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AG NOTE

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Introduction

From everyone at Western AG, a big welcome to the Spring edition of our newsletter.

The 2016 growing season up until the end of August was best described as being ideal in most areas of SW Victoria, the Wimmera and Mallee. This area, along with much of the SE of Australia, has now received record amounts of rain for the month of September causing issues with water logging and paddock access for spraying and spreading.

So what does a very wet Spring mean for crop and pasture production? On the plus side, there is plenty of stored moisture to maximise production in the current year and it is likely to reduce the risk of frost. The immediate main negatives include increased disease pressure in crops, downgrading of hay and the increased incidence of flystrike in sheep.

Company Updates

This month has been very busy for Western AG with both the Ballarat and Willaura facilities finally completed and functioning well.



These facilities are indicative of Western AG's ongoing commitment to our customers and will certainly provide an ever better, more reliable service to our customers.

Please take an opportunity to come in to our stores and say hello.

At the time of writing, leaf rust has been detected in early sown Manning and stripe rust (possibly a new strain) in Trojan wheat in SW Vic. It's expected that stripe and leaf rust, and possibly stem rust pressure, will increase over the coming weeks and crops will need to be monitored closely. Unfortunately, we are also experiencing the worst year on record for foliar diseases in cereals and canola.

In this edition of our newsletter, we have provided updates on topical issues such as late weed control in canola and pulses, Russian Wheat Aphid, fly control, roll over protection for ATV's and more.

We hope you enjoy the newsletter and look forward to seeing you at either our Southern Client Golf Day, one of our Grain Treatment and Marketing Updates or Client Bus Trips.

In the last few weeks, we have also welcomed another agronomist to the Western AG team with Brendan Smith joining us. Brendan originates from Mathoura in southern NSW where his family has dairying and broadacre cropping interests. He has completed a Bachelor of Ag Science at La Trobe University. Since completing his studies, Brendan has worked as a crop and pasture agronomist in the Skipton area for the last 3 years. Brendan resides in Ballarat and, together with Anna Fry, will service existing and new Ballarat and Derrinallum clients.



Brendan Smith
0417 935067

Blackleg Disease in Canola (by guest editors Angela Van de Wouw & Steve Marcroft)

Blackleg disease of canola is caused by the fungal pathogen *Leptosphaeria maculans*. This stubble borne disease affects canola crops across Australia but is more severe in areas of intensive production such as South Australia's lower Eyre Peninsula.

Blackleg life cycle and symptoms:

Blackleg survives on canola stubble, producing fruiting bodies that contain large quantities of airborne spores (Figure 1a). In the autumn and winter, rainfall triggers spore release from these fruiting bodies and within two weeks of spores landing on canola cotyledons and young leaves, clearly visible lesions develop (Figure 1b). Once the lesion has formed, the fungus grows within the plant's vascular system to the crown where it causes the crown of the plant to rot resulting in a canker. Severe stem cankers will sever the roots from the stem (Figures 1c and d).

A less severe infection will result in internal infection of the crown restricting water and nutrient flow within the plant. In the past few seasons new blackleg symptoms have been observed whereby blackleg is infecting the upper stems, branches and pods (Figures 1e and f).

Blackleg disease is challenging to control due to a number of factors;

1. Blackleg is a sexually reproducing pathogen that will also overcome cultivar resistance genes.
2. Fungal spores are released from canola stubble, therefore disease is more severe in areas of intensive canola production.
3. Spores are spread extensively and quickly via wind and rain splash.

Controlling Blackleg disease:

Blackleg disease can be minimised using a range of management strategies. These include growing cultivars with high levels of blackleg resistance, growing this year's crop at least 500m away from the previous year's crop (stubble avoidance), fungicide applications, and rotation of cultivars with different resistance groups.

Each year, growers should monitor their crop to determine whether there is any yield loss due to blackleg (Figure 2). Growers can then consult the current Blackleg Management Guide (www.grdc.com.au/GRDC-FS-BlacklegManagementGuide) and follow the management steps to reduce the effect of Blackleg.

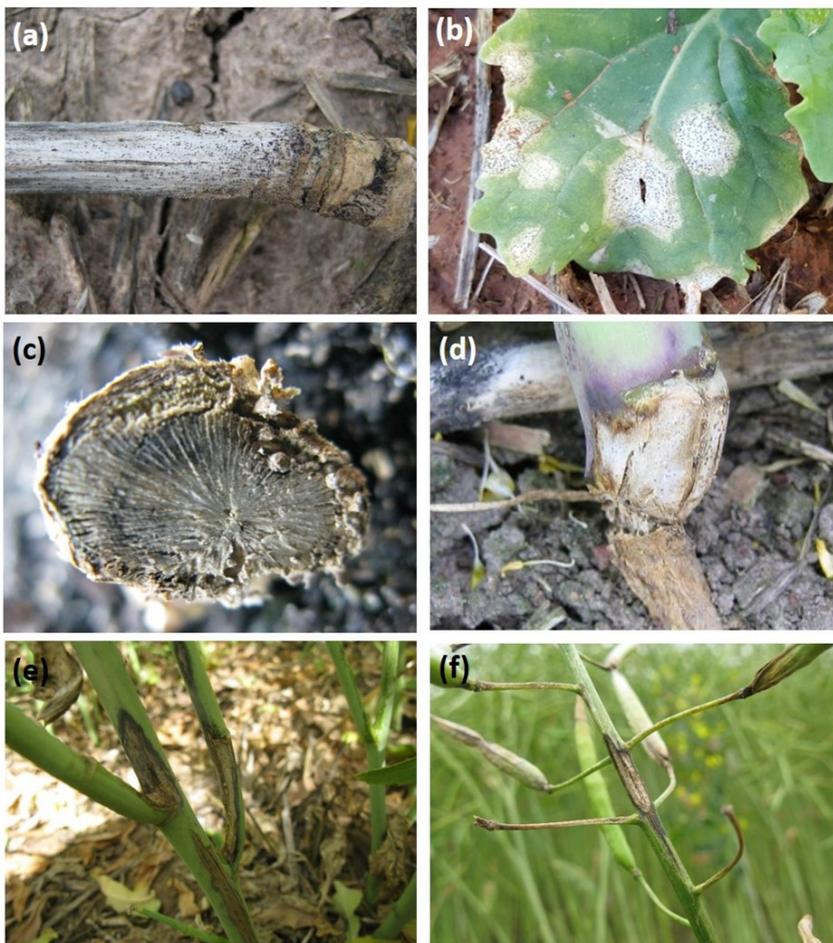


Figure 1. Symptoms of blackleg of canola. (a) Blackleg survives on canola stubble and forms fruiting bodies seen here as black dots. (b) Lesions develop on canola leaves causing off-whitish lesions with black fruiting bodies within them. (c) Blackleg causes internal infection (blackening) within the stem at the base (crown) of the plant. (d) In severe infections stems will sever from the roots. (e and f) In recent seasons, blackleg has also infected upper stems (e) and branches and pods (f).



Figure 2. Growers should monitor Blackleg disease in their crops each year to determine whether yield loss is occurring. To monitor crops, pull plants from the ground and cut the stems at the crown. Inspect the amount of internal infection (blackening) within the stems to determine whether blackleg is present and needs managing. Consult the Blackleg Management Guide for detail monitoring procedures and for managing Blackleg disease.

Russian Wheat Aphids (by Tim Hofmaier)

Russian Wheat Aphids (RWA) can be found in all major cereal production areas across the world, however, never before in Australia. That is until this year when it was first reported in the mid-North of South Australia. Since then, RWA has slowly moved its way into different growing regions of Victoria including the North Central (Wimmera/Mallee) and Central areas predominantly.



RWA injects salivary toxins into the plant during feeding that causes rapid, systemic phytotoxic effects on plants, resulting in potentially significant yield losses. This is unlike damage caused by other cereal aphid species that effect through the removal of nutrients. RWA is relatively easy to identify by both its appearance and the damage it causes to the crop.

The toxin which is released causes leaf rolling along with white or purple/red streaking on the leaves with patches appearing stunted, resembling areas of drought stress. Colonies are often found in tightly rolled leaves near the base of the leaf or concealed on the stem inside the flag leaf sheath.



Survival of RWA outside the shelter of leaf rolls is affected by exposure to rainfall, drying winds and predators. Heavy rainfall events can cause up to 50% mortality. The warmer conditions going forward are perfect conditions for the aphids therefore it's important to know your thresholds and what the symptoms are to look out for.

Recommended rates of Chlorpyrifos or Dimethoate have been used to gain control of the aphids when thresholds are met. Thresholds of at least 10 plants in 1.5ha, or one in ten plants (i.e. 10% infestation) is the advisable threshold to initiate control. Overseas research has indicated that each 1% infestation will result in a 0.5% yield loss at harvest if left untreated. However, there is no Australian data to confirm or deny such a statement surrounding yield loss.

Looking to next year, the addition of an Imidacloprid (Senator or Gaucho) as a seed dressing will give early protection of RWA and is highly recommended as a seed applied insecticide for next season. Talk with your Western Ag agronomist for further information.



Pulse Topping in Legumes & Sharpen Registration (by Matt Witney)

With harvest fast approaching and legume yields looking favourable there is no better time to start looking at pulse desiccation options. Spray topping Legumes is an important part of controlling resistant grass weeds and is an extremely important tool for reducing problem or resistant weed seed set as well as reducing green trash for ease of harvest. Fortunately this year, both Glyphosate and Paraquat are at attractive low prices, giving all the more reason not to compromise on desiccating pulse crops to ensure good weed seed management.

Sharpen (700g/kg Saflufenacil) by BASF is now registered for prior to harvest application of field peas, faba/broad beans, chickpeas, lentils, and lupins and can be added to Gramoxone or Glyphosate for improved results. This can be an effective tool to help manage herbicide resistance, particularly on problem weeds such as Wild Radish and other hard to kill weeds like sow thistle and prickly lettuce. More often than not both these weeds prove to be stubborn when it comes time to desiccate.

The benefits of adding sharpen are clearly evident and are improving the control over traditional straight Paraquat or Diquat desiccants.

The 5 Key points to consider when using Sharpen are;

1. Always use with 1% Hasten
2. Use minimum 100L/ha water.
3. DO NOT use for Lentil seed crops.
4. DO NOT add an acidifying agent such as Companion or LI 700.
5. Stocks are limited so order product asap.

The benefits of using Sharpen at your pulse harvest are;

- a. Rapid desiccation and dry down of winter pulse crops
- b. Manage uneven crop maturity which can delay harvest
- c. Quick dry down of leaves, stems and green pods
- d. An alternative mode of action to existing desiccants Paraquat and Glyphosate
- e. Valuable resistant management tool for hard to kill broadleaf weeds

Application timing:

Faba beans: Hilum black in top pods at the top of the canopy (30-80% pods ripe and dark). **Chick peas:** 80 – 85% of pods have turned yellow-brown.

Lentils: Just after crop starts to yellow (or senesce). When 40 – 70% yellowing of plant material. This is visually late and similar to Diquat application timing, rather than earlier timings found with Paraquat. Sharpen may have a negative effect on lentil germination. DO NOT use on crops for seed production.

Narrow leaf Lupin: At 80% leaf drop when leaves are brown. Seeds should be changing from light green to yellow. Only apply Sharpen to direct harvested Lupins Application prior to windrowing can result in severe loss of grain yield.

Field Peas: Apply when 30% moisture content is reached, or when lower 75% of pods are brown and leathery with firm seeds.

Consult your Western Ag agronomist for more information regarding pulse desiccation and specific timings.

Pre Harvest Annual Ryegrass Control in Canola (by Trudy McCann)

The pre harvest application of glyphosate provides another option for reducing seed set and viability of late germinations of Annual Ryegrass (ARG) in Canola.

Currently, Weedmaster DST is the only glyphosate product with registration for application in canola at this timing. Weedmaster DST can be applied under the windrower or 'crop-topped' at 20% canola seed colour change.



It is important to use herbicide control options as a part of a broader integrated weed management strategy. Leaving just 10 ARG plants per square meter to set seed can result in over 200 plants the following season!

A timely application of Weedmaster DST under the cutter bar can reduce ARG seed germinations to 20% and in standing crops to below 30% compared with an untreated control. The following few points will help to maximise results.

- Density of the crop canopy has a big influence on efficacy, apply a minimum application rate of 2.8L - 4.1L for best results.
- Always add an adjuvant to increase penetration down into the canopy and for drift management.
- Use a minimum of 3L/ha for aerial applications.
- Ground speed should be no more than 15-20km/hr.
- Water rates of at least 80L/ha are required with the aim for a coarse to very coarse spray droplet.

Weedmaster DST will also provide some activity on wild radish, sow thistle, fleabane, as well as many other grasses and broadleaf weeds. There is no harvest withholding period (WHP) when applied under the cutter bar at windrowing, however, there is a 5 day harvest WHP following applications to a standing crop.



Annual Ryegrass (ARG) in Canola

Grain Market Outlook (by guest editor John Simpson, AWB)

A 'wave of wheat' is one of the common expressions being thrown around the grain industry at the moment with 2016 shaping up as one for the ages when it comes to production. The west is coming in thick and fast, SA is positioned nicely and the east coast is either two wet or ideal. Unfortunately, a record wheat crop is unlikely to bring record prices. Whilst poised to have excellent domestic supply, it's inevitably going to be competing on the world stage for a large portion of the crop, as the current estimate has the total Australian wheat production to be surplus of 28 million tonnes. In the recent couple of months, CBOT wheat futures have come under extreme pressure on the supply side. Some factors putting pressure on futures values include:

- Corn has come through pollination all but unscathed in the US. This has led to the USDA increasing their expected average corn yields by 3.5%.
- US winter wheat harvest is all but done and spring wheat is over halfway. All reports are of above average yields and predominately no major quality concerns that can't be overcome.
- Russia is on the verge of a record wheat crop.
- Australian total wheat production estimates are over 28 million tonnes.

Unfortunately, the market is extremely bearish.

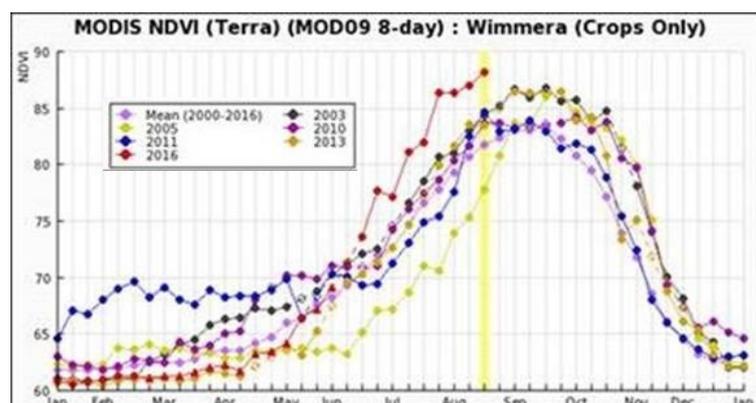
With global stocks looking reasonably settled in the short-term this does not mean there are no pricing opportunities to be had. We may simply have to adjust our expectations of what these look like. A spike in the market may be a \$5-15 run over a couple of days as opposed to a more obvious \$20-30 move. A few short-term reasons that may push these shifts in the market might be:

- Quality. While markets may be 'full', quality is a major concern especially out of France and parts of Europe. The IGC have released data increasing production estimates for wheat and coarse grains, however the report also noted growing concerns around the availability of high protein wheat.
- Lack of farmers selling. US farmers in particular are resisting selling at the current levels.

- Second Brazilian corn crop is over 90% harvested and in quite poor condition.

As mentioned earlier, the markets will not be without opportunities. However, we may have to be more realistic about what we expect the market to do leading into harvest, and into next year.

The good news story is certainly around production (consider the graph below). The graph is a measure and indication of crop growth (NDVI). The data goes back to 2000, when NDVI images were first taken and the red line is 2016. At the moment, the Wimmera is in uncharted territory. Understanding that there is still a considerable time before harvest, farmers are still 'ticking yield boxes' every day.



Harvest Seed Weed Management (by Nick Zordan)

Harvest weed seed management is an important part of the Intergraded Weed Management (IWM) tool kit and should be considered when tackling out of control weed populations. This is essential to breaking the stronghold of resistant weeds. Rotating herbicide modes of action, plant resistance testing, ensuring a lethal dose is prescribed, using double & sequential knock strategies, hay cutting and silage are all pieces of the puzzle that ensure paddocks are weed free and productive. Harvest management of weed seed is the last piece of that puzzle, and determines the effectiveness of all of the hard work that has been put into a paddock during the season. Chaff carts, narrow windrow burning and the Harrington Seed Destructor are the main management techniques used at harvest.

Chaff carts are towed directly behind the harvester in order to capture residue including chaff, weeds and some straw via a belt or blower system. Most of the straw is spread back onto the paddock by the harvester. Dumps are then strategically placed in areas of paddocks and burnt in the autumn. Over Summer, when feed is tight, chaff dumps have been successfully grazed without reducing the effectiveness of the technique and without tending to spread too many weed seeds. Towing the cart and waiting to dump the chaff can be a hassle but the use of such a machine can drastically reduce weed seed banks and should be considered as an option.



Narrow windrow burning- Funnelling chaff into a narrow windrow at harvest is the most widely adopted harvest weed seed management technique. A cheap and effective way to reduce weed seed numbers, burning narrow rows is most commonly performed on legumes and oilseeds.

This technique can also be successful on cereal stubbles. A purpose built chute that concentrates residue into a 500-600mm wide row is ideal depending on crop biomass. Dropping off the spinners is not sufficient with the row produced being too wide causing it to not burn hot enough. This leaves viable weed seeds still in the windrow creating issues the following year.

The temperatures and length of time required to ensure an adequate kill are vitally important for the success of the system. Temperatures of 400°C at the soil surface for 30sec kills wild radish seeds; and 400°C at soil surface for 10sec kills ryegrass seeds.



Therefore, the burning of narrow rows successfully requires good timing and patience, a slow, hot burn, with cross winds and dry conditions providing the best results. Large summer rains can make achieving a successful hot burn more difficult, particularly if regrowth is occurring amongst the rows. The key is getting burns done as early as possible, even if that means gaining permits and extra tankers.

Integrated Harrington seed destructor

After years of hard work from Western Australian farmer Ray Harrington and the GRDC, the Integrated Harrington Seed Destructor (iHSD) is now here. Mounted in the back of a commercial class 8 or class 9 harvester, the iHSD pulverises weed seeds in a high speed mill to a point where they are no longer viable. There is no chemical, no burning and nothing towed behind the harvester. The results this machine can achieve are second to none. Catching weed seeds through the header front, destroying them in an integrated seed destructor, and spreading the residue back onto paddock all in one pass. It is innovation at its best.



Data from Sydney University's director of weed research Michael Walsh, shows iHSD's high performance level destroying our hardest to control and resistant weed seeds.

Seed	% of weed seeds destroyed
Annual ryegrass	95
Wild radish	92
Wild oats	99
Brome grass	98

**Data supplied courtesy by Michael Walsh, Director of Weed Research, Sydney University.*

The cost of an iHSD is approximately \$165,000 per unit and requires 85hp to run under normal load to 105hp under max load. Its high cost and large power requirements mean that for now it may be primarily adopted by large operators or contractors with class 8 and 9 harvesters. GRDC and De Bruin (the iHSD's licenced manufacturer) are looking at building a smaller model in the future that would suit an average size harvester that is more suited to the average grower.

Other harvest weed seed management techniques, such as funnelling chaff onto tramlines in a CTF farming system and the bale direct system where harvest residue is baled directly behind harvester, are less common. With resistance increasing in weed populations, the need to utilise all the tools available is essential. Not all harvest weed seed control management options are going to suit every farm business, but a conscious effort with one or more will reduce weed seed banks.

Speak with your Western AG agronomist for further information regarding weed seed management for this coming harvest.

Summer Crop Management and Utilisation (by Karl Drever)

With the Summer Crop Season just around the corner there are two key points to consider. Firstly, give the crop the best possible chance to grow to its' full potential, and, secondly, ensure best utilisation practice. You don't get paid for how much feed you grow, you get paid for how much meat is sold out the gate. This message simply relates to getting the best utilisation percentage from your Summer crop to obtain the best achievable profit.

PRODUCTION:

There are 3 key points that will give you every chance of growing a good crop.

1. Select the correct species and variety that suits your requirement, there are more varieties available every year, all having their benefits, all maturing between 6-20 weeks, please speak to your agronomists to select the one that suit your situation best.
2. Weed Control, previously there has been no registered in crop option for weed control in summer crops, but last season Forage Max was released with some outstanding results in our area, moisture is generally always limiting in a summer crop so having the option to control undesirable weeds using moisture from the crop is of huge benefit to us, as seen last season in such a dry Spring/Summer.
3. Monitor crops on a regular basis, pests have wiped summer crop out in recent years mainly because they are not being inspected regularly. Mites, aphids, slugs and moths are the keys pests that need to be monitored, we have plenty of options to prevent and control these pests.

UTILISATION:

There are generally only three ways that farmers are utilising their summer crops each year.

1. When too many stock are put on a crop and the feed runs out prior to the stock being finished. This is not good.
2. When stock are all finished and there is still plenty of summer feed left in the paddock. This is not as bad as the first, but still a underutilised crop.
3. The production system that has been calculated to get the most meat sold per hectare planted with little dry matter remaining in the paddock. This is the optimal result.

This is where the correct advice can provide a significant return on both the livestock and cropping investment.

Below is a Brassica wheel (by Agricom Seeds). This is a fantastic tool for calculations relating to stocking rates and area required of a Brassica crop.



The Agricom Brassica Wheel

There are two ways to use the Brassica wheel.

1. Prior to sowing, to calculate how many Ha of crop is required to sown, if we have a certain amount of stock that we want to feed over a certain amount of time.
2. Once the crop has grown, what will the stocking rate be per Ha of crop for the feed to last a certain amount of days.

This will only be a guide, but it has certainly helped farmers achieve the full potential from the crop in recent years. Please speak to you agronomist regarding varieties, stocking rates, crop areas and the Brassica wheel.



DEMONSTRATION SITE:

This Spring, Western AG will be setting up a 7 Ha demonstration site just west of Ballarat. The demonstration will include sowing different options of Summer crop along with various Herbs and Lucerne varieties. In the Autumn, all different Grass and Legume species will also be sown into the same site. A field day will be conducted later that in the year so keep your eye out for the invite.

Flystrike Risks & Considerations (by Katrina Ridgway)

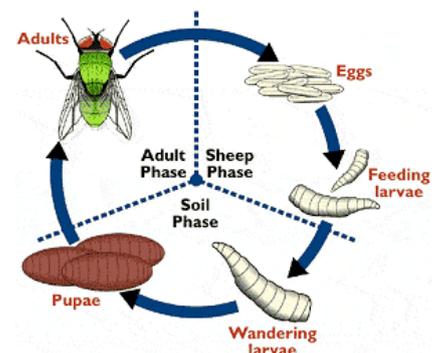
Flystrike is potentially a real threat this season with excess moisture and warmer weather conditions combining .

The risk of flystrike increases once the temperature is above 17°C, wind speeds are moderate (<30 km per hour) and sheep fleece remains moist from rainfall for a few days. Generally, paddocks that are more exposed to wind, with less ground cover, timber and wet spots, will have less flystrike risk, making them more suitable for high risk mobs of sheep, such as marked lambs, daggy sheep and lambing ewes. www.flyboss.com.au.

Following are some considerations to make with flystrike control programs but, first and foremost, **prevention is the key.**

- How to choose a fly product?
- Stage of production cycle - which classes of sheep are to be treated?
- Time to shearing post treatment?
- Are you planning to sell any sheep post treatment?
- What length of ESI or Wool WHP can be tolerated?
- What protection is required? (short / medium / long range protection, or a short term/knockdown treatment)
- Are any existing strikes present?
- How will you treat? (spray-on, jetting, wound dressing)

Remember, your result is always only as good as your application!



ATV Lifeguard Saves Lives (by Aaron Starick)

Statistics prove that deaths from ATV (primarily quad bikes) rollovers have been steadily increasing as the popularity of ATV increases for on-farm use.



The ATV Lifeguard is the world's first flexible, passive and yielding Crush Protection Device that is designed to fit most steel framed Quad Bike racks. The lifeguard fits most brand name bikes including Honda, Yamaha and many more which have steel racks attached.

The unique segmented design has been extensively tested and is now proven to reduce the risk of severe injury or death following the roll over of farm quad bikes. The unique flexible system flexes around your body simply meaning that the bike can not fall on to top of you when rolling over.



The Lifeguard simply clamps to the rear steel carrier bar and its flexible character absorbs the impact of a roll over and the steel carrier easily sustains the forces required to protect the rider.

Optional extras for the ATV Lifeguard include:

- Rubber mat, for carrying extra gear or your dog.
- Flashing LED Light, which simply zips on and is wired to the battery.
- Spare Neoprene Cover.

The Victorian Government is currently offering a rebate of \$600 to Victorian farmers who purchase an approved Operator protection Device. The OPD must be designed and manufactured in accordance with approved engineering standards. The ATV lifeguard meets all the criteria for claiming the rebate. Go to www.vff.org.au/quadbike for more information on the Govt Rebate.

For more information on the ATV Lifeguard, pricing and rebates simply contact your nearest Western AG Store.

Key Upcoming Dates.....

Grain Storage & Marketing Updates

Note: All sessions start at 4pm.

Willaura

October 10th

Martin & Adam Gellert's property,
Blue Gum Rd, Willaura

Contacts: Phil Hawker 0427 367542
Braydn Robertson 0438 976557

Ballarat

October 11th

Neil Ham's property,
Black Bottom Rd, Trawalla

Contacts: Gerard O'Brien 0419 801485
Karl Drever 0438 397544



Northern Paddock Crop Walks

Date: Friday, October 14th

Bus Times: 8:00am Kaniva
8:30am Horsham
8:45am Nhill

Venues: Nurcoung, Wonwondah and
Warracknabeal

RSVP: Horsham 03 53822488



Southern Client Bus Tour

Note: **Client Invite Only**

Date: Thursday, October 20th

Bus Times: 7:00am Derrinallum
8:00am Bannockburn

Venues: Nufarm / Cropcare facility
Melbourne Water farm
Little Creatures Brewery

RSVP: Derrinallum 03 55976622



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