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LIEBE GROUP

# LIEBE GROUP NEWS

## INSIDE THIS ISSUE



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

# LIEBE GROUP PARTNERS

Liebe Group Partners are an integral facet of the success of the group. Since our inception the group has developed long and valuable relationships with 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.

These partnering organisations are high profile agribusinesses with a keen interest in the healthy future of agriculture. They see the relationship with the group as a meaningful way to stay in close contact with the grass roots innovators of the industry and a way to invest resources into a group which is focusing on research and development for future agricultural sustainability.

## DIAMOND PARTNERS

Rabobank

RSM

CBH GROUP

CSBP

## GOLD PARTNERS

Elders SCHOLZ RURAL

ProcessWorx HR & SAFETY

AFGRI EQUIPMENT

COUNTRY WIDE INSURANCE BROKERS

FARMANCO

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Refuel Australia
Syngenta
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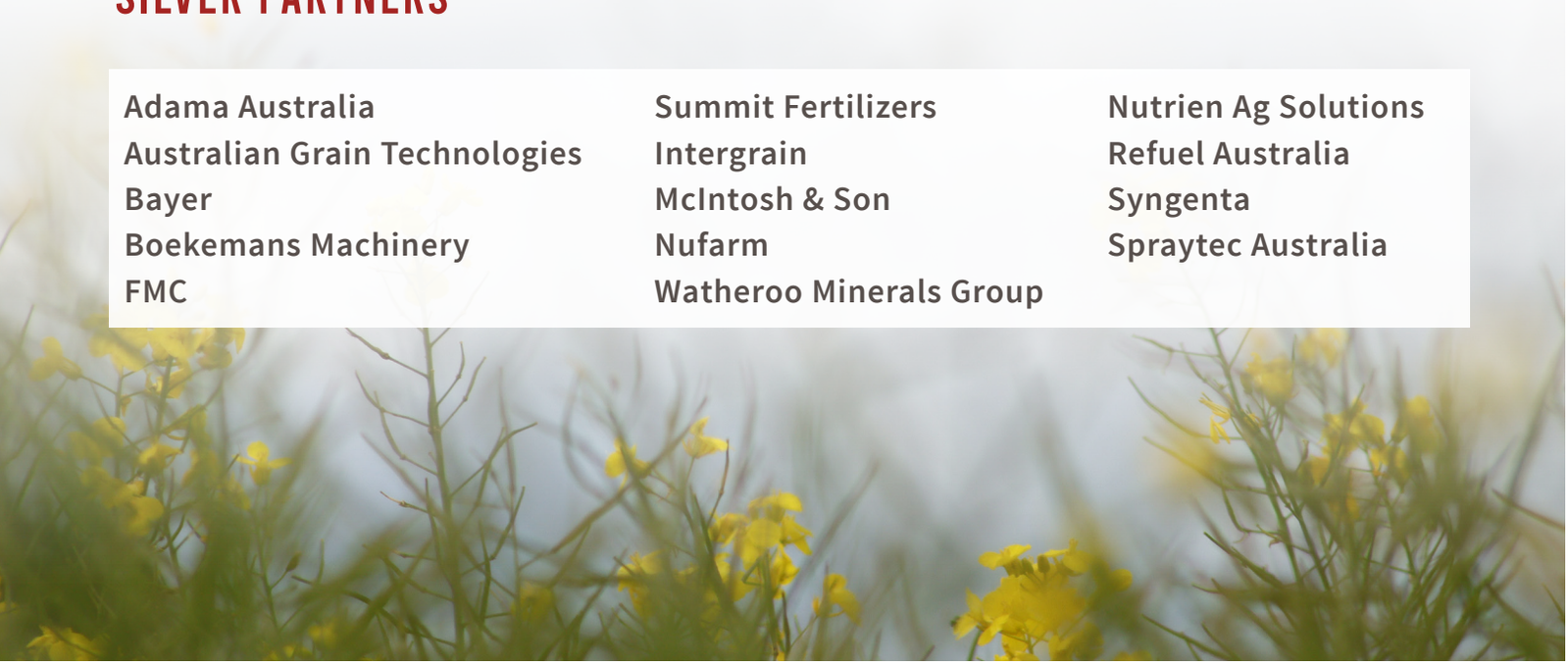

# FROM THE EXECUTIVE OFFICER

Welcome to the latest Liebe quarterly newsletter. It has been a busy start to the year with new staff settling into their roles and a raft of new projects kicking off.

At the end of 2022, the group bid farewell to Executive Officer Katrina Venticinque, R&D Co-ordinator Juniper Kiss and Project Officer Jess Cole, all of who made significant contributions to the group during their time with Liebe and we wish them well for the future. I would also like to extend our congratulations to Katrina and Todd on the birth of their first child in February.

I have stepped into the Executive Officer's role again, which I am doing for 4 days per week, which for the first part of the year has involved overseeing the staff recruitment and onboarding, plus getting new projects off the ground and oversight of the 2023 trial program. In addition to my Liebe work, I have also retained some of the EO duties with the Midlands Biosecurity Group of which I am ably supported by a quality team of support staff and contractors.

At the start of the year, we welcomed Aeneva Poulish into the team. Aeneva began as an administration assistant, however her role has since evolved very quickly into being a project officer, taking on the group's Agtech decoded and moisture probe network project.

Aeneva will also take on one of our exciting (yet to be announced) upcoming projects that will focus on crop sequences and nutrition.

We were also lucky to have Aimee Flynn join the team in March. Hailing from Ireland, Aimee has been traveling Australia as part of a working holiday and has landed in Dalwallinu until July. From an agricultural background in Ireland, Aimee has very quickly settled into the Research & Development Coordinator's role and has been busy co-ordinating much of the trial program for 2023 and assisting with data analysis from 2022. Aimee will be continuing with her travels from July, however I am excited to announce we will have a new R&D Co-ordinator starting in June, allowing for a seamless 6 week handover period with Aimee.

Lisa-May Shaw has also returned from maternity leave, assisting Danielle with administration duties, whilst Rebecca Wallis has also been assisting me with co-ordinating the group's sponsors.

As a result of this staff movement, the start of the year was a little slower than what would ordinarily be expected from the Liebe Group, however as we build up our capacity I am confident that the group will return to delivering timely and relevant R&D and events as the year progresses. There are a number of exciting projects in the works and the trial plans for the year are looking good. Hopefully we receive some decent opening rains soon to get season underway.

All the best with seeding and I am sure to see you at a Liebe event soon.

## LIEBE'S LEADERSHIP 2023

### BOARD

**Chair:** Brad McIlroy
**Vice-Chair:** Rebecca Wallis
**Secretary:** Chris O'Callaghan
**Treasurer:** Sophie Carlshausen

**Board Members:**
Boyd Carter
Dylan Hirsch
Wendy Sawyer
Emma Pearse
Blayn Carlshausen
Gavin Carter
Alex Keamy

### FINANCE COMMITTEE

**Chair:** Wendy Sawyer

### R&D COMMITTEE

**Chair:** Dylan Hirsch

### WOMEN'S COMMITTEE

**Chair:** Amanda Nixon

LIEBE GROUP
Working together in Agriculture

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## MEMBER NEWS



## AGRONOMIC UPDATES



## BUSINESS UPDATES



## OTHER UPDATES

# AGTECH DECODED: GROWERS CRITICALLY ANALYSING THE ROLE OF NEW TECHNOLOGY IN ON FARM DECISION MAKING – WHAT ARE THE POSSIBILITIES?

**By Aeneva Poulish, Project Officer, Liebe Group**

Australian grain growers are constantly required to make effective decisions in a short time frame. Climate variability presents numerous farming systems challenges, including optimising crop and variety choice, suitable sowing times as well as maintaining soil nutrition and grain protection.

Data-analytics is increasingly seen as an important tool for farmers to improve their enterprises. Modern technology including real-time soil moisture sensors and satellite imagery, when combined with in-season paddock data and evaluated with advanced analytic techniques, has the potential to change the face of farmer-driven R&D in Australia.

In collaboration with Stirlings to Coast Farmers in Albany, the Liebe Group has teamed up CSIRO to increase grower awareness and knowledge of the current state of play with Agricultural technologies, building on the groups existing investment into its soil moisture probe and weather station network. This has provided growers with the opportunity to better understand water use efficiency (WUE) on various soil types and what tools are available to monitor and improve this.

## SNAPSHOT OF THE PROJECT

In 2021, 14 growers in the region invested in a network of moisture probes and weather stations to improve their understanding of soil water dynamics and water use efficiency. Ten additional automatic rain gauges were also installed as part of the network. This first year focused on the installation of the technology, calibration and learning of what the data could provide.

The AgTech Decoded project kicked off in June 2022 with the aim to explore the use and integration of this network into tools such as Yield Prophet and learn about other tools that are available and may have benefit to farmers. Monthly reports were generated through Yield Prophet, which provided growers with a predicted final yield based on rainfall at that site to date, stored soil moisture and the characterisation of that soil.
In August, the participating growers involved in the project met with representatives from Farmanco, DPIRD and CSIRO to discuss feedback and commence conversation into how the network will look going forward.

Liebe Group staff completed on-farm surveys with the host growers in January of 2023, purposed to discuss data collection and technology used to assist in making real time farming decisions.
In March, Liebe Group and Stirlings to Coast Farmers held workshops in Dalwallinu and Albany. Growers were joined with industry representatives from CSIRO, DPIRD and GGA with discussions covering digital tools available, interoperability, trial datasets analysed and general data management moving forward. CSIRO presented the results from their yield gap analysis and an evaluation of the existing digital technologies on farm, as well as some of the challenges and solutions of these technologies.

Workshop discussions revealed that growers were most interested in technology that helped with a critical management decision. This invariably meant a technology should assist with an action related to crop planting, crop nutrition, soil amelioration, weed detection and management, pest detection and management and pathogen detection and management.

With the completion of the AgTech Decoded project approaching in July of this year, there has been ongoing communication between the Liebe Group, Stirlings to Coast Farmers and CSIRO to discuss the path forward.
To finalise the learnings from the project and to make a clear statement of what growers are looking for, the Liebe Group is carrying out case study discussions with selected growers, to ensure nothing gets left on the table.

The findings from this project will be published later in 2023.

Local growers joined industry representatives from CSIRO and DPIRD to discuss the Liebe Group Soil Probe and Weather Station Network during the workshop held in March 2023

# ECONOMICS OF EARLY SOWN CANOLA IN 2022

By Chris O'Callaghan, Executive Officer, Liebe Group

In 2022, with GRDC investment, the Liebe Group investigated the risks and rewards of early sown Canola by instigating a small plot trial that tested 6 canola varieties when sown at the start of April versus the start of May.

In this trial, the April sowing was after 114mm of rain falling from the remnants of ex-tropical cyclone Charlotte and was one of the best early sowing opportunities you could get.

In this trial the rewards of early sowing of canola were clear, with the results indicating that sowing any variety in early April would have outperformed any variety sown in early May.

An economic analysis of this trial has been completed by Stacey Bell-Crookes of Farmanco and is reported on the right.

This trial is being repeated this season, in what has been a more challenging start to the season. The first time of sowing of this trial was the 3rd of April, after 35mm fell in the last week of March. The site at Jibberding had received no summer rainfall and thus there was no subsoil moisture.

Plant counts four weeks later averaged 12 plants/m$^2$ across the trial which was well down on the target density of 40 plants/m$^2$.

This is in contrast to 2022 when plant count numbers at the same time were closer to 50 plants/m$^2$, although it must be noted that this trial was sown at an exceedingly high sowing rate owing to a calculation error at seeding. The second time of sowing was the 2nd of May into fairly dry topsoil conditions.

The 2022 trial gave us the rewards of sowing early in what was a near perfect scenario for doing so. This year, in what has been a more marginal start to the season, the trial will hopefully give us equally as valuable information around the risks and rewards of early sowing canola.

These trials are made possible with GRDC investment.

**Table 1:** Enterprise Analysis Crop - TOS 1 2022

| Crop Enterprise | | Nuseed Emu TF | Hyola Battalion XC | Pioneer 44Y27 RR | Invigor R 4022P | Invigor R 4520 P | Nuseed GT-53 |
|---|---|---|---|---|---|---|---|
| Area | ha | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 |
| Yield | t/ha | 2.60 | 2.63 | 3.02 | 2.50 | 2.41 | 2.93 |
| Production | tonnes | 11.87 | 12.04 | 13.83 | 11.42 | 11.03 | 13.40 |
| For Sale | tonnes | 11.87 | 12.04 | 13.83 | 11.42 | 11.03 | 13.40 |
| Average Grain Price (FIS) | $/t | $840 | $840 | $840 | $840 | $840 | $840 |
| Grain Sales | $ | $9,968 | $10,111 | $11,613 | $9,591 | $9,264 | $11,256 |
| Total Income | $ | $9,968 | $10,111 | $11,613 | $9,591 | $9,264 | $11,256 |
| **Income** | **$/ha** | **$2,180** | **$2,212** | **$2,540** | **$2,098** | **$2,026** | **$2,462** |
| **Variable Operating Costs** | **$/ha** | | | | | | |
| Seed, Treatment & EPR's | | $347 | $347 | $347 | $347 | $347 | $347 |
| Grain Freight (Up Country) | | $84 | $85 | $98 | $81 | $78 | $95 |
| Grain Handling Charges | | $47 | $48 | $55 | $46 | $44 | $53 |
| Crop Contract | | $28 | $28 | $28 | $28 | $28 | $28 |
| Other Crop Costs & Crop Ins | | $22 | $22 | $22 | $22 | $22 | $22 |
| Wages Gross | | $19 | $19 | $19 | $19 | $19 | $19 |
| R&M Mach./Plant/Vehicle | | $39 | $39 | $39 | $39 | $39 | $39 |
| Fuel & Oil | | $27 | $27 | $27 | $27 | $27 | $27 |
| Fertiliser, Lime & Gypsum | | $292 | $292 | $292 | $292 | $292 | $292 |
| Pesticide | | $173 | $173 | $173 | $173 | $173 | $173 |
| **Variable Operating Costs** | **$/ha** | **$1,077** | **$1,079** | **$1,099** | **$1,073** | **$1,068** | **$1,094** |
| **Variable Operating Costs** | **$/t** | $415 | $410 | $363 | $429 | $443 | $373 |
| **Operating Gross Margin** | **$/ha** | **$1,103** | **$1,132** | **$1,441** | **$1,025** | **$958** | **$1,368** |
| | **$/t** | $425 | $430 | $477 | $411 | $397 | $467 |
| **Fixed Operating Costs** | **$/ha** | **$106** | **$106** | **$106** | **$106** | **$106** | **$106** |
| | **$/t** | $41 | $40 | $35 | $42 | $44 | $36 |
| **Total Operating Costs** | **$/ha** | **$1,183** | **$1,185** | **$1,205** | **$1,179** | **$1,174** | **$1,200** |
| | **$/t** | $456 | $450 | $399 | $472 | $487 | $410 |
| **Operating Profit (BIT)** | **$/ha** | **$997** | **$1,026** | **$1,335** | **$919** | **$852** | **$1,262** |
| | **$/t** | $384 | $390 | $441 | $368 | $353 | $430 |
| Finance Costs | $ | $16 | $16 | $16 | $16 | $16 | $16 |
| **Earnings Before Tax (EBT)** | **$/ha** | **$981** | **$1,010** | **$1,319** | **$903** | **$836** | **$1,246** |
| | **$/t** | $378 | $384 | $436 | $362 | $347 | $425 |

**Table 2:** Enterprise Analysis Crop - TOS 2 2022

| Crop Enterprise | | Nuseed Emu TF | Hyola Battalion XC | Pioneer 44Y27 RR | Invigor R 4022P | Invigor R 4520 P | Nuseed GT-53 |
|---|---|---|---|---|---|---|---|
| Area | ha | 3.05 | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 |
| Yield | t/ha | 1.78 | 1.82 | 1.80 | 1.64 | 1.83 | 1.86 |
| Production | tonnes | 5.44 | 8.33 | 8.25 | 7.51 | 8.35 | 8.52 |
| For Sale | tonnes | 5.44 | 8.33 | 8.25 | 7.51 | 8.35 | 8.52 |
| Average Grain Price (FIS) | $/t | $840 | $840 | $840 | $840 | $840 | $840 |
| Grain Sales | $ | $4,570 | $6,997 | $6,930 | $6,308 | $7,014 | $7,157 |
| Total Income | $ | $4,570 | $6,997 | $6,930 | $6,308 | $7,014 | $7,157 |
| **Income** | **$/ha** | **$1,499** | **$1,530** | **$1,516** | **$1,380** | **$1,534** | **$1,565** |
| **Variable Operating Costs** | **$/ha** | | | | | | |
| Seed, Treatment & EPR's | | $347 | $347 | $347 | $347 | $347 | $347 |
| Grain Freight (Up Country) | | $58 | $59 | $58 | $53 | $59 | $60 |
| Grain Handling Charges | | $33 | $33 | $33 | $30 | $33 | $34 |
| Crop Contract | | $28 | $28 | $28 | $28 | $28 | $28 |
| Other Crop Costs & Crop Ins | | $22 | $22 | $22 | $22 | $22 | $22 |
| Wages Gross | | $19 | $19 | $19 | $19 | $19 | $19 |
| R&M Mach./Plant/Vehicle | | $39 | $39 | $39 | $39 | $39 | $39 |
| Fuel & Oil | | $27 | $27 | $27 | $27 | $27 | $27 |
| Fertiliser, Lime & Gypsum | | $292 | $292 | $292 | $292 | $292 | $292 |
| Pesticide | | $173 | $173 | $173 | $173 | $173 | $173 |
| **Variable Operating Costs** | **$/ha** | **$1,037** | **$1,038** | **$1,038** | **$1,029** | **$1,039** | **$1,040** |
| **Variable Operating Costs** | **$/t** | $581 | $570 | $575 | $627 | $569 | $558 |
| **Operating Gross Margin** | **$/ha** | **$463** | **$492** | **$478** | **$350** | **$496** | **$525** |
| | **$/t** | $259 | $270 | $265 | $213 | $271 | $282 |
| **Fixed Operating Costs** | **$/ha** | **$106** | **$106** | **$106** | **$106** | **$106** | **$106** |
| | **$/t** | $59 | $58 | $59 | $65 | $58 | $57 |
| **Total Operating Costs** | **$/ha** | **$1,143** | **$1,144** | **$1,144** | **$1,135** | **$1,145** | **$1,146** |
| | **$/t** | $640 | $628 | $634 | $691 | $627 | $615 |
| **Operating Profit (BIT)** | **$/ha** | **$357** | **$386** | **$372** | **$244** | **$390** | **$419** |
| | **$/t** | $200 | $212 | $206 | $149 | $213 | $225 |
| Finance Costs | $ | $16 | $16 | $16 | $16 | $16 | $16 |
| **Earnings Before Tax (EBT)** | **$/ha** | **$341** | **$370** | **$356** | **$228** | **$374** | **$403** |
| | **$/t** | $191 | $203 | $197 | $139 | $205 | $216 |

*The information for this analysis has been sourced from Daily Grain and Farmanco Marketing (grain prices), the Farmanco Profit Series (variable, fixed and finance costs) and CBH (handling and freight costs).*

# LIEBE GROUP PROJECTS IN 2023

By Chris O'Callaghan, Executive Officer, Liebe Group

## THE SPRAYING CHALLENGES OF STRIP AND DISC

The Liebe Group-led project that is investigating different stubble heights across the WA Wheatbelt continues in 2023. This project consists of 4 farmer-scale demonstration trials, at Latham, Wickepin, Corrigin and Kendenup, with each trial looking at the 'Strip & Disc' system compared to other stubble management systems including Windrow & Bale and the convention low cut chaff spread with a tyne-seeder system.

Whilst the yield results from 2022 varied, there were a couple of clear challenges that come with managing the taller Stripper front stubble across all the sites from the '22 season. Notwithstanding the challenges seeding into thick stubble load proving troublesome, other challenges included reduced spray efficacy, with some sites having a significantly reduced efficacy in the taller stubble compared to the low-cut stubble, particularly where spraying was completed in more marginal conditions.

These trials will continue in 2023, with additional measurements for temperature and humidity taken in each plot using data loggers to further add to the rich datasets that are already being collected.

## BUILDING SOIL CARBON WITH CLAY AND MANURE

In collaboration with the Soil Co-operative Research Centre, Murdoch University and WANTFA, the Liebe Group is implementing a trial that aims to improve a poor sand by adding clay and chicken manure. Located at Coorow, the paddock has had no cropping or pasture history, however the farmer is keen to bring it into production. Bentonite clay will be added in strips to assess the improvements that it will bring for water holding capacity and hopefully crop and pasture production and in turn improve soil carbon levels.

## THE ECONOMICS OF GROWING LEGUMES

The Liebe Group are starting a new grower-led project that aims to explore some of the challenges of growing legumes in our environment. This project is part of a largescale collaborative effort taking place in WA over the next two seasons which is working towards a breakthrough in mastery of profitable legume production. The Liebe Group will be conducting small plot trials at the Main Trial Site in 2022 which will look at inoculation strategies for different legume crops on contrasting soil types. These trials will include peat-based inoculants, including new acid-tolerant peats for chickpeas, liquid inoculant and granular ALOSCA inoculants. These will be used on chickpeas, faba beans and lupins. The project will also include two farmer scale demonstrations that will be run over the next two years looking at different rotational strategies and the benefits of including legumes in the rotation.

# MAIN TRIAL SITE UPDATE - JIBBERDING


The Liebe Group has been working hard over the past few months designing the 2023 Main Trial Site that is being hosted by Boyd Carter at his property in Jibberding.

Working alongside valued industry partners and research organisations, the site will host a variety of trials covering topics such as Canola, Wheat, weed management, plant nutrition and more!

With the early rainfall event in March/April, the early sown Canola trial has already germinated, and its growth is being monitored by our team.

1 - Glyphosate Tolerant & Triazine Tolerant Canola NVT - *Living Farm (GRDC)*

2 -N Strategies and Inhibitors Trial - *CSBP*

3 -Risks and Rewards of Early Sown Canola - *Liebe Group (GRDC)*

4 -Evaluating different legume crops and inoculation (light and red land sites) - *Liebe Group/GGA (GRDC)*

5 - Pre and Post Emergent Options for Radish Control - *Elders*

6 - Efficacy of Reflex herbicide on Wild Radish - *Syngenta*

7 - Optimising Nitrogen and Potassium in Wheat - *Summit Fertilizers*

8 - Wheat & Barley National Variety Trial - *Living Farm (GRDC)*

9 - Rotational Strategies - Wheat on Wheat compared to Wheat on Faba Bean - *Host Farmer Demonstration*

10 - Wheat Depth of Sowing Evaluation - *Host Farmer Demonstration*

11 - Alion for Fenceline Weed Control - *Bayer Crop Science*

# TRIAL SPOTLIGHT

***Nitrogen Sources, Placement, and Timings on Canola/Urea Sustain- CSBP***

The aims of this trial are to;

- Compare the effectiveness of banding Flexi-N at seeding compared to topdressing Flexi-N, Urea or Urea Sustain at the 4-5 leaf stage, and
- To determine the productivity gains from applying Urea Sustain post seeding compared to urea.

It has been identified that high-yielding canola crops can have a high demand for nitrogen fertiliser. CSBP canola trials have shown the benefits of banding Flexi-N at seeding.

In this trial, CSBP will compare the effectiveness of banding Flexi-N compared to applying Flexi-N, Urea and Urea Sustain at 4-6 leaf stage. Urea Sustain contains urease and nitrification inhibitors which can reduce losses of nitrogen (N) to the environment and increase returns from fertiliser applications.

This project begun in early April and was seeded May 9th.

**CSBP pegged out the trial site and spread basal rate of SOP 30th March 2023.**

# SHOWCASE OF THE SITE IN 2023

These trials will be available to view at two annual events, the first is the Post Seeding Field Walk on the 26th of July and the second is the Spring Field Day on the 7th of September. All trial reports will be included in this year's Liebe Group Research and Development book, this will be available to members at the end of the season.

| TRIAL | MORE INFORMATION | TRIAL | MORE INFORMATION |
|---|---|---|---|
| Glyphosate Tolerant & Triazine Tolerant Canola NVT - *Living Farm (GRDC)* | | N Strategies and Inhibitors Trial - *CSBP* | |
| Evaluating different legume crops and inoculation (light and red land sites) - *Liebe Group/ GGA (GRDC)* | | Pre and Post Emergent Options for Radish Control - *Elders* | |
| Wheat & Barley National Variety Trial - *Living Farm (GRDC)* | | Optimising Nitrogen and Potassium in Wheat - *Summit Fertilizers* | |
| Efficacy of Reflex herbicide on Wild Radish - *Syngenta* | | Risks and Rewards of Early Sown Canola - *Liebe Group (GRDC)* | |
| Alion for Fenceline Weed Control - *Bayer Crop Science* | | Wheat Depth of Sowing Evaluation - *Host Farmer Demonstration* | |
| Rotational Strategies - Wheat on Wheat compared to Wheat on Faba Bean - *Host Farmer Demonstration* | | | |

# 2024 & BEYOND - SITE HOSTS WANTED!

2024 will see the main trial site enter its 27th year. This would not be possible without our dedicated members hosting the trial. It has been rotating annually around the region.

We are currently looking for future site hosts (2024 and onwards). Please get in touch with the Liebe Group Office or our R&D Committee Chair Dylan Hirsch if you might be interested.

# AN OPPORTUNITY FOR BETTER RESULTS FROM UREA

**By James Easton, Senior Agronomist, CSBP**

CSBP's new product Urea Sustain has been designed to help growers improve their nitrogen use efficiency when applying urea.

Urea Sustain contains a unique formulation that targets multiple nitrogen (N) loss pathways with one application. It reduces the potential for N losses from volatilisation, leaching and denitrification.

Volatilisation of ammonia gas occurs when urea breaks down (in the presence of moisture) and there's not enough rain to wash it into the soil. Without good follow-up rains in 7 to 10 days, around 30% of the applied N can be lost to the atmosphere. This is why we try to apply urea before rain. However, this can be a challenge to do over big cropping programs, where logistics are an important consideration. And there's always the risk of those expected rains not arriving.

Urea Sustain contains an inhibitor that slows the rate of urea breakdown, reducing potential volatilisation losses. Volatilisation inhibitors like those in Urea Sustain have been shown to reduce these losses by up to 80%.

Ultimately, Urea Sustain buys more time to spread urea and can give a lot of protection against volatilisation losses.

In high rainfall environments, N can also be lost to leaching. To reduce this risk, N applications are split and/or delayed until the crop or pasture is established and supply can be better matched to demand. But losses can still occur if heavy rains follow.

As well as containing an inhibitor that reduces volatilisation, Urea Sustain contains an inhibitor that can reduce leaching losses if there is leaching rain within a week or two of application. The same inhibitor has also been shown to reduce the potential for nitrous oxide emissions, which may be significant under waterlogged and/or anaerobic conditions.

By holding N in more stable forms for longer, Urea Sustain gives crops and pastures a better chance of responding to the applied N. This in turn reduces the risk of losses and environmental impacts.

Urea sustain will be tested in comparison to Flexi-N and conventional urea at the Liebe Group's 2023 Main Trial Site at Boyd Carter's property at Jibberding.

Urea Sustain is available as a limited release in 2023 exclusively to CSBP customers.

For more information, contact your local CSBP account manager or visit csbp-fertilisers.com.au/sustain
Or tune into our podcast episode 'Field Trial Results of New Urea Sustain' on Apple, Spotify or watch on YouTube to find out more.

# MOUSE SURVEILLANCE & MANAGEMENT IN THE WA GRAINS INDUSTRY - PROJECT UPDATE

**By Aimee Flynn, R&D Coordinator, Liebe Group**

The Liebe Group are currently assisting Farmanco with on-ground monitoring for their Grains Research and Development Corporation invested project aimed at increasing the capacity and ability for mouse surveillance and management in the Western Australian grains industry.

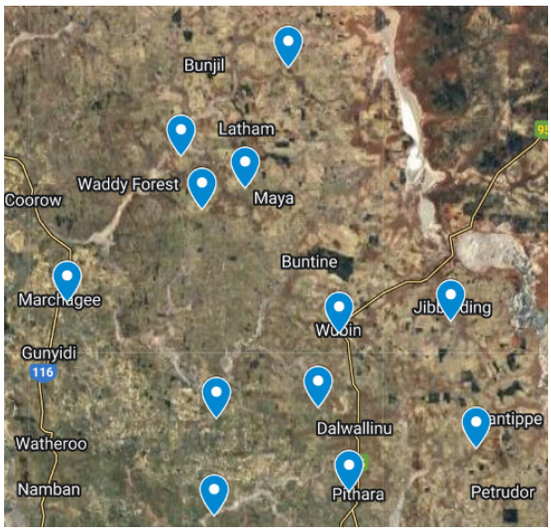
This project will see the Liebe Group staff visit twelve paddocks around the region to monitor mouse activity pre-sowing, post-sowing, mid-season, and late-season, and forms part of a state-wide mouse monitoring initiative.

During April, R&D Coordinator Aimee traveled to twelve sites across the Liebe area, placing chew cards and cornflour around burrows in the late afternoon and revisiting the following morning to see if there had been any activity.

Of the twelve sites, ten showed no activity on the chew cards or around the burrows. Most sites were not baited since the middle of last year which raises the question of whether the dry spell and lack of food have helped to deplete mouse numbers in our paddocks.

At one site there was a medium level of chew activity on a singular card. Right beside this activity was freshly sown seed, which was not available in any other paddock. Another site that had not been seeded, showed evidence of activity around burrows however these may be isolated events.

In late May, July and October the same twelve paddocks will again be visited to retest. This will give a better view of mouse numbers and what are the factors affecting population numbers.




Clockwise from top: Twelve sites around the Liebe region will be monitored for mouse activity over the season (top), and mouse activity identified around burrows and with chew cards.

## RECOMMENDED READING

GRDC Mouse Control is now Year Round

GRDC Practical Tips for Baiting

GRDC - Know Your Mouse Numbers

GRDC -Check Your Paddocks for Mice

If you have found any activity in your paddock you can add it to this national database: https://www.feralscan.org.au/mousealert/map.aspx

# THE FAMILY THAT HAS COLLECTIVELY WORKED AT CBH FOR 145 YEARS

By Kelly Lodge-Calvert, Principle – Corporate Affairs, CBH Group

**In CBH's 90th year, CBH employee, John Burton is also celebrating an incredible milestone of his own.**

**This year marks John's 40-year CBH anniversary, adding to a family legacy of Burton's who have collectively worked at CBH for a total of 145 years.**

## INTRODUCING JOHN BURTON

John first started at CBH on 3 March 1983 as a Receival Point Operator (RPO) in the Merredin district at the age of 18.

Now 40 years on, John still loves working at CBH. Over the years, he has worked as an RPO in Area 1 & 12, RPO and Plant Operator at the Geraldton Port, and for the past 15 years a Gang Truck Driver in Area 1.

Working as a Gang Truck Driver, John is responsible for moving outloading machinery including MLS's and frontend loaders from site to site, and delivering water and tarps to sites.

## LOOKING BACK OVER #40HARVESTS

When reflecting on 40 years, John said that CBH had looked after their employees well.

"I have been a part of #40harvests, but the last two years have been the most memorable. It is fantastic to see farmers have such a great two years, with our region breaking many receival records."

**"Every harvest has had its challenges but the last two have also been more challenging than most, mainly due to such large tonnages being received."**

"CBH has been a constant for me and I have worked with some amazing people over the years."

Cory Foot, Area 1 Manager said that John is an honest and very hard-working person.

"He is a very good teacher to anyone who starts with the business and has taught all Area 1 and country staff on a number of tasks at some point."

"John has always been there when we need, whether it's swapping out a broken machine late in the day or on the weekend, to helping out with harvest when we have had staff shortages with outloading programmes all throughout the zone," said Cory.

"John is a massive asset to the team. He is always someone that RPO's can go to if they have an issue or seeking an opinion."

"It has been great to learn from John - I am proud to have worked with him and he has made CBH a better place to work in his 40 years."

## A CBH LEGACY - THE BURTON'S DEDICATE 145 YEARS TO CBH

In addition to John's 40-year achievement, his family over four generations have worked at CBH for a further 105 years.

- Grandfather Herbert Burton - 13 year's as a Supervisor in Esperance and then Head Office.
- Father Stanley Burton - 38 year's as Bulk Head Construction and then Pest Control Officer in Merredin.
- Uncle Raymond Burton - 38 year's in the Pest Control Department at Head Office.
- Uncle Lennard Burton - 3 year's as an RPO.
- John Burton - 40 years
- Son Marshall Burton - 7 year's (and still employed with CBH). Started as a casual RPO and is now an Electrician in Area 2 & 3.
- Daughter Kayleena Burton - 1 year as Admin Geraldton Port and sampling in Northhampton.

John said that many people choose CBH as their employer because they wish to stay in their hometown, which has also been the case for the Burton's.

"CBH has been considered by my family as a reliable employer and job satisfaction has played a part in why they stayed for so many years," said John.

Congratulations John on #40harvests - what a fantastic achievement!

Thank you to the Burton family for their contribution to our co-operative and being a part of our 90-year history.


John Burton, pictured third from the left with the Merredin Crew in 1986.

Marshall Burton (John's son) with his daughter – a potential future CBH employee?

# FENCELINE CONTROL

By Clare Antonio, Elders Dalwallinu

Elders Dalwallinu

Now is a good time to be thinking about fence lines, particularly if using residual herbicides that work best with soil contact. There are now a few options to mix up the chemistry and make sure we are avoiding the development of resistant weeds in our fence lines.

**Options to consider:**

Terrain (Flumioxazin 500g/kg, Group 14 (G)) - WG formulation, can also get SC formulation. Pre-emergent soil residual herbicide with up to 6 months residual control. Safe around trees and vegetation.

Uragan (Bromacil 800 g/L, Group 5 (C)) – WG formulation pre-emergent soil residual herbicide with >12 months weed control depending on rate. Group C (5). Just remember to avoid any trees when using Uragan as it can do a good job at killing them too.

NEW in 2024 - Alion (500g/L Indaziflam, group 29 (O)) - SC formulation. Pre-emergent soil residual herbicide with >5 months residual control. Ideally rainfall within 6 weeks to wash in and bind to soil. Washes off green material. Safe around trees. No knockdown, so mix with Glyphosate or paraquat where weeds are already present. Registration expected end of 2023.

**Table 1:** Common and new fence line herbicide costs.

| Product | Rate | Approx $/km (2.5m boom) |
|---|---|---|
| Glyphosate 450 | 2 L/ha | $3 |
| Paraquat 250 | 2 L/ha | $2.50 |
| Atrazine | 4 kg/ha | $10 |
| Terrain | 700 g/ha | $24 |
| Uragan | 3.5 kg/ha | $66 |
| Alion | 150 ml/ha | $66* |

**No pricing available yet, indicative price.*

**When is the last time you calibrated your fence line sprayer?**
With some new, more expensive chemistry being used on fence lines, it's worth spending a little time to ensure you're not throwing money away by over or under applying. See below a little reminder on how to do it.

**A**. Boom ouput (L/min) = nozzle output per minute (L) x no. nozzles on boom
*Eg. 4.2 L/min = 0.7 L x 6 nozzles*

**B**. Speed (km/hr)

**C**. Spray width (m)

Rate (L/ha) = (A x 600) / (B x C)

Eg. 70L/ha = (4.2 x 600)/(20 x 2.5)

Chemical volume per tank (ml) = (Rate required (L/ha) x tank volume (L))/ (L/ha)

Eg. Treatment = Terrain @0.7kg + Glyphosate 450 @2L with a 800L tank volume

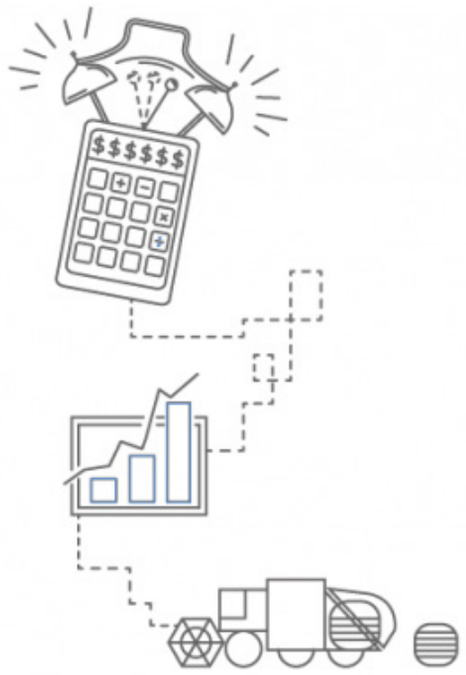
8kg Terrain = (0.7 x 800)/70

22.85L Glyphosate 450 = (2 x 800)/70

Adjuvants go in on tank volume, so 0.5% Hasten = 4L

# IS HOLDING FARMING LAND IN SUPERANNUATION THE SMART THING TO DO?

By Judy Snell, RSM Moora



Agricultural property values have recorded double digit growth over the last two to three years.

Farming land where it is held in self managed super funds is often a disproportionally large asset class of the total fund.

With the potential changes in the superannuation laws mooted recently, we could see some issues around liquidity and the taxing at a higher rate if certain thresholds are exceeded.

These issues need to be addressed soon. The lease income generated by the farming land has not maintained pace with the large growth in the agricultural property market. What this equates to is if the minimum pension out (based on a % of the total asset pool value of the super fund) outpaces the lease income received there could be issues.

The Government is reducing the tax concessions available to individuals whose total superannuation balances exceed $3 million. Individuals with balances over this threshold would be subject to an additional tax of 15 per cent on the earnings on any balance that exceeds the $3 million threshold.

This change broadly brings the headline tax rate on earnings corresponding to that proportion of the balance greater than $3 million to 30 per cent.

The Trustees of the SMSF need to weigh up their options – no two cases are the same and it is important to discuss this and consider with your adviser. Some of the options are:

- *Should the land be transferred out of the superannuation environment (stamp duty issues should be considered).*
- *Should the land be sold, with sale proceeds remaining inside superannuation and increasing liquidity available to fund future pension requirements.*
- *Determine whether other investments can be sold to generate additional cash flow but would only provide a temporary solution to the liquidity issue.*
- *Do the members have capacity to make further contributions to superannuation (or rollover balances from elsewhere) to shore up liquid assets within the superannuation fund to continue to comply with minimum pension requirements.*
- *Whether existing account-based pensions should be partially rolled back to accumulation to reduce future minimum pension withdrawal requirements. This will likely cause additional income tax to be payable annually by the Super Fund.*
- *Whether land values should be reassessed more frequently.*

**For example:**

- Max is 68 and has retired and his SMSF has farming land of approx. $4.5 million on 30th June 2025 which grows to $5 million on 30th June 2026
- Max draws down his minimum pension of $75,000 during the year and makes no additional contributions to the fund
- Max's calculated earnings are:
- $5m - $4.5m = $500,000 + $75,000 = $575,000
- His proportion of earnings corresponding to the funds above $3m is:
- ($5million - $3million) / $5million = 40%
- Therefore his tax liability for 2025- 26 is 15% x $575,000 x 40% = $34,500
- Max would need to ensure the lease income paid to the SMSF is in excess of his pension and the additional tax payable by the fund - $75,000 + $34,500 = $109,500

# "ROCK HARD" DEMAND FOR WA FARMLAND

**By Lisa Curtis, Marketing Manager Rabobank**

**Demand for farmland in Western Australia has been "rock hard", with the state's average agricultural land price rising by 22.5 per cent in 2022, agribusiness banking specialist Rabobank says in its recently-released annual Australian Agricultural Land Price Outlook.**

The report, supported by farmland sales data from DAS (Digital Agricultural Services), says record demand for land – following three consecutive good seasons for the state's farm sector – has seen the median price per hectare of WA agricultural land rise to just over AUD 6,000/hectare.

Arable farmland prices in WA increased 29.7 per cent year on year (to AUD 4,295/hectare), while the Bunbury area retained its lead as the region with the most valuable ag land, with an average price of just over AUD 19,000/hectare.

Report author, RaboResearch agriculture analyst Vitor Pistoia said looking back over the past four years, lower rainfall regions in the state were comparatively shown to have experienced the highest percentage increases in value.

"The Mid West has seen a 133 per cent rise in median ag land prices since 2019, followed by the Northern Wheatbelt with 131 per cent growth and the Southern Wheatbelt with 111 per," he said.

Nationally, the bank's analysis – of the DAS data set which comprises genuine rural sales and excludes lifestyle and non-market transactions – found agricultural land prices across the country rose by 29 per cent (median price per hectare) in 2022, with cropping land increasing by 29 per cent, livestock grazing land by 26 per cent and dairy by 29 per cent.

Agricultural land prices were found to have recorded double digit percentage growth on the previous year in all states, with South Australian farmland prices rising the most – at 34 per cent.

The distribution of farm sales (in number of deals) across Australia remained stable year on year, with 16 per cent in Western Australia in 2022.

And good financial performance for Australia's farm sector – driven by high commodity prices and good weather conditions for the majority of the country – is set to once again fuel "double digit" percentage growth in agricultural land prices for the year ahead, Rabobank says, albeit easing from the record near-30 per cent increases seen in both 2022 and 2021.

Mr Pistoia said agricultural land prices across the country had soared again in 2022, with the "macro settings" having been favourable for land purchases and farming profits in Australia.

"Prices for most major commodities reached record highs, widespread rainfall supported agricultural yields – which also surpassed historical records in some regions – and interest rates were at historical lows for almost half the year," he said.

While a decline in agricultural land prices is not forecast, the bank cautions that – after the estimated double digit percentage price increase this year, a significant slowdown in the "pace" of price growth – which had been "massive" in recent years – is expected from 2024 potentially through to 2028.

Mr Pistoia said "farmland sale prices in early 2023 are still setting new records", with prices in 2023 expected to continue to rise.

"Albeit to a lesser extent to the previous year as the combination of high property prices and increasing interest rates – along with the expected onset of El Nino, and potentially drier weather for many parts of Australia, which may hamper agricultural yields – will be impacting farmers' appetite for buying land," he said.

Mr Pistoia said the income outlook for Australian farmers in 2023/24 was, though, "solid and positive" with above-historical-average prices for agricultural commodities still granting good profitability and with recent high costs for farm inputs now easing.

However, looking out from 2024 to 2028, he said – with the record highs for agricultural yields and commodity prices seen in the past three years unlikely to be repeated – there are expectations of a slowing pace in the growth of land prices, although with no price declines expected.

"Commodity prices are likely to remain at good levels for farmers for the next one to two years. However, the drier forecast may result in lower yields and reduced margins, while rising interest rates will curtail long-term investment plans," he said.

"Currently, cash already available in the system and stocks of grains and livestock ready to enter the market remain the key factors driving land price growth."

To find out more about other Rabobank research, contact Rabobank Moora on (08) 9690 8500 or subscribe to RaboResearch Food & Agribusiness Australia & New Zealand on your podcast app.

RaboResearch Agricultural Analyst – Vitor Pistoia.

# NATURAL CAPITAL

**By Stacey Bell- Crookes, Farmanco**

## KEY POINTS

- Natural Capital can be defined broadly as the world's collective or country's individual natural assets and/or resources.
- This encompasses a wide range of services, including climate regulation and carbon sequestration.
- The topic is receiving global and local attention, with policy and services developing at a rapid pace.
- It needs to be thought of in terms of impacts and dependencies and how this affects both the environment and the business.
- Farmanco is committed to independent, data-led advice.

## WHAT IS NATURAL CAPITAL AND WHY ARE PEOPLE TALKING ABOUT IT?

Whether they are farmed, mined, extracted, built, or created — in recent years there has been a shift in the focus of values and expectations when it comes to the production of resources. These expectations are not only being applied by the end point consumer, but by all points of the value chain. In some cases, it is driven by government directive or incentive. End point consumers no longer just focus on food miles or factory farming to determine whether the products they consume are socially responsible. Their expectations have increased in complexity and are now being applied to more than just their food.

As a result of this change, the understanding of how to best meet expectations of the market has had to evolve and develop quickly. New terminology is emerging and value is starting to be placed on things that farmers may not have previously considered influential to the success of their business. One term that is quickly gaining popularity is natural capital.

## WHAT IS NATURAL CAPITAL?

Natural capital is defined as the world's stock of natural resources. It includes geology, soils, air, water, and all living organisms. From the resources categorised as natural capital, we derive a wide range of services, termed eco-services, which make human life possible. Some obvious examples of ecosystem services are the food we eat, the water we drink and plant materials used for fuel, building materials, and medicines. Less obvious ecosystem services include climate regulation, the carbon stored by plant biomass and pollination by insects.

Natural capital is regarded as being similar to other forms of capital that can produce economic outputs. These capital types include financial, physical, human and social. A comparison can be made between financial and natural capital.

In finance, spending more than we have accrues debt. The same applies to natural capital. An example of this is to not match the nutrient provision with the nutrient demands of growing a wheat crop. The plant will still access the nutrients it needs through those available in the soil, leading to nutrients being mined and the soil becoming deficient. Just like a bank refusing finance, at some point in time, the soil will no longer be able to make up the nutrient shortfall between crop demand and supply. Crop production would suffer and subsequently, the financial outcomes of the business would also be impacted.

Previously, natural capital was considered a free of charge component of business, resulting in it being systematically undervalued by broader society during decision making processes. One industry where natural capital has had an influence during the decision-making process and is valued, is agriculture.

Looking at property values across the grain growing region of Western Australia, a general rule of thumb is that properties on the western side, closer to the coastal plain, are worth more on a per hectare basis than those located on the eastern side, which are closer to the desert. The western side receives higher and more reliable rainfall, produces higher yielding crops, and has a greater carrying capacity for livestock than their eastern edge counterparts.

While these are not the only factors people consider when purchasing property, they are all factors that determine how much a business is willing to pay for arable land. All these factors are components of natural capital or determined by the available natural capital.

At a corporate level, natural capital related risks and opportunities are best categorised as **impacts and dependencies.** Impacts are defined as how business activities positively or negatively impact nature.

For example, a chemical or fuel spill would be considered a negative impact on nature, but planting trees would be considered a positive impact on nature. Dependencies, however, is how nature positively or negatively impacts the immediate financial performance of a business. An example of this would be a frost event, which will negatively affect profitability. Conversely, a positive would be a mild and moist spring.

Australia's natural capital is diverse and complex. Unfortunately, this complexity has led to mismanagement of the available resources. An historical example would be the clearing of trees in years past, without due consideration to downstream consequences. Clearing trees led to rising of the water table, bringing salinity problems with it.

Another easy example from the past was our over-enthusiasm in the application of fertiliser. Oversupply of leachable nutrients increased soil acidity. This was then compounded by the overstocking of livestock, and combined with cropping operations, this led to soil compaction.

Fortunately, we were able to learn and adapt. The mismanagement of available natural capital was identified and the Decade of Landcare was declared in 1989, with the vision statement:

> ***"Development and implementation of resource management practices which enhance our soil, water and biological resources and sustain individual and community benefits now and in the future."***

In 1994, the Swan-Avon Integrated Catchment Management Group was established by the Avon Working Group to assist WA Wheatbelt farmers manage their natural resources. Since 2009, the group has been known as Wheatbelt Natural Resource Management (Wheatbelt NRM).

At present, natural capital is receiving a lot of attention. Private enterprises and both state and federal governments are supporting, undertaking, and funding research and development projects in this space. As a result, it is rapidly evolving, with updates coming in thick and fast.

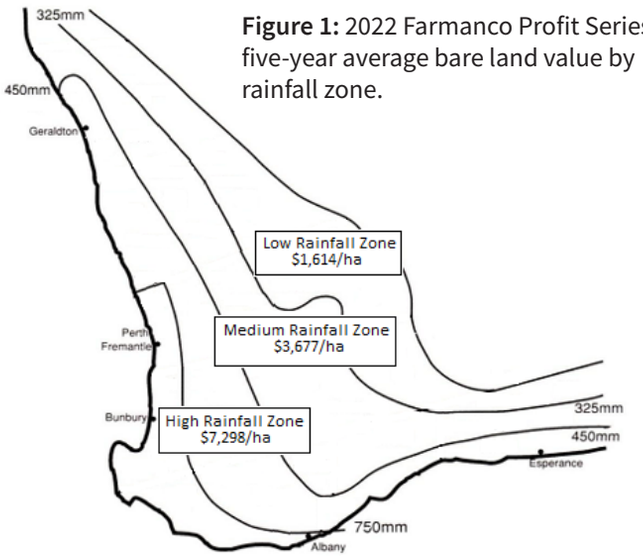



**Figure 1:** 2022 Farmanco Profit Series five-year average bare land value by rainfall zone.

The combination of evolutionary pace and available funding has resulted in there being a plethora of accessible information available. On the back of this information boom, there is a growing natural capital industry to assist people in making sense of the carbon space, how they fit into it, and what changes they can make to positively impact their emissions footprint. Everything from biodiversity plantings to carbon farming to feed additives are being researched, with the aim to improve the quality and quantity of the natural capital being purchased by farmers.

Understandably, there is a growing concern from growers and advisors alike due to the short period of time in which this space has gained momentum. Terms like snake oil have been used with suspicion when describing some of the newer products being developed and promoted to farmers.

## FARMANCO NATURAL CAPITAL MANAGEMENT

Farmanco is in the business of assisting growers to make informed decisions by developing products and offering services to meet the needs of their clients. A number of years ago, it was identified that the calculation and analysis of GHG emissions would be a focal point in the future for the agricultural industry, and subsequently, our clients. With the growing number of clients enquiring about services focused on the management of natural capital, we are looking at ways to help clients in this area.

Based on the above, and a tendency to strongly advise against the use of snake oil, Farmanco is in the process of developing a group of services to assist growers with decisions on managing their natural capital.

Part of this development is to start to form a specialised team, the Natural Capital Management Team, to deliver these services to growers. Applying the Farmanco standard of focusing on economic/business analysis principles and any advice given being data-led, the services are intended to assist grower decision making by representing the potential economic outcomes of their natural capital management, not just the environmental benefits.

# CARBON CREDITS: THE POTENTIAL TO REPAY LOANS

Bailiwick Legal.
AWARD WINNING AGRIBUSINESS & TOURISM LAWYERS

By Matilda Lloyd, Solicitor & Anna Tills, Law Graduate, Bailiwick Legal

## CARBON CREDITS: REPAYING YOUR MORTGAGE OR LOAN?

Last year we were involved with the purchase of a pastoral property in Western Australia's Mid-West. The property was purchased for the dual purposes of accruing carbon credits as well as running livestock. Finance was required for the purchase and the buyer offered the Australian Carbon Credit Units (ACCUs) that were to be generated from the carbon project as security as well as for repayment of an institutional loan.

## CARBON PROJECTS

Carbon projects are land-based projects focused on either storing carbon in vegetation or soil or reducing emissions from animal production enterprises. Tree planting projects are the most common example of land-based carbon projects in WA. Landowners have the option to sell the ACCUs that are generated via their Carbon Project either directly to the Australian Government via the Clean Energy Regulator's Energy Reduction Scheme or on the open market to (typically) international buyers seeking to offset their carbon footprint.

The Clean Energy Regulator (CER) offers fixed term contracts to landowners with eligible projects. These fixed term contracts require landowners to deliver a set out amount of ACCUs to the CER at a fixed price. If a carbon service provider is engaged to manage the project, then they may also negotiate a fee based on a portion of the ACCUs generated or be paid once ACCUs have been sold. If the landowner produces more ACCUs than is required under their contract with the ERF and their carbon service provider, then they have the option to sell their ACCUs to the CER through the Federal Government's Emission Reduction Fund (ERF) or on the open market to generate additional income.

## LOAN AGREEMENTS

On the purchase of the pastoral property, the scheme agreed between the buyer and the lender involved the lender taking an interest in and security over the ACCUs accrued, with the loan being repaid by a fixed allocation of ACCUs granted to the lender each year for the term of the loan.

The scheme also involved the allocation of accrued ACCUs to the carbon project manager. Overall, it was a complex arrangement involving a number of separate agreements between the buyer, lender and carbon project manager. Historically lenders have been wary of the risks involved in such arrangements, and we are informed that this particular scheme is the first agreement of its type within Australia.

The arrangement represents a new and unique method of loan repayment within the agriculture sector.

If you would like assistance with carbon projects, the management of and financial aspects to carbon projects and loan agreements generally or further information about this article please get in contact with us on (08) 9321 5451 or by email at office@bailiwicklegal.com.au.

*For further information about our legal services, please visit our website: https://www.bailiwicklegal.com.au/*
*The above information is a summary and overview of the matters discussed. This publication does not constitute legal advice and you should seek legal or other professional advice before acting or relying on any of the content.*

# WHAT ARE THE TOWED IMPLEMENTS DRIVERS REQUIREMENTS? - MC-X LICENCE?

**By Catherine Keeffe ProcessWorx WHS Advisor**

In Western Australia, most tractors can be driven on the road, provided you meet the weight restrictions. Vehicle weights are calculated by their Gross Vehicle Mass (GVM). Tractors with a GVM 4500kg or less are legally able to be driven with a C Class License, tractors over 4500kg require the operator to hold an additional licence (see table).

| Weight | Axles | Licence Required |
|---|---|---|
| 4500kg - 8000kg | No limit | Light Rigid |
| Mass greater than 8000kg | 2 Axles | Medium Rigid |

Did you know that to drive a tractor towing an Air Seeder, sprayer, spreader, or any other towed implement on the road you require either an MC(Multi-combination) or an MC-X licence? What is an MC-X license and how do I get one you might ask?

An MC-X licence is a licence to drive Towed Agricultural Implements on public roads. Without this licence, or an MC licence, you as the employer or your workers are not legally covered to tow agricultural implements on public roads. This has huge implications under the Work Health and Safety (WHS) Act 2020 (WA) if you or a worker were to have an incident while towing an agricultural implement on a public road and weren't legally covered to do so.

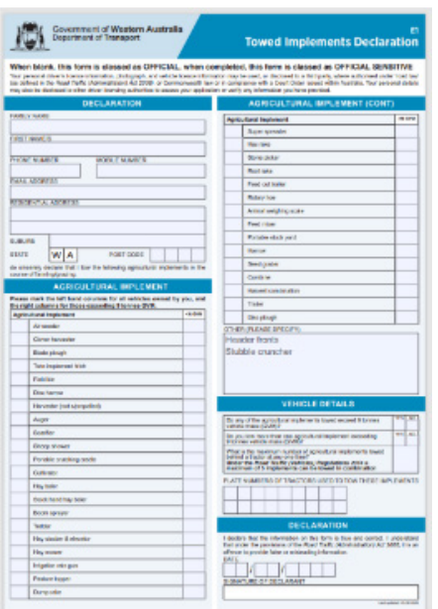
Applicants must be over 18 years of age and hold a WA 'C' class driver's licence to apply for an MC-X licence.

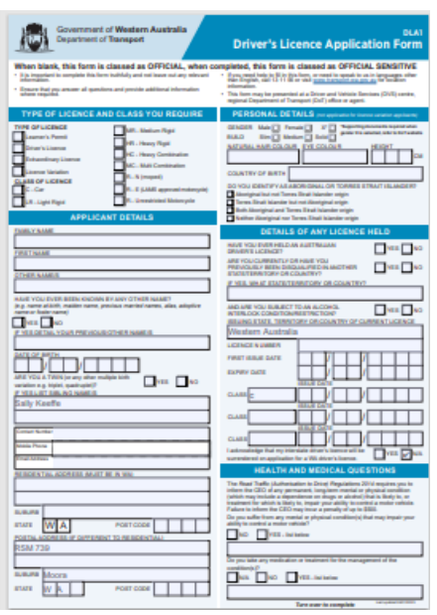
A letter of competency must be written by a qualified person, that is someone who holds an MC licence, and is able to verify the applicant's ability to both drive tractors and tow implements. For ProcessWorx clients, there is a letter already produced on our ProcessWorxShield ready for you to fill in and sign.

From there applicants are required to fill in two forms: The Towed Implements Declaration and Driver's License Application Form. These can be downloaded at: http://www.transport.wa.gov.au/dvs

All three of these forms must then be logged at a Licensing Centre or Clerk of Courts in regional locations, by the applicant. They must take along a copy of their current Driver's licence. A fee does apply.

As part of the WHS Act 2020 (WA) it's necessary for farm managers/owners to identify the hazards and risk factors on their property, assess these risks and then evaluate what control measures are already in place and decide what additional control measures need to be added. Taking steps to mitigate the risks on their properties might include steps such as training, instruction, education or supervision of workers. Ensuring workers have the correct licence for the task they are undertaking is one-way businesses can minimise the risk to both the business and it's workers.


Towed Implements Declaration Form


Driver's Licence Application Form

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**On the cover:** The Living Farm team prepared to sow the early sowing of canola trial.