seeds and the activation of pre-emergent herbicides.

Current soil moisture levels in the Wimmera, Mallee and Western District are ideal at the moment. Well above average amounts of rain have been received in the medium and low rainfall areas of the state which importantly provides a buffer going into spring.

Fortunately, it has not got too wet in the high rainfall areas to restrict access for spraying and spreading of fertiliser.

The Bureau of Meteorology rainfall outlook for the next three months is for above average rains (Figure 1). With the combination of a favourable rainfall outlook, good current soil moisture levels and the prospect of reasonable livestock and grain prices, it is hard not to be optimistic about this season.



Company Developments

This season has seen the Wimmera / Mallee areas of Victoria receive very good rainfall and with this we have experienced significant demand for all our services, especially those based out of our Horsham Branch.

We will have some exciting company news coming in future newsletters including the appointment of an Assistant Manager at our Horsham Branch. He will start late August and be helping Mark Hoffmann and the entire team across a range of activities.

Keep an eye out for the details.

Inside this issue:

Introduction	1
Company Developments	1-2
The Season So Far	2
Good Agronomic Advice	3
The Benefits of B12	3
Wimmera / Mallee Update	4
Post-Em Broadleaf Control in Wheat & Barley	4-5
The importance of Trace Elements	5
Foliar Disease Update	6
Winter Management of Pastures	6



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Company Developments continued... Western AG in Stawell

We are very pleased to announce the appointment of Reppers Rural Merchandise at Stawell as an Agent for Western AG in the area.

Reppers Rural are an established supplier of seed, fertiliser, crop protection chemicals, animal health and general farm merchandise. The owners of Reppers Rural are John and Joy Repper who also operate a transport business and farm in the Lake Fyans area.

Western AG will be supplying seed, fertiliser and crop protection chemicals as well as agronomic services to clients of Reppers Rural. Reppers Rural will continue to supply animal health and general merchandise products directly.

Farmers in the Stawell area will now have access to Western AG's product range and services through a locally based business. The full package of agronomic services will be made available from our Horsham based agronomists for clients north of Stawell and from Glenthompson based Agronomist Brad McLean for clients south of Stawell.

The team at Western AG is looking forward very much to working with Reppers Rural and to provide services to farmers in the Stawell area.



Mark Hoffmann (C-Left) and John Repper (C-Right) shake hands at the announcement of the new agreement. With them are Western AG agronomists Brad McLean (Left) and Tim Hofmaier (Right)

The Season So Far (by James Jess)

Well, what a season so far! One of the driest summers on record, with a break that arrived just in time. There's been plenty of early sowing, combined with robust pre-emergent strategies to account for the lack of knockdowns and, once again, slugs are the topic of conversation! But despite all of that, things seem to be tapping along nicely.

Pre-emergent chemicals seem to have worked well this season considering the amount of dry-sowing that took place. The lack of soil moisture at sowing meant that limited ryegrass was able to germinate before the chemicals were activated by the break which arrived in early May. Robust pre-em mixes such as Sakura and Avadex targeting root and shoot uptake are proving very effective at achieving long term ryegrass control.

Many canola paddocks are full of volunteer cereals as a result of the dry summer and limited opportunity to get a summer knockdown. Cereal crops are also proving difficult with many volunteer cereals emerging unaffected by the pre-emergent as expected. Control is tricky and growers are advised to discuss options with your agronomist.

Once again, slugs have been the arch enemy of many farmers throughout the western district. Whether the crop is canola, wheat, barley, oats or newly sown pasture, slugs are there attacking seedlings. This goes against what many believed to be the 'Perfect Summer' to get rid of the major pest and it seems that all rules of thumb have been busted by the persistent presence of the mighty slug. As such, plenty of bait has once again been spread. The positive thing to come out of another high pressure year is that we're getting smarter in our monitoring and baiting techniques. Fewer paddocks have been lost, and less re-sowing has been needed to patch out affected areas. No longer are we relying on hot/dry summers or hot burns, and cultivating or rolling to drive the numbers down. We're now looking at incorporating as many different control strategies combined with constant monitoring and targeted baiting. The results being that we're able to live with the slugs in our system without too much damage.

Insects are up and about at the moment with heavy infestations of RLEM, BOM, and Lucerne flea reported in most areas.

All crops are susceptible although special consideration should be directed to new and existing pasture with a clover base. Watch out also for Faba bean paddocks which can be severely affected by the insects and can retard their growth significantly. Knockdown insecticides such as Dimethoate or Le-mat can be used to eradicate the problem. Astound Duo or Alpha - Cypermethrin can also be used on RLEM and BOM, but does not have good activity on Lucerne flea.

Frosty weather is now making spraying canola very difficult. These icy cold mornings are not only hard on our will to get out of bed, but also hard on our weed targets. As a result the plant shuts down and the level of control can be affected. Therefore, spraying ryegrass particularly should be avoided after a frost or if a heavy frost is forecast. If you receive a run of two or three frosts in a row, give the plant time to recover before spraying takes place.

Disclaimer

The information contained in this AG Note is to be used as a guide only and specific information needs to be sought from the authors regarding individual situations. Western AG Supplies takes all care in compiling this information. However Western AG Supplies accepts no liability for any loss or damage suffered by any person who relies on this information.

Good Agronomic Advice (by Philip Hawker)

As an Agronomist, there is nothing more rewarding than working with a client to develop robust and profitable farm production systems. To get to this point it is necessary to consider risk and sustainability as well profit optimisation and input cost. It is also critical to have an understanding of the clients farming business objectives. To do a good job as an Agronomist you need a high level of skill, local knowledge and thorough knowledge of your client.

It is tempting as an Agronomist to try and drive profit higher purely by trimming inputs. The majority of growers understand that this is a short term strategy and can put the production system at serious risk. Examples where the focus is on costs that can result in large production and profitability losses include inadequate slug control strategies resulting in paddocks requiring re-sowing, and the use of less effective pre-emergent herbicide strategies in cereals resulting in the build-up of rye grass. Other areas where it may be tempting to trim costs which can result in large profitability losses include the rate of starter fertiliser, the use of trace elements where required and the correct identification and control of foliar disease.

Western AG has made a large investment in its agronomic service capacity and we are the largest and most experienced team in SW Victoria. Our combined agronomic experience is now approaching 130 years. As a group, our absolute focus is on the provision of independent industry leading advice. Our agronomists are located either in or very near to the areas that they work and, being a larger team, we have the ability to cover for each other during peak times or when leave is taken to ensure farm visits are regular. We are also pleased to say that we have had very little change in the people over the eight years we have been operating for.

As an agronomist the continual updating of skills is a must to ensure sound advice is able to be given. Our team spend, on average, 2-3 days per month on technical training and development as well as continually researching and checking information on topics that arise in the normal course of work. In addition to this, we meet as a group every month to share information formally and at these monthly meetings a guest expert is usually invited to present to the group.

Expert guests that we have had at our meetings so far this year include, Dr Chris Preston (Adelaide University) on

herbicide resistance and weed management, Dr James Hunt (CSIRO) on early sowing agronomic packages for wheat, Dr Rob Norton (International Plant Nutrition Institute) on nitrogen management and Nick Poole (Foundation of Arable Research) on foliar diseases control in cereals particularly Septoria.

To provide agronomic services efficiently a large resource commitment is also required to be made. As required our agronomists have access to ATV's for checking crops as well as being equipped with specialised farm planning software and computer hardware.

It is important to also note that the independence of our advice is guaranteed in that clients have the option of being provided agronomic services free of charge as a package with the supply of inputs, under a per acre fee for service arrangement or on a per hour basis.

Feedback on the agronomic advice you are receiving from our business is important, to enable us do a better job of taking your farm productivity and profitability to that next level, and we would like to hear from you.

The Benefits of B12 (by Troy Kollegger & Aaron Starick)

With lamb prices increasing steadily in recent months, it is good management practice to implement the best possible vaccination program to maximise profits. Producing heavier and healthier lambs can have a huge impact on a producers' bottom line.

Vaccinating at marking, and administering a booster shot at weaning, provides protection against clostridial disease and helps insure your flock against sudden death. A further booster is required annually for ongoing protection. At the abattoir, carcass trimmings due to Cheesy Gland and other common diseases can significantly reduce profits.

In grazing situations, Cobalt is the main source of Vitamin B12 which is ingested with the pasture or soil while grazing.

Vitamin B12 deficiency can come from a number of things such as grass dominate pastures, year to year fluctuations in rainfall, regular use of fertilisers and in granite-predominate soil types.

Recent studies have shown that using an effective supplement program (i.e. B12) can increase meat value. Some vaccines come with added supplements, including B12 and Selenium, which can also increase lamb survival, improve growth, wool quality and fleece weights and also improves the animal's immune system.

To avoid any B12 deficiency issues, supplements are given to the ewes pre-lambing to help increase lambing percentages, decrease lamb mortality and to help optimal lamb growth in the late pregnancy stage.

So when protecting your sheep against major clostridial diseases and Cheesy Gland, you can also now treat with Glanvac 6 B12 or Glanvac 6S B12 for vitamin deficiency. As an administered supplement, sheep only need to gain around 50gms of additional dressed weight to cover the cost of the Vitamin B12, anything above that is extra profit.

And remember, most vaccines should be used within 30 days from opening.



Wimmera Mallee Update (by Tim Hofmaier)

Season 2013 has proven to be a roller coaster ride to the start of the cropping season with some people saying it was going to be the drought of all droughts in 2013 (weren't they wrong!). Many farmers decided to start sowing canola on the 12mm of rain on April 23rd thinking this was the "break". They were again proven wrong with canola germinating and then dying due to lack of rainfall in the coming weeks ahead.

In May, rainfall totals of 21mm in Horsham and 27mm in Nhill for the month, with the biggest daily total of 8mm, made it hard to decide on whether to start sowing or wait for a knockdown on emerging weeds. With 70% of the Wimmera/Mallee ending up being sown dry, this again has put huge pressure on pre-em's to hold problem populations of annual ryegrass and brome grass.

Sakura is again leading the way in ryegrass control in wheat. The dry start allowed farmers to spray it out before the ryegrass germinated. Checking paddocks over the last 2 to 3 weeks has identified how robust this product has been on high pressure paddocks. Sakura is allowing for some brome grass control and is also doing a good job on self-sown canola, which has allowed the wheat to compete quickly and well.

High rates of Trifluralin and Avadex Xtra are also doing an excellent job on controlling grasses and, in particular, brome grass where there are minimal options in barley crops. It appears the pre-em's this season are proving to be the most effective they have been for a number of years. Encouragingly, they still appear to be having lasting effects on weeds currently in crops.

There has been high pressure of red legged earth mite (RLEM) and Lucerne Flea damage in cereals and legume crops this season with canola and vetch suffering the hardest. Talstar with Dimethoate has been doing an excellent job on killing and holding these pests, with 100ml/ha of Talstar giving up to two months protection. Farmers should continue to keep monitoring their crops for pests.

June proved to be a fantastic month. Horsham received 77mm and Nhill 125mm (some areas receiving higher totals) all in the matter of weeks. This has certainly helped to set up for a good season going forward. Post Emergents are well under way and farmers need to ensure they take out there grasses and broadleaf weeds efficiently to maximize moisture and nutrients.

Nitrogen management should be the next crucial decision that farmers need to consider going forward as there are crops out there starting to show signs of N deficiencies. With Urea currently at low prices, farmers should be looking at maximizing yield with the good rains that we have had so far this season.

Tissue testing is an excellent option for getting a guide on how much N you have got currently in your plant and for around \$100 it's a good investment. It takes the guess work out of estimating how much nitrogen you need to apply and \$100 is a small amount to pay taking in to account how much you spend on Urea!!!

We also need to keep an eye on cereal diseases in the coming months with rust, powdery mildew and scald all going to be a factor with the good season rain so far. Hopefully, the areas of the Wimmera/Mallee continue to build on moisture profile in the coming months and get some spring rain to finish off the excellent start to the season.

Post-Em Broadleaf Weed Control in Wheat & Barley (by Ashley Perkins)

With many cereal crops well emerged and some ready for some broadleaf weed control, the following lists a few popular options used in the Western District high rainfall cropping zone (HRZ).

There are plenty of chemicals available to choose from and, with that, also a few traps to be wary of. Although the labels state control of many weeds, there are certainly some that are better than others on certain weeds. The following article highlights some of the most common cropping weeds found in the HRZ.

Common weeds include wild radish, small flower fumitory, capeweed, bedstraw, thistles, tares (wild vetch) and hogweed (wireweed). There are many more but, for this article, we will concentrate on these particular weeds.

An oldie, but a very good chemical, is Tigrex. It is very good on wild radish and also very good on water weeds such as crassula, chickweed to some extent and small toadrush. It is reasonable on the smaller capeweed but as it gets bigger, a spike of Lontrel will be required. This is also required for thistles and tares. It is weak on bedstraw and poor on small flower fumitory. For wireweed you will need Metsulfuron (Associate/Ally) as a spike.

Care needs to be taken when mixing with grass selective herbicides as the adjuvants can cause some crop effect and sometimes injury. It is generally the oil component that causes the reaction so this often has to be replaced with a non-ionic wetter.

Precept 300EC on the other hand is an excellent mixing partner with grass selective herbicides that require oil as adjuvants, as it requires oil itself as the preferred adjuvant. It is excellent on radish, smaller capeweed and wireweed, and reasonable on smaller small flower fumitory. However, it will need to be spiked for thistles and tares. It is also good on smaller bedstraw and its' real strength is that as a mixing partner as stated above as the crop effect is lessened.



Post-Em Broadleaf Weed Control in Wheat & Barley continued.....

Bromicide MA is generally preferred if fumitory is the major target and you require it to be mixed with a grass selective. It is very good on wireweed, radish, bedstraw, fumitory and quite reasonable on small capeweed and tares. It will need to be spiked for thistles.

An older chemical which ticks all the boxes is Broadside. It is similar to Bromicide MA, but also has Dicamba in it. It is very good on tares, fumitory, small capeweed, bedstraw and wireweed. For thistles, it will still need a spike. It doesn't mix with grass selectives due to the Dicamba component but, as a stand alone herbicide, it is extremely effective and it also "browns out" weeds quickly.

A few points to be wary of with broadleaf control is volunteer canola. Make sure you know which herbicide trait it is because Group B herbicides such as Associate, Hussar, and Eclipse will have minimal effect on volunteer Clearfield varieties. Also be aware that frosts can increase crop effect with some broadleaf herbicides.

It is important to check chemical labels for compatibilities with other herbicides and their respective adjuvants as getting this wrong could have serious crop effect and resultant damage.

Remember, all the points stated above will vary with the weed size and type,

so ensure you get a Western Ag agronomist to inspect your crop for accurate identification of weeds and their size to enable correct rates and/or spikes required to suit your weed spectrum and situation.



The Importance of Trace Elements (by Brad McLean)

All nutrients are required for plant growth and if any one essential nutrient is limiting then this will reduce yield potential. Most people are familiar with the macro elements like Nitrogen (N), Phosphorus (P), Potassium (K), Magnesium (Mg), Calcium (Ca) and Sulphur (S) that are required in large amounts by the crop. It's those elements that are required in smaller amounts that can be forgotten. The 'Micro-Nutrients', which include Zinc (Zn), Copper (Cu), Boron (B), Iron (Fe), Manganese (Mn), Molybdenum (Mo), Iron (Fe), Cobalt (Co) and Chlorine (Cl), are equally as important as the macro-elements and need to be considered.

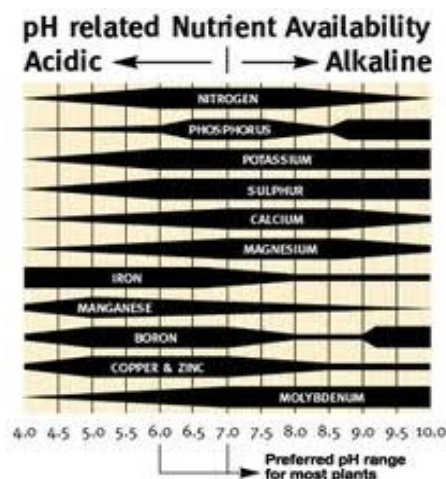
Zinc, copper, moly and boron are the common micro nutrients that are deficient throughout soils in Western Victoria. Factors such as pH, use of fertiliser and increased crop yields, all contribute to the availability and mining of these nutrients.

Zinc is required very early in a plants life cycle as it promotes root growth along with phosphorus. To correct any zinc deficiency, it can be applied directly onto the seed or as a blend to the fertiliser. Another option is to apply it as a foliar fertiliser around the crops 3-5 leaf stage.

Copper has many roles, including strengthening cell walls, but when a plant is severely copper deficient new leaves

can show curling and white tipping. Another symptom is the grain head does not produce any grain as copper is required for pollen formation. Copper can be corrected by applying Copper Sulphate as a foliar spray during stem elongation and booting stage of the crop. Copper can also be applied to the starter fertiliser.

Molybdenum is commonly known to be important in legumes to aid nitrogen fixation. It is also required in the nitrate reductase enzyme system of the plant which reduces nitrates to ammonium. Some big responses have been noticed with applications of moly to legume pastures especially in acidic soils, as low pH "ties" moly up and reduces its availability. Raising the pH by liming will release moly availability in the soil.



Boron is required most by brassica and pulse crops as it helps with the uptake and efficient use of calcium; a very important nutrient for canola. Boron also aids in pollen viability, flower and seed formation. Deficiencies are common in soils low in organic matter and visual symptoms may appear as internal yellowing of leaves but this can sometimes be too late to rectify. Boron can be applied mixed with fertiliser or broadcasted where deficiencies are severe although care should be taken as the gap between deficiency and toxicity is narrow. Therefore, foliar applications would be far more appropriate.

Determining whether these nutrients are limiting crop growth can be difficult and do not always show visual symptoms. In fact, if a crop does show classic symptoms of a nutrient deficiency crop yield is already affected. Soil testing, plant tissue testing are tools to help detect early deficiency levels in the plant.

Please contact your Western Ag agronomist to discuss testing and/or application of potentially deficient nutrients to your crop.

Foliar Disease Update (by Michaela Alexander)

HRZ cropping provides opportunity for high yields and high returns; however this environment can also favour increased incidences of crop foliar disease. HRZ's are more likely to provide more suitable conditions for disease to occur therefore potential for crop damage and/or loss is also increased. Major pathogens of wheat include Stripe rust, Leaf rust, Stem rust and Septoria tritici blotch. In barley, the major pathogens include Spot form of net blotch and Scald.

These pathogens each have a relatively wide temperature range in which they will infect crops. It is important to also note that the closer we get to the 'optimal temp range' of a particular pathogen, the shorter the time is between infection and visible symptoms occurring. Many of these common pathogens also require a period of leaf wetness, and the longer the period of leaf wetness, the greater the chance of successful infection. For example, Leaf rust in wheat has an optimal temp range of 15-25°C, a leaf wetness requirement of only 3 hours and a latent period of 20-86 days. As a result, the pathogen can have infected the plant long before symptoms become visible.

The success of a fungicide treatment is primarily in the timing of application, in respect to crop growth stage and protecting the 'money leaves'. In wheat, this commonly refers to the flag leaf and leaf 2 (or flag-1). In barley, it refers to leaf 2 and leaf 3 (or flag-1 & flag-2).

GS31-33 is where the first – third node are detectable on the main stem of cereals and this can often coincide with infection of Septoria tritici blotch, Stripe rust and Leaf rust. GS37-39 is where the flag leaf becomes visible to fully unrolled. These growth stages tend to coincide with the end of winter where we are likely to have significant rain events providing the opportunity for Septoria, Stripe, Leaf and Stem rusts to infect. During head emergence (GS55), Stem rust can appear if we get warmer spring temps and adequate rainfall.

As we know, it is critical to protect the crop from GS33-59 (head emergence complete) as these are the growth stages that contribute the most to final yield.

For wheat varieties susceptible to Septoria tritici blotch, Stripe or Leaf

rust, a product such as Opus or Prosaro is best applied at GS31-33. Opus also is a good option for Stem rust as well, however if Stem rust is the main pathogen, Prosaro has demonstrated to be highly effective in previous years. Opera and Amistar Xtra are two premium products on the market which both have a 'greening' effect on the crop. Provided a crop has adequate nitrogen and moisture, this has proven to increase yields by providing a longer time frame for crops to fill grain.

In barley, our main pathogen in the Western District is Scald, and the best fungicide option is Prosaro applied at the beginning of stem elongation (GS31). Scald require long periods of leaf wetness and if conditions favour infection of this pathogen in susceptible varieties, such as Gairdner (susceptible to very susceptible), a two spray strategy may be implemented.

It is also noteworthy to mention blackleg in canola. Risk is again increased in a HRZ and where canola has been intensely grown in the past. Varieties with a blackleg rating of MS and MS-M have found to benefit from an application of Prosaro at the 4-6 leaf stage.

Winter Management of Pastures (by Matt Barber)

When considering pasture management over winter there are a number of different issues to consider so that pasture production is at a peak coming into Spring.

Weed Management

Most pasture stands usually have large amounts of weeds going into or coming out of winter. These weeds can consist of capeweed, erodium, wild radish, various thistles, barley grass and silver grass amongst many others. All these weeds can be managed in a perennial pasture so that the peak production can be obtained in Spring. The best time to control these weeds is when the weeds are small (3 to 4 leaf) and the pastures are established. However, this can be hard to get right, especially if the pasture is a newly sown perennial pasture.

Most broadleaf weeds are controlled with chemical such as Tigrex, Agtryne and MCPA 750. Specific grass selective herbicides are usually used to control

grass weeds. These include products like Shogun (barley grass and winter grass), Verdict (barley grass, winter grass and erodium), and Simazine which is used for silver grass control in perennial pasture. Talk to your Western Ag agronomist to get the right advice on weed control and chemical rates.

Fertiliser

Fertiliser can be used on pasture to try and lift production over the winter months. Straight urea and urea/potash blends are commonly used to get grasses growing when feed is required for livestock, but be careful with lush grass and hungry stock because this can lead to animal health problems. Consider using ProGibb or Gibberellin alternative to try and give perennial pastures a kick over the winter months. This by itself will give a 4 week boost to perennial pasture and works best on Phalaris, Fescues, winter active Lucerne and Perennial Ryegrass.

Insect Control

RLEM and Lucerne Flea can also be problem in perennial pasture going into, and coming out of winter, especially in new pastures or pastures dominated by broadleaf. There are a number of different insecticides which can control both of these insects, but it is critical to get your identification of insect correct because there are "good" beneficial insects as well as "bad" insects.

Once again, keep in close contact with your agronomist before spraying to correctly identify what insect you have in your paddocks and to use the right product.



RLEM