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# AG NOTE

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## *Introduction*

As the year draws to a close, it is important that we get our last newsletter out to cover off on some late season issues and some relevant management concerns for the start of next season. Unfortunately, the years' end has come with a drier than normal finish. In the Western District, the month of November has been particularly dry and has potentially limited some of the wheat yield. Despite the prolonged dry finish, canola and early sown barley appear to have maintained good yield potential but it won't be long before we know actual yields and oil, as well as malt potential. The recent 'storm' rains will have certainly added some yield on to wheat crops, as well as boosting fodder crops and Lucerne stands.

In the Wimmera and Mallee, the yields are extremely varied from area to area, depending

on the storm clouds. It has been reported that in areas around Minyip and Murtoa, that some barley yields are as high as 5.5t/ha and going malt, but the rest of the Wimmera, reported yields of 2 to 2.5t/ha are common, but mainly of feed quality. Lower yields of mixed quality are also common in the Mallee. Canola has been ranging from 1 to 2.5t/ha with oils of 37-43%.

The loss of some potential crop yield has been slightly offset by some firm grain prices. Canola (NGM) has been firm around \$540/t delivered Geelong, malt barley around \$250/t, feed barley \$240/t, and APW wheat around \$295/t delivered Geelong.

Good luck for the remaining season and we look forward to continued support next year.

## *Company Developments*

Western AG is very pleased to announce the appointment of Aaron Starick as Animal Health and General Merchandise Specialist working across our Derrinallum and Willaura locations.

In addition to this appointment, Derrinallum and Willaura locations are being upgraded to be able to supply the full range of animal health and general merchandise items. This is expected to be completed early in the new year.

Aaron has over 10 years experience working in this field and has previously worked at our Horsham location. We have been supplying animal health and general merchandise items from our Horsham and Bannockburn locations for a number of years.

### **Aaron Starick**

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Animal Health & General  
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## Cropping Fertiliser for 2013

### IMPORTANCE OF SOIL TESTING

Shallow soil tests (0-10cm) to determine the P status, pH, and key micro nutrients, are an important part of understanding what's going on in your soil.

Essentially, what you want to know is which nutrient/s are needed, and how much? This then leads to what fertiliser is required to address the soil and crop needs. Making sure that you optimise fertiliser usage, a farm's highest input, is also crucial to achieving optimum business performance. Therefore, soil testing should be considered as a way to keep track of paddock performance and ensure you are getting the best results.

### SULPHUR

Sulphur is an extremely important element for many plant functions. In Particular, it is an important part of the amino acids, cysteine and methionine, that form proteins. It also plays an essential role in the production of Chlorophyll; a key driver of photo-synthesis. Canola in particular is a sulphur sensitive crop with 10kg S required to produce 1t of grain. Cereals require considerably less but should be maintained to ensure optimum growth. As a comparison, wheat requires 1.4kg S to produce 1t of grain.

So why is sulphur now becoming an issue? The reasons would include increased nutrient removal due to better varieties and higher yields, the introduction of high analysis N and P fertilizers containing little S, and the reduction in sulphur emissions from industry resulting in less acid rain.

Therefore understanding the S status of the soil is an important factor to consider when planting all crops, but in particular, canola. If there are soil structure constraints, gypsum (calcium sulphate) will be an appropriate choice to ameliorate the soil, whilst also providing adequate levels of S to sustain the crop. If not, other sources of sulphur will need to be considered. This may be in the form of Sulphate of Ammonia (SOA) which can be easily top-dressed early post emergent.

Talk to your Western AG Agronomist at planning time about the requirements for sulphur in your production system.

### ZINC

Zinc is the most common trace element deficiency in Australian agriculture. Yet it is a key driver in the early growth of the plant and also plays an important part in animal and human nutrition.

Combining zinc with the starter fertiliser is an efficient way to enhance the health of the plant early and ensure optimum vigour at emergence. The use of premium high analysis fertilisers which combines the essential nutrients for early growth is an important point to consider.

### MAP (10:21:0:2) & DAP (18:20:0:2)

Both MAP and DAP are the most widely used phosphorus based fertilisers at sowing. However, limiting our usage to these starter products, we are potentially overlooking the essential micronutrients mentioned above that contribute to early growth and development. Zinc and Sulphur are key elements that need to be considered when trying to achieve

balanced nutrition. Zinc coating, zinc blending or fully compounded zinc products are excellent ways to ensure that early growth is maximised. Individual zinc products will all have pro's and con's in terms of distribution within the soil.

Consideration must be taken with premium high analysis fertilisers which have an even distribution of key micronutrients within every granule allowing you to achieve excellent availability throughout the seed bed.

### MICRO ESSENTIALS - S10 & SZ

These products which comprise 12:18:0:10 and 12:18:0:10+1% Zn respectively are specially formulated fertilisers which have been developed by the Mosaic company.



Mosaic have created a patented technology which allows them to compound Nitrogen, Phosphorus, and Sulphur (including 1% zinc in the MESZ) into the one nutritionally balanced granule. This allows for an even distribution of balanced nutrition throughout the soil profile with improved nutrient uptake and longer lasting sulphur availability. Both sulphate sulphur (quick release) and elemental sulphur (slow release) are present in this fertiliser which gives it season long availability. Both these products would be an excellent alternative to the standard starter fertilisers.

## Importance of Spray Water Quality

It is very important to use the best quality water when spraying pesticides to ensure the effectiveness of the product you are applying. Naturally, rain water is the highest quality that could be used for spraying pesticides. If you have had any chemical failures this season, it could be due to the water quality. Depending on the water source used (dam, river or bore), characteristics such as dirt, water hardness, water pH and dissolved salts, can all have an effect on many pesticides. Dirty water can contain clay or silt soil

particles which bind to the active ingredient and reduce its' effectiveness.

Products affected from this water quality are Glyphosates, Diquat and Paraquat. Water hardness is the percentage of calcium, magnesium bi-carbonates (or sulphates), chlorides and nitrates. These ions bind to the active ingredient of herbicides such as Glyphosate, Lontrel/Archer, Kamba, 2-4D and MCPA formulations. They can also cause them to breakdown or even precipitate.

**.....if you have any  
chemical failures this  
season, it could be  
because of the water  
quality!**

## *Importance of Spray Water Quality continued.....*

Water pH is a measure of acidity and alkalinity and is measured on a scale of 1 to 14. A measure of 1 is very acidic, 7 is neutral and 14 very alkaline. Acidic or low pH water breaks down the Sulphonyl Urea (SU's) herbicides very quickly whilst high pH, or Alkaline water, breaks down glyphosate, Sprayseed, 2,4-D and MCPA Amine products. Many insecticides are also affected from water pH. Most products are stable at a Neutral pH of 7, so testing the pH of your spray solution is very important to determine the effectiveness of the mix.

The pH can be tested using a hand held meter or with pool indicator strips. Saline water can affect pesticides performance in the same way hard water does due to the presence of sodium chloride. As always, try to prevent leaving herbicides in the tank overnight.

Wherever possible, use rain water to overcome any pesticide effectiveness issues, and if forced to use another water source, it is highly recommended to get it tested.

Please contact your Western Ag agronomist to organise a water sample or discuss the water quality adjuvant or acidifying options available to improve your water quality.

Having a good idea, of your water quality, prior to your next knockdown is a great start.

## *Summer Weed Control for the Wimmera / Mallee.*

Over the last 7 years, summer weed control has become one of the most important tools to manage correctly on your farm. Retaining the moisture in your soil over the summer months is very crucial in helping to produce a high yielding crop at the end of the season. Every year we see the same thing, anyone that has controlled their weeds more effectively over summer via spraying or cultivation, will be far better off going into the season with some stored soil moisture. The photo below demonstrates how much moisture self-sown canola can take out over the summer months if not sprayed and allowed to grow.



**A wheat crop this year sown into uncontrolled canola stubble**

In 2005, the Birchip Cropping Group (BCG) had 190mm from November to February and nearly half the moisture (80mm) was lost in the soil due to the heliotrope and melons growing and not being controlled.

A good strategy would be to try and spray your summer weeds 2 to 4 weeks after germination (small weeds!!). Also, please consider plant back restrictions when adding residual products to glyphosate and don't spray when conditions are high with Delta T (above 10dt). When the summer days are hot (over 20dt) spraying should be done in the early morning or late evening. Keep glyphosate rates up and always use ammonium sulphate with a vegetable oil such as Hasten or Infiltrator.

Also in 2008, we had good rainfall events over the summer months and BCG trials showed an increase in wheat yield from 1.2t/ha to 2.5t/ha (1.3t/ha increase) with the use of spraying or cultivating weeds.

Last summer, we saw very poor results when using Hammer on marshmallow caused due to weed stress and size. In addition to the physiological and climatic problems, the glyphosate was allowing the Hammer to pass into the plant quickly



**Large marshmallow control.**

*Glyphosate 450 @ 1.5 lts/ha  
plus 800 ml/ha of Flagship  
plus 250 mls of VC700.*

causing it to burn the leaves off and not translocate effectively through to the roots.

Currently, we are seeing excellent results with mixes using glyphosate and Flagship (200g Fluroxypyr) as this is a slow acting chemical that often takes 6 to 8 weeks to control weeds.

If done correctly, and on time, summer spraying can save valuable moisture, nutrients and can reduce soil diseases, which gives you improve yield for the following crop.

### **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.



## Burning Windrows

With harvest starting, it is a good time to look at any escaped weed seeds, which can often be resistant to the herbicides used, particularly ryegrass and wild radish. A good way of controlling these weeds is by windrow burning, which involves farmers taking off the spreaders on their headers, leaving a 1.2m to 1.4m windrow (conventional windrow). Alternatively, you can make a simple chute which is mounted to the rear of the harvester, making a windrow 0.6m to 0.7m wide (narrow windrow). This can be as simple as mounting 2 'hay caps' to funnel the chaff and straw. Windrows are then burnt in the normal burning period and, preferably, they should not be grazed over the summer.

Less biomass allows for a narrower windrow, assuming there is still enough biomass to produce a hot burn. For this reason legume, wheat and canola stubbles are best dealt with in narrow windrows and they will also survive grazing better. This is the most popular type of windrow, although the main downfall can be if they are too dense or packed down, they can be hard to burn because of lack of oxygen, or they may not dry out.

In barley paddocks, however, they may burn to intensely causing the whole paddock to burn. Research shows burning narrow windrows in a light wind will generate a burn that generates high temperatures for a longer duration which is essential to kill radish and ryegrass seeds.

In heavier crops or crops harvested with headers using larger fronts above 36ft wide, a conventional windrow may be preferred. Crops, such as barley, can be harder to windrow burn, due to the risk of burning the whole paddock, so in this case you may need to harvest the crop low and leave a wide row.

Ryegrass seeds need exposure to 400°C for 10 seconds to guarantee seed death whilst wild radish needs 500°C for the same duration or 400°C for 30 seconds to get a significant pod kill. This is why windrow burning can be so successful, getting up to 96% of radish seeds, in comparison to full paddock burning which may only get around 10% at best. In stubbles containing ryegrass, trials have shown 1% of seed survival under windrow burning and 20% surviving in full paddock burning.

This does not take into account the natural eradication of ryegrass through predators.

To get the most out of burning windrows, you can use the FESA Macarthur Fire Index Mk 4. This is a measure of temperature, humidity and wind speed, and can be downloaded from the following website address. [www.firebreak.com.au/grassmk4.html](http://www.firebreak.com.au/grassmk4.html)

A Fire Index of 8 to 10 is ideal. Less than 2 is too cold or damp in which you may only burn the top layer. More than 15 could result in the risk of burning the whole paddock.

Windrow burning is used as a tool to control weed seeds but with the benefit of retaining over 90% of stubble. However, its disadvantages can be the redistribution of nutrients such as Potassium (K) into the windrow area and the loss of nutrients such as Nitrogen (N) and Sulphur (S). To manage excessive potassium accumulation in rows, it is advised to shift the header track over if windrow burning is used in successive years.

## New Canola Varieties and Seed Treatments for 2013

There are various new canola varieties being released for the 2013 growing season. It can be quite confusing choosing a variety as they all look quite the same in the trial plots. Here are some important points to consider before choosing a variety.

Firstly, look at the blackleg ratings of the canola variety and also the blackleg resistance group rating. You should be trying to rotate canola resistance groups just as you do with chemical groups. Monitor this season's crop to determine blackleg severity and any crop losses due to blackleg. We have some very handy tools, such as seed treatments, to assist with blackleg but relying solely on these alone is a recipe for disaster. Check when was the last time canola was sown in the paddock and try to get a minimum of a 500m buffer from any canola sown in the previous season as blackleg spores can spread by wind.

The GRDC have published a fact sheet named 'Blackleg Management Guide' (July 2012) which has some excellent information on blackleg risk and planning.

Once these assessments have been made, move on to choosing the right variety. Remember, just because it is the highest yielding variety in a trial in a particular area, this doesn't necessarily mean it is right for you. Growing season rainfall, soil types, time of sowing, weeds and insects also need to be taken into account.

Also, it is very important is to choose the correct herbicide management system which suits the weed spectrum that you may have in each individual paddock.

To assist in your decision making, here are some new varieties that may suit your enterprise.

**GT50 Roundup Ready Hybrid** – is an early/mid variety blackleg rating of MR and group N. It is a medium-tall high yielding variety. **45Y23** is also another RR Y series hybrid with a very high yield potential. It has very good early vigour and mid maturity. Blackleg MR and a provisional (C) group rating. It has early maturity which would suit medium rainfall zones.

For those who have grown **Monola** in the past, there is **NP0549** which is also a RR canola, open pollinated, mid maturing variety with MR-MS and group (N) to blackleg. Also TT **Monola NL0606** is an early-mid open pollinated variety with a medium height. MR and group (N) blackleg rating.

In the Clearfield management system a new release for 2013 is **45Y86**. It has excellent vigour with very high yield potential, could also be used as a dual

## *New Canola Varieties and Seed Treatments for 2013 continued.....*

purpose (graze and grain) in a longer growing season. It is MR and provisional group (B) for blackleg. It will replace 46Y83 and has 2 to 3% better yield and 1 to 2% better oil than 46Y83.

In the Triazine management system or TT's, Pacific Seeds have a couple of new varieties. **Hyola 559TT** is mid maturing variety which will replace Hyola 555TT. It is R-MR for blackleg and will be in very limited supply in 2013. They also have **Hyola 656 TT** which will replace Hyola 751TT; it is a mid-late variety, also R-MR for blackleg and flowers 2-3 days earlier than Hyola 751TT.

There are quite a few that are looking good for 2013 but, once again, you need to assess your soil types, growing season, and other considerations before choosing.

Further to the confusion of choosing a specific variety, it gets more complex when you have to work out what seed treatment to have on your seed and/or fertiliser. The most commonly used options include Jockey Stayer, Maxim, Cosmos and Gaucho and all have their pros and cons. Personal choice and situation will determine what is applied, however, seed companies often supply seed with a standard treatment so choice is sometimes limited.

The most commonly used fertiliser treatment is 'Intake In furrow' (Flutriafol) and with the price reduction of this product over the last few years, this treatment has now become very popular for effective control of blackleg.

A new option for 2013 is '**Cruiser Opti**' from Syngenta.

Cruiser Opti is unique in its' ability to manage three of the most important insect pests in both canola and cereal crops during establishment. Cruiser Opti protects against Red Legged Earth Mite (RLEM), Lucerne Flea and Aphids. It consists of two modes of action which is an advantage for resistance management. It has the potential to improve emergence and crop establishment, potentially resulting in improved yields because these insect pests are controlled early. Cruiser Opti is compatible with other seed treatments such as Maxim XL, which combined will aid in fungal disease control in canola.

## *The Importance of Checking Weed Control at Harvest*

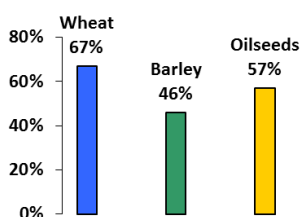
Now is the time to be looking closely for weed burdens in paddocks in regards to planning your cropping rotations for next year. Ideally paddocks with a high rye grass population should not be sown back to a cereal phase, as herbicide options are limited and often not 100% successful. Conversely paddocks with a higher wild radish burden should not be sown to conventional canola varieties.

Multiple germinations of weeds in crop throughout the year, particularly Annual Ryegrass, commonly lead to weed populations unable to be controlled and resulting in the need for a late season herbicide application. This can occur when the crop has ripened just prior to harvest.

Whether it is for crop desiccation or weed spray topping to prevent viable seed setting - be vigilant in adhering to product label registrations and rates as well as harvest withholding periods (WHP's) which will impact MRL's (maximum residue limits). MRL's vary between counties, and for example; Australia's MRL for Paraquat in canola is ZERO. Paraquat over the top of canola will increase the Japanese (a major importer of Australian canola) MRL by up to 134 times, and in barley Paraquat will increase the Australian MRL by up to 28 times.

Right through the supply chain, industry bodies are checking for residues and are able to trace a single load back to delivery at a receival site if they find a shipment is contaminated. Considering our export market is so large (fig. 1) and valuable at approximately \$9055 million (cereal grains and products) in 2010-2011, as well as the implications for individual growers it is vital obey chemical labels, they are legal documents after all.

%age of total commodities grown exported  
2010 - 2011 (courtesy ABARES)



Before spraying, take into account your intended use for the seed harvested – whether you are planning to retain seed and sow it the following year or sell it at harvest. In particular, malting barley must be able to 'sprout' to commence the malting process and many buyers randomly carry out specification testing in regards to germination percentages and residues.

In addition to the considerations when selling grain, spraying crops with Glyphosate intended to be kept and sown for seed is not recommended as this may affect germination and subsequently plant numbers in crop.

Registration for Roundup Attack™ in canola crops either over the top – prior to direct heading (via both ground and aerial application) or at windrowing (under the cutter bar) is anticipated for the 2013 season. Chemical companies and Government bodies are currently working to increase MRL's to allow farmers to legally utilise these practices.

The herbicide options for late season application include Paraquat, Diquat and Glyphosate and vary depending on crop type. The registrations are as follows (please consult the label for use as not all formulations are registered).

Wheat: Diquat and Glyphosate  
Barley: Diquat  
Canola: Diquat  
Chickpea's, Lentils, Faba Beans and Field Peas: Paraquat, Diquat and Glyph.

In wheat and barley, spray when the crop is ripe and ready for harvesting. When applying Glyphosate over wheat, ensure the crop is at a minimum of 28% moisture (late dough).

## The Importance of Checking Weed Control at Harvest continued .....

Canola crops should have at least 70% of their pods yellow with seeds ranging from brown to bluish in colour and pliable when spraying a product such as Reglone® (Diquat).

To gain the best results for controlling ryegrass, weeds should be sprayed from flowering to the milk stage, while keeping in mind that Diquat has less activity on ryegrass than Glyphosate.

If you are concerned about weed populations increasing the following year especially for heavily infested areas,

consider spraying out the entire area and forego harvesting. This will reduce weed seed set and the weed burden in the following season.

Other options include growing a pulse or canola crop the following year, using a weed seed collection cart behind the harvester, or manage concentrated windrows and then burn them. Seed collection behind the harvester is not a common practice in the eastern states of Australia however; windrow burning is increasingly growing in popularity.

Windrow burning is becoming common practice in WA with great success in reducing annual rye grass and wild radish seed. Unfortunately for farmers on raised beds in the high rainfall zone in the western districts of Victoria, this is less practical and other measures of management will need to be implemented.

As always, please remember - off label applications are illegal.

## Grain Storage

Even with solid commodity pricing of grains, there will still be an ever increasing requirement for on farm storage. Effective control is becoming increasingly difficult as there is growing prevalence of insect resistance and, in a majority of cases; the condition of sealed storage equipment is deteriorating. This season there are two main changes with particular reference to the products that can be safely used to treat grain for on farm storage.

Dichlorvos (Divap 1140) has had an APVMA required label change and is no longer available for on farm use. Any clients who still have some stock on hand may use it for the next 12 months to disinfest grain but only where no access to sealed silos is possible.

Probably the most significant product in grain treatment for many years is the 2012 release of K-Obiol to the on farm market. K-Obiol has been used by commercial bulk handlers for the last 6 years and is now available to growers as a rotational chemical with Methoprene IGR. Whilst Methoprene IGR is still reasonably effective in South West Victoria, the Wimmera and Mallee areas have seen some significant issues of Methoprene IGR resistance.

The availability, distribution and on farm use of K-Obiol will be heavily regulated though a stewardship program and essential training is required before access to the product is approved. Therefore, anyone considering storing grain on farm this season in sheds or

unsealed silos and wanting to use K-Obiol should find out the exact requirements to register for training and to gain access to this product for this season.

In addition to Methoprene IGR and K-Obiol, Aluminium Phosphine (ALP) will continue to be important for grain storage. Western AG will have ALP blankets and tablets available to those of you with sealed silos and temporary bunkers. Again, without Dichlorvos being available, it will be critical to ensure that the correct grain protection products are applied to obtain satisfactory control results and also avoid breaching any Maximum Residue Limits (MRLs).

Category *	Chemical	Full Rate Litres / 100 Litres	Full Rate PPM	WHP	MARKET				TARGET INSECT					
					Malt Barley (Domestic)	Milling Wheat (Domestic)	Feed (Domestic)	Wheat - Starch / Gluten (Domestic)	Lesser Grain Borer	Rice / Granary Weevil	Flour Beetle	Sawtoothed Grain Beetle	Flat Grain Beetle	Moths
A	Fenitrothion 1000	1.2 litres	12 ppm	3 months	✓	✓	✓	✓	✗	✓	✓	✗	✓	✓
A	Reldan	2 litres	10 ppm	1 day	✗	✓	✓	✓	✗	✓	✓	✗	✓	✓
A	Actellic	0.45 litres	4 ppm	1 day	✗	✓	✓	✗	✗	✓	✓	✗	✓	✓
B	Methoprene IGR	Rizacon - 0.2 litres	1 ppm	1 day	✓	✓	✓	✓	Resistance in most areas	✗	✓	✓	✓	✓
		IGR 200 - 0.5 litre	1 ppm											
		Diacon S - 2 litres	1 ppm											
B	K-Obiol	2.0 litres	1 ppm	Nil	✓	✓	✓	✓	✓	Some resistance	Potential for resistance	✓	✓	✓
	Divap 1140	1.14 litres	12 ppm	Read label	✓	✓	✓	✗	Resistance in most areas	Some resistance	✓	✓	✓	✓
	Phosphine		1.5g/m3	3 days	✓	✓	✓	✓	Increasing resistance	✓	✓	✓	Resistance in parts of Wimmera Mallee	✓

\* Always mix an 'A' chemical with a 'B' Chemical as per table above

**Note 1** Before applying any treatment, ensure you check the treatment is suitable for the intended market for the grain.

**Note 2** For more information on residue tolerances for domestic or international markets contact Grain Storage Solutions or check the Grain Trade Australia web page