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Introduction

Welcome to our Spring edition of Agnote and, as always, we hope you find it an enjoyable and informative read.

Spring is a busy time for our agronomy team in particular as crops and pastures advance very quickly in growth stage and the timing of application of fungicide and herbicide treatments become critical.

There are large areas of crop in good to excellent condition but unfortunately there is also areas that have been impacted by too

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much rain, slugs and mice and this is hurting clients. Our goal is to use our high level of combined experience to be there in assisting you to maximise the productivity and profitability of the good crops and pastures as well as making the best decision on what to do with the difficult situations.

Here is wishing that grain and stock prices climb as we head into Spring and you get the right amounts of finishing rain at the right time!

Western District Update

Crops have benefited from the recent dry and sunny few weeks and there growth has been excellent. Cereal crops are now at critical stages for disease and nitrogen management which will be covered in other articles.

Canola is patchy and it is hard to find a paddock in the area which has not been affected by slugs and or mice. Some canola crops have been baited up to 3 times and cereals have been seriously affected also. It does appear slug numbers are continuing to build and there have been cases of damage in advanced cereal crops that have required treating. In general, the pre-emergent herbicides have worked reasonably well especially where a good burn has removed the trash. The Trifluralin and Dual Gold mixes are holding up well, as are the Trifluralin and Avadex treatments.

Unfortunately, we are seeing more poor results of ryegrass control from using the Group A & B herbicides. Now is a good time to note these paddocks and weed populations for testing over summer so an accurate picture of exactly where the population is at from a resistance status can be obtained.



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Wimmera-Mallee Update

The past few weeks have seen significant rainfall occur across the Wimmera and Mallee which has been very timely for crops. With 80% of the post emergent spraying already done, the main attention is now turning to late weed and disease control.

This season, cropping paddocks have been generally pretty clean of weeds due to summer spraying and that ability to get knockdowns out prior to seeding. The Trifluralin and Avadex mixes have worked well, particularly on important weeds such as brome grass in barley where options for controlling this weed are limited.

Late germinations of wild oats have been observed in paddocks due to the good profile of moisture and because of the different depths of seeds through the soils. Keep an eye out for any late germination that may require clean-ups. The main products available are Topik (wheat only), Axial and Foxtrot.

Just recently there have been reports of Lucerne Flea damage in both wheat and

Nitrogen Applications

With cereal crops at stem elongation stage and Canola at early flowering the majority of nitrogen (N) has either already been or just about to be applied.

With barley, care needs to be taken with the rate and timing of N applications as there is a risk of increasing protein above malt specifications. Nitrogen is generally best applied at around GS 30/31 stage in high rainfall areas and often earlier in low to medium rainfall areas.

In wheat, there is more flexibility and opportunity to manipulate yield and protein using N. The main timings for applications are at tillering, early stem elongation and at flag leaf emergence.

UREA

When topdressing urea, rainfall helps following application to avoid any potential volatilisation of the product. Around 10mm of rainfall is required to adequately wash the urea into the soil. barley, and crops need to be checked. Look out for signs of 'clear windows' on leaves. Also, any wild radish that has germinated late will require a clean-up with Amine 625 mixes a good option. It will also be a worthwhile addition to apply a fungicide product whilst running over any crops.

Mice are still causing problems in cereal and canola crops and their activity needs to be closely monitored as they have the potentially do severe damage closer to harvest time by lopping crop heads and pods off. Locating the mouse holes in paddocks is becoming harder due to the growth stages of the crop, however it is often still worthwhile spreading bait in these areas to keep numbers down.

Stripe rust is active, particularly in wheat crops that have not been treated with Flutriafol. It is expected that susceptible crops such as Yipti and Derrimut will have to be sprayed twice with fungicide, once at GS31 and then again at GS39. It is possible that the application of the Flutriafol with mean that a single GS39 treatment will be adequate.



Stripe Rust in Wheat

Interestingly, stripe rust hot spots have been found in Correll wheat which previously has shown good tolerance. It is likely Stem rust will be a problem this year and it is important to keep an eye out for this disease and understand the resistance status of the varieties you are growing.

Scald has been reported in Hindmarsh barley and is expected to be a problem in Gairdner and Commander crops also. Fungicide needs to be applied early from GS30 to provide effective control of this disease. In higher yielding situations a second flag emergence treatment may also be required.

EASY N

Easy N or UAN offers the convenience of being able to apply nitrogen by boom, contains ammonium nitrate which is a more available form and, by being applied directly to the plant, enables a level of nitrogen to be taken up directly over the leaf surface.

A cereal plant only has the capacity to take in 8-10kgN via the leaf. Therefore, Easy N is best applied when rainfall is imminent so as the product is also washed into the soil for root uptake.

When applying Easy N, leaf burn is difficult to avoid and this becomes more significant as the temp increases and the crop advances. The level of leaf burn is dependent on three main factors being the rate of N, weather conditions and application technique.

When using flat fan nozzles, under 18°C up to 100 l/ha of neat UAN can often be safely applied. Above 18°C, rates are

usually limited to 20 l/ha. Diluting Easy N with a least 50% water will enable higher rates of N to be applied in warmer conditions and reduce the potential burn. Streaming nozzles are an excellent way to remove the burning risk.

Mixing different chemicals with Easy N can also have negative effects on the leaf burn potential. Typically EC chemical formulations (e.g. LVE MCPA) are harsher on the crop and promote leaf burn. In comparison, the SC chemical formulations (e.g. Opus) are softer on the crop and tend to cause less significant effect. Extra care does need to be taken when UAN is combined with a fungicide as the leaf burn can be exacerbated.



Disease Control in Wheat & Barley in High Rainfall Zones

Stripe rust, leaf rust, stem rust, Septoria tritici blotch of wheat and leaf scald in barley are the main diseases likely to be detrimental to yields in high rainfall areas. Stripe rust and Septoria can now be found in wheat and, it is expected that, disease pressures will be higher than average this year.

WHEAT

It is important to understand the disease reactions of the varieties being grown and to be prepared to treat as they approach critical growth stages, rather than wait to see disease. The 'money leaves' in wheat so to speak are flag, flag -1 and flag -2 and timing of fungicide spraying is critical to ensure adequate coverage of these leaves. A fungicide treatment at GS32 (when flag -2 is emerging) followed by a second treatment at GS37 to GS39 (start of flag leaf emergence to full emergence) is a common program for sensitive varieties.

At this stage, it appears that the Flutriafol treatments applied to fertiliser are proving to be effective in controlling stripe rust and Septoria and it is possible they can potentially replace the need for a GS32 foliar treatment. However ,crops will need to be monitored closely as it is expected as the fertiliser treatment runs out of activity disease development in the crop will be quite rapid.

Last year Septoria was found in the susceptible varieties of wheat, such as Beaufort, and was suspected to be responsible for significant yield losses.

Fodder Crop Options

With the season now starting to turn for the better, it is time to make decisions on those paddocks that were too wet earlier to sow or were sown and subsequently failed either to slugs or waterlogging. With wool and lamb prices remaining firm, albeit down on prices earlier in the season, growing good quality fodder over the Summer/Autumn might be an attractive alternative to Spring sown crops for farmers with mixed livestock/cropping enterprises. Individuals will have to make their own minds up about potential Spring sown yields and harvest commodity feed prices and sum that up against fairly robust grazing potentials.

Up until now, Septoria was not all that common in Victoria.



Septoria in Wheat

Septoria "over-summers" on stubble residues, favours wet conditions and it can be found on the lower leaves of susceptible crops such as Bolac, Beaufort and Revenue now. All the main White wheats grown in our area plus the Red wheats Beaufort and Revenue, are all susceptible to Septoria and it is recommended that this disease be controlled early in the crop, from GS32 onwards. The preferred product for Septoria control is Opus or Soprano which also has excellent activity on stripe rust as well.

It is likely that we will be affected by stem rust again this year and the risk is that it arrives earlier and therefore has a greater impact on yield. The optimal timing of treatment of stem rust is usually around GS55 (around mid head emergence). Again, if you wait to see the disease before treatment, yield potential will be lost and sensitive crops need to be treated based on growth stage. This year, we will be selectively recommending the use of Opera for the later flag leaf emergence treatments in high potential crops. Opera is a mix of an Epoxiconazole (same as Opus) and a Pyraclostrobin. The benefit of this product is extended disease protectant activity and the ability of being able to preserve the amount of green leaf area in the crop for longer. These 'strobi' type fungicides are widely used in high yielding European and NZ crops and are becoming more of an option for us as they come down in price.

BARLEY

In barley, the flag leaf is less significant for grain fill and the 'money leaves' are flag -1 and flag -2. The barley varieties more commonly grown in the Western District, Gairdner and Commander, are rated S-VS and S respectively to leaf scald, which has been quite prevalent in crops in past years.

With the weather warming up (scald favours temperatures between 15-20°C and high crop canopy moisture) this disease will be significant. Prosaro is the preferred product and it is often required to treat crops twice, once at GS32 and then again at GS39.



Regardless of whether a fodder crop or cereal is sown this spring, there is still the continual and potential problem of slug devastation. It would be naive to assume that attack would not occur given the massive build up of slugs over the last 12 months. Before any sowing is done, it is important to dig around and assess slug numbers and calculate the risk. If the numbers are excessive, don't do it unless you are committed to a good baiting program. It might be advisable to get an effective bait out before working, one down the tube at sowing, and one after sowing, or a combination of each.

Furthermore, we would advise that any spring sowing have some form of cross cultivation, not to any great depth, but enough to aerate the soil and eliminate the perfect direct drill 'slot' for slugs to move along that can occur with single pass direct drilling. Also, depending on conditions, it might be advisable to roll the paddock post sowing.

If a fodder crop was decided for this Spring, there are several options that are available to growers.

Fodder Crop Options continued.....

Some questions need to be answered by the grower before making a choice.

For example, how many stock do you want to finish or fatten. There is no point growing say 200ha of fodder if you can only utilize half of it. We can certainly help you with working out the potential yields and stocking rates.

Also, how long do you want the feed to last or the paddock to be out of crop? There is no point sowing say a Winfred type, if you want to sow early next year as there would still be plenty of residual crop left at that point.

Do you want the fodder to last longer than the Summer/Autumn? – there are options for this. Do you want to grow a perennial crop such as lucerne or tonic plantain? These are all questions that need to be addressed first. Back to the varieties.

Winfred rape has certainly been a very reliable performer over the varied Summer seasons in the past. It can be grazed from 9-10 weeks after sowing and, unlike other rape varieties, doesn't have to reach full maturity before grazing. The added benefit of Winfred is that it will easily withstand multiple grazings and will persist into the Winter months without bolting to seed like the other varieties tend to do. Options in Autumn could include topping up with an annual rye or oats to carry through for another year.



Winfred Forage Rape

If you decided that you only required a Summer feed, then a variety such as 'Ace' rape would certainly be an acceptable option. It was bred from the Rangi rape but, overall, has a better performance than Rangi. Another newer option is Titan rape, it has excellent regrowth potential as well as aphid and virus tolerance. It is an early maturing variety at around that 10-12 weeks.

Turnips are another option as long as the conditions are favourable. Turnips have the potential to produce a huge amount of feed, as long as there is enough rain to grow the bulb. Turnips generally require less rain than rape so this is a good option if the summer looks like being drier. Varieties such as Australian Purple Top (APT) which was selected from old MPT lines, are good producers. APT has a maturity of about 14 weeks and has a big leafy top and large round bulb.

A fodder variety that has gained in popularity over the last few years is Tonic Plantain. With chemical options now available for Plantain, this is certainly a fodder plant that could be considered for numerous situations. For example, topping up an old lucerne stand or as a stand alone crop. Plantain is highly nutritious, fast to establish, tolerant of a range of soils and, from what we have seen, can withstand wet conditions.



Tonic Plantain

Plantain has also shown to prevent scouring in animals and has a higher levels of minerals than other fodders. It is certainly an option that should be discussed with your agronomist.

Whatever you choose to sow this Spring, the key to successful crops is good planning and preparation. The fertiliser at sowing and insect control will be essential for good establishment, as well as the seedbed preparation that was discussed earlier.

Website now up and running

Western AG have now got our website up and running.

www.westernag.com.au

We have spent considerable amount of time developing a website that you hopefully find both interesting and informative at the same time.

Our pages include who we are, where we are, services we provide, company and staff profiles, agronomy notes,

weather information, client activity dates and links to our latest newsletters. Moving forward, we anticipate all our newsletters will be archived on the site providing a useful information resource.

We also envisage having a "blog" area available where you can view our Agronomist's thoughts and comments on various hot topics and the current happenings in each region as they occur. Go and take a look at the site and tell us what you think.



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.

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WA Resistance Management Study Tour

This year in late July, a number of the Western Ag agronomy team travelled to Western Australia for four days to investigate the development and management of herbicide resistance.

Along with Agronomists from SA, the group attended a radish management 'Master Class', inspected local trial work, visited various farms and spent time with the Australian Herbicide Resistant Initiative (AHRI) group that are located at the University of WA.

The Radish Master Class was run by Bill Campbell who is employed by Nufarm and has been at the forefront of developing resistant management programs for wild radish. He was able to provide an insight in to how multi group herbicide resistance has developed in radish populations in WA and how it is currently being managed.

His four main points for delaying the development of herbicide resistance in radish and it's management are;

- 1. Understand the resistance status of each radish population;
- 2. Do not cut herbicide rates;
- 3. Use multiple modes of action herbicide treatments;
- 4. Treat paddocks early and be prepared to spray twice.

The group was given the opportunity to visit a number of growers and get a "first hand" feel for how the highly resistant radish and ryegrass (ryegrass was often the lesser problem) is being controlled at farm level.

Various techniques are being used including a property where moldboard ploughing is being used to bury weed seeds at a depth of >400mm to prevent them from germinating and emerging.



Moldboard Plow

On this same property, the grower was able to store almost 40,000 tonnes of grain on farm in aerated vertical silos which allowed him to develop niche export and local markets.



40,000 Tonne Farm Storage

We inspected trials at Milling, North East of Perth and it was here that we started to see first hand the issues that farmers were facing. When you see a plot where 1.3lt / ha of Estercide 680 had been applied to radish and the plants are growing through as if they had been sprayed with water, it is a very sobering sight!

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Further North in Dalwallinu, we met a local grower who farms 70,000ha of which 40,000ha is in crop. Interestingly, he has been easily able to manage resistant ryegrass in his cropping rotations and now radish control was the bigger problem. It was fascinating to gain an insight into how such as large operation is conducted and the challenges he faced in the areas of equipment efficiency, water use efficiency, integration of livestock and labour.

Properties in the Goomalling, Dowerin and Tammin areas were also visited to inspect trails and meet growers. We were able to gain an understanding of the use of two spray programs for radish control and seed management using capture and windrow burning techniques.

One of the highlights of the trip was visiting a property in the Tammin area where precision ag was being applied to in excess of 8,000ha of crop and the use of weed seeker technology that had allowed the grower to reduce his glyphosate usage during summer spraying to only around 1000 litres per pass.



Tammin Grower- Brad Jones

The afternoon of our last day was spent at the University of WA with Steve Powle and the AHRI group. This group is world leading in understanding weed resistance development and management at the population and biochemical level.

We were able to inspect their glass house work where they are investigating the resistance development in herbicides such as Sakura and Boxer Gold. They are also evaluating the effectiveness of various harvest management techniques including the use of the Harrington Seed Destructor.

(See page 6 for the AHRI Feld Day invite, Skipton Golf Club, Sept 23, from 8.30am to 12.30pm)

Overall, it was a very informative trip and we returned with some extremely important take home messages regarding herbicide resistance including, how it develops, how quickly it develops and what the farmers are actually doing in the field to manage it.





Harvest: An opportunity to cart, crush or cremate weed seeds



In September, the Australian Herbicide Resistance Initiative (AHRI) will be conducting half day seminars focusing on weed seed management systems. These seminars are designed to provide information from trial results and practical experience on the effective use of chaff cart, windrow burning, baling and weed seed destruction systems during harvest.

Presentations

- Evolution of the Harrington Seed Destructor
- Effectiveness of harvest residue management systems
- Ten years of IWM smashes ryegrass seed banks by 98% over 31 focus paddocks
- Chaff carts and weed management
- How to burn 10,000ha of windrows





Michael Walsh AHRI



DAFWA



Ray Harrington Darkan Grower



Hosted by: Western Aq Date: Friday, 23rd September Location: Skipton Venue: Skipton Golf Club

Time: 8.30 - 12.30 Morning tea and sausage sizzle lunch will be provided



Lance Turner Corrigin Grower



Rod Messina Mullewa Grower

RSVP: For catering purposes we need those interested in attending to RSVP no later than Monday, 5th September

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