

LIEBE GROUP NEWS

June 2021

Volume 24

Issue 4

What's Inside



23rd Women's Field Day an Inspiration



Hands on Precision Ag Training Workshop



2021/22 Federal Budget Recap



Managing Breaks



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

Aerial photo of the 2021 Main Trial Site at Dalwallinu.

Photo: Tristan Clarke, Elders Scholz Rural.

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Rabobank



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FROM THE EXECUTIVE OFFICER

KATRINA VENTICINQUE

WELCOME to the June Newsletter! With seeding finally drawing to a close in the region, the Liebe team continues to steam ahead with several exciting events and projects in the works. All members are encouraged to join in on the Canola Management AgChats on 22nd June, Hands-On Precision Ag Training on 29th June and Myers Briggs Workshop on 1st July.

The upcoming Post Seeding Field Walk (21st July) is also being organised with trial partners to showcase the locally-relevant research work being done, so keep the date free! More information will be extended out in the coming weeks.

The Liebe Group Main Trial Site is showing great promise for the season ahead thanks to over 250mm of rain it has received since January. Hop onto the Liebe Group website to view details of the finalised trials and demonstrations.

I would also like to express thanks to the Women's Committee for the successful Women's Field Day that was held on Tuesday last week. 130 regional women came together in Dalwallinu to upskill their knowledge, gain inspiration from their peers and build their networks within the agricultural industry. Check out the full debrief on page 4.

In the project space, I have been working alongside the team to scope up several opportunities that have been identified by our members including a Women's Networking & Diversification Tour, a comprehensive succession planning program as well as an innovative data-utilisation project building upon our Soil Probe and Weather Station Network.

With the promising season ahead, we look forward to seeing all of our members out and about. Liebe's doors are always open for a chat and a cuppa!



GOLD PARTNERS



SILVER PARTNERS

Syngenta	Pacer Legal	Adama Australia	GrainGrowers
Nutrien Ag Solutions	Refuel Australia	Nufarm	Intergrain
Carbon Ag	Australian Grain Technologies	Boekemans Machinery Dalwallinu	McIntosh & Son
FMC			

23RD WOMEN'S FIELD DAY AN INSPIRATION

ON Tuesday 15th June, the Liebe Group hosted over 130 people for the 23rd annual Women's Field Day. The event is aimed at increasing the management capacity of women to build a sustainable future for their families, farm businesses and the agricultural industry.

The agenda was filled with a variety of speakers who covered a range of topics from business diversification, mental and physical health, farm safety and HR, autonomy in farming, insurance, and business management.

The day began with Joanne Harris, owner manager of Jorobi Natural Fertiliser, sharing her story detailing the shift from traditional broadacre farmer to compost producer. Joanne originally began producing compost for personal use on their property, looking to move away from their reliance on imported nitrogen fertilisers. Over the years this grew, and became a commercial enterprise in its own right with the world renowned process of Controlled Microbial Compost. Compost has many benefits in farming and is growing in use in the wheatbelt. Compost is known to improve soil fertility and structure, reduce soil compaction, inhibit erosion and suppress soil borne diseases and pests.



Joanne Harris, owner manager of Jorobi Natural Fertilisers starting the day.

The second session of the day was another country entrepreneur, Rhianne Elliott, Physiotherapist and owner manager of Rhiform Physio & Pilates. Rhianne talked through some of the health benefits of a good diet, and how a mother's diet shapes her families health as well as her own. She then talked through some interesting ways to achieve exercise goals in the Wheatbelt, one of which is Pilates!

Judy Snell, Executive Director at RSM then turned the morning towards several business management focused topics with her presentation on machinery purchase options. Judy enthusiastically explained the benefits and drawbacks of several purchase options and how they may work into a farm budget. This was then followed by a run through of recent tax changes have been affecting machinery purchases, and will continue to influence purchases over the following years.



Over 130 regional women hearing from RSM Executive Director Judy Snell.

The business management topic was then continued by Kate Keamy, Watheroo grower, who gave the audience an overview of business structures and how they can influence risk. The focus of her talk was how business structures can be used to "quarantine risk", and the topic will be explored in more detail on Thursday 29th of July at Liebe's Bitesize Learning workshop.

Danielle McNamee, founder of ProcessWorx, a human resource and work health and safety business specialising in the Agriculture sector discussed the very hot topic of farm safety, and how safety protocols will need to change on farm to meet new industrial manslaughter laws. The topic raised a lot of questions and Danielle suggested several steps one can take to start getting your business ready. This presentation concluded with a Q&A with Ruth Young, Calingiri Grower, who is enthusiastic about safety protocols on her broad acre farm.



Danielle McNamee, ProcessWorx, and Ruth Young, Calingiri, talking through farm safety and HR.

Liebe Group Women's Committee Chair, Jen Birch said "It was great to see the thoughtful group discussion generated by the HR and safety presentations before leading into lunch, a delicious affair catered by 'One L of a Good Feed' and served by Liebe men who assisted in the kitchen". Local produce including salt bush lamb was featured through the lunch, accompanied by great networking and sharing amongst the ladies.

The final business management topic followed, "Insurance: Do we even need it?" presented by Latham Grower and Nuffield Scholar Dylan Hirsch. Dylan started his talk with a humorous summary of how insurance came about, and the many risks we face as farmers. He summarised the different types of insurance available, how we can optimize our insurance, and what insurance we use to cover the important risks without wasting money on premiums which are less relevant or effective. If used well, insurance can be a business tool rather than just another expense.

Key note speaker Leonie Knipe, Dealer Principal of Toyota and Nissan Northam gave an inspirational speech on her life, and how she became "More than a farmer's wife" which led to winning the 2019 Telstra Business Woman of the Year. In a male dominated industry, Leonie is passionate about taking chances to achieve your dreams, and removing the stigma of being the only woman in the room.

Mrs Birch says "The high quality of speakers and variety of topics brought rural women from near and far for a fantastic day of knowledge sharing and networking. Leonie was great to listen to and I loved hearing about her journey".

Another inspirational speech followed from speaker Jessie Ray who detailed her experience living in Chicago, USA during lockdown and the 2020 riots. It was quite the tale, and many challenges were present as she went from farm living to lockdown in a small apartment with her two toddlers.

Liebe Group member Leanne Sawyer said "I enjoyed listening to Jessie Ray and hearing her experiences with COVID while living overseas. It was a touching piece and showed the true reality of what is going on and what we in WA have not experienced".

Mrs Sawyer also says the day was an inspirational and informative for women in rural WA. "It was great to see women travel to Dalwallinu for networking and creating friendships which has been difficult over the past year due to COVID".



Lunch catered by One L of a Good Feed, Carnamah.



The day finished with Kondinin Group's Ben White who spoke on new technology and the rise of autonomy in agriculture. It was an energetic topic on the exciting new technology becoming available in agriculture. Ben spoke on how automation is likely to be implemented gradually with an emphasis on wheel control potentially coming with the advent of electrification of machinery.

The Liebe Group would like to thank event partner FRRR for their contribution to the day as well as Diamond partners RSM, Rabobank, CSBP and CBH Group, and all Gold and Silver partners for their continued support. Thanks to the Liebe Group Women's Committee for their continued efforts in planning and delivering a successful day, and to the Liebe Group volunteers who assisted with the service of lunch.



Keynote speaker Leonie Knipe sharing how she became a leader in the male dominated industry of car dealerships.



Is insurance worth it? Local grower and Nuffield Scholar Dylan Hirsch says yes!



Ben White, Kondinin Group, sharing how autonomy is in the future for WA farmers.



Presenter gifts from local business, Waukalands.



Thank you to the men who volunteered their time to assist with the service of lunch.



Lucky door prize winners with Women's Committee Chair Jen Birch. Prizes donated by Agrimaster, Sarah Lang Consulting and Jorobi Natural Fertiliser.



2021 Liebe Group Women's Committee.



Liebe Group members Kelsea Pipe, Karly de san Miguel, Heather Knowles, Sarah Barnes and Kirsty Carter.



Wendy Sawyer, Liebe member, and Paula Eley, Grain Corp.



Jody Boyanich, Natasha Mills, and Mary Boyanich.



Ladies enjoying lunch catered by One L of a Good Feed.



Jennifer Birch, Judy Storer, Liebe Group R&D Coordinator, and Alan Meldrum, GrainGrowers.



Jess Humphry, Rabobank, and Rhianna Elliott, Rhiform Physiotherapy.



Ros Shaw, Erin Hayes with son Elliot, and Lisa-May Shaw, Liebe Group Administtraion Assistant.



Keynote speaker Leonie Knipe networking with regional women.



Chela Lamond, Grain Corp, Maree Gooche, SafeFarms, and Carmen Stanley.

NEW SEEDING APPROACH HELPS TO OPTIMISE ESTABLISHMENT IN WA'S SHORTER SEEDING WINDOWS

SNAPSHOT

Grower: Stuart McAlpine

Property name: Cooinda

Location: West Buntine, WA

Area: 4000ha

Enterprises: Wheat, barley, canola, lupins, sheep, cattle

Soil types: Sandy loam, gravel duplex, medium clay

Rainfall: 283mm

Growing season rainfall: 242mm

Seeding setup: 18.28m (60 foot) Horsch Pronto 12 NT with undulated coulter/cutting disc on 30cm (12 inch) row spacings, TurboDisc coulter and inbuilt triple hopper seed/fertiliser unit.



The McAlpines monitor seeding depth whenever conditions change, such as moving to different soil textures, soil types or soil moisture conditions.

Stuart McAlpine finds that marginal moisture conditions are the primary factor limiting good establishment in his region.

The McAlpine's Buntine property is located in an area where average growing season rainfall (GSR) has been decreasing, with rainfall events becoming smaller and less frequent during the traditional growing period. There has also been a shift towards later and more variable season breaks.

These factors combine to make it increasingly common for growers in the region to be seeding much of their program into marginal moisture conditions.

For Stuart, however, this problem has recently been lessened by the switch from a tyne seeder to a new Horsch Pronto 12 NT disc seeder. The new seeder allows significantly increased efficiency at seeding, reliably operating at 18 kilometres per hour without impacting seed placement, wheel slip, soil throw or seeding rate capacity.

With their 18m (60 foot) seeding bar, the change from the standard eight km/hr speed has more than doubled their seeding rate from 14 hectares per hour to 33ha/hr.

The overall picture

Stuart works his seeding program to an end date. This is the date by which his entire program will be seeded regardless of the how the season has progressed.

"A knockdown is preferred, and a double knock if possible, for some of the poorer paddocks. If rainfall allows, we will wait to get that knockdown and then start seeding and keep going until it's done," Stuart said.

"But even if we haven't had a chance to do a knockdown, I have a date in mind of when I need to start seeding to have the entire program finished by the end of June."

With the new equipment, it takes Stuart half as long to implement the entire seeding program. Given their seeding strategy, this increased efficiency gives the McAlpines a much higher chance of achieving a comprehensive knockdown and seeding into more optimal moisture conditions.

More even establishment

The new disc seeder also achieves more even establishment overall. The wavy discs that pre-cut the seed row cope well with even heavy stubble load. Stuart hasn't had any issues seeding into stubble since using the machine.

The coulters also follow the contour well to achieve more even and more controllable seeding depth, despite uneven soils. The rubber coulter and rubber press wheel work to release high pressures to minimise the effects of speed on seeding depth.

These factors combine to allow the disc seeder to achieve more even and reliable establishment across a range of conditions and soil types.

However, Stuart says a limitation of the seeder is that it has reduced capacity, compared with a knifepoint seeder to achieve subsoil cultivation below the seed. He says the disc seeder can achieve cultivation of up to 100mm below the seed compared with at least 150 – 170mm for a traditional knifepoint seeder.

Stuart is not particularly impacted by this limitation as he is operating a minimum till farming system. However, it may be a significant consideration for others.

Achieving success

Stuart believes that achieving successful establishment depends on adequate soil moisture and having accurate seeding equipment. Both factors can be difficult to manage depending on the resources available.

"The most important steps in maximising establishment are seeder calibration, starter fertilisers and seed treatments, specifically biological inoculants, as no pesticides or fungicides are used in our farming system," Stuart says. "Calibration is the most important step and is completely dependent on the disc seeder we use."

"I was especially drawn to the Pronto because it is well-known for its accuracy and defined furrows."



Stuart McAlpine believes that good establishment is crucial to the success of every other aspect of farming.

Top Tips

Stuart recommends a few key tips for those wanting to improve their soil sampling and move closer to what they see as ‘success’.

- Work to your soil type. Optimise everything you do to according to soil type, from machinery choices to rotation to herbicide regimes. Make sure they suit soil type first and your establishment will increase.
- Don’t be afraid of disc seeders, even if you have had bad experiences with them previously. Give them a go – the new ones are very different from old technology. This is doubly so when seeding canola, which is a good place to start trying a disc seeder.
- Make sure you get good, consistent weed control. It doesn’t matter how well a crop establishes if it is contaminated and out competed by weeds.
- Try to maximise your accuracy. It can really increase your efficiency and crop consistency.



The McAlpines have found increased efficiencies and improved overall establishment from switching over from their tyne machine to the new disc seeder.

Seeding preparations

The McAlpines monitor seeding depth whenever conditions change, such as moving to different soil textures (such as ripped versus unripped), soil types or soil moisture conditions.

Stuart is willing to spend as long as it takes to optimise seeding depth. However, with the new disc seeder hasn’t taken long to adjust. On average they spend 30 minutes to adjust to the correct depth.

Where to next?

Looking forward, Stuart wants to make a few changes, including starting to optimise his press wheel pressures and vary them more between soil types. This will help to optimise soil seed contact.

He will also purchase a new lead tractor more suited to pulling the disc seeder at higher speeds.

WOMEN OF LIEBE

ROS SHAW

JINDARRA CROPPING CO

THE Liebe team caught up with one of the women of the Liebe Group to chat about their background, involvement in the group and their own goals and aspirations.

Note: Views stated in the Women of Liebe articles are strictly those of the individual and do not necessarily represent those of the Liebe Group.

Tell us a bit about yourself – what is your background?

I was born in Wubin and lived there until I was 15. I moved to Perth for school and then university where I studied to become a music educator specialising in piano teaching.

I met my husband Mel while at boarding school and, after university I moved to Dalwallinu to teach piano before we got married. We moved to the farm where Mel working in partnership with his brother Mark and their parents.

I started taking an interest in working on the farm very early in our relationship and learnt to drive the machinery and work with sheep until we had our three children Rochelle, Casey and Erin. During this period I continued teaching music and worked as an Education Assistant at the Buntine Primary School.

What is your role in your farm business? How long have you been in this role for and how do you enjoy it?

In 2011, Mel and I formed our own entity and over the next ten years of farming I supported Mel in the everyday running of the farm. This included driving machinery, helping with maintenance, sheep work, taking over the book work and assisting in the decision making. This all really helped to develop my understanding of the farming business, especially doing the book work.

With Casey coming home in 2019, I have started to take a bit of a step back from being out in the paddock every day but I’m still involved in the book work alongside Casey. I am hoping to get Casey’s wife, Lisa-May, trained up in this to help with her understanding of the farming business. I also keep a hand in the practical side of things by driving the machinery when needed.



Ros and husband Mel (right) with their son Casey and daughter-in-law Lisa-May on their wedding day.

MEMBERS NEWS

What are the biggest opportunities and challenges for you and your farm business?

An opportunity for me is being able to see the next generation take on the business while being a part of their journey ahead, and to see the passion and drive that Casey has to learn and take on the farming business. This has given me the chance to be able to spend more time with grandchildren and for us to travel more.

A challenge that has come with this opportunity is to try and step back from the decision making whilst being mindful of the challenges Lisa-May faces coming from a non-farming background, having learnt from my own experience. This also brings with it the challenge of making sure we are able to obtain a good outcome with succession.

Something that I think is probably a challenge for a lot of farmers is the cost structure of farming and where it is going to go in the coming years. We are seeing a trend of having to continually expand our farm to be able to keep up with the input costs vs the grain prices which we have no control over and as farmers we can't pass our costs on.

What do you enjoy most about living in a rural area?

Living in a rural area is like living in one big family. There is always people there to help you and they all have an understanding of living in a rural area which you don't really get when you are in the city. It has been great to be here during the COVID lockdowns and not having to be stuck in a small area. But the thing I love the most is the big wide open spaces!

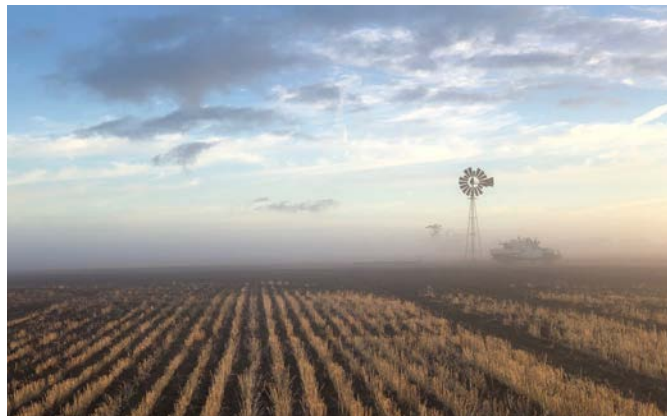
What has been the involvement you have had with the Liebe Group? What have you gained from this?

I was on the Women's Committee for about two years and gained an insight into how the Women's Field Day was organised, which is an event I really enjoyed even though I didn't get to attend a lot of them due to working on the farm. It was really nice to work with a network of likeminded women.

Who or what inspires you the most?

Who inspires me would have to be Casey, with his passion, drive and always trying to access as much information as he can from different avenues to improve his knowledge of farming and running the business.

What inspires me is a year like this where there is beautiful rains and you can see the response from the crops, gardens blooming and nature at its best.



Winning images from the 2020 photo competition (from top: Tash Mills, Helen Heinrich, Peter Waterhouse)

LIEBE GROUP 2021 PHOTO COMPETITION

BEHIND THE SCENES OF FARMING

**3 X LUCKY WINNERS EACH
RECEIVE A \$150
REFUEL AUSTRALIA FUEL CARD!**

THE RULES

- Photos are to be submitted via [email](mailto:admin@liebegroup.org.au) admin@liebegroup.org.au
- 5 photos may be entered into the competition per person but more can be shared via Facebook
- Judging will be completed by 3 members of the Liebe Group Management Committee
- Entry into the competition includes permission for the Liebe Group to use images in future publications and media
- Mobile phone images are welcome
- Winner will be announced at Spring Field Day, Thursday 9th September 2021

ENTRIES CLOSE FRIDAY 27TH AUGUST

PROUDLY SUPPORTED BY





CANOLA NUTRITION & MANAGEMENT

TUESDAY 22ND JUNE

3 - 5PM | LIEBE GROUP OFFICE | SAUSAGE SIZZLE TO FOLLOW

HOW AN EARLY BREAK CAN CHANGE MANAGEMENT DECISIONS

Join industry experts Angus McAlpine (CSBP), Tristan Clarke (Elders Scholz Rural), and Jackie Bucat (DPIRD) as they share their knowledge around canola management and nutrition after an early break.

Topics for discussion include:

- Nutrition and fertilisers - the basics for canola nutrition and what you need to consider
- Pest identification and management
- Time of sowing and emergence

REGISTRATIONS PREFERRED FOR CATERING

Liebe Office: 9661 1907

Email: admin@liebegroup.org.au

Web: <https://tinyurl.com/canolaagchat>

SUPPORTED BY



Precision Ag Workshop June 29th Variable Rate Nitrogen & Spraying

Program

12:30pm Intro, refresher and grower experience
13:00pm Laconik - demonstration
13:30pm Decipher - demonstration
14:00pm Vantage Precision Ag solutions
14:30pm Discussion on how to set rates & trials

14:45pm **Brand specific training** - Getting data in and out of monitors and creating prescriptions. Take home a prescription on USB or transfer via telematics to equipment.

o Afgri / John Deere o Vantage/ Trimble o Boekemans / Case o

16:30pm VR process reflection, collecting yield data & where to next? (whole group)
17:00pm Sundowner

Optional session (during sundowner) - stay and do more in-depth training

Facilitator: Bindi Isbister - Agrarian Management
Hosted by: Liebe Group
Venue: Liebe Group Office - 17 Johnston St, Dalwallinu

RSVP - admin@liebegroup.org.au
9661 1907

FREE

Bring your computer & any relevant farm data on USB or hard drive



HELPING TO BUILD A LEADERSHIP PATHWAY FOR GROWERS

Rebecca Lawson
Principal - Corporate Affairs
CBH Group



ACTIVITY in our grower scholarships programs are heating up, with applications open for one program and a two-year report completed for another.

A large part of CBH's Community Investment Fund is directed towards building regional capacity and leadership skills in our communities. It's to build strength, resilience, knowledge and skills for future industry leaders to work towards a sustainable and profitable grain growing industry.

We offer a series of scholarships, courses and support awards which identify future leaders, including Growing Leaders Scholarships, Nuffield Scholarship, Grass Roots Leadership Short Course, Governance workshops and Leeuwin Ocean Adventure Foundation Scholarships.

Nuffield Scholarship

In May, our 2019 Nuffield Scholar Johanna Tomlinson published her report which focused on the issue of soil acidification.

It's one of the biggest soil health challenges in the South Coast region of WA, where she and husband Wayne own and operate mixed farming operations. It's also a challenge for other large areas of WA and New South Wales, and about half of Australian agricultural land is at risk.

Soil acidity can limit crop and pasture choice, production and profitability. Throughout Johanna's travels to the Americas, Asia and Europe, she found consensus on the most cost-effective way to manage it: apply lime.

"So, the question then became how can industry and government support farmers to adopt best practice management."

She says growers need more localised knowledge and proof to demonstrate the return on investment on buying and applying lime.



2019 Nuffield Scholar
Johanna Tomlinson.

"Our local grower and natural resource management groups have a huge role to play, and I feel that they need more support to amplify their impact."

You can download Johanna's full report through the Nuffield Australia website, and also watch a webinar she took part in late last year.

The Nuffield Scholarship is a unique program that provides Australian farmers with an opportunity to travel overseas and study farm to fork issues they believe will add value to the industry. CBH typically sponsors one WA Nuffield Scholar's journey every two years totaling \$52,000.

Growing Leaders Scholarship

Applications are open for the 2022 Growing Leaders Scholarship program, which will be the fifth consecutive year the scholarship has been offered to growers.

2021 recipient farmer Lucy Hall, from Arthur River, is a few months into her Growing Leaders Scholarship program, a program that places up to two growers into Leadership WA's 10-month Signature Leaders course. Lucy is the eighth recipient of the scholarship that is aimed at building a pathway to leadership within the agricultural industry and at CBH either through the Growers Advisory Council or our Board.

"I'm excited about connecting with new people from outside the agricultural industry and learning from people in different industries across WA," she said.

"I feel my participation in this course will help me discover more about my leadership style while new connections will help bring new ideas and thinking into the community and groups I work with."



2018 Jasmy Allen



2018 Rebekah Burges



2018 Niki Curtis



2019 Jules Alvaro



2019 Tracey Lefroy



2020 Debbie Gillam



2020 Bronwyn Fox



2021 Lucy Hall

Growing Leaders Scholarship Alumni

The Growing Leaders Scholarship program places up to 2 people each year in Leadership WA's 10-month Signature Leaders Course, with each scholarship valued at \$15,500.

The scholarships are targeted at emerging regional leaders who are involved in or aligned with a grain growing enterprise in WA, who has demonstrated grower group and community involvement.

If you know of anyone who may be interested, there is more info on the GGA website here – <https://www.gga.org.au/activity/cbh-growing-leaders-scholarship/>

'FUTURE FIELDS OF GOLD' - AUSTRALIA'S WINTER CROP PLANTING RISES AGAIN

Skye Ward
Media Relations Manager
Rabobank



Rabobank

AUSTRALIA is looking at a second consecutive near-record winter crop planting, as excellent prices and good seasonal conditions see planted hectares rise according to Rabobank.

In its just-released 2021/22 Winter Crop Outlook, the bank forecasts the national winter crop planting to stand at 22.93 million hectares.

This is up two per cent on last year – where planted area had soared on the back of a return to positive seasonal conditions around the country – and within one per cent of the nation's record-high winter crop planting in 2016/17. This acreage also represents an area eight per cent above the five-year average.

The bank says this will see Australia on track to deliver an above-average winter grain crop for this season, with an estimated total wheat harvest of 28.9 million tonnes, barley of 10 million tonnes and canola of 4.1 million tonnes.

Report co-author, Rabobank grains and oilseeds analyst Dennis Voznesenski said with substantial rainfall and good soil moisture profiles across many parts of the country coming into this year's planting, Australia was overall set up for another very strong winter grain crop.

"And with the Bureau of Meteorology forecasting a 60 to 75 per cent chance of the east coast and South Australia exceeding median rainfall for the next three months, this should set crops up well and have a positive impact on yields in those regions," he said.

Some states had, however, fared better than others with seasonal conditions coming into planting, the report noted.

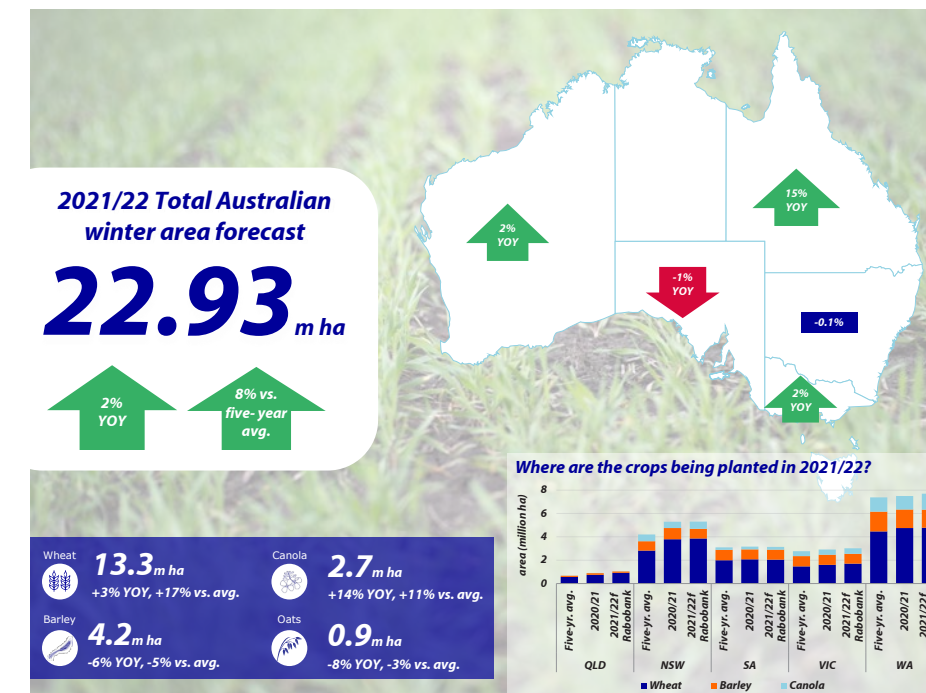
"While most regions had excellent opening rainfall, particularly in Western Australian and northern New South Wales, not all have been so fortunate," Mr Voznesenski said. "In parts of South Australia and western Victoria, less favourable conditions have meant we will not be able to factor in a year-on-year increase in area planted in those regions, despite prices incentivising many other regions to expand total area.

"In Western Australia, conditions have been very favourable for the opening to the planting season due to the rainfall associated with Cyclone Seroja, with WA plantings estimated to be up two per cent to 8.49 million hectares."

By crop, the report said WA wheat plantings are forecast to come in at 4.79 million hectares, barley at 1.54 million hectares and canola at 1.37 million hectares – an increase of one, four and 19 per cent, respectively.

Mr Voznesenski said while WA is forecast to receive average to below-average rainfall in the next three months, the impact should be softened by the favourable soil moisture at planting.

Across Australia, the bank is forecasting a three per cent increase in national wheat planting this year (to 13.3 million hectares), while area planted to canola is expected to climb by 14 per cent (to 2.7 million hectares). Barley planting is down an estimated six per cent (to 4.2 million hectares), with oats declining eight per cent (to 0.9 million hectares).



2021/22 Total Australian winter area forecast.

A different year

While 2021/22 was shaping up as a second consecutive very good cropping season for Australia, there were marked differences to last year, Rabobank's report notes. And these will have price implications.

"With canola prices near record highs, and China's tariff on Australian barley top of mind, farmers have heeded the call and switched in favour of canola," Mr Voznesenski said. "Come harvest time, however, it may mean that there will be increased harvest pressure on local canola prices."

Mr Voznesenski said there had also been a greater uptake in GM canola this year – particularly in WA – as the premium for non-GM over GM canola had declined considerably.

"With non-GM canola supplies tight around the world, this should support a rising premium for non-GM," he said.

Similarly, Mr Voznesenski said, growers were also noted to be switching from malt barley to feed barley. "With less malt barley being planted and world malt demand recovering, we see the premium for malt barley over feed barley increasing this season from its lows," he said.

Another factor of note, Mr Voznesenski said, was that approximately 25 per cent of last year's east coast grain harvest remained on farm in storage and this would weigh on prices. "Until the stored grain is sold down, local prices will continue to be restrained from fully following overseas markets higher," he said.

Global prices for most grains and oilseeds are expected to remain elevated over the next 12 months, the bank says, on the back of strong demand and poor seasonal conditions in many other of the world's grain-growing regions.

PARTNER UPDATES

Price outlook

For wheat, Rabobank sees CBOT (Chicago Board of Trade) wheat trading near to US 650 cents a bushel out to quarter one 2022 then gaining marginally in quarter two – supported by a number of factors, including low global corn stocks.

Report co-author, Rabobank senior grains and oilseeds analyst Cheryl Kalisch Gordon said, Australian wheat track prices were expected to remain near to AUD 300 per tonne for the coming 12 months, with marginal strengthening in the first quarter of 2022.



Rabobank senior grains and oilseeds analyst Cheryl Kalisch Gordon

“Strength in the Australian dollar, which we forecast to continue to trade in the high US 70 cents range, together with strong local supply, will keep local prices at more modest levels than global price levels would otherwise support,” she said.

A tight global corn market will also feed into support for barley in the coming year, Dr Kalish Gordon said.

“For Australian barley, pricing will continue to be reliant on the ongoing patronage of Saudi Arabia and Thailand,” she said. “With good volumes of new Australian crop expected in quarter four this year and no expectation of resumption of the barley export program to China in 2021 or 2022, local prices will be kept in check.”

Australian feed barley track prices are forecast to trade at around AUD 250 a tonne over the coming 12 months, with some softening in quarter three 2021, she said.

Global canola stocks are on track to end the 2021/22 year at a five-year low, and the bank expects Australian canola prices to remain elevated. However, expanded planting will support higher production in 2021/22 and see local prices lag behind global, Dr Kalisch Gordon said.

Potential upside is seen for pulse prices in the year ahead, with scope for lentil and chickpea prices to lift on potential relaxation of some market access restrictions by the Indian government. However, periods of uptick rather than a sustained lifting in the price outlook are expected.

In terms of exports, at this stage, the bank is “penciling in an export program of almost 20 million tonnes of wheat, 5.5 million tonnes of barley and 3.1 million tonnes of canola”.

To find out more about other Rabobank research, contact Rabobank Dalwallinu and Moora branch manager Georgina Day on 08 9661 0900 or subscribe to RaboResearch Food & Agribusiness Australia & New Zealand on your podcast app.

PARTNER UPDATES

DEPRECIATION

There have been numerous changes to depreciation over the last few years as a result of the COVID-19 pandemic. Fortunately, the only change to depreciation that came out of the 2021/22FY budget was an extension of the full expensing threshold for another 12 months to June 2023.

Whilst on the face of things this is a relatively minor change, it is important to consider the longer-term impact of the full expensing threshold and how it will influence the assets purchased during this period or trade-in time frame for existing equipment. With all small business pool balances being written off at the 30th of June 2021 existing business equipment will no longer have any residual cost base from a tax perspective. This means that when the time comes to sell or trade an asset in, the proceeds are 100% assessable income. This means that additional planning will be required when assets are sold to ensure there is not substantial tax payable on disposal and particular consideration should be given to equipment that might be traded in after the full expensing ends in the 2023FY.

Whilst there will be long term planning implications of writing off all pool balances at the 30th of June 2021, it has also given rise to many short term tax implications and opportunities which need to be considered – ideal before the end of the current financial year!

Superannuation

The announced proposals, which would come into effect from 1 July 2022, should help members that were previously unable to get some contributions into their fund.

The downsizer contribution age would be dropping to 60 from 65. This would mean that those who would like to sell their main residence and put in a one-off, post-tax contribution of up to \$300,000 from the proceeds of the sale can take advantage of it sooner.

A work test was required for all members age 67 to 74 if they wanted to put any contributions into their funds. Members had to be gainfully employed for at least 40 hours over a 30-day period. The proposal is to have only concessional or employee contributions provide a work test. Any voluntary contributions would be able to be made up to age 74 regardless of if the members met the work test.

The First Home Super Saver Scheme allowed members to access their voluntary contributions, along with the earnings it made in the fund, to purchase their first home. If eligible they could access up to \$30,000. The budget has put forward to increase this amount to \$50,000.

A change to the super guarantee rules, would abolish the \$450 monthly earnings threshold for compulsory superannuation payments. This would mean all employees receive super payment regardless of the amount they earn per month. The Government is promoting the measure to reduce the gender gap in superannuation.

2021/22 FEDERAL BUDGET RECAP

Keiran Sullivan
Director
RSM

Danelle Smith
Manager
RSM

Reagan Manns
Manager
RSM



PARTNER UPDATES

If you are an employer with staff earning under this threshold, and the proposal comes into effect, please check your payroll software to ensure it has the capability to pay the SG for all staff.

Also, when working out your contributions this year don't forget about the carry-forward unused concessional contributions for members with balances under \$500,000. Check with your accountant or on your MyGov account for your eligibility and unused balance.

Loss Carry Back Tax Offset

Do you trade through a company, (For example ABC Pty Ltd) or have a company in your trading structure somewhere? If you do and you have paid company tax in that company in either the 2018/19 or 2019/20 financial years, then there may be some good news for you.

If in this current financial year 2020/21 or in the next financial year 2021/22, you make a loss in that corporate entity, you may be able to "carry those losses back" to the previous years and use them to offset the profits made in those years. This will then allow you to recoup some or all of the company tax you have paid in those years.

There are some eligibility rules and you must be a company and have a surplus balance in your company Franking Account. It is also important to note that if you utilise those losses by "carrying them back" they will not be available for future use. Accessing them now though may give you some additional cashflow via a refund of previously paid tax.

National Soil Strategy

An announcement was made in the budget that did not get a lot of airplay. It was about the National Soil Strategy (NSS) and the interaction that this NSS can have for Primary Producers.

The NSS has a vision to ensure that "Australia's soil resources are recognised and valued as a key national asset" and the goal of the NSS is to determine how Australia will value, manage and improve its soil for the next 20 years.

As a part of driving its strategy and vision, the NSS is trialling a two year National Soil Monitoring and Incentives Pilot Program. As a part of that program farmers will be paid to capture existing soil data to inform the program and receive incentives to undertake more comprehensive soil testing in exchange for sharing their data.

The key to receiving the incentives will be in sharing your data with the NSS.

What the incentives will be or how they are administered is not yet clear however it would seem as though it will be via a cash or rebate system once the data is shared.

Something to keep aware of as we receive more information.

PARTNER UPDATES

MANAGING BREAKS

Danielle McNamee
Managing Director
ProcessWorx



MANAGING breaks can be difficult during peak periods in farming as there is a lot of work to do in a short time and often involves working long hours. Workers can also be isolated or spread over properties so direct supervision is not always practical. However, meal and rest breaks are important to maintain a safe and compliant farm.

As a minimum standard, farm workers should receive at least one half-hour unpaid break for every 5 hours of work, unless there is an agreement between the employer and an individual employee for the break to be taken at another agreed time. This means that workers are required to take a 30-minute unpaid break after completing every 5 hours of work.

Under the Pastoral Award 2020, all work performed on the instruction of the employer during a recognised meal break will be paid at 200% of the ordinary hourly rate. This rate continues to apply until the worker has their meal break for at least 30 minutes.

In addition, workers are also entitled to one 10-minute paid break each morning.

Although it may seem more productive to 'power through' and not stop for meal breaks, in the long term it increases the risk of fatigue and cost of wages. If you don't encourage your workers to take their breaks you can also be risking the health and safety of your farm.

We understand that this is particularly difficult when workers are alone, and managers are not there to ensure workers have breaks. Unfortunately, there is no way around this, and workers are required to have breaks. We recommend farm managers direct workers to take a 30-minute break and make it their responsibility to manage this.

If breaks are not managed and an employee leaves disgruntled, they can demand to be back paid for the time worked at the higher rate, potentially costing the farm a lot of money.



Taking breaks is important for both you, and your employees. Photo: Kogody Farm

For farms under the state system, the Farm Employee's Award 1985 does not specify break requirements. We recommend these farms adopt the same principle of one 30-minute unpaid break for every five hours of work.

Don't be reactive when it comes to your Farm's HR. Many people wait until they have a problem with an employee or claim with the Fair Work Commission before they implement HR and Safety compliance. No farm is too small to implement HR and Safety, any business with employees can benefit from it. Implementing practical and effective HR and Safety systems now can save you a lot of time and money in the future.

POST SEEDING LEARNINGS AND WHAT IS TO COME FOR THE REMAINDER OF THE GROWING SEASON

Tristan Clarke
Agronomist
Elders Scholz Rural



AS we come to the end of seeding I think there are quite a few tired but smiling farmers out there as we finish off what has got to be one of the best starts to seeding in the recent few years. Widespread rains around the district to break the season courtesy of cyclone seroja and follow up rains almost weekly after this coupled with plenty of warm days through may have led to some incredible crop growth around the district. Canola in some areas is already starting to poke flowers up!

So, what have we learnt so far, with the warm temperatures and good summer rain the green bridge (despite seemingly endless summer spraying) was definitely present this year and we are beginning to see some of the effects from this.

Grasshoppers have been prolific and were almost reaching plague proportions in some areas where there was an abundance of green feed available however have soon been brought back down to controllable levels following the start of seeding. Some areas are still experiencing high numbers and may need addressing sooner rather than later. Early season vegetable weevils have been found all over the state and multiple cases were recorded around the district with symptoms shown below.

These are often not seen and were probably missed early on when canola was germinating with some quite severe damage done to small canola plants. Following from this several grubs have also been found around the district with Cabbage centre grub and weed web worm being found in a few different cases. Important that these numbers are monitored and addressed especially where there are young canola plants around.



Clockwise from top left: Grubs found around the district this year - Cabbage centre grub in canola, Vegetable Weevil and typical Vegetable weevil symptoms with "necking" of the plant below the soil surface.

Weeds around the district have in large been well controlled with most pre-emergent chemicals doing an excellent job in the moist soil conditions and warm weather. In addition to this the ability of growers to get a solid knockdown on nearly all of their paddocks has helped to reduce numbers in paddock and ease the pressure on pre-emergents to do all the heavy lifting. Some good news stories around the job that some of the new chemistry's are doing is a real positive and adds confidence for growers who have not yet used these newer products that they will be a good fit in the system in years to come.



Visual herbicides are often the favourite for growers and not many can beat the bright pink ryegrass that are seen when Overwatch is used as seen here in front of a wheat crop.

Post emergent spraying has pretty well already kicked off with plenty of growers getting out there early to make sure that they can get onto potentially un-trafficable paddocks sooner rather than later. Remember that when targeting broadleaf weeds in crop it's easier to kill smaller weeds so hit them hard and hit them early if you want to get the best bang for your buck out of your chemical. Remember timing is just as important as rates when it comes to getting the best efficacy out of your chemicals.

Moving forward I expect to see quite a bit of disease pressure this year given the current conditions and green bridge over the summer. Once again monitoring this is important for growers to make sure they are not caught out. Some crops are already showing some disease symptoms so please be on the front foot with this!

All the best for the rest of the season, hopefully the rain continues to fall and I look forward to catching everyone at some of the upcoming Liebe Group events.

MANAGING EWES FOR LAMBING

Bronwen Fowler
Animal Health, Nutrition &
Production Specialist
Nutrien Ag Solutions

Bridie Luers
Animal Production Technical
Services Adviser
Nutrien Ag Solutions

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Ag Solutions™

THE key elements for lamb survival are:

- Optimal lamb birth weights – 4.5 – 5.5 kg
- Healthy alive ewe
- Maternal bonding
- Colostrum & lactation
- Shelter & predator control

The key drivers that impact these, are:

- Pre-lambing vaccinations and effective drenches
- Adequate mineral supplementation (Ca supplementation at least 3 months prior to lambing)
- Reducing stress and handling 4 weeks prior to lambing
- Ewes in BCS 3- 3.5,
- Mob Size – lambing in twins max 150 ewes and singles ewes max 400
- Energy dense feeds with, 20 % fibre

Coming into lambing time there are many animal health practices that we need to address in a timely fashion. Any pre-lambing health treatment should be done 4-6 weeks prior to lambing to minimise stress during that critical period. Ewes require an annual booster vaccine for clostridial diseases (including pulpy kidney) and arthritis, either a 3 in 1 product or 6 in 1 product, plus Eryvac. This boosts her immune system against these diseases and allows her to pass the immunoglobulins to the lamb via her colostrum.

This provides passive immunity to the lambs for the first few weeks of life to protect them until their first vaccination at marking. It is also recommended to provide a drench 4-6 weeks prior to lambing to reduce the number of eggs deposited on the lambing paddocks, and therefore the worm burden the lambs are exposed to.

Leading up to lambing ewes are very susceptible to developing Pregnancy Toxaemia. Pregnancy toxaemia occurs when a ewe experiences an energy deficit, most often during late pregnancy. Low levels of glucose in the blood result in increased body fat breakdown and a build up of ketones in the body, which are toxic at certain levels.

This results in the development of neurological signs, dehydration, going off feed, possibly abortion and then death of the ewe. Contributing factors to the development of pregnancy toxaemia include twin-bearing ewes, inadequate nutrition (both quantity and quality), and anything which causes the ewe to stress and further deplete her energy supplies i.e mustering, transport and inclement weather.



Hypocalcaemia is another disease which often rears its ugly head leading up to lambing and throughout lambing. This disease occurs due to a deficiency of calcium in the blood and results in muscles of the body not being able to contract properly, including heart, gut and legs. The consequences are severe, with rapid development of neurological signs, tremors and death. The high calcium demands of pregnancy and lactation predispose to the development of hypocalcaemia.

Additionally, ewes are often grazing young cereal crops and immature grasses, as well as being fed high rates of grain during this period; all of which are relatively low in calcium as a feed source. Hypocalcaemia can often be seen when bringing in the mob to mark lambs. Often these two metabolic diseases are hard to differentiate between in the paddock, however treatment is recommended if the ewe is found early enough.

Products we recommend having on hand are Ceton or Ketol (propylene glycol – energy supply), as well as Minbal 4 in 1, which contains calcium, magnesium, phosphorous and glucose. However, prevention is more effective than treatment. By providing adequate nutrition with an appropriate calcium:phosphorous ratio, and minimising stress 4-6 weeks before and then throughout lambing, you will help to reduce the risk of seeing either of these metabolic diseases in your ewes.

Setting ewes in mobs based on production status, singles, twins and multiples, and also on foetal age (early and late), if you have the information 4 weeks pre-lambing, is beneficial in many ways at lambing. It allows for precision feeding, a tighter lambing period making a more even line at lamb marking, allocation of lower mob sizes depending on twins and single status, and also allows to maintain ewes BCS, whilst ensuring adequate nutrition is supplied to produce colostrum and prepare ewes for lactation.

Priority feeding and better allocation of feed resources ensures the twin / multiple bearing ewes receive the extra energy required to grow multiple foetuses to an adequate birth weight and maintain adequate body condition score. As research states the driver to lamb survival is optimum lamb birthweights, monitoring ewes and feeding to BCS, FOO and production status are simple steps to achieve this. Further splitting these mobs into early and late, allows for greater control, particularly, in the maiden single mobs to monitor feed intake to avoid over fat ewes at lambing time. Over fat ewes can also be a concern causing metabolic disorders, dystocia, and lambs which fail to thrive due to brain injuries received at birth.

An example of the cost benefit of splitting ewes into early and late, single and twin bearing maybe as follows: When running multiple, early bearing ewes the ration can be developed to meet the energy requirements, of a ewe which at day 150 of lambing can be as high as 23.2 MJ of energy / hd/day, compared to a single bearing late ewe whose energy requirements at day 130 sits at 14.4 MJ of energy, Lifetime Wool (2006), this increased feed intake for 20 days can be an extra cost to the business when feeding supplements. Feeding a ration of 70 % barley @ \$260 /tonne, 10 % Lupins \$460 /tonne and 20 % oaten hay @\$250 /tonne on average values would provide 12.07 MJ / KG DM, 12 % CP, & cost 2.6 c/mj of energy, \$2.69 /kg CP. This excess of 8.8 Mj / day / single late bearing ewe could cost over 20 days a total of \$4.56. This increased cost over a 20 day period for a mob of 1000 late bearing single ewes, costs \$4, 576 .

Having ewes in adequate body condition score, and access to a balanced ration at lambing time allows for ewes to stay at the birthing site, and carry out the maternal bonding and grooming, which stimulates oxytocin and allows for ewes to let down, ensuring that the lambs get access to the colostrum within the first few hours of life. This colostrum provides the lamb with much needed energy and immunity, to ward off the bacteria's and viruses which may challenge their naïve systems.

Due to the reduced capacity of the rumen as 2/3rds foetus growth occurs in the last trimester, the challenge is to provide enough high quality, quick release energy feeds, whilst meeting the CP, fibre requirements without causing sub-acute ruminal acidosis. Developing adequate colostrum supplies requires ewes to be fed, a diet which is high in energy, CP and minerals at least 4 weeks prior to lambing, transitioning to this high starch diet at least 6 weeks prior to lambing, to allow for a gradual adaption to the new feed source without causing SARA and / or metabolic disorder.

PARTNER UPDATES

Splitting mobs into singles and twins also allows to run the twins at a lower mob size (below 150 ewes /mob), than the single ewes (below 400 ewes/ mob). The lower the mob size at lambing time, particularly in twin mobs, results in a decrease in ewe lamb interactions, and therefore a lower incidence of mismothering. Maternal bonding can be disrupted when there are too many ewe- lamb interactions at the one-time, higher mob sizes increase the incidence of this occurring.

Mismothering can lead to inadequate colostrum intake, risk of predation, higher chance of death due to starvation, hypothermia, and or infection. It also allows to monitor where the losses are occurring, if they are occurring and manage more closely for the subsequent years.

Lambing paddocks that have protection from prevailing winds, have adequate shelter, a clean water source, enough FOO and /or supplementary feeding system, and good predatory control contribute to ewe and lamb survival. Any deaths should be recorded, investigated, removed from lambing paddocks and burnt, to prevent the spread of disease and to prevent attracting predators into paddocks. Ensuring adequate PPE, and biosecurity protocols are followed as some diseases are zoonotic. DPIRD currently have funding for investigating ewe abortion and newborn lamb deaths. It is as simple as collecting a sample of the lamb's liver or a piece of the buttons of the placenta (if available) and freezing it. Once 3 samples are obtained, they can be submitted to DPIRD. For further information please contact your local Nutrien Store.

References

LifetimeWool (2006), Dry Feed Tables, <http://www.lifetimewool.com.au/Tools/dryfeedbud.aspx>



PARTNER UPDATES

SUSTAINABLE USE OF PARAQUAT PRODUCTS: A SYNGENTA PERSPECTIVE

Owen Langley
Territory Sales Manager
Syngenta



WITH cropping conditions currently leading many to rely on paraquat products, it's a good time to remember the importance of sustainably using one of the key actives in the crop protection toolbox to manage weeds.

Paraquat was researched and developed by Syngenta legacy company, ICI, many decades ago and Syngenta first introduced the Group L Herbicide, GRAMOXONE®, to Australian growers more than 50 years ago. An extremely soluble product in water, it acts in the chloroplasts of green plants and controls weeds faster than any other herbicide. Its unique mode of action, control of many pervasive and difficult weed species, and the speed that it becomes inactive in soil makes paraquat a crucial component of integrated weed control systems.

In addition to the benefits for farmers, paraquat helps reduce soil erosion, leads to enhanced biodiversity, protects soil health and the helps reduce the effects of climate change.

While Syngenta is now just one of 377 companies worldwide that has registered paraquat for sale, we have invested hundreds of millions of dollars over the product lifetime to ensure its safety when used according to the label directions. Locally we also invest in providing best practice training and resources, R&D into new technology and solutions and scientific defense to maintain farmer access to crucial crop protection products.

Syngenta's GRAMOXONE® 360 was specifically developed to reduce application rates and provide the convenience of handling less product. It also adds flexibility to tailor the adjuvant to suit specific needs and conditions.

Syngenta's stewardship of paraquat products in Australia

- All Syngenta paraquat products in Australia and around the world contain the minimum emetic level mandated by the FAO/WHO or higher depending on the product formulation.
- A foul odour and blue coloured dye are added to make the product repulsive to ingest.
- In Australia paraquat is not available to the general public for use in home gardens and is only available in large containers sold through licensed agricultural pesticide distributors.
- Strict warnings against transference of the product to small containers.
- Largescale Australian agriculture also typically employs closed transfer systems, preventing accidental spills, the mixing or pouring the pesticide into other containers or other actions that could lead to paraquat exposure.
- Poisons test kits to help healthcare workers identify the level of Paraquat exposure are made available to hospital pharmacies for free around Australia.
- A 24/7 emergency hotline is available on all Syngenta products

PARTNER UPDATES

Syngenta has been at the leading edge when it comes to industry efforts to drive continuous improvement in the safety of the products that we offer.

It's important to remember that paraquat products are Schedule 7 poisons and, like all pesticides, must be used carefully. We must always be aware of the risks involved in applying crop protection products.

There are five golden rules for safe use of paraquat.

1. Exercise caution at all times
 - Keep children and animals away from spraying sites and operations
 - Store product and application equipment safely and in accordance to state legislated requirements
 - Never put paraquat in a container that is not designed for pesticide use
 - Assess weather conditions (wind speed and direction, temperature) to avoid drift
 - Dispose of waste product and packaging materials properly (Schutz for IBCs and DrumMuster for other packaging sizes)
2. Read and understand the product label
3. Wash after spraying
4. Maintain sprayer
5. Use personal protective clothing and equipment.

With Syngenta's stewardship measures in place, our continued commitment to improving the safety of our products and using paraquat products safely on farm and preventing accidents, we all contribute to ensuring paraquat products remain one of the most useful crop protection tools in a grower's toolbox.

To view a short video on the correct stewardship of GRAMOXONE, visit the Syngenta ANZ YouTube channel: youtu.be/ixMukND79Uo

PARTNER UPDATES

WEATHER AND SOIL MOISTURE NETWORK UNDERWAY WITH LIEBE GROUP

Kieran Coupe
Managing Director
Wildeye



LIEBE Group were recently successful in securing National Landcare Program Smart Farms Small Grants Program funding to study weather and soil moisture throughout the Liebe Group membership area. A total of 14 growers have taken part in the project, which has seen the installation of soil moisture probes and weather stations (plus several additional stand-alone automated rain gauges) throughout the region. Perth-based Wildeye - one of Australia's largest and longest established providers of "IoT" ("internet of things") technologies for agriculture - was contracted to deliver the technology involved. This involved supply, installation, and commissioning of the sensor suites and telemetry hardware at grower properties, and provision of apps and web-based software for viewing the data.

The weather stations collect data relating to wind speed, wind direction, humidity, temperature and rainfall. This data is presented in user friendly apps and web-based software, where it is also combined to provide additional information to support on-farm decision making such as delta-T and fire danger index. With most of the weather station network being commissioned just prior to the arrival of Tropical Cyclone Seroja, there has been a lot of interest in the data collected from inception, including observations of average wind speeds around 90 km/h and significant rainfall during the passing of Seroja. In addition to providing some interesting data, Seroja also provided an early opportunity to test the robustness of the installed equipment, which remained operational throughout the cyclone and came through the event unscathed.

The automatic rain gauges that have been installed – both those that form part of a complete weather station and “stand-alone” automatic rain gauges – are self-emptying, tipping-bucket type that measure rain accumulation in 0.2mm increments. The Liebe Group project is the first significant deployment that utilise Wildeye's manual check gauges with unique QR codes – these are traditional rain gauges installed next to each automated gauge to provide backup and check-data for data from automatic gauges. This approach of pairing manual and automatic gauges and integrating software and QR codes for simple and secure data collection from each, is unique to Wildeye and comes from many years' experience of managing automated rain gauges. Rather than any indication of a lack of faith in the automated devices, it is an acknowledgement of the importance of accurate and complete rainfall records to modern farming operations, and the practical realities of putting very sensitive and accurate measurement devices unattended and exposed to the elements in a farm paddock for months (sometimes years) on end.



Automatic and manual rain gauges installed around the Liebe region.

Rain data has proven to be of significant interest to the group so far, with general feedback from the growers involved to date indicating that the variation in rainfall observed within relatively small distances has been surprising. An example of such a rain event is below, with accumulated rain totals over a <24hr period varying from less than 4mm to almost 14mm, and with some reasonable significant changes in terms of leading and lagging gauges as the rain event progressed.

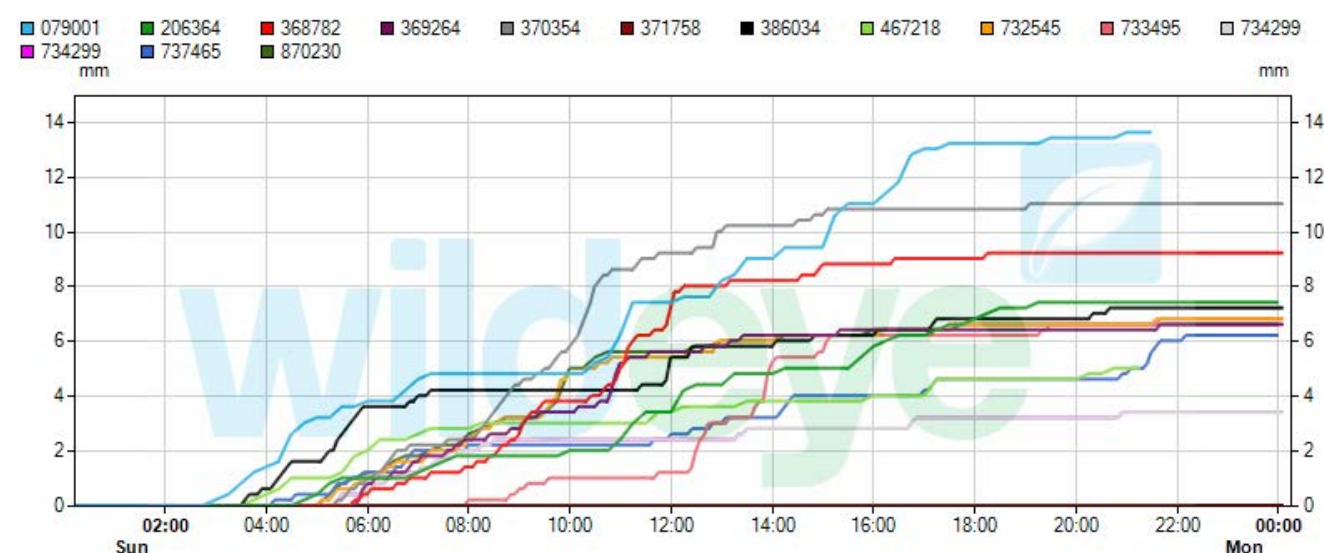


Figure 1. Cumulative rain totals for a recent ~24hr rain event

Soil moisture probes installed are attached to each weather station via a sub-surface cables installed to approx. 300mm depth and protected by conduit, extending to approx. 10m from the fence line (to avoid edge effects). The soil probes themselves comprise sensors at 100mm intervals (a mix of 8-sensor/800mm and 12-sensor/1200mm probe models were used), with each sensor measuring soil temperature and soil moisture (measured as volumetric water content). The probes are installed vertically within the soil profile, starting at a depth of 200mm with the intention that the shallow soil profile can be cultivated each season without damage to the probe or cabling occurring. A wide range of soil textures have been covered with the probes, and detailed soil analysis at each site has been performed through coring and lab analyses. Wildeye, Liebe Group and DPIRD will work together in coming months to “calibrate” the soil probes according to soil texture and data will be displayed in a range of formats, as indicated below.

Soil moisture by depth

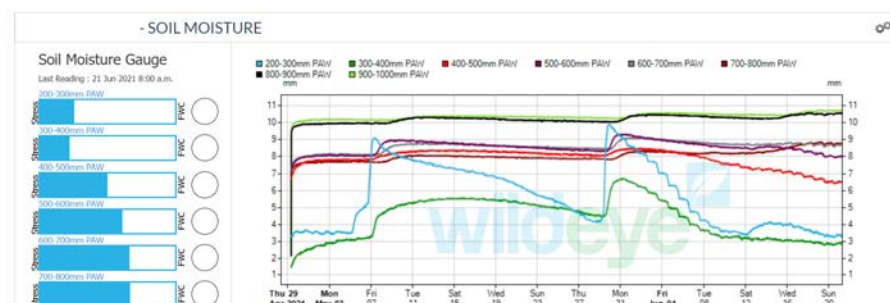


Figure 2. Soil moisture by depth

Soil moisture profile (commonly referred to as a “stacked” soil moisture graph”). Of particular interest is the “stepping” pattern observed at increasing depth as the growing season progresses - this is generally interpreted as an indication of the increasing depth of the the crop rootzone, with the “stepping” pattern being caused by daily removal of water from the soil profile by the actively growing crop.

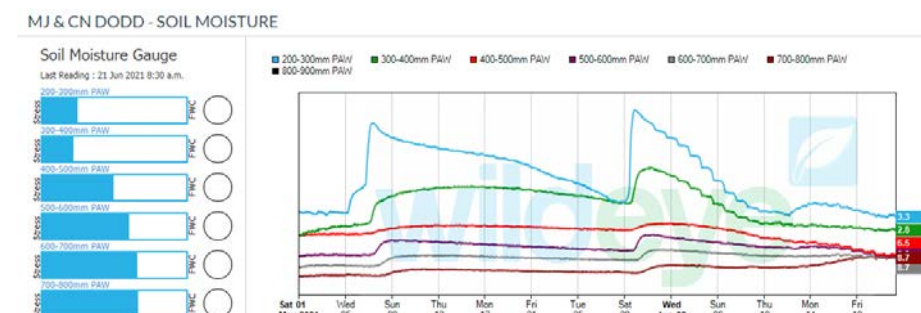


Figure 3. Soil moisture profile showing signs of increasingly active plant water use via the appearance of stepped drawdown at shallow depths.

Percent plant available water

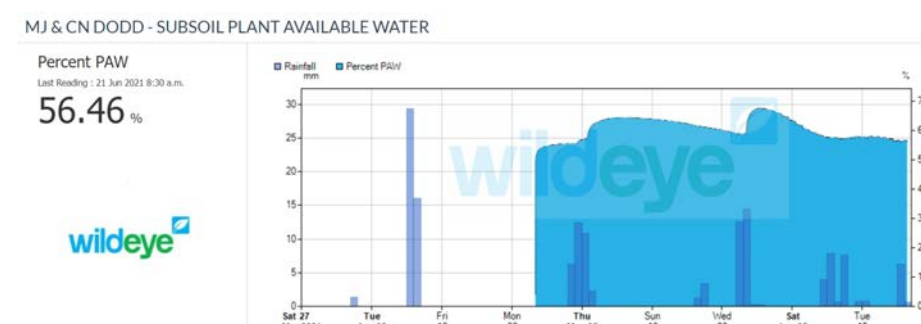
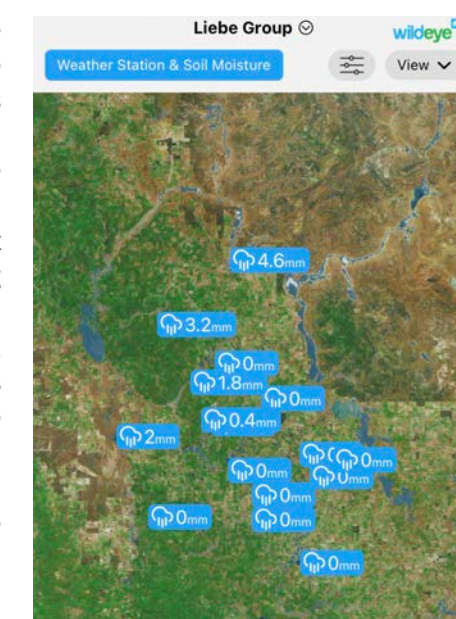


Figure 4. Percent plant available water across the probe length

Locations for the hardware were determined by Liebe Group and the growers involved, without consideration for radio network coverage (which is delivered by Wildeye as part of the technology offering). This approach is contrary to the conception many growers and ag-tech industry members have regarding connectivity for “IoT” devices like meters and sensors, which assumes connectivity is a barrier to adoption and is a key consideration during IoT deployments. The installations at Liebe Group all use radio networks/connectivity that was pre-existing and which meet Wildeye’s key criteria in connectivity selection (criteria Wildeye believes is also in the best interest of consumers of agricultural IoT products); being that it is delivered using open standards technologies, by established businesses with demonstrably sustainable business models, with high service levels, at a deterministic price.

Through the remainder of the coming season the soil probes will be calibrated and access to data from the network made available beyond the growers directly involved. Liebe Group and their members hope to use the data to better understand soil/crop/water interactions to improve water-use efficiency, to better understand weather variability, and to ultimately result in more informed on-farm decision making.



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CALENDAR OF EVENTS

LIEBE GROUP EVENTS 2021

AgChats: Canola Management	Tuesday 22nd June	Liebe Group Office
Hands on Precision Ag Training	Tuesday 29th June	Liebe Group Office
AgChats	Thursday 8th July	Latham
Myers Briggs Personality Type Workshop	Thursday 1st - Friday 2nd July	Liebe Group Office
Post Seeding Field Walk	Wednesday 21st July	Hyde Property, Dalwallinu
Bitesize Learning: Business Structures	Thursday 29th July	Liebe Group Office
Project Brainstorming Workshop	Tuesday 10th August	Liebe Group Office
St John First Aid Course	Wednesday 11th August	Liebe Group Office
Pinot in the Paddock	Monday 23rd August	Hyde Property, Dalwallinu
Spring Field Day	Thursday 9th September	Hyde Property, Dalwallinu

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