LIEBE GROUP NEWS

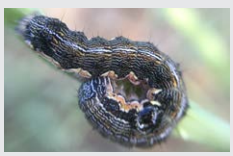
August 2019
Volume 22
Issue 6

What's Inside

Spring Field Day Flyer & Agenda

Tackling Net Blotch - Identification and Management Strategies

How to Manage Blackleg



Spotted! Budworm Moths

LIEBE GROUP
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The Liebe Group mission is to facilitate grower prioritised research, development and extension to support our members to be profitable and sustainable.

From the Cover

Local growers attending the Liebe Gorup Post Seeding Field Walk in July.

MEMBER NEWS

EVENTS

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FROM THE EXECUTIVE OFFICER

Bec McGregor

WELCOME to the Liebe Group's August newsletter! A sunny afternoon for the 2019 Liebe Group Post Seeding Field Walk brought together over 50 people to review the current trial program at the Main Trial Site on the Keamy family property in the Watheroo region. See page 5 for a full debrief.

With the Liebe Group Spring Field Day less than a month away we are excited to share the full agenda for this informative day with you all. On pages 10-11 you will find all of the event details and the agenda for the day. We have a diverse range of trials on show at the site this season as well as a range of marquee sessions and displays on offer. Be sure to mark the day in your calendars and share amongst your friends and neighbours.

On Thursday 1st August the Liebe Group hosted interactive AgChats and Bitesize Learning sessions on grain marketing. The sessions provided participants with some key take home messages and tools with support from Chris Tonkin and Jacquie Warr of Ten Tigers.

On Friday 23rd August we will also be hosting Fran Lopez from the Centre for Crop Disease Management for a hands on AgChats session focused on identification and management strategies for net blotch in barley. Participants are invited to bring along samples for testing and join in an interactive discussion on crop disease management.

In late July the Liebe Group were fortunate to host our second work experience student for the year, Alannah Chapman from the University of Western Australia. Alannah was a great a help during her two weeks with the group and assisted with the monitoring of a range of trials as well as the running of our Post Seeding Field Walk. Alannah shared some of her thoughts and experience from her time with Liebe on page 8.

The Liebe Group are currently seeking applications for the role of Executive Officer. The role details can be seen on page 4 which we encourage you to share amongst your networks. Applications will close Friday 23rd August.

And lastly as this is my final newsletter as the Liebe Group Executive Officer I would like to thank you all for your support over the past three years. I have written a more detailed farewell on page 9 to share with you all. Wishing you all the best for the remainder of the season!

EMPLOYMENT OPPORTUNITY: EXECUTIVE OFFICER

APPLICATIONS CLOSING 5PM FRIDAY 23RD AUGUST

The Liebe Group are seeking an enthusiastic and personable individual to take on a leadership role in our member based organisation. This is an excellent opportunity for either a skilled individual with management experience or someone who is interested in developing their leadership skills. Agricultural experience and/or qualifications are not essential for this position.

The Liebe Group is a grower-driven, not for profit organisation that operates within the Western Australian Wheatbelt. The group has built a solid reputation over the last twenty-two years as being a professional, highly respected and innovative grower group with a dynamic and engaged member base.

The group conducts valuable research, development and extension through trials, demonstrations, workshops and events and focuses on extending knowledge to members and the local farming community.

The core functions of the Liebe Group are:

1. Agricultural research, development, implementation and validation.
2. Provide information, education, skills and training opportunities to members and wider community.
3. Strengthen communication between growers and industry and whole community.

The Liebe Group office is based in the vibrant town of Dalwallinu, 260km north of Perth. The progressive community offers a welcoming atmosphere with the best of rural living and amenities.

THE PREFERRED CANDIDATE WILL POSSESS THE FOLLOWING:

- Experience in project management, community development and/or human resource management
- A general understanding and/or interest in agriculture.
- Interpersonal skills and the ability to communicate with a diverse range of people
- Current C Class Driver's license
- The ability live and work in Australia

The diverse role will include managing the operational activities to ensure it aligns with the group's strategic objectives, human resources management, supporting staff and members in the Liebe Group's research and development program, engaging with key stakeholders and members and liaising with and reporting to the group's Management Committee.

An attractive remuneration package will be negotiated, including use of a vehicle for work and private purposes and professional development opportunities. This is a permanent position, with an initial three month probationary period.

REMUNERATION PACKAGE: $90-110,000 per annum based on experience.

FOR FURTHER INFORMATION & APPLICATION FORMS:
Contact Rebecca McGregor, (08) 9661 1907 or email eo@liebegroup.org.au

To find out more about the activities of the Group, please refer to our website - www.liebegroup.org.au

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ANOTHER SUCCESSFUL POST SEEDING FIELD WALK FOR THE LIEBE GROUP

Alannah Chapman
University of Western Australia

GRACED with excellent weather (A perfect day for spraying), the annual Post Seeding Field Walk took place on the 24th July at the Main Trial Site in Watheroo. Over 50 growers and industry representatives from the surrounding area attended, where they were provided with a great opportunity to interact with others to see the direction of research and trials that are relevant to the local region. Liebe Group trial partners, presented a diverse range of trials showcasing new research, product development and comparisons. Event partner Bayer showcased their trial and offered attendees the chance to network at the sundowner afterwards.

The Watheroo Main Trial Site from above thanks to Steve Lamb, Pacific Seeds

The scope of trials was extremely diverse and reflected the interest's that local growers in the region had indicated they would like more information on. These trials included canola variety trials, National Variety Trials; wheat and barley, a ripping demonstration, Nitrogen management and timing in wheat, pre-emergent weed control in canola and wheat, Truflex canola systems, IMI residue impacts on canola, a knockdown demonstration, and a pre-emergent grass control in lupins.

The IMI soil residue trial sparked some interest among growers. This trial was designed to inform growers of the potential range of negative effects of both IMI chemical soil carryover or Group B tank mix combinations on both grain yield and profitability across different environments.

Local growers view the wheat and barley National Variety Trials at Watheroo

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Bayer's trial, focusing on second generation weed control trait compared to the old generation roundup ready trait, offered growers an insight into greater flexibility options for glyphosate application, as roundup ready herbicide with Plantshield ®can be applied later, and at higher rates compared to other canola varieties. In this trial four different canola varieties are being compared, with different treatments being applied at different rates.

The CSBP trial moved away from herbicides and touched on another important aspect of cropping systems; nitrogen use efficiency. Angus McAlpine (CSBP) talked about the possible ways there are to increase nitrogen use efficiency, with mid row banding being the main focus of the trial. This trial compared the effectiveness of nitrogen banding at start of stem elongation to nitrogen banded below the soil surface (mid-row banding).

Liebe Group R&D Chairperson and local grower Steve Sawyer said that "The trial site is looking really good and I'm excited by the amount of new chemical technologies that are being showcased at the site this year"

The day ended with everyone being invited back to Miling for networking followed by a beer and burger.

The Main Trial Site overall had good plant emergence, given the late start to the season, with all the trials looking to be on track. Some early data has already been collected for crop establishment counts, and weed counts, such as the deep ripping demonstration, where differences in treatments are already identifiable. The Spring Field Day at the Main Trial Site will be on Thursday 12th September 2019, where the trial partners are given the opportunity to delve further into the details of their trials and more extensive results.

The Liebe Group would like to thank everyone who came along to the Post Seeding Field Walk, this year's Main Trial Site hosts, the Keamy family, for their hard work and dedication to the site, event partner Bayer for sponsoring the event, and to all the trial partners for the support in making the day a success.

Bevan Addison, Adama presenting on pre-emergent grass control in lupins

Matt Willis, Bayer walking growers through the canola systems trial

TALKING GOOD GRAIN MARKETING PRACTICE WITH TEN TIGERS

ON Thursday 1st August the Liebe Group were fortunate to be joined by Chris Tonkin and Jacquie Warr from TenTigers for two fantastic and interactive sessions on grain marketing.

The morning kicked off with the fourth Liebe Group AgChats which is a workshop series supported by GrainGrowers. Alan Meldrum, GrainGrowers WA Regional Coordinator spoke about GrainGrowers new initiative, Behind Australia Grain, which will see the development of a grains industry wide sustainability framework. Alan explained that the framework will demonstrate the sectors commitment to proactively address the key materiality issues that provide both sustainability challenges and opportunities for the sector.

Chris Tonkin, TenTigers, then took the Liebe Group members through a discussion on grain marketing which included setting strategies for your business and how to understand and use percentiles to help make decisions. Chris explained the importance of the 4 T's being trust, timing, targets and tracking and that it is important to take the emotion out of the process and make decisions when you're not under pressure.

Following on from the AgChats, Jacquie Warr from TenTigers facilitated the Liebe Group's third Bitesize Learning session on grain marketing basics. The Bitesize Learning series is targeted specifically towards women in the farming business with this session being for those completely new to grain marketing that were keen to learn new skills to apply in their business.

After first giving an overview of grain marketing and understanding of some of the key terminology, Jacquie stepped the Liebe ladies through a fun and engaging "marketing game" which saw the women have the opportunity to "market" the sale of a wheat crop by setting strategies and making decisions across a fictional year. With real-life scenarios thrown in the mix of holidays and weather events in addition to the highs and lows of market prices the game provided a fantastic opportunity for the group to experience the feeling of making decisions and sticking to a strategy.

The Liebe Group would like to thank everyone who participated in the sessions and extend an enormous thank you to Chris and Jacquie of TenTigers for their involvement and enthusiasm.

Chris Tonkin and Jacquie Warr, Ten Tigers, presenting grain marketing to Liebe members

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WORK EXPERIENCE INSIGHT

Alannah Chapman
University of Western Australia

THE last two weeks working at the Liebe group have been busy, rewarding and a huge learning curve. My experience here has far exceeded any expectations I had about coming here, and I think this will prove to be an invaluable experience in the future. It has opened my eyes to the world of cropping, as I have not had much exposure to this part of the industry before, but hopefully I have gained a little more knowledge now!

I have enjoyed everything about my placement, from writing articles to helping organize the post seeding field walk and meeting local growers and other industry representatives. I especially liked going out to farms on a daily basis, and collecting data and seeing first-hand how the trials are run, and all that is involved in data collection and collation. I have gained experience in using equipment such as the penetrometer, using soil moistures probes and other technology, which I think will be very useful in the coming years. My experience with Liebe Group has been an extremely positive one, and I was never left twiddling my thumbs for want of something to do.

All the staff here have been extremely helpful and accommodating during my time here. A special thanks to Neil for putting up with my endless questions on the long drives to and from farm sites, and to Bec and Danielle for having me in the office. Thanks to the Liebe Group for giving me the opportunity do work experience!

Good luck to you all for the remainder of 2019!

Cheers,
Alannah

Alannah with the Liebe staff after her two week work experience

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FAREWELL FROM BEC MCGREGOR

Growing up in Buntine I have always been familiar with the Liebe Group. I would often spend my time after school in the old Liebe offices helping Mum fold the newsletter or waiting outside the Buntine Bowling Club for a meeting to finish.

In January 2017 I was fortunate to move to Dalwallinu and have the opportunity to work for the Liebe Group in the role of Executive Officer. Coming into the role with no agricultural experience, besides a farming background, was definitely a challenge and a steep learning curve. Two and a half years later I am thankful to say that I have learnt so much about farming systems in this region and I would say I am now fairly fluent with the ag terminology and lingo.

The role of Executive Officer has given me the opportunity to expand my skills in a diverse range of areas from understanding trial design and results, to coordinating and running events and managing the requirements of a not for profit organisation. I have had the chance to meet some fantastic people from within the industry and more importantly work with a number of the Liebe Group members from throughout the region.

During my time with the Liebe Group there has been some incredible achievements for the group that I have been thankful to be a part of. These include the completion and opening of the Liebe Group Agricultural Research and Education Facility, celebrating the 20 year anniversary of the group, working with the team to be successfully awarded a number of project grants, the launch of the new AgChats series and the running of a number of successful events and workshops.

I have also been lucky enough to have worked with a number of incredible team members during my time with the Liebe Group. Their support and dedication to their respective roles has made the last few years such an enjoyable experience. To our current team members in Danielle, Rebecca and Sophie thank you for everything you have done. I would also like to thank the Committee members who have been a fantastic support during my time with the group. To the current and past Management Committee members, I appreciate all the support you have given me in my role.

I am thoroughly looking forward to my next adventure of becoming a Mum but know that I will continue to be involved with the group as an avid supporter in years to come.

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EVENTS

LIEBE GROUP SPRING FIELD DAY

KEAMY PROPERTY

MERREWANA ROAD, WATHEROO

THURSDAY 12TH SEPTEMBER

COST

Liebe Members	Free Entry
Non-members	$100
Students	$20

REGISTRATION

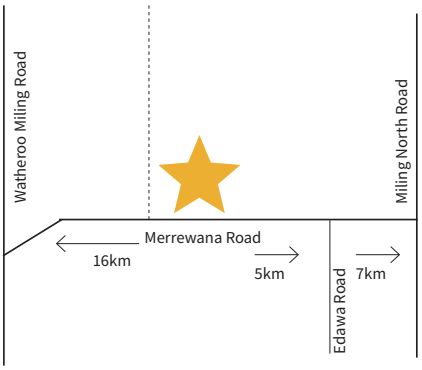
8:30am for 9am start
REGISTER ONLINE

The day includes a field day booklet, presentations, tea and coffee, afternoon tea and lunch.

SUNDOWNER

Sundowner to follow
$5 BBQ dinner and cash bar

SITE LOCATION



FIELD TRIALS & DEMONSTRATIONS

- Truflex Canola Systems
- Pre-emergent weed control in canola
- Nitrogen management and timing in wheat
- Pre-emergent grass control in lupins
- National Variety Trials - Wheat and Barley
- Canola Variety Trial
- Deep ripping demonstration
- Swarmfarm Robotics display
- Plus many more!

GUEST SPEAKERS

Mining and Farming, how do we earn and maintain our social license to operate?
Keren Paterson, Trigg Mining CEO

Precision Ag on Wepowie, how it looks on our farm - Ben Cripps, Wepowie Farms

EVENT PARTNER

Elders
SCHOLZ RURAL

QUERIES

For more information, contact the Liebe Group office on 08 9661 1907 or email admin@liebegroup.org.au

DIAMOND PARTNERS

RSM · CSBP · AFGRI EQUIPMENT · Rabobank · CBH GROUP

LIEBE GROUP SPRING FIELD DAY AGENDA

8:30	9:00	**Registration**				
9.00	9:10	**Welcome & Housekeeping** *Liebe Group President – Blayn Carlshausen* **Site and season overview** *Main Trial Site Host – Alex Keamy*				
		Session 1	**Session 2**	**Session 3**	**Session 4**	**Session 5**
9.20	9.50	Wheat NVT GRDC (1 of 2)	**Evaluation of delayed N application to improve grain protein** – Tom Shaw, Landmark (1 of 2)	**Truflex Canola Systems Trial** – Matt Willis, Bayer (1 of 2)	**Wheat Time of Sowing 1 & 2** – Mike Ashworth, AHRI (1 of 2)	**Deep ripping demonstration & soil pit –** Steve Davies, DPIRD (1 of 2)
10.00	10.30	Barley NVT GRDC (1 of 2)	**Canola Variety Trial –** David Scholz, Elders Scholz Rural (1 of 2)	**Knockdown demonstration** – Lisa Furey, Nufarm (1 of 2)	**Seeding Rate, row spacing and seed size Hybrid Canola on Ryegrass and Wild Radish** – Mike Ashworth, AHRI (1 of 2)	
10.40	11:10	**Calisto Pre-Emergent Broadleaf Weed Control in Wheat –** Clare Johnston Elders & Owen Langley Syngenta (1 of 2)	**Nitrogen Management and Timing in Wheat** - Luke Dawson, CSBP (1 of 2)	**Pre – emergent grass control in Lupins** – Bevan Addison, Adama, and Matt Sherriff, Sacoa (1 of 2)	**Pre- emergent weed control in Canola** – Michael Macpherson, Imtrade (1 of 2)	
11.20	11.50	**Precision Ag on Wepowie, how it looks on our farm** – Ben Cripps, Wepowie Farms				
11.50	12.00	**R&D Session**				
12.00	12.50	**Lunch**				
1.00	1.30	**Knockdown demonstration** – Lisa Furey, Nufarm (2 of 2)	**Wheat Time of Sowing 1 & 2** – Mike Ashworth, AHRI (2 of 2)	**Hyola XC imi Residue Trial –** Justin Kudnig, Pacific Seeds (1 of 2)	**Deep ripping demonstration & soil pit –** Steve Davies, DPIRD (2 of 2)	**SwarmFarm Robotics** (1 of 2)
1.40	2.10	**Pre – emergent grass control in Lupins** – Bevan Addison, Adama, and Matt Sherriff, Sacoa (2 of 2)	**Seeding Rate, row spacing and seed size Hybrid Canola on Ryegrass and Wild Radish** – Mike Ashworth, AHRI (2 of 2)	**Calisto Pre-Emergent Broadleaf Weed Control in Wheat –** Clare Johnston Elders & Owen Langley Syngenta (2 of 2)		**iLime App -** James Fisher, Desiree Futures (Marquee session)
2.20	2.50	**Afternoon tea**				
3.00	3.30	Wheat NVT GRDC (2 of 2)	**Canola Variety Trial –** David Scholz, Elders Scholz Rural (2 of 2)	**Nitrogen Management and timing in Wheat** – Luke Dawson, CSBP (2 of 2)	**Truflex Canola Systems Trial** – Matt Willis, Bayer (2 of 2)	**SwarmFarm Robotics** (2 of 2)
3.40	4.10	Barley NVT GRDC (2 of 2)	**Evaluation of delayed N application to improve grain protein –** Tom Shaw, Landmark (2 of 2)	**Hyola XC imi Residue Trial –** Justin Kudnig, Pacific Seeds (2 of 2)	**Pre- emergent weed control in Canola –** Michael Macpherson, Imtrade (2 of 2)	**Australian meat sheep products into the Middle East** – Steven Bolt (Marquee session)
4.20	4.50	**Mining and Farming, how do we earn and maintain our social license to operate? -** Keren Paterson CEO Trigg Mining				
4.50	5.00	**Survey Raffle Draw and Close** *Liebe Group R&D Chair Steve Sawyer*				
Sundowner to follow						

EVENTS

LIEBE GROUP AGCHATS

TACKLING NET BLOTCH: IDENTIFICATION AND MANAGEMENT STRATEGIES

DATE: Friday 23rd August
TIME: 11:30am - 1:30pm
WHERE: Liebe Group Office
Light lunch provided

RSVP WEDNESDAY 21ST AUGUST

Centre for Crop and Disease Management
GRDC Grains Research & Development Corporation
Curtin University

Join Dr Fran Lopez-Ruiz, CCDM, for an interactive workshop on disease management.

Topics of discussion include:

- Introduction to fungicide resistance issues in net blotch in Western Australia
- Chemical management
- Hands on sample testing

Bring your own samples!

Requirements for samples

- Barley leaf samples that may be showing disease symptoms.
  - Best collected on the morning if possible, however any collected up to a week in advance are also fine.
  - Best transported in a paper bag/wrapped in paper to keep dry.
- All samples to be labeled with:
  - Name and contact details
  - Location of sample (location/ approximate distance from nearest town)
  - Variety of leaf sample
  - Fungicide treatment used on the leaf this growing season (if applicable) / Sprayed at which growth stage

SUPPORTED BY Grain Growers
Real benefits. Real results.

For more information, or to register, contact the Liebe Group office by phoning 9661 1907 or email admin@liebegroup.org.au

HARVESTER SET-UP WORKSHOP FOR THE COLOUR-BLIND

This hands-on workshop run by Martin Reichelt will work from front to back of the harvester to help growers improve their harvesting productivity and profitability.

Date: Friday 6th September, 2019
Location: Wimmera Farm (J&B Sawyer) Dalwallinu
Time: 9.00am-5.00pm
Cost: $125 (excluding GST)

The workshop will cover an overview of what the steps are to improve performance from front to back and focus on:

- Reducing header front loss
- Improving crop flow through the feeder house
- Puting Dollars in your pocket through proper loss measurement and calibration

From the workshop attendees will be better armed to set-up their harvester to balance minimising harvester lossses with efficient and timely completion of their harvest program. No matter the colour of their harvester.

Peter Newman, AHRI, will discuss set-up for HWSC.

CLICK BELOW TO REGISTER

On-line Registration

PRIMARY SALES AUSTRALIA

For more information contact Peter Broley 0458 458 053.

CROP SEQUENCE WORKSHOP

FARMANCO

9am Monday 26 August 2019 @ Beacon Country Club

CROP SEQUENCING

Presented by Farmanco

- **Project Overview, demonstration of legume crops for profitability in the Western Region**
- **CSIRO, crop sequence trials and models and how these apply to your farm**
- **Paddock measurements and DPIRD trials, what are the trends in the WA farming system?** — **Greg Shea, DPIRD**
- **Farm rotations and grower profits. What are the profit drivers for choice and how to build the best rotation.** — **David Ward, Farmanco**
- **Agronomy and rotations, how the decisions are made. Where to from here? You've been given the information, now how to tie it together?** — **Peter Borstel, Farmanco**

RSVP on 08 9295 0940 for catering purposes

www.farmanco.com.au

Department of Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA

FARMANCO

LIEBE GROUP
Working together in Agriculture

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

PinG Partners in Grain WA

Being a Better Boss: Industrial Relations

Legal Obligations for Farmers

WORKSHOP

Find out your legal obligations for awards, minimum rates and conditions of employment for your staff.
Don't put your business at risk - have your questions answered!

AWARDS

State vs Federal System - which award does your business fall under? Minimum conditions of employment.

LABOUR HIRE

Casual, part-time, full-time or contractor? Hiring from overseas?

FORMS & TEMPLATES

20+ electronic forms and templates to use for contracts, wages records, pay slips, termination letter, individual flexibility agreement, etc.

Tue 3 Sep **DALWALLINU** **9am to 3pm**

Dalwallinu CRC, Johnston St, Dalwallinu WA 6609
Registrations ESSENTIAL via pingwa.org.au/legal.
Cost: $325 + GST (first person from a business), $175 + GST (add. members of same business)

RURAL BANK Farmer focused. Future driven.

This workshop is made possible through the support of ProcessWorx, PinG WA's official Industrial Relations Consulting partner for 2019, and the Muresk Institute.

PARTNERING WITH MURESK INSTITUTE CULTIVATING MODERN AGRICULTURE

ProcessWorx

SUCCESSION PLANNING

Keiran Sullivan
Director
RSM

AT the mention of the words "Succession Planning", many different emotions are brought up. For some, it is often a confusing, stressful and difficult time. For others it is seen as a more enjoyable experience, an opportunity to help the next generation grow and develop. Whatever the experience may be for you, the best way to manage the process is to have a plan that can be discussed in an open and transparent way between all parties.

A good succession plan is a bit like a road map. You often have a destination that you want to reach and there can be many paths or roads that get you to that destination. Some of the roads are unsealed and bumpy and at times unusable. Others are graded, smooth or sealed and make the traveling along the journey a lot easier.

As most succession plans involve intergenerational parties, ensuring that you are all heading to the same destination is important. To help everyone stay on the same roads and heading towards the same destination communication is crucial. It needs to be open and honest to ensure that everyone's views on the journey are heard. Often communication can be one the largest barriers in the planning as different generations communicate in different ways and have different styles of communication. The use of an outside facilitator as a guide a bit like a Navman can help keep all parties communicating freely and keep the journey on the right roads.

Like a roadmap, succession plans often need updating as you travel along the journey. The road you start out on today may not end up being the best road to travel on in the future. Again like a Navman, you need to update your plans as circumstances change or roads move or be created. Keeping the succession plan as a living map or document helps all parties be fluid and move as individual circumstances or needs change.

When traveling we often plan how long it will take us to get from point A to B. A succession plan is similar, we need to plan the time it will take to travel the journey. A good succession plan shouldn't be rushed. It should consider all roads and the time it will take to travel them. Remembering that people often travel a different paces. The speed at which you travel through your succession plan may not be the same pace at which others travel. You may travel different roads and through navigate through different terrain. However slow or fast you wish to take the trip, you still need to outline a timeframe for the journey and be prepared to change your speed as circumstances change.

Just like a roadmap, we should also consider and be aware of what obstacles will be in our path or what terrain we need to navigate through. Often succession plans will interact with income tax, capital gains tax and GST legislation. It often involves navigating through legal documentation and interactions with the Duties Act 2008. To help weave through these roads, it is critical to seek advise of expert advisors. Many good plans have come undone by failure to seek advice from professional experts. As legislation changes the roads you travel down may vary to help you get to the destination. Professional advice can help you stay on the smooth sealed roads and avoid the bumps and potholes of other roads.

In the end we all want to survive the journey and ensure we all end up at the same destination. Like all good plans, communicating the plan to everyone is critical to everyone staying on the same roads. The use of experts can help navigate through the difficult terrain of legislation and tax implications. Ensuring the process is open, honest and adaptive will help keep everyone on the same road. Travel safely.

'MORE SMOKE, LESS FIRE' AHEAD FOR AUSTRALIAN AG LAND PRICES

Wes Lefroy
Agricultural Analyst
Rabobank

THE heat is set to come out of Australia's agricultural land market – with increased property availability and decreasing farm operating profits forecast to slow price growth in the coming 18 months – according to a recently-released report.

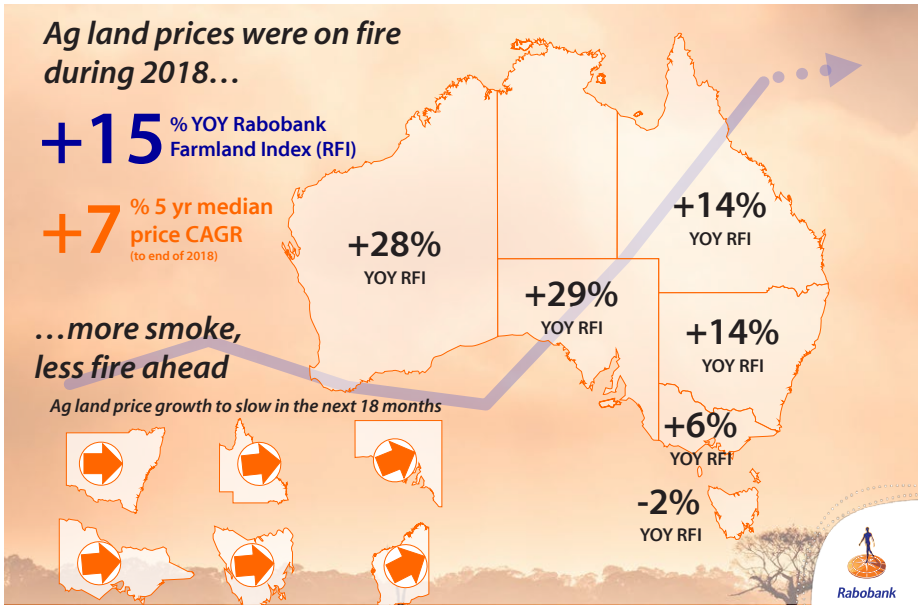
In its annual Australian Agricultural Land Price Outlook, titled More Smoke, Less Fire, Rabobank says agricultural land price growth is set to slow in the next 18 months – especially in the eastern states as the effects of drought impact the market.

Agricultural land prices have increased by a compound annual growth rate of seven per cent over the past five years, with particularly strong growth over the past two years as a string of favourable seasons have driven farm business operating profits to 20-year highs across many regions and commodities.

However, the past 12 months have seen a divergence in the primary drivers of ag land prices across the nation, according to report author, Rabobank agricultural analyst Wes Lefroy, with a distinct difference emerging between the drought-affected eastern states and the west and south of the country, which have experienced better rainfall.

"While ongoing strong demand for agricultural land has continued to accelerate price growth in Western and South Australia, in the drought-affected eastern states, a shortage of properties on the market has primarily been supporting price growth," he said. "Many would-be sellers in these areas have chosen to hold on to land until conditions improve and this has effectively created a 'liquidity squeeze' in the agricultural land market in these regions."

That said, across the country, a fall in agricultural land prices is considered unlikely, the report says, with farmers' balance sheets remaining generally strong, and with support from a number of macro-economic factors. These include a low and falling cost of funds, a weak and falling currency and a favourable price outlook for most commodities.



Strong outlook for the west

In the west of the country, Mr Lefroy says continued strong demand for rural property will maintain robust price growth, albeit on slightly softer trajectory.

During 2018 price growth of agricultural land in Western Australia was among the strongest in the country, up 28 per cent (based on the Rabobank Farmland Index**) – compared to the national average of 15 per cent.

"For WA, 2018 was the latest in a string of high-production years, which, alongside record grain prices, fueled farmer operating profits and confidence. This resulted in strong demand for agricultural land and saw a sustained increase in prices," Mr Lefroy said.

By region, price growth was particularly strong in the Central West region, he said, with the median land price (excluding improvements) tracking close to $3000/arable hectare.

"Looking ahead, land price growth is expected to show signs of slowing, albeit from record high levels," he said.

With there being little foreseen change in the number of properties hitting the market, Mr Lefroy said listings were expected to be particularly 'slim' for prime farm land.

"With sales of premium properties so rare, demand will continue to filter down to mid- and low-tier properties, as farmers continue to adjust their focus in search of the best value," he said.

"And with the market remaining so tight, we expect to see farmers looking beyond their region to achieve scale. With this trend expected to become more widespread over the next 18 months."

Ag land versus other asset classes

The report also analysed the capital appreciation of ag land compared to other asset classes, with the report finding agricultural land to have appreciated at a faster rate than most other asset classes over the past five years.

"The five-year compound annual rate of return for Australian agricultural land is ahead of most other asset classes, including residential housing prices, the S&P 500 Index and the ASX All Ordinaries," Mr Lefroy said.

And agricultural land is expected to remain attractive to investors in the medium term.

"Returns aside, investors value the fact the capital return of ag land is not volatile and is generally not correlated with a range of other investments," he said.

"Looking into the medium term, we also see a number of factors that will support the attractiveness of agricultural land for corporate investors. Larger parcel sizes, which are resulting from ongoing consolidation, will make it simpler for investors to purchase the land they need to meet investment parameters, while technological research and development will make it simpler for investors to replicate management systems across regions.

"In addition, we see the attractiveness of other asset classes to be decreasing relative to ag land, with global and local economic growth slowing and no long-term conclusion to the trade war in sight. While most notably, we don't expect ag land prices to be impacted by forces pulling local house prices lower."

**The Rabobank report tracks Australian agricultural land prices using a new method, the Rabobank Farmland Index (RFI), which provides greater accuracy than traditional measures (such as median price per hectare). The RFI weights agricultural property sales based on production value at a state and at a national level, to ensure variations in locality and production type are accounted for.

BLACKLEG IS BECOMING MORE OF AN ISSUE: HOW TO BEST MANAGE IT

Andrew Smith
Management Consultant
Farmanco

Reviewed by:
Blake O'Meagher
Management Consultant
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KEY Points:

- An integrated approach needs to be taken to manage blackleg disease in canola;
- Blackleg is becoming an increasing issue due to the breakdown of resistance genes in some common varieties;
- Later seasonal breaks increase blackleg infection risk due to the timing of spore shower release;
- BlacklegCM is a new app available to assist with disease management (Farmanco will be testing in the field as part of a 2-year GRDC funded project).

Blackleg in canola is becoming an increasing issue in recent times. Tight rotations, together with the genetic susceptibility and widespread sowing of particular varieties, are leading to an increased prevalence of the disease. Later starts to the season, like we have experienced in 2019, is also increasing the risk of blackleg. An integrated disease management approach to blackleg is critical to remain profitable in higher risk areas. A new tablet app "BlacklegCM" was released last year by DPIRD to assist in blackleg management. Farmanco is currently conducting trials in WA to put the app to the test. They have one trial in the Avon region and one trial located in the Great Southern of WA.

Blackleg Lifecycle

Blackleg is caused by the fungus Leptosphaeria maculans, which can result in an average 10-15% yield loss to canola and up to and over 50%, with incorrect management or if the variety resistance genes are overcome. It is a challenging pathogen as it is sexually reproducing, allowing it to overcome a cultivars' genetic resistance. Blackleg survives on canola stubble, producing fruiting bodies full of airborne spores. Once the fruiting bodies mature, autumn and winter rainfall trigger the release of these spores into the air. The spores will typically only travel within 500m, but winds can pick them up taking them long distances.

Based on years of epidemiology research, DPIRD provides a spore maturity forecast for Western Australia which is updated regularly prior to sowing. The sporacle forecast shows the level of risk each region has with respect to the blackleg spores and time of sowing/emergence (see Figure 1). Up to date readings can be located at the DPIRD website (https://www.agric.wa.gov.au/canola/canola-blackleg-spore-maturity-forecast-western-australia-0) or alternatively Bayer have a crop alert website based on the same modelling but presented in a different layout https://www.cropalert.com.au/RunCropAlert/).

FARMANCO

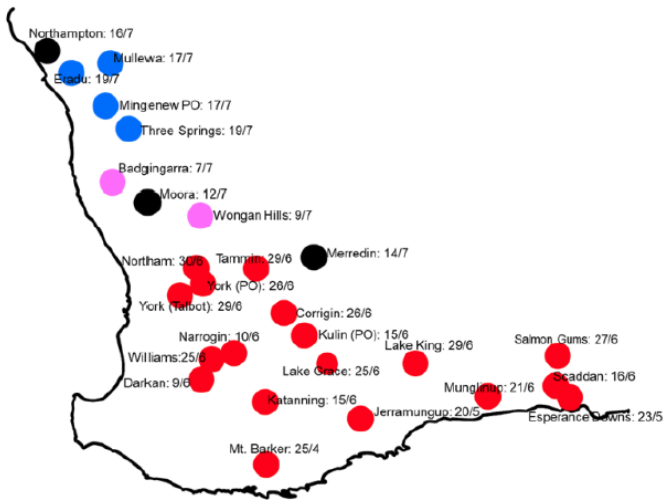

Figure 1 Map showing predicted dates of canola blackleg spore maturity (dates) and the relative current risk of spores coinciding seedling stage (red: high, pink: high-moderate, black: moderate, blue: low and green: very low) based upon Blackleg Sporacle Model outputs for various locations in Western Australia (29 May 2019). (Source: DPIRD)

Blackleg can infect the plant at any stage of development; however, early infections leading to severe stem canker are the most critical. Once the canola is past the six-leaf stage, adult plant resistance starts to kick in, if lesions are seen on plants at this stage they do not typically result in great yield loss.

While the intensity of spore release is highest in the first season of canola stubble, high amounts of spores are released in the following years until the stubble is completely broken down, typically lasting four years in WA. Dry Autumn and late break seasons (such as 2019) align spore shower release and canola germination timing, causing higher rates of infection at seedling stage. Under high disease pressure, untreated scenarios may cause seedling death. Once lesions are formed, the fungus will grow within the plants vascular system towards the crown of the plant to form a stem canker. It is at this stage of development where the disease will affect yield by restricting water and nutrient flow to maturing plants and also causing canker lodging.

Figure 2: Blackleg leaf lesions with black fruiting bodies within. (Source: DPIRD).

If the season permits, which it has done in the previous few years in WA, wet spring conditions can be conducive to aerial blackleg infection. Upper Canopy Infection (UCI) can cause yield loss through abortions of flowers, heads or restricting nutrient flow to filling pods. At high pressures premature ripening, pod shatter or seed abortion within pods may occur. UCI is predominately controlled by effective major gene resistance and has become increasingly more common due to continual use of the same cultivar, causing a breakdown in the blackleg resistance genes. More research is being conducted in this area looking at the yield loss from this type of infection and potential control options.

Blackleg Disease Ratings

Cultivar blackleg ratings can change from year to year as the fungus sexually reproduces to overcome the cultivars' resistance. It is because of this that blackleg ratings are assessed each year and it is critical to rotate cultivars with a different group of resistance genes if in high risk areas. An updated list of the current blackleg ratings and resistant groups as of Autumn 2019 can be found in the latest blackleg management guide produced by the GRDC or within the BlacklegCM app (https://grdc.com.au/resources-and-publications/all-publications/publications/2019/blackleg-management-guide). With increased and widespread plantings of varieties such as ATR-Bonito, the disease has overcome the major resistance genes, because of this, other management options need to be used such as changing to more resistant varieties or using fungicides.

PARTNER UPDATES

Integrated Management

There are a range of management options that should be considered, depending on your blackleg risk. Paddock selection (how tight is the rotation), distance to last year's canola stubble, variety, in-furrow seed/fertiliser treatment and/or foliar fungicide treatments can all be implemented to minimise infection risk and reduce your yield loss. Current management options are:

- Do not to sow into canola stubble - its best to stay at least 500m away from last year's stubble;
- Choose a resistant variety specific to your region;
- Fungicide seed treatment (fluquinconazole);
- Banded fungicide or coated on fertiliser (flutriafol), and/or
- Foliar fungicide treatment (various products).

The blackleg management guide produced by DPIRD and GRDC contains information which considers all these management options, providing a risk factor for potential disease infection. Although this paper-form management guide has useful information, it is relatively limited with respect to comparing complex interactions and various management scenarios that may be used. Updated only twice yearly there has been a need to develop a management tool that can provide disease forecasting based on the management principles proposed by the grower. Hence BlacklegCM was created by DPIRD with support from GRDC, with the ability to model interactions and scenarios whilst finding an economic response for the comparisons.

Blackleg CM

Available for both Apple and Android tablet devices, BlacklegCM is a decision management tool released last year to assist canola growers to manage blackleg. The app is the result of 30 years of blackleg research built into a decision support tool to analyse the interactions between management options, costs involved, yield benefits and grain price, which then returns an economic response. The user has the option to change the parameters and tailor the scenario to a paddock by paddock level, with the idea to play and adjust these options to find the best fit for individual paddocks. It is best used at the start of the season to plan your blackleg risk mitigation strategies. However, if yield potential drops as it has this year due to the late break and blackleg risk increases, the parameters can be adjusted to find whether or not it would be economical to use a foliar fungicide treatment.

How to use the app:

1. First you need to set the parameters in scenario A.
2. Starting with the crop circumstances setting yield potential, budget grain price, production cost, estimate (%) of canola in district and the spore maturity risk factor (DPIRD).
3. Next is the paddock set up. What is the distance to the 1-year-old stubble and is it sown in a 2-year-old stubble, if so is that stubble standing?
4. Then the variety options need to be entered. Select the relevant variety to be sown, the seeding rate and whether or not the resistance status of that variety has been reduced?
5. Lastly, the fungicide options need to be entered; whether or not you are using a seed dressing, fungicide with fertiliser or using a foliar spray?

Worked Example

The following page shows parameters that were put into the BlacklegCM app to show what it can do. While it is unrealistic, Figure 3 shows that a susceptible variety such as Bonito will suffer sever yield loss in a high-risk area without fungicide treatments.

Farmanco Project

Over the next couple of years Farmanco, with the support of GRDC, will be conducting trials in canola growing regions of WA with a variety of treatments and different management options. The aim of this is to validate the use of the BlacklegCM tablet app and assist growers in how to use it effectively, whilst also gathering data to assist the app in future analyses.

Table 1: An example of parameters put into the Blackleg app to show what it can produce.

Crop Circumstances	Scenario A	Scenario B
Target yield	1.8	1.8y
Grain Price	$500/t	$500/t
Production Cost	$400/ha	$400/ha
Canola in district	25%	25%
Spore maturity risk	H	H
Paddock Set Up		
Distance to 1 yr stubble	500m	500m
Distance to 2 yr stubble	Sown in	Sown in
2 yr stubble standing	Y	Y
Variety Options		
Variety	Bonito	Stingray
Seed Rate	3 kg/ha	3 kg/ha
Resistance status	-	-
Fungicide Options		
Seed dressing	N	Y
Fungicide with fertiliser	Y	Y
Foliar fungicide	N	Y

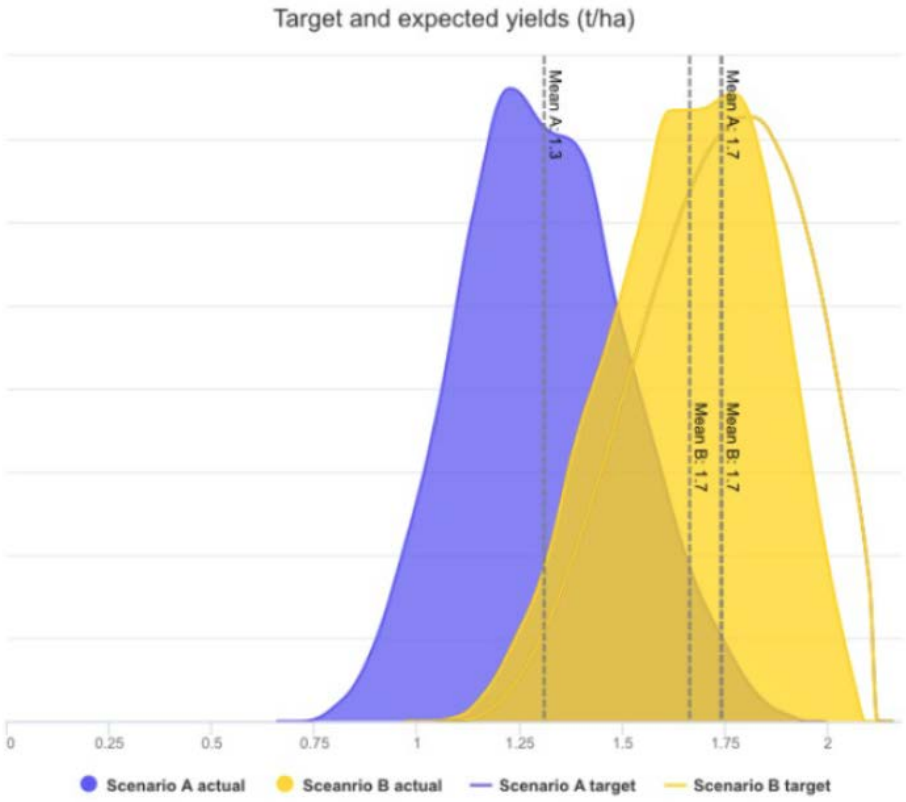

Figure 3: An example output of what the BlacklegCM app produces. The yellow graph being the result of scenario B showing the increase in yield vs the poor management in Scenario A.

OPTIMISING CHEMICAL COVERAGE AND REDUCING DRIFT

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Agronomist
Elders Scholz Rural

IT is in everyone's best interests to ensure all chemicals are hitting their target effectively. This is even more important following the introduction of stricter 2,4-D Ester regulations to raise minimum spray droplet from coarse to extremely coarse or ultra coarse.

This is particularly relevant when spraying Ester 680 with Velocity which has a label requirement for a medium spray nozzle. Coverage is key for Velocity so to increase coverage, we need to ensure water rate is as high as possible. Water is the cheapest way to improve results.

Another option is Interlock, a new deposition and drift agent for use in broadacre and aerial spraying. It works by modifying the droplet deposition, reducing spray particle variation - fines (drift) and large particles (less coverage), helping to increase coverage with greater canopy penetration.

Spotted! Budworm Moths

In collaboration with DPIRD we are monitoring a budworm trap in the region. This week we caught 94 budworm moths. This follows on from DPIRD's Pest Fax report last week which found 441 moths in Binnu and 11 grubs in a lupin crop in the area.

What does this mean?

Increased populations mean we need to continue to monitor crops throughout the rest of the season to monitor thresholds. There are several generations per season but the first spring generation is the most damaging to maturing winter crops. Small white eggs are laid on young shoots or fruiting parts of plants. Larvae emerge about a week later and feed for about three weeks before pupating in the soil. Budworm pupates for a few days to several months, depending on the time of the year and seasonal conditions.

Control - Spray thresholds depend on the susceptibility to damage and the value of the crop. Control budworm in canola when there are 4 large grubs per 10 sweeps. Spray lupins when 5- 6 large grubs (>12 mm) per 10 sweeps are found. The threshold for chickpeas, field peas and faba beans is 2 grubs per 10 sweeps (of any size).

Elders SCHOLZ RURAL

GLYPHOSATE'S IMPACT ON HUMAN HEALTH AND SAFETY

Bayer Crop Science

GLYPHOSATE-BASED herbicides are among the most widely-used crop protection products in modern agriculture, so it's understandable that people have questions about their safety, and the impact they have on our food supply and our health.

All crop protection products, including glyphosate, are subject to rigorous testing and oversight by regulatory agencies. Glyphosate, given its effectiveness and wide adaptation, is one of the most studied herbicides in the world.

Human Health Research

There is an extensive body of research on glyphosate and Bayer's glyphosate-based herbicides, including more than 800 rigorous studies submitted to the EPA, and European and other worldwide regulators in connection with the registration process, that confirms that glyphosate-based herbicides can be used safely and that glyphosate is not carcinogenic. Over 160 countries approve the use of glyphosate-based products.

What the Experts Say

"The draft human health risk assessment concludes that glyphosate is not likely to be carcinogenic to humans. The Agency's assessment found no other meaningful risks to human health when the product is used according to the pesticide label. The Agency's scientific findings are consistent with the conclusions of science reviews by a number of other countries as well as the 2017 National Institutes of Health Agricultural Health Study." — U.S. EPA, Draft Risk Assessment for Glyphosate[1]

"Glyphosate use was not associated with overall cancer risk." — National Institute of Health, 2018 Agricultural Health Study[2]

"EFSA — in line with the scientific opinion of 27 out of 28 Member State experts — concluded that glyphosate is unlikely to be carcinogenic to humans." — European Food Safety Authority, Statement on Glyphosate[3]

"EPA continues to find that there are no risks to public health when glyphosate is used in accordance with its current label and that glyphosate is not a carcinogen. The agency's scientific findings on human health risk are consistent with the conclusions of science reviews by many other countries and federal agencies." — U.S. Environmental Protection Agency News Release, April 30, 2019.

"Glyphosate is unlikely to pose a carcinogenic risk to humans from exposure through the diet." — Joint FAO/WHO Meeting on Pesticide Residues (JMPR)[5].

Data also indicates that glyphosate does not put people at risk of cancer via food. In May 2016, the Joint FAO/WHO Meeting on Pesticide Residues (JMPR)[5] concluded that "glyphosate is unlikely to pose a carcinogenic risk to humans from exposure through the diet."

The largest and most recent epidemiologic study — the independent 2018 National Cancer Institute-supported Agricultural Health Study that followed over 50,000 licensed pesticide applicators for more than 20 years and was published after the IARC monograph — found no association between glyphosate-based herbicides and cancer[6].

Glyphosate's Classification by IARC

One non-regulatory organization presented a classification of glyphosate that was inconsistent with experts and regulatory authorities around the world – this organization was the International Agency for Research on Cancer (IARC), a sub-agency of the World Health Organization (WHO). In March 2015, IARC gave glyphosate a classification of "Category 2A: probably carcinogenic" despite evidence to the contrary. IARC is one of four programs within the WHO that has reviewed glyphosate, and the only one to have made such a finding.

IARC is not a regulatory authority and conducted no independent studies. IARC is the same organization that determined beer, meat, cell phones and hot beverages cause cancer or are likely to cause cancer.

IARC's opinion is inconsistent with the overwhelming consensus of regulatory authorities and other experts around the world, who have assessed all the studies examined by IARC — and many more — and found that glyphosate presents no carcinogenic risk. Since IARC classified glyphosate in March 2015, regulatory authorities in the United States, Europe, Canada, Korea, Japan, New Zealand and Australia have publicly reaffirmed that glyphosate-based herbicides can be used safely and that glyphosate does not pose a carcinogenic risk.

Safety Research on Herbicide Residues

Before crop protection products like glyphosate can be approved for use, scientific evaluations are conducted to determine potential risk of residues. If the risk is too high, the product never makes it to market. For products that pass scientific evaluation, the next step is to submit the studies to government regulators who review them and establish their own safe levels of residues, and then constantly monitor harvests to ensure those levels are not exceeded.

Understanding Residues

All crops will contain trace amounts of elements that are used or present in the environment in which they are grown. Thanks to incredible advances in technology, experts are now able to detect certain substances in units as small as one billionth of a gram. For context, one billionth of a gram would be the equivalent of one drop of water in an Olympic-size swimming pool. These advances give scientists great confidence in their ability to ensure that food is safe.

When it comes to pesticide residues, regulatory authorities have strict rules. In fact, the EPA and the EFSA set daily exposure limits at least 100 times below levels shown to have no negative effect in safety studies [7,8].

The levels sometimes found in food are incredibly small and nowhere near any level of concern. Furthermore, on Oct. 2, 2018, the Food and Drug Administration (FDA) published results of its annual residue testing program and concluded that the "levels of pesticide residues in the U.S. food supply are well below established safety standards." The FDA was clear that the glyphosate levels "were below the tolerance levels set by the U.S. Environmental Protection Agency (EPA)."

The Basics

Acceptable Daily Intake (ADI) and Maximum Residue Limit (MRL) are established thresholds to help assess any potential risks that could arise from consuming food with residues from certain substances.

- The Acceptable Daily Intake (ADI) value represents the amount of residue that, if ingested daily over a person's lifetime, is considered to be without significant health risk.
- The Maximum Residue Limit (MRL) value reflects the enforceable maximum level of pesticide residues that are permitted in food or feed based on recommended use.

Safety Research on Toxicity

Any real danger from a potentially toxic substance depends on the dose or the levels at which the substance is present in our environment. While some chemicals, like botulin, are poisonous in small doses; others, like caffeine, are only dangerous at higher doses. Just because a chemical is present does not mean that it is harmful. For example, apple seeds, pears, potatoes and courgettes/ zucchini all contain natural chemicals that are potentially toxic to humans. In each of these cases, however, they are usually present in amounts that are far below harmful toxicity levels.

Given the sophisticated technology available, glyphosate has been detected in incredibly small amounts in some foods — at levels approximately 100 times below the safety thresholds set by the U.S. EPA and EFSA. Based on the miniscule amounts in which glyphosate is sometimes found in food, a person would have to consume an incredible amount to get anywhere close to a potentially hazardous level.

Impact on Farmer Health

For farmers working regularly with glyphosate in the field, it's important to know exactly what impact — if any — this will have on their health.

25-Year Study Follows 50,000 Pesticide Applicators
For more than 20 years, the Agricultural Health Study (AHS)9 has continuously monitored over 50,000 pesticide applicators. The study on glyphosate was conducted by independent researchers in academia and/ or the U.S. government, and was publicly funded by the National Cancer Institute, the National Institute of Environmental Health Sciences and the National Institute for Occupational Safety and Health, among others — all governmental bodies in the U.S.

This particular study was commissioned by the U.S. government in order to determine the impact of agricultural practices, lifestyle and genetic factors on the health of farmers and their families. In the long-term study, researchers found no association between glyphosate use and cancer [2].

Some Additional Facts about Glyphosate Safety Testing

- Glyphosate and glyphosate-based herbicides, which have been on the market around the world for more than 40 years, are among the most rigorously studied products of their kind.
- In addition to the rigorous registration that it has gone through in the U.S. and the EU, glyphosate is approved for use in more than 160 countries.

"We want to explain the benefits that science and innovation can deliver in agriculture while championing what's important to people: safe, healthy and affordable food that is produced in an environmentally sustainable manner. Improving access to the science behind our products is a key part of our Transparency Initiative."
– Liam Condon, President of the Bayer Crop Science Division

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iLIME: EVALUATE LIMING STRATEGIES SPECIFIC TO YOUR FARM

James Fisher
Desiree Futures

Jenni Clausen
DPIRD

iLime is an easy-to-use app that allows you to estimate the impact of applications of lime on soil pH, yield and profitability of a paddock or area of soil over twenty years.

Feedback from farmers and consultants pointed to the need for a mobile app to aid planning of lime application. Such an app needed to estimate responses to managing soil acidity with lime, in an easy-to-use interface. The iLime app was developed over three drafts, with feedback to ensure that what has been produced will be of use and valued by the target audience of farmers and consultants (as well as researchers and students).

The app may be used to compare lime sources & rates, evaluate economics of liming, prioritise paddocks for lime, investigate deeper liming, determine when to re-lime and assess rotational options. Outputs include yield response, pH change in the top 30 cm and cumulative cashflow comparing liming strategies over 20 years.

Using inputs selected by the user, the app determines the change in pH and toxic aluminium in each of three soil layers and hence the impact on yield of crops and pastures. This directly leads to the economic response to the liming scenarios. Soil type, soil pH, lime quality, lime cost, crop type, crop price, fertiliser inputs and crop rotations can all be modified to create lime scenarios relevant to you. Two liming scenarios may be evaluated and compared with an unlimed scenario at any one time.

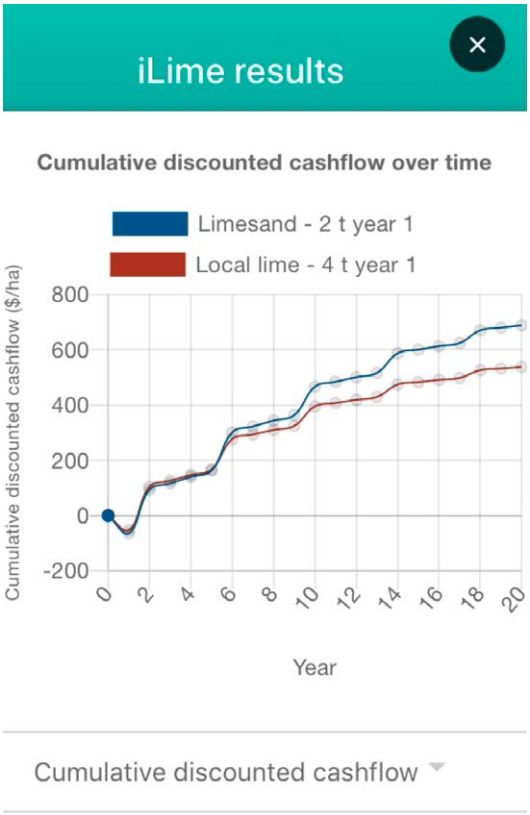

Figure 1. Sample of iLime output. This shows cumulative cashflow for a wheat-canola-wheat-wheat rotation for scenarios of a limesand ($47/ha on farm) compared with a reasonable quality local lime ($11/ha on farm). Note: these are sample results only, but selections can easily be tailored for your situation.

Department of Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA

iLime implements the Optlime spreadsheet model that was developed as part of the 'Time to Lime' research programme, 1996—2001, using established principles of soil acidity and results from field and laboratory experiments carried out in WA. It has been tested against subsequent research data and was thoroughly reviewed in 2008. iLime has also been tested using data collected over the past 10 years.

iLime was developed under GRDC and DPIRD project DAW00236. Is it available to download in the iTunes and Play stores on both phone and tablet by searching iLime. The app will be demonstrated at the Spring Field Day on 12th September.

Useful links & more information

iTunes
Play Store
iLime - DPIRD

For more information, please contact James Fisher, Desiree Futures james@desireefutures.net.au

FILLING THE FARM LABOUR GAP

All content has been republished from the GRDC Factsheet January 2013.

ACQUIRING and maintaining quality, skilled farm labour is an increasing challenge. Understanding your specific labour needs forms the basis of a plan to source labour resources best suited to your business.

Key Points

- Plan ahead.
- Identify your labour requirements for the full year.
- Determine the most suitable way to fill your labour gap.
- Consider the different ways to source appropriate labour.

The workload on a farm has peaks and troughs throughout the year. Peak periods, such as harvesting, often require additional labour. This fluctuating demand can make it difficult to source and secure labour when required or to find enough work for full-time staff throughout the year.

Have a think about your situation and consider your responses to the questions in the labour health check below.

Labour health check

- Is there enough labour (family or external) on the farm to achieve the desired outcomes?
- Given the labour resources available, are the expectations of what can be achieved realistic?
- Are the hours worked by all the people on the farm consistent with their expectations?
- Do you find the right people to work on your farm easily?
- Are you chasing labour at the last minute to get important jobs done?

Where to begin

Planning ahead will allow time to determine the farm's requirements for additional labour. Consider why there is a gap in labour resources. Perhaps it is because the farm has expanded and therefore requires additional staff. It could be that production has increased, the enterprise mix has changed, or there may have been a change in the existing family or staffing arrangements:

- Identify your requirements before taking on new staff:
- time;
- personality and attitude;
- task to be undertaken; and
- competency and skills.

Time

It is important to consider the timeframe in which the work needs to be done and whether or not the work will be ongoing. See the box overpage, 'defining the labour gap', which shows how one farm maps out the hours of work for the various tasks across the year. This technique can be used to analyse different options for filling labour gaps and identifying appropriate time for leave.

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

Many farmers naturally work from sunrise to sunset, or until the job is done. While an employee certainly needs a good work ethic, there are legal guidelines around employee work hours and it is important to make sure all parties involved have a clear understanding of the expectations.

Personality and attitude
The personality and attitude of both the employer and employee is important when bringing new people into a farm business. Whether or not you enjoy managing staff on a daily basis may help determine the type of employment option used. For example, hiring contractors to complete certain tasks throughout the year might be an option if you find it difficult or daunting to provide instruction, communicate or work closely with other staff.

Consider your own personality style, how it may impact on the way you make decisions, and the level of staff management you are comfortable undertaking.

- Are you organised?
- Do you plan ahead and identify tasks?
- Do you prepare work lists and are you prepared to delegate?

Reflecting on these questions may help you make a decision about the most appropriate labour to complete the required tasks and also fit in with your personality style.

Some personalities are more extroverted and people-orientated and find relating and interacting with others easier than introverted personality types. As long as you are aware of how you behave and react in different situations, you may be able to adapt your natural tendencies to achieve a better outcome. You can also inform potential employees of your personality style during an interview to ensure they are comfortable working within that environment.

Tasks
Identifying tasks that need to be completed throughout the year is important when planning ahead. There are key tasks during peak work periods, such as harvest and seeding, as well as maintenance and monitoring throughout the year.

Making decisions about filling the labour gap during peak demand alone may not allow all factors to be considered. Filling a labour gap with a full-time employee might seem beneficial during sowing or harvest, however depending on the scenario there may not be enough work through winter or spring to keep that person gainfully employed.

Competency and skills
The level of competency and skills required to complete the tasks also needs to be considered. In some cases a potential employee might have the desired skill set but need some more time on-the-job to develop the level of competence required. Identify which tasks you expect to be completed without guidance or supervision and therefore what the specific skill set or competency level of the desired employee should be.

Employers should be aware that there is an expectation to provide employees with opportunities for training and personal development. This can be on-the-job training or allocating time and/or money for employees to attend relevant training courses, workshops or other industry events. You should consider what you can offer a potential employee and have a discussion with them about their needs and aspirations and how you can work together to meet them.

DEFINING THE LABOUR GAP

Knowing when and where the gaps in labour occur on your farm is an important step in the process of filling the labour gap. Once you have established the peaks and troughs you will be in a better position to determine the best option for filling the labour gaps. These options might involve:

- *Employing full-time, part-time or casual staff;*
- *Engaging contractors;*
- *Re-allocating existing staff resources; or*
- *Identifying periods where holidays can be taken with minimal impact on the farming operation.*

The calendar in Figure 1 provides an example of the peaks and troughs in labour demand for a 2000 hectare cropping farm. The tasks undertaken by staff throughout the year are listed down the rows, with the hours taken to complete the tasks allocated across the months when they occur. The total hours of work per month are assessed against the hours of a full-time equivalent (FTE) labour unit.

An FTE is a unit that allows the workload of employees to be compared, for example an FTE of 1.0 is equivalent to a full-time staff member, where an FTE of 0.5 refers to a worker who is half-time.

The Fair Work Act and modern Pastoral Award define a full-time employee as working an average of 38 hours per week or 152 hours over a four-week period.

The example in Figure 1 shows two peak workload periods (April/May and November/December) where the actual hours of work are significantly greater than one FTE. In addition, there are times during the year when the workload is less than one FTE such as January/February. This helps highlight periods when staff can be encouraged to take leave and maintain a healthy work-life balance without impacting on the farming operation.

Identifying these gaps allows the owner or manager to decide how to best use the existing resources on the farm (both labour and machinery), plan ahead and lock-in additional staff or resource when required.

Figure 1: An example calendar outlining the allocated labour hours for each task, summarised by the number of full-time equivalent (FTE) staff required each month for a 2000 hectar cropping farm.

Job/Task	Hours per month											
	J	F	M	A	M	J	J	A	S	O	N	D
Management and planning	20	20	20	20	20	20	20	20	20	20	20	20
Spraying	70	-	70	50	50	35	35	35	35	-	-	-
Cultivation	-	-	-	30	-	-	-	-	-	-	-	-
Sowing/seeding	-	-	-	50	120	30	-	-	-	-	-	-
Crop inspections	5	5	5	5	5	10	10	10	10	10	10	5
Spreading/top dressing	-	-	-	-	-	-	60	60	-	-	-	-
Windrowing	-	-	-	-	-	-	-	-	-	50	-	-
Harvesting	-	-	-	-	-	-	-	-	-	-	100	150
Grain cartage, storage and handling	-	-	10	10	10	-	-	-	-	-	100	150
Machinery maintenance	10	10	20	20	20	10	10	10	20	20	20	10
General farm maintenance	10	10	10	10	10	10	10	10	10	10	10	10
Purchasing supplies	10	10	10	10	10	10	10	10	10	10	10	10
Total hour per month	125	55	145	205	245	125	155	155	105	120	270	355
Number of FTE per month	0.8	0.3	0.9	1.2	1.5	0.8	0.9	0.9	0.6	0.7	1..6	2.2
Difference in FTE per month	-0.2	-0.7	-0.1	0.2	0.5	-0.2	-0.1	-0.1	-0.4	-0.3	0.6	1.2

Key: red indicates there are more hours of work than one FTE; yellow indicates there are less hours of work than one FTE; and green indicates a similar amount of work to one FTE.

What are the different options for filling the labour gap?

There are four main types of labour that can be employed to meet your requirements. Some benefits and potential disadvantages for the different options are outlined below.

FULL-TIME EMPLOYEE

A full-time employee is often engaged when a farming enterprise expands to a scale where additional labour improves operational efficiencies for most of the year. Tasks, wages, working times and conditions should be agreed with the employee before commencement of hiring and should be recorded in a formal manner.

An employer has certain obligations to fulltime employees.

- An employer must ensure maximum weekly hours of an average of 38 hours per week or 152 hours over a four week period. Overtime or time in lieu is accumulated for additional hours. (There is some flexibility to set a higher number of work hours as long as the employee is deemed to be financially better off compared with the award. For example, if the hours are set at 45 per week the rate of pay needs to be calculated at or
- above the award rate, that is: 38 hours at base rate plus seven hours at the overtime rate of time and a half.)
- An employer must pay superannuation contributions as per the superannuation guarantee legislation.
- An employer must provide leave entitlements including: parental leave and related entitlements; annual leave; public holidays; personal, carer's and compassionate leave; and long service leave.
- An employer must ensure a safe and healthy workplace in accordance with relevant state legislation.

The benefits of employing full-time labour include:

- Regularity and consistency in having the same staff member all-year-round;
- On-going knowledge build-up of your preferred farm practices;
- Training or skills developed are applied on-farm continually, throughout the year;
- Training in advance and when workload
- Permits; and
- Development of a good working relationship in which both parties gain a better understanding of working together as a team.

Potential disadvantages:

- There may not be enough work for a FTE throughout the year, which can potentially lead to boredom, underutilisation or the resource leaving the business.

PART-TIME EMPLOYEE

A part-time employee is defined as an employee who is engaged to perform less than the full-time work hours of 38 per week and has reasonably predictable hours of work. Part-time employees receive equivalent pay and conditions on a pro-rata basis to full-time employees who do the same kind of work.

Part-time employment can provide flexibility for both employers and employees. There are many different arrangements that can be worked out between you and a potential employee. Examples include employees that need to drop-off and pick-up school-aged children and so work between school hours or someone that is looking to work off their own farm for a couple of days each week.

The benefits of employing part-time labour include:
number of work hours and times that suit both parties;
regularity and consistency in having the same staff member all year round;
training or skills developed are applied continually throughout the year; and
development of a good working relationship, in which both parties gain a better understanding of working together.

Potential disadvantages:

- Work output can sometimes be disjointed; and
- Difficulty managing tasks that require sustained input over consecutive days.

CASUAL EMPLOYEE

A casual employee is an employee engaged as such and paid by the hour. Casual loading is paid instead of annual leave, personal or carer's leave, notice of termination, redundancy benefits and other attributes of full-time or part-time employment.

On each occasion a casual employee is required to attend work, they are entitled to a minimum payment of three hours work at the appropriate rate.

The benefits of employing casual labour include:

- Help completing specific jobs that require additional resources or a different skill set;
- Having appropriate labour available at the required time;
- Potential to fill a labour gap at short notice;
- Help to ease the workload during peak periods; and
- Increased efficiency during peak times.

Potential disadvantages:

- Time and benefit spent training casual labour is lost once they leave;
- Reliability can be an issue with some casual labour; and
- If employing seasonal or casual labour from overseas, employers need to be aware of working visa requirements, sourcing and sponsorship of employees, and tax and superannuation issues.

Potential sources of casual labour:

- Semi-retired farmers, shearers and other members of the community that may only want to work for certain periods of time through the year;
- International backpackers: a popular source of short term casual labour;
- Farm labour exchange between farms from different districts;
- Students who have block periods of holidays though the year; and
- Off-farm family members or relatives.

INDEPENDENT CONTRACTORS

The law distinguishes between those who offer their services for hire – a contractor – and those who are in service - an employee. A contractor controls the work to be done and how it is to be performed. They can employ their own staff and can sub-contract or delegate. A contractor generally supplies their own equipment, and must provide WorkCover for their employees.

Contract labour can play an important role in managing peak labour periods such as during sowing or harvest, spraying, topdressing or fodder conservation.

The benefits of employing contractors include:

- Provision of their own labour and equipment or machinery; and
- Completing specific jobs that require additional resources or a different skill set.

Potential disadvantages:

- Ensuring the contractor and equipment is going to be available when you need it; and
- Quality of work may be of a different standard to your own.

Where do you source appropriate labour?

The decision on where and how to advertise for labour will depend primarily on what the position is, the number of people you want to reach and how much you want to spend. There are a number of different methods used to source farm labour. Word-of-mouth is a favoured approach, followed by utilising rural employment agencies and newspaper advertising.

Different ways to source labour include:

- Word-of-mouth;
- Local newspapers or statewide rural newspapers;
- Community newsletters;
- Internet, for example, Gumtree and other 'backpacker' or recruitment websites;
- Recruitment agencies and agricultural consultants;
- Local agricultural colleges or training institutes;
- International exchange students, tourists and backpackers;
- International agricultural exchange programs;
- Local farming systems groups or sporting clubs; and
- Farms in different districts that may have a different peak labour period, that is, a labour swap.

Indicator	Employee	Independent contractor
Degree of control over how work is performed	Performs work, under the direction and control of their employers, on an ongoing basis	Has a high level of control in how the work is done
Hours of work	Generally works standard or set hours (note: a casual employee's hours may vary from week to week)	Under agreement, decides what hours to work to complete the specific task
Expectation of work	Usually has an ongoing expectation of work	Usually engaged for a specific task
Risk	Bears no financial risk (this is the responsibility of their employer)	Bears the risk for making a profit or loss on each task. Usually bears responsibility and liability for poor work or injury sustained while performing tasks. As such, contractors generally have their own insurance policy
Superannuation	Entitled to have superannuation contributions paid into a nominated superannuation fund by their employer	Pays their own superannuation
Tools and equipment	Tools and equipment are generally provided by the employer, or a tool allowance is provided	Uses their own tools and equipment (note: alternative arrangements may be made within a contract for services)
Tax	Has income tax deducted by their employer	Pays their own tax and GST to the Australian Taxation Office
Method of payment	Paid regularly (for example, weekly/fortnightly/monthly)	Has obtained an ABN and submits an invoice for work completed or is paid at the end of the contract or project
Leave	Entitled to receive paid leave (for example, annual leave, personal/carers leave, long service leave) or receive a loading in lieu of leave entitlements in the case of casual employees	Does not receive paid leave

Useful resources

- Rural Skills Australia
- National Farmers Federation
- Fair Work Ombudsman
- Fair Work Australia
- Victorian Farmers Federation
- South Australian Farmers Federation
- NSW Farmers
- Tasmanian Farmers and Graziers Association
- Dairy Australia, The People in Dairy
- Work Cover

PODCASTS

GRDC

Spot Form Net Blotch on Barley

A GRDC/RCSN 'local project' investment into tactical fungicide use is addressing the issue of managing spot form of net blotch (SFNB) in barley crops.

This disease is a R&D priority for the Regional Cropping Solutions Network Kwinana West (RCSN) group and for the GRDC Western Regional Panel. This podcast highlights how local research results are providing solutions for this disease, especially the economics of fungicide use.

Listen to it now - https://grdc.com.au/news-and-media/audio/podcast/spot-form-net-blotch-on-barley

The Crop Disease Rundown with CCDM

Constantly battling disease outbreaks on your paddock? Sprayed a fungicide lately that just didn't seem to work? Or perhaps suffering information overload and have discovered podcasts as a way to catch up on agronomy while on the move? Welcome.

Along with a guest co-host, join Megan Jones from the Centre for Crop and Disease Management (CCDM) as she interviews researchers, growers and agronomists on all things crop disease from across the Australian grain growing region.

The CCDM is a national research centre co-supported by Curtin University and the Grains Research and Development Corporation.

Listen to four episodes today - https://podcasts.apple.com/us/podcast/crop-disease-podcast/id1460217270

AgTech So What

Stories of innovators working at the intersection of agriculture and technology.

Investment in agriculture technology and momentum for agtech entrepreneurship is taking off. But this is not new: farmers have been adopting technologies that add value for decades. So is it just hype? What does all the momentum for agtech- from accelerators to venture capital funds to sexy technologies like drones and robots- actually mean for farmers and the agriculture industry?

In each podcost, leading innovators working at the intersection of agriculture and technology are interviewed. Go beyond the jargon and dig into teh key questions that not enough people are asking about AgTech: So What?

https://www.agtechsowhat.com/

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CALENDAR OF EVENTS

Event	Date	Location
AgChats: Tackling net blotch: identification and management strategies	Friday 23rd August	Liebe Group office
Crop Sequencing Workshop	Monday 26th August	Beacon Country Club
Harvester Set-Up Workshop	Friday 6th September	Wimmera Farm Dalwallinu
Spring Field Day	Thursday 12th September	Main Trial Site, Watheroo
AgChats: Pulses in farming systems	Thursday 3rd October	TBC
Bitesize Learning: Firefighting Safety	Friday 11th October	Liebe Group office
Liebe Group Annual Dinner	Friday 18th October	Liebe Group office