

LIEBE GROUP NEWS

December 2020

Volume 23

Issue 9



What's Inside



Join the Gen Y Paddock Challenge!



Reflecting on the year that was 2020



Liebe secures six-year MLA livestock project



Summer Weeds



**LIEBE
GROUP**

Working together
in Agriculture

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

Harvesting the Ripper Gauge trial site at Kalannie.

DIAMOND PARTNERS



Rabobank



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FROM THE EXECUTIVE OFFICER

KATRINA VENTICINQUE

WITH the Christmas break just around the corner, harvest is starting to wrap up around the Liebe region. This signifies the end to a rather chaotic year! Our rural community has showcased the epitome of resilience, continuing to operate throughout the height of the COVID-19 pandemic to ensure paddocks were sown, sheep got sheared and families were kept safe. Have a look at page 4 for a rundown on how the past year has looked for Liebe Group.

The Main Trial Site this year was a great success thanks to the hard work put in by Dylan and the Hirsch family. Although there was an unfortunate weather event during harvest that has caused some hail damage which will be seen in the results from various trials, there is still plenty that has been learnt.



It has also been a pleasure to welcome several new partners in 2020 to the Liebe Group family including Gold Partner ProcessWorx and Silver Partners FMC and Carbon Ag. I would also like to thank all of our long-term and valued Diamond Partners RSM, CSBP, Rabobank and CBH along with all of our gold, silver and industry supporters for their contributions to the group.

Looking into 2021, we have already started preparations for various new projects and demonstrations investigating wind erosion, stubble heights, pasture optimisation, double break crops, soil pathogens, early post emergent deep ripping and more!

Our 2021 Main Trial Site at Matt, Harry and Jane Hyde's is looking to have an extensive trial program already. We also have many topics being looked at for AgChats, Bitesize Learning and general Liebe workshops, including a Myers Briggs workshop (see page 15 for flyer).

The coming year also marks the start of the strategic plan review for 2022-2027. We will be sending out more information in regards to this process in the coming months. This is a great chance to have your say in the direction of the group for the next five years!

I would also like to introduce our new staff member Lisa-May Hilly. Lisa has come on board in a part-time administration support role. See page 5 for some insight into this new addition, and make sure to pop into the office to say hi!

On behalf of the Liebe Group team, I wish all of our members, partners and supports a safe and Merry Christmas and happy New Year!

GOLD PARTNERS



SILVER PARTNERS

Syngenta

Pacer Legal

Adama Australia

GrainGrowers

Nutrien Ag Solutions

Refuel Australia

Nufarm

Intergrain

Boekemans Machinery Dalwallinu

Australian Grain Technologies

FMC

Carbon Ag

REFLECTING ON THE YEAR THAT WAS 2020

THE Liebe Group is winding down for the holiday break, providing time to reflect on the year that has gone by. Whilst 2020 may not be remembered for the best reasons, it is important to recognise the strength and resilience of rural farming communities in the Wheatbelt.

The Main Trial Site this year was a great success thanks to the hard work put in by Dylan and the Hirsch family. X trials were included in the program which will be showcased in the upcoming R&D Book.



The Liebe Group Spring Field Day had the 2020 Main Trial Site on the Hirsch property at Latham on display

Events throughout the season had high attendance, boasting a record-breaking 112 growers and industry at the Post Seeding Field Walk in July. Growers were able to network and build their understanding of new technologies, chemistries and other advancements in broadacre agriculture whilst keeping our community safe within all required guidelines for COVID-19.



Record breaking numbers at the 2020 Post Seeding Field Walk

Partnerships continue to develop for the group, with three new organisations coming on board to support the future of local farming businesses including ProcessWorx, FMC and Carbon Ag.



New Gold partner ProcessWorx presenting a HR and farm safety workshop with Liebe Group members



These organisations along with the valued Diamond, Gold and Silver Partners are an integral facet to the success of the group. The Liebe Group would also like to acknowledge CSBP marking the 20 year milestone of partnership in 2020.



Liebe Group Executive Officer Katrina Venticinque presenting local CSBP representative Angus McAlpine, Lois Kowald and Matthew Tropiano a certificate in recognition 20 years of partnership

Plans are underway for the 2021 trial and demonstration program, with the Main Trial Site to be held at Harry, Jane and Matthew Hyde's property in Dalwallinu.

The Liebe Group is a progressive grower-driven group, working to facilitate research, development and extension to support members to be profitable and sustainable. The group would like to thank all partners, members, staff and supporters who have supported the group's success in 2020.

THE LIEBE GROUP WELCOMES LISA-MAY TO THE TEAM



THE Liebe Group is pleased to welcome its newest staff member, Lisa-May Hilly. Ms Hilly has joined the team as Administration Assistant.

Originally from Newman, Ms Hilly moved to Perth after completing high school where she worked for an Insurance Broker, the American Chamber of Commerce and then moved into the Mining industry where she has spent the last 8 years.

Ms Hilly has recently moved to Maya to join her partner Casey Shaw who moved back to his family farm in 2019. She is looking forward to growing her knowledge of agriculture through working with the Liebe Group and to be part of the community



JOIN THE GEN Y PADDOCK CHALLENGE FOR 2021!

Do you have a soil health question burning in the back of your mind that you would like to investigate? Now is your chance to explore this with the support of Liebe Group and your fellow farmers!

The Liebe Group are currently seeking four passionate growers to take part in this exciting project for the 2021 season, which involves the development and implementation of a demonstration on your farm.

This project aims to support the adoption of innovative and sustainable soil management practices through an online peer learning network.

The 2020 season saw five local growers from throughout the Liebe region come together to investigate various soil health questions that were relevant to their own properties. This included looking at fertiliser rates, post-seeding deep ripping on canola, plozza ploughing and variations of deep ripping.

If you're interested, this opportunity will assist you to identify soil constraints, design a relevant on-farm trial, perform in-season monitoring activities and assess the results alongside your peers. It involves being a part of an interactive and engaging group of growers who are all looking to build capacity and knowledge of local farming systems and soil health.

A case study will be developed to showcase the learnings that arise from the demonstration. For more information on this opportunity please get in touch with the Liebe team.

This project is supported by the Department of Agriculture and Water Resources, through funding from Australian Government's National Landcare Program.



Gen Y participants visiting trial sites around the Liebe Group region



LIEBE SECURES SIX-YEAR MLA PROJECT LOOKING AT ALTERNATE PASTURE OPTIONS

THE Liebe Group is excited to announce the group has been successful with a recent application to Meat & Livestock Australia (MLA) under the Producer Demonstration Site (PDS) Program. This project will support four long-term research sites over six seasons with the implementation and comparison of various pasture system options.

The aim of the project is to identify and demonstrate how to optimise the profitability of livestock pasture systems in the low rainfall zone of the northern Wheatbelt. It will focus on the utilisation of improved perennial and annual feedbase options to reduce the cost of supplementary feed in the typical summer/autumn feed gap period.

Producers in the Liebe Group region have expressed an interest in exploring new and more resilient pasture systems that can provide additional feed through summer and autumn at a lower cost. The end goal is to run farming enterprises with more reliable and productive pastures to increase stocking rates for an improved economic return.

It's estimated that Liebe Group members dedicate approximately 150,000ha to livestock production annually. This means that increasing stocking rates by 0.2 head/ha with the use of more robust pasture options would equate to 30,000 more head of sheep in the region.

With the average return per ewe being \$150/year, this would represent an increase in returns of \$4.5 million per year in this region alone, with the potential for further extension of knowledge and technologies across other low rainfall regions of Australia.

Through this project, the Liebe Group will facilitate and engage an enthusiastic group of livestock producers to develop knowledge around improved pasture management. Various systems being demonstrated include:

- self-sown pasture
- serradella
- grass and legume mix
- sown cereals
- perennial grasses and shrubs.

A comprehensive survey will also be carried out to provide baseline data around livestock numbers, practices, and priorities, to develop a database that can assist in the development of future R&D projects. These activities are strongly supported by the Central Wheatbelt Biosecurity Association and Midlands Biosecurity Group.

This PDS is funded by Meat & Livestock Australia (MLA). More information on this project will be distributed to members in early 2021. If you are interested in being involved in the core producer group please get in touch with the Liebe Group on 9661 1907 or email admin@liebegroup.org.au



PROCESSWORX A GOLD PARTNER FOR THE LIEBE GROUP

The Liebe Group are pleased to welcome a new partner to the group in November with ProcessWorx coming on board as a Gold Sponsor.

Liebe Group partners are an integral facet of the success of the group and since our inception we have developed long and valuable relationships with a number of organisations who have mutual interests to the Liebe Group. These strong partnerships have given the group diversity, a level of security and the capacity to build a sustainable and healthy future.

ProcessWorx is an experienced HR and safety team passionate about helping small businesses succeed with quality human resources and safety management services. Working with clients across a wide range of industries, their expertise and personable approach simplifies HR and safety practices, documentation and processes.

Founded in 2012, ProcessWorx aim to help smaller businesses use process and technology to improve their performance after it became apparent that many small businesses were struggling with human resources and safety management. More recently, farmers have demonstrated a strong demand for reliable and knowledgeable assistance in managing their staff and safety requirements. With this in mind, ProcessWorx offer resources, knowledge and expertise to farm and small businesses to be responsible employers who are up to date with the most current HR and safety legislation.

Danielle McNamee ProcessWorx MD, explains HR and Safety can be a really complicated area yet so important for a business to get right. She is really excited that ProcessWorx will be able to help the Liebe Group members.

Our partners add value to the group through in-kind support, products or services and they see the relationship with the group as a meaningful way to stay in close contact with the grass roots innovators of the industry. We look forward to building an on-going relationship with our latest Gold Partner and thank them for their support towards the Liebe Group.



ProcessWorx HR Advisor Kaitlin Trebley (left), with Managing Director Danielle McNamee



ProcessWorx presenting on HR and safety requirements at a recent Liebe Group workshop

WOMEN OF LIEBE

HEATHER KNOWLES

KL CARTER & 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 grew up in a small town called Peebles in South East Scotland. It has a great community spirit but that's probably where the similarities to Dalwallinu end. Peebles is surrounded by green rolling hills, has 2 rivers running through it and is cold and rainy for about 11 months of the year!

I went to Uni when I was 18 to do nursing then worked in a drug and alcohol rehab hospital for a few years before deciding to pack up my things and go travelling. I came to Australia in 2016 and travelled (almost) all the way around the country then arrived in Dally in Feb 2018 as a barmaid.

I met Boyd in the pub a month later after he came back from one of his Nuffield trips. I moved to the farm at the beginning of harvest 2018 and got a job at the medical centre around about the same time.



Heather and Boyd in Scotland with Neidpath Castle, Peebles in the background

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

Before meeting Boyd my only experience with farming was that my dad's cousin married a farmer. We visited them a few times growing up but it's safe to say my knowledge was very limited. So, over the last 2-3 years I have enjoyed learning the basics of how the farm works.

I work full time in town so I don't have a huge amount of time to be on the farm but I have helped shift vehicles between paddocks, gone on crop checks with Boyd at the weekend and picked up parts from town on my way home. I definitely want to be more involved in the farm in the future, whether that is out in the paddocks or learning more about the admin side of things.

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

From someone who is still learning a lot about the industry, I'd say one of the biggest challenges is the weather. Coming from Scotland I never thought I'd enjoy the rain so much (except during harvest)!

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

I love the peacefulness of living in the middle of nowhere and if I want to play music really loud while doing housework, I know I'm not going to disturb any neighbours!

The best thing about living in a rural area has to be the people – everyone is so supportive and kind, and they make newbies to the area feel very welcome.

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

So far, my involvement with Liebe Group is attending many of the great events they put on throughout the year. It's always nice to mingle with other members and although I don't always know enough to join in some of the conversations I'm always listening and learning!

Who or what inspires you the most?

I've got 2. I would say my mum is someone who inspires me a lot. She passed away earlier this year and lived the last year of her life with a debilitating, terminal illness MND, but she remained happy and positive until the very end. She definitely inspires me to find happiness and positivity in the face of adversity!

Also Boyd, I've never met anyone who is as laid back yet so hard working at the same time! He never lets the stress get to his head.



Heather and Boyd in Brisbane where Boyd was presented with his Nuffield in 2018

REGIONAL ROUNDUP

BRAD & HAYLEY WEST

RONVER HILLS FARMING CO

This year, the Liebe Group caught up with a family from within the Liebe Region to find out what their plans were for the year and what they hope to achieve.

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

Farmers (Family)	Brad and Hayley West	
Location	West Buntine	
Average Rainfall	Annual: 330mm	GSR:260mm
Farm Size	4600ha (3800 arable)	
Cropping	Wheat, barley, lupins, oats (every second year for hay, left on property not sold)	
Enterprise mix	73% cropping, 27% pasture for sheep	

Tell us about the 2020 season – how did it shape up for your business?

The season was about average over all for the West family, which was a little better than expected. There was a lot of variability across the property, primarily due to where summer storm/winter rainfall fell.

They got a bit unlucky with the pasture paddocks mostly being located in the lower rainfall areas of the property, leading to grazing fodder scarcity and necessitating hand feeding through most of the season.

The Wests also ended up decreasing their merino flock numbers again this year, contrary to hopes expressed at the beginning of the year to build the flock up. However the livestock enterprise didn't perform too poorly despite this, as the West's got quite lucky with the timing of their sales coinciding with higher sheep and wool prices. Hayley was also interested to see that the wool cut and quality was better than usual due to the hand feeding.

They were also unfortunate enough to be hit by a hail storm during harvest, which was a disappointing end to a large portion of their lupins this year. They plan on turning the sheep out into the paddocks to attempt to recoup some of the losses.

What do you think were the major constraints to production on your farm this season?

Water availability and rainfall was the most pressing constraint on production for the Wests as is often the case. The best crops were those that were planted in locations that received significant summer rainfall. The early finish really squeezed most crops however Brad feels the cooler weather in spring prevented worse crop performance.

The Wests also had some issues with nitrogen burn decreasing crop performance especially on the poorer soils. Brad was expecting to see more rainfall this season and he feels the nitrogen fertiliser application was too high and held some crop back.

They also has some issues with grain quality in some areas. This seems to be due to variety choice and has lead the Wests to reconsider the varieties employed in their business.

REGIONAL ROUNDUP

How are you planning to adapt to manage these constraints in the future?

Due to afore mentioned quality issues the Wests are looking to use more resilient and shorter season varieties next year. They are planning on moving Ninja out of their enterprise mix and instead incorporate more Zen and Vixen wheat. Brad is excited to utilize the shorter season Vixen wheat to achieve better grain fill in shorter seasons with early finishes. And, as a tool to be able to apply a knock down before seeding with less penalty to crop performance.

Brad is also looking to incorporate beast barley into their rotation to utilise its better competitive traits as an alternate weed management strategy that relies less heavily on expensive herbicide chemistries.

Did you trial or adopt any new technologies or practices on your property this season? What were the outcomes and how will these influence what you do next season?

The Wests have continued to use their new reeferator and assess its benefits in their business. There have been yield increases in most areas where the reeferator has been implemented. Additionally, it has been especially nice for them to have fewer rocks to contend with during harvest, resulting in less damage to harvest equipment. Current plans for the reeferator are to continue its use to increase the productivity of the shallower soils and to push out the edges of cropping areas into current rock. This will be combined with the removal of contour banks to make paddocks easier to work with.

They also plan on leaving more of the property out for pasture in 2021, not wanting a repeat of the feed shortages that occurred this season.

They started digging some new deep drains on the property to address the spread of saline areas. Deep drains have been successful previously on their sandy soils but they are instead employing more salt bush plantings on the heavier clay soils.

If you had \$5 million to invest in R&D, what would you do with it?

Brad would especially like to see the development of more competitive crop varieties, especially wheat. He feels this is a more economical approach than using more chemicals that often have prohibitive prices.

Hayley is interested in new research on more humane castration methods for sheep that are also cost effective in comparison to current methods.

What trials, demonstrations or workshops would you like to see Liebe hold next season?

Hayley would like to see a few more livestock focused workshops, and is excited to see what will be occurring through the new MLA funded project Liebe in implementing from 2021 to 2026. She would especially like to attend a workshop with a vet that would discuss common livestock illnesses present in the region and how to address them on property before they lead to secondary complications.

Brad would like to see work done on ultra-deep ripping, down to depths of 500-700mm, and what benefits it may have in our farming systems. He is also seeing mounds and hollows forming around tram lines that have now been in place for a number of years, especially on more sandy soils. Due to this he is interested in seeing some demonstrations around tramline renovation in coming years.



Hayley and Brad West

FROM OUR PATRON

Dr. Michael Robertson
Science Director
CSIRO



HELLO everyone

I hope you are all well and that harvest has progressed well.

The continuing news about escalating trade tensions with our major export markets is concerning us all. It is shining a light on the need to diversify markets for our produce and have systems that can deal with non-tariff trade barriers. The federal Department of Agriculture recently announced a trade modernisation initiative with a major allocation in the 2020 budget. This initiative and other work will be trying to make the process of discovering and accessing new export markets a lot easier. It will also look at how we can manage risks like biosecurity and food safety that can sometimes form the basis of a non-tariff trade barrier.

CSIRO and its partners have launched a major new program of research to work with government and industry on these challenges. Here is a brief summary of some of the work that is being planned:

- Countries importing our products are becoming fussier about all sorts of things, ranging from the carbon footprint of products (like the canola market in the EU) to animal welfare concerns (like how consumers perceive we treat our dairy calves). Its hard for an individual producer to provide the proof that their products are compliant with new requirements, so we are developing systems to make that a lot easier for an industry or an exporter.
- In some overseas markets products are falsely labelled as Australian when they are not, to attract a higher price. A common example of this is beef in China. There's no easy way to quickly and easily verify in the marketplace whether the label is telling the truth or not. Research is looking at natural chemical "markers" in the produce that relate uniquely to where the product was grown and hence can provide unequivocal proof of the provenance of that product.
- Supply chains for our exports are moving away from paper-based auditing and tracing systems to becoming more digitised. This will require that the players along the chain such as farmers, bulk handlers, processors, and exporters to share their data. However, many are understandably reluctant to do this because of privacy concerns. Luckily, there is digital technology that makes it possible to encrypt data and preserve privacy without destroying the value of that data. The opportunity is to get the supply chain players to use that privacy preserving technology.
- We don't really know what increases consumer's trust in products and what can be done by exporters to enhance trust. There's social research required to figure this out. We can do experiments in markets with real consumers to find answers.

I hope this snapshot gives you a sense how researchers are responding to a challenge our export-dominated sector faces.

May the remainder of the year go well for you all and I hope to see you at some Liebe events in 2021.

Regards,
Michael

GRDC GROWER NETWORK SUMMER SESH SERIES



GRDC welcomes all involved in the grains industry to the:
GRDC Grower Network SUMMER SESH Series

Tues January 19th - Abbey Beach Resort, 595 Bussell Hwy, Broadwater

Thurs January 21st - Centennial Stadium, 156 Lockyer Avenue, Albany

Friday January 22nd - Esperance Yacht club, The Esplanade, Esperance

4.00pm - 7.00pm (Complimentary finger food and refreshments provided)

Guest speakers

Neil Bennett (Media and Communication Manager at Bureau of Meteorology) at Busselton

&

Darrell Panizza (WFI; WA Football Hall of Famer & triple premiership player with Claremont) at Albany & Esperance

Join GRDC at a “Summer Sesh” Local Forum this summer. It’s an opportunity for anyone involved in the grains industry to bring forward ideas including opportunities and constraints which are relevant to the grains industry. Ideas raised will be discussed in detail, to assist the GRDC in developing targeted RD&E activities.

RSVP for catering purposes by Friday January 15th to Julianne Hill

GRDC Grower Network Facilitator

E: grdcgrowernetwork@gmail.com M: 0447 261607

LIEBE GROUP PRESENTS



MYERS BRIGGS TYPE INDICATOR WORKSHOP

**WANT TO KNOW MORE ABOUT YOUR PERSONALITY AND
HOW COMPATIBLE YOU ARE WITH OTHER PEOPLE?**

The Myers Briggs Type Indicator is the most widely used personality assessment in the world!

Join the Liebe Group and AgConsulting Co Director Jeanette Long for a two day work shop in 2021.

\$120 per person

\$100 for each subsequent person in the farm business

**EXPRESSION OF
INTEREST**

EARLY 2021 TBC

LIEBE GROUP OFFICE

REGISTER YOUR INTEREST

Ph: 9661 1907

E: admin@liebegrp.org.au

 Ag Consulting Co.
Innovative Growth



Australian Government

**National
Landcare
Program**



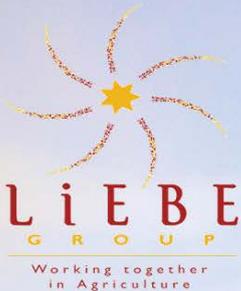


LIEBE GROUP AGCHATS

CROP INSURANCE: PROTECTING YOUR PROFIT

THURSDAY 4TH FEBRUARY 2021

SUPPORTED BY



CROP UPDATES AND TRIALS REVIEW DAY

WEDNESDAY 10TH MARCH 2021 | DALWALLINU RECREATION CENTRE

TRIALS REVIEW DAY

MORNING SESSION

Join in on facilitated discussions with researchers, industry and fellow local growers to review results from the 2020 season trials throughout the region

MEMBERS ONLY

CROP UPDATES

AFTERNOON SESSION

Come along to the annual Liebe Group Crop Updates to hear a range of relevant and topical presentations to prepare for the season ahead!

ALL WELCOME

SAVE THE DATE | FURTHER DETAILS TO COME

ANY ENQUIRIES PLEASE CONTACT THE LIEBE GROUP OFFICE ON 08 9661 1907

GLOBAL FERTILISER
PRICE OUTLOOK
POSITIVE NEWS FOR
AUSTRALIAN GROWERS

Lisa Curtis
Assistant Marketing Manager
Rabobank



Rabobank

CHEAP fertiliser prices have supported growers' profit margins and further contributed to the 2020/21 winter crop recovery, according to agribanking specialist Rabobank.

Nationally, urea sales were 26 per cent up year-on-year (YOY) during the first half of 2020, while global fertiliser benchmarks bottomed out at, or near, 10-year lows.

However Rabobank analyst Wes Lefroy said the market had taken a new turn during the second half of this year, with prices across the global fertiliser complex moving back toward the 10-year average.



Rabobank analyst Wes Lefroy

Mr Lefroy said that according to Fertiliser Australia, on average over the past five years, 66 per cent of all fertiliser sold in Australia had been imported, up from an average of 50 per cent from 2002 to 2006.

For the three main products sold here, the figures are even higher – in 2019, 86 per cent of urea sold was imported, 79 per cent of mono-ammonium phosphate (MAP) and 100 per cent of Muriate of Potash (MOP).

And of the domestically-produced fertiliser products, Mr Lefroy said some rely on imported raw materials.

“As such, local farm-gate fertiliser prices are largely driven by global prices, the Australian dollar and, to a lesser extent, ocean freight rates,” he said. “For growers, the good news is we expect heavy supplies and growing production capacity will continue to weigh on prices across the global nutrient complex.”

In the immediate term, he said prices of phosphates and urea continuing would be supported by northern hemisphere demand (until the start and end of quarter one 2021 respectively).

However he warned that once seasonal demand from the northern hemisphere subsided, markets would again be exposed to heavy supplies.

“In 2021, this is expected to be particularly the case for urea. The International Fertilizer Association expects another nine million metric tonnes (mmt) of urea production capacity, a 4.5 per cent increase, well above their forecast demand growth of one per cent,” Mr Lefroy said.

Almost half of that new capacity was likely to appear in India, reducing that country's activity in global markets.

PARTNER UPDATES

“The one exception is potash, where the market is more supportive of prices. We expect importers in China and India will continue to cover inventories and demand in the US and Brazil will be sustained.”

On the supply side, current low prices may limit production from high-cost plants and new projects coming online, and as a result, Rabobank was forecasting global potash prices to increase at a constant rate over the first half of 2021.

“While we expect global fertiliser prices to remain favourable for Australian producers, one factor chewing into importers’ purchasing power will be a relatively weak Australian dollar. At current urea prices, a one cent drop in the AUD represents approximately a 5-6 AUD/tonne increase in local prices.”

The ongoing impacts of COVID-19 also needed to be considered in the year ahead, he said.

“The resilience of local and global fertiliser supply chains to the impacts of the global pandemic this year have been something to celebrate. In fact, to the end of August, year-to-date urea imports reached 2.1 mmt, some 300,000 million tonnes more than 2019, and 665,000 million tonnes than 2018.”

“However, with case numbers still very high in many part of the world, the potential for a COVID-19-related interruption to either supply or production remains,” Mr Lefroy said.

WITH harvest rapidly ending, attention is turning to the next phase in the farming business operation, planning for the next season. A good way to start the planning is to start preparing your budget for the coming year.

The purpose of a budget is to plan, organise and track your financial performance and requirements for the coming period. A good budget will include not only your income and expenses but also your capital and personal expenditure items.

Some of the key points to consider in your budget include the following:

- Income – Include all your income. This could include goods sold for cash as well as sold on deferred terms. Also include the sale of any capital items.
- Expenses – Do not just average common expenses out over the period of the budget. Ensure that you include expenses in the actual months in which they are expected to be spent.
- Capital – Ensure you include any capital items of plant and equipment that are required to be purchased. Give consideration as to how you will pay for these items. Will it be cash or with finance as each will impact your budget in different ways.
- Personal – Remember to add in any personal spending requirements from the business.
- Loan Repayments – If you are expected to make any repayments off chattel mortgages or term loans, make sure they are included.
- Tax / GST – If there are any tax or GST payments that need to be included during the year make sure provision has been made to include these items.
- Finance Limits – Consider the limits on your finance facilities. Do you need to increase your limit or is it sufficient.

It is important to remember that the budget should be an interactive and living document. It is not something that is prepared and then forgotten about.

To assist in getting the most from your budget:

1. Review the budget with your accountant. Your accountant is well placed to assist in making sure that you have picked up all relevant income and expenditure items and nothing has been missed.
2. Keep your budget an interactive document that can be reviewed regularly. Ensure that you are using the most appropriate program to prepare your budget with. Many programs allow you real time data processing to allow budget to actual reporting, allowing you to make real time decisions about your business and it's finance requirements.

Wishing you all a Merry Christmas and a safe New Year.

Happy Budgeting!!

EFFECTIVE BUDGETING

Kieran Sullivan
Director
RSM Australia



KEY MESSAGES

- Application timing is important to ensure control and optimise water use efficiency.
- Spray actively growing weeds.
- If you haven't yet, familiarise yourself with what Button Grass looks like – new problematic weed.

SUMMER WEEDS

Clare Antonio
 Agronomist
 Elders Scholz Rural

With a wet start to harvest there are many summer weeds already popping up. While overwhelmingly frustrating, to take a few positives out of it, on paddocks already harvested there has been some germination of volunteers. After a few years of no summer rain this year we were able to see the massive benefit of getting rid of those volunteers prior to the season to aid in paddock crop rotations. Additionally, this season I don't believe we would have been able to achieve some of the incredible yields I have heard of if only relying on growing season rainfall and not controlling summer weeds for maximising water use efficiency. An incredible reflection on how far agriculture has come in such a short period of time.

The usual culprits are already popping up such as caltrop and melons. Be sure to keep an eye out for button grass, the new and increasingly problematic summer grass. It is easy to see how it has begun to spread throughout the region, growing on minimal moisture, producing a seed head in no time and being able to practically hibernate while waiting for more moisture (doesn't take up herbicides when stressed).

The balance of waiting for more to germinate and killing smaller weeds is skewed by button grass arriving. Once button grass is bigger than a 4cm, it is significantly harder to kill. Trial work has shown that glyphosate is effective however the rates required increase quickly!

If targeting Afghan thistle be aware of plant back requirements. Clopyralid plant back for pulses is the key one. You may be better off opting for something like Sharpen however then canola plant back is 40 days.



Button grass

A trial conducted by Imtrade at the 2018 main trial site showed significant biomass reduction from 180ml haloxyfop or 25g sulfosulfuron applied within 57 days of seeding. Similarly 7g metsulfuron had a significant impact on biomass when applied up to 86 days prior to seeding.

For further information, contact Clare or Dave on 08 9661 2000.



WATERING LIVESTOCK IN DRY TIMES

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

The logo for Nutrien Ag Solutions, featuring the word "Nutrien" in a bold, black, sans-serif font with a green leaf-like graphic to the left of the letter 'N'. Below "Nutrien" is the text "Ag Solutions" in a smaller, italicized, black, sans-serif font.

HAVING access to enough quality water for agricultural enterprises and rural communities, is proving to be a significant challenge. These past few seasons being dryer than expected, water has been in short supply, which has left growers searching for alternative water sources or for solutions, in some cases this has meant significant destocking. Growers who have committed to running stock have been actively looking for ways to drought proof their properties to ensure adequate water supplies moving forward.

In drier seasons, water quantity is not the only concern, with lower dam levels, minerals contents can be less diluted, and can be found in elevated levels which can lead to stock production losses. Poor quality water negatively impacts on stock production; therefore, when allocating feed sources and determining mineral supplements required, it is important to assess the water quality.

When assessing water quality, the key points to consider are:

- water pH
- salinity levels
- mineral and chemical content
- presence of algae, vegetable matter or carcasses
- temperature

Other concerns with water quality in dams are algae blooms which are common in summer with higher water temperatures, and excess phosphorous and nitrogen, due to organic and faecal matter.

Botulism and salmonellosis can result from water sources contaminated with organic matter, both are serious diseases which can result in death. Retaining ground cover, maintaining silt traps, removing animal carcasses, and removing excess vegetable matter are important management strategies to maintain water quality.

Water temperature is also important as it drives consumption, generally animals prefer water at or below body temperature.

When determining whether you have adequate quantity of water on hand, to meet consumption levels it is important to consider:

- livestock type & production status
- weather
- water quality
- feed type and quality
- available shelter

PARTNER UPDATES

Table 1: Water pH & Mineral Analysis levels

Element	Rainwater	Upper limit	Effect
Calcium	40 mg/L	>1000 mg/L	Phosphorus deficiency
Magnesium	0–19 mg/L	> 1000 mg/L	Scouring and diarrhoea
Nitrate	10 mg/L nitrate, 1 mg/L nitrite	>1500 mg/L nitrate, >30 mg/L nitrite	Vomiting, convulsions, death
Sulfate	250 mg/L	>1000–2000 mg/L	Diarrhoea
Aluminium	0.05–0.2 mg/L	5 mg/L	Phosphorus deficiency
Arsenic	0	0.5 mg/L	Diarrhoea, anaemia, poor coordination
Copper	1 mg/L	0.5 mg/L	Liver damage and jaundice, copper accumulation in liver
Fluoride	1 mg/L	>2 mg/L	Tooth damage, bone lesions
Iron	0.3 mg/L	None (low toxicity)	None
Lead	0.015 mg/L	0.1 mg/L	Respiratory diseases, anorexia, unco-ordination
Molybdenum (related to copper)	0	0.15 mg/L	Scouring, loss of condition, infertility, skeletal disorders, testicular damage
pH	6.5-8.5	>9, <5	Other minerals become available, such as copper and aluminium
Total dissolved solids	500 mg/L	Variable – generally >5000 mg/L	Poor production, diarrhoea, higher mortality rates

Table 2: Acceptable salinity levels

Production decline begins above these levels		
Type of livestock	EC ($\mu\text{S}/\text{cm}$)	mg/l or ppm
Poultry	3,100	2,000
Pigs	3,100	2,000
Horses	6,250	4,000
Mature Sheep	9,300	6,000
Nursing Ewes	6,000	3,800
Lambs	6,000	3,800
Mature Cattle	6,250	4,000
Lactating Cattle	5,000	3,200
Calves	5,000	3,200

Source: *Drought Feeding and Management of Sheep - A guide for farmers and land managers 2015*. Victorian Government Department of Economic Development, Jobs, Transport and Resources, Agriculture Services and Biosecurity Operations Division, October 2015.

Table 3: Livestock water consumption requirements

Stock type	Peak demand (L/head/day)	Ave demnad (L/head/day)	Annual demand (KL/hd/yr)
Dry sheep	10	6	2.2
Lactating ewes	14	10	3.7
Weaner lambs	6	4	1.5
Dry cattle	100	80	29.2
Lactating cattle	120	100	36.5
Wewaner calves	70	55	20.1

Sourced from: Agriculture Victoria, 2019, Adapted from (2016) booklet, Managing farm water supplies. Department of Economic Development, Jobs, Transport and Resources, Melbourne.

Animals in peak production status require twice as much water as dry animals. Younger animals require less water / head /day, than older stock.

During hotter months sheep can consume 40% more water than they do in winter. On extremely hot days animals can consume 80 % more water than usual, however prefer colder water so warmer temperatures will limit intake.

Fouled dirty water, with high vegetable matter content can also effect consumption as dam water becomes unpalatable.

Trough water which is regularly cleaned supports better production levels for animals, compared to those whose water source is from dams. Animals drink more water from troughs when water quality is high, because its more palatable and easier to access. Higher water intake leads to an increase in dry matter intake and increase growth rates. However, it is important that adequate trough space, shelter and flow rate are provided to support stock requirements.

A trough water supply system needs to be able to deliver the daily peak demand in four hours, and troughs need the capacity to hold 400 -600 litres of water for 500 hd sheep or 160 hd cattle.

Table 4: Required trough space and flow rates

Livestock	Flow rate	Accessible Trough Edge 1 m
Dry cattle 160 hd	67 L/min	20 cattle / m of accessible trough edge
Sheep 500 hd	21 L/min	63 sheep / m of accessible trough edge

How to Address Water Supply Issues

Carrying out the usual fall back methods to secure quality water supplies like: cart water, shandy water supplies, clean out catchments etc, have been good temporary means to address the water shortage, but to remain sustainable more permanent cost effect solutions need to be found. Reverse Osmosis has proven to be cost effective versatile system which can be adapted to suit a range of agricultural applications.

In a nutshell reverse osmosis reduces the salinity and removes excessive minerals in the water, which turns unusable poor quality water into high quality drinking, spray or livestock water.

The reverse Osmosis process facilitates a complete solution based on the end process requirement. Systems can be fully mobile to allow for usage on farm in areas of most need or fixed at a key water source. Typical system design will make allowance for many various incoming water quality standards.

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Nutrien provide for a large range of potential water supply concerns by way of primary and tertiary filtration that is tailored to the application.

Simple customisation of the plant will allow the same plant to deliver several different water quality standards based on the desired use, season or specification that is to be achieved.

Filtration units are automated and minimise the need for ongoing maintenance.

Key features:

- Treats volumes from 10kl/day up to 2000kl/day
- Iron removal and treatment via splash plate and media types
- Water softening available
- Filtration down to .5um
- UV treatment available
- PH correction available
- Supply power from a range of sources: 240V to 415V, Mains, Generator and solar system in development – typically limited to approx. 40kl/day plants
- Maximum salt level for RO plants 15,000 PPM Salt – pending full analysis
- Systems available for 15,000+ PPM Salt – pending full analysis
- Containerised, mobile or fixed systems
- System design and specification based on water analysis

Even with the enormous benefits that RO provide users through reliable, high quality water, there have been some key concerns with Reverse Osmosis in the Agricultural settings. These concerns are in regards to labour and maintenance requirements, controlling waste water, stripping and pH changes and bacterial and fungal control.

Labour & Maintenance

RO systems can be based around minimal maintenance which are specifically developed for Ag settings. RO systems use a simple dosing pump and anti-scaling method to prolong the life of the RO membrane, making a low maintenance system.

Stripping & pH Change

RO units do strip the water of minerals and is beneficial when there is a high mineral content, however the systems can also remineralise balance PH if required. A typical RO will decrease the PH .1 or .2. which is a negligible change.

Sources

[DPIRD \(2019\) Livestock Water Requirements](#)
[DPIRD \(2020\), Water Quality Livestock](#)
[Agriculture Victoria, \(2017\)](#)

Water Waste

Brine water production from the RO is directly related to the quality and salinity. High salinity, results in high waste and vice-versa however; the waste production is also based on what quality is required for the end product. RO units can a remineralisation line so the brine waste can be re-used as much of the as possible. Evaporation ponds provide the opportunity to re-use the dried salts and minerals for livestock lick, if there are no heavy metals are present. Wastewater can also be used to “freshen” an existing saline stream on the property if the brine discharge is less than that of the existing stream.

Bacteria & Fungal

RO systems with are available with a full 70W UV sterilisation units which is compliant with the AWD guideline for human consumption, this is the highest of standards to meet.

Any water sources that are low, or you have stock on that aren't reaching expected growth rates, we strongly suggest you test your water, to determine livestock thresholds. If you are concerned with your water quality, want to set up trough systems or have limited water available and wish to investigate your options further please make contact with your local Nutrien Ag Solutions Store.

DISCUSSION OF DEEP RIPPING TIMING: POST SOWING

Wayne Parker
Soils Researcher
DPIRD Geraldton

2020 was a challenging year for soil amelioration. Dependant on which storm cloud you were under there was little summer rain to assist with deep ripping during the pre-sowing 'ripping season'. When the season did arrive it came with such wind that any exposed or poorly covered soil was lost to the atmosphere. Newly emerged crops were damaged, canola sown dry disappeared and a great deal of soil was shifted around paddocks. A timely reminder of the necessity of stable soils.

As a result there is a need to reassess how soils are treated in the lead up to sowing. The benefits of deep ripping are well established for many soil types and most growers are attempting to deep rip ahead of sowing. Given the lack of opportunity this year some considered deep ripping after sowing in order to 'get across more ground'.

Unfortunately this timing of amelioration has had little to no reported research work to help decision making. In one study, Dr Paul Blackwell applied deep ripping between established wide row lupin crops at early budding stage. In this instance the ripping was unsuccessful resulting in yield losses of 130 to 460 kg/ha.

Growers deep ripping post sowing, pre-emergent, were recommended to stop at 72 hours after sowing. The growth stage of the grain is the reason for this. At this point the freshly emerged radicle (embryonic root) is most susceptible to damage and can be easily broken from the grain. If this happens the grain dies and the plant is lost. Understanding this is key to minimising the risks from post-sowing, pre-emergent deep ripping.



In 2020 a number of growers pushed the boundary of ripping timing well after the recommended 72 hours. Three of these circumstances deep ripping post sowing provided contrasting results.



Department of
Primary Industries and
Regional Development

The first grower success story, Binu yellow sand plain, wheat crop, ripped from day 2 to day 7 after the first rainfall event. Not enough summer rain fell to begin their ripping program prior to the season and made the decision to rip a paddock after sowing. Soil compaction was a large constraint in this paddock as no other amelioration had occurred in the years prior to ripping. The paddock went on to yield well above unripped neighbouring paddocks. In future they will be adding 10 kg/ha to the seeding rate to take their rate to 70 kg/ha. Future deep ripping will be on an angle to seeding direction to reduce in furrow seed movement. Deep ripping post sowing will be used in future particularly on paddocks with low levels of stubble cover.

An unsuccessful application of post-sowing ripping occurred in an established canola paddock spaded in 2019. Too many plants were lost during the process as tines removed plants from the furrow. Ripped canola areas yielded 100 kg/ha less than the unripped canola. Compaction was less of a constraint in this paddock given recent spading.

A second success story, Northampton yellow sand, the grower deep ripped a severely sand blasted, emerged wheat crop at two to three leaf. Ripping was at an angle to sowing in soil at greater than 8 percent soil moisture. No rollers or packers were used post ripping. Plant numbers were reduced slightly as tines pulled established plants from the soil though not sufficiently enough to reduce yield. Final yield was far beyond the grower's expectation as the second highest yielding paddock on the farm.

Safer deep ripping post dry sowing is achievable if the soil is still dry. Likelihood of damaging emerging seeds is greatly decreased as they are yet to grow. Managing the seeding depth and the dramas of pulling the seeding bar through soft soil are also avoided.

Soils higher in clay are likely to have greater movement of soil during ripping as clods fracture, break and shift during passage of the tine.

Considerations for deep ripping post sowing

- Soil moisture sufficient to allow fracturing without excessive cloddiness.
- Minimal soil surface disturbance, no topsoil inclusion plates, consider wider tine spacing.
- Cereal crops have a greater probability of success and less susceptible to damage.
- Paddocks with soil compaction as the largest constraint will give greatest return.
- Ripping on the angle can reduce the likelihood of ripping tine lining up with sowing rows and causing much greater damage.
- No post-ripping rolling.
- Increase the sowing rate on those paddocks to be ripped post sowing.
- Leave an unripped strip to compare and help with future decisions.

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CALENDAR OF EVENTS

LIEBE GROUP EVENTS 2021

AgChats Crop Insurance: Protecting your Profit	Thursday 4th February	Liebe Group Office
Crop Updates	Wednesday 10th March	Dalwallinu Recreation Centre
Women's Field Day	Tuesday 15th June	Dalwallinu Recreation Centre
Post Seeding Field Walk	Wednesday 21st July	Hyde Property, Dalwallinu
Spring Field Day	Thursday 9th September	Hyde Property, Dalwallinu



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