# Liebe Group Newsletter

CELEBRATING 20 YEARS IN 2017

JUNE 2017 I VOLUME 20 I ISSUE 4


## INSIDE THIS ISSUE




The Liebe Group would like to acknowledge and thank the Department of Agriculture and Food WA, the Australian Government, the Grains Research and Development Corporation and Farm Weekly for their valued support.


## THE LIEBE GROUP WELCOMES NEW SILVER PARTNERS

The Liebe Group are pleased to welcome three new Silver Partners to the group this month; TekAg, NuFarm and BASF. 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.

TekAg is a local agronomy business working within the Liebe region and wider Wheatbelt. Ty Henning, Director/Agronomist at TekAg has worked closely with the group over the past few years and has provided integral support to Liebe staff and the groups research activities. Recent involvement has included technical support and guidance for the Variable Rate Technology demonstration at Mike Dodd's property in 2016. We look forward to continuing a strong working relationship with TekAg into the future.

NuFarm is an Australian manufacturer of crop protection products designed to perform in Australian conditions. NuFarm joins the Liebe Group as a Silver Partner in 2017 and brings an extensive team of agricultural specialists who offer local know how and support that assists in delivering the results Australian farmers demand for their long term sustainability. NuFarm are involved in two trials at our Main Trial Site this year including the Collaborative Canola herbicide systems – control of annual ryegrass trial and a fence line weed management trial. We look forward to working closely with NuFarm this season and into the future.

**Continued on page 2**

### DIAMOND PARTNERS

# EO REPORT

**Bec McGregor, Executive Officer, Liebe Group**

Welcome to our June Newsletter. With the dry start to the 2017 cropping season in our region it has highlighted the needs for ongoing research into variable season conditions and the importance of sticking together when times are tough. With the hope for rain soon we eagerly await the first signs of growth and continue to look forward to the year ahead.

This month sees us quickly approaching the Women's Field Day along with preparations for July's Post Seeding Field Walk.

The Women's Field Day is just around the corner with the day kicking off at 8:30am on Tuesday 20th June. Final ticket sales will end on Wednesday 14th June so be sure to get in quickly so you don't miss out! More information can be found with a full agenda on page 4.

On Thursday 20th July, we will host our annual Post Seeding Field Walk at Dodd's Property in Buntine. Starting at 2.30pm the day will include a series of short introductions to the trials on site followed by an R & D Ideas Forum which will enable all in attendance to share their innovative ideas and local concerns in a fun and relaxed setting. The day will conclude with a chance to wind down and catch up over a beer and spit roast, with lamb kindly donated by the Fitzsimons Family.

Plans for the Liebe Group's 20th Anniversary Dinner are well underway with invitations sent out and hopefully reaching your mailboxes late last week. If you haven't received your invitation or would like to know more about the event please call the office.

We hope to see lots of the Liebe ladies at our Women's Field Day, it is sure to be an amazing day!

## The Liebe Group welcome new Silver Partners cont...

BASF are an international chemical company with over 149 years of investment in Research and Development. BASF focus on providing a range of innovative crop protection solutions and continue to invest in local R & D to deliver high performance solutions and understands future challenges Australian farmers face. The Liebe Group look forward to building a valued relationship with BASF.

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 new Silver Partners and thank them for their support of the group.

If you would like further information about the development of partnerships please contact Rebecca McGregor on 9661 0570 or email eo@liebegroup.org.au

### GOLD PARTNERS

Elders SCHOLZ RURAL

FARMANCO

IMTRADE AUSTRALIA Agriculture Reimagined

BAYER

### SILVER PARTNERS

| | | | |
|---|---|---|---|
| Syngenta | Adama Australia | Australian Grain Technologies | Tek Ag |
| 4Farmers | GrainGrowers | Scott's Watheroo Dolomite | NuFarm |
| Pacer Legal | Landmark | Refuel Australia | |
| Agrimaster | Pacific Seeds | BASF | |

## GENERAL MEETING DEBRIEF

**Katrina Venticinque, Administration Manager, Liebe Group**

**MONDAY 10TH APRIL 2017, DALWALLINU DISCOVERY CENTRE**

- **Project Update:** The committee were updated on the upcoming project opportunities.
- **Main Trial Site 2017:** A report was given around the Main Trial Site at Dodd's Property in west Buntine.
- **Strategic Plan:** The committee discussed the draft Strategic Plan progress timeline for implementation.
- **New Building Update:** The committee were provided a progress report on the building planning and construction.
- **Women's Field Day:** The committee were provided an update on the grant applications submitted to assist the day, and were debriefed on the event planning.
- **DAFWA Meeting Debrief:** The committee discussed outcomes from the DAFWA meeting on 21st March.
- **Liebe Patron Meeting Debrief**: The committee were debriefed on the Patron meeting held with Mike Robertson who has become the inaugural Liebe Patron.
- **New Website Update:** The committee were updated on the status of the new Liebe website.
- **20 Year Celebrations:** The committee were updated on the plans for a 20th anniversary celebration dinner, with discussions on how to further acknowledge the 20th anniversary of the group.

**Members Only**

# Liebe Group's Post Seeding Field Walk

## Thursday 20th July

**2.30pm to 6pm**

**Dodd's Property - Jackson Rd, west Buntine**

Event & Diamond Partner

Rabobank

Diamond Partners

RSM CBHGROUP CSBP AFGRI EQUIPMENT

Please contact Alana at the Liebe Office on 9661 0570 or email research@liebegroup.org.au with any enquiries.

### R&D Ideas Forum

Join us for an opportunity to brainstorm and discuss priorities for local research and development

**Spit roast and beer night from 6pm!**

### 2017 trials include

- National Variety Trials
- Pre-emergent herbicide control on cereals & canola
- Nutrition after canola
- Wheat powdery mildew trial
- Canola time of sowing
- Canola N response
- N application timing and N use efficiency in wheat
- UAN scorch assessments
- Rhizoctonia management
- Deep tillage demonstration
- Fenceline herbicide demonstration
- Historical wheat demonstration

# Liebe Women's Field Day

**TUESDAY 20TH JUNE 2017** Dalwallinu Recreation Centre

*Increasing the management capacity of women to build a sustainable future for their families, farm businesses and the agricultural industry*

CELEBRATING 20 YEARS IN 2017

LIEBE GROUP

| | |
|---|---|
| **8.30am** | **Registration** |
| 9.00am | **Welcome**<br>Sophie Carlshausen, Liebe Group |
| 9.10am | **Housekeeping and introduction**<br>Katrina Venticinque, Administration Manager, Liebe Group |
| 9.15am | **The chicken or the egg; what comes first when diversifying your farm business**<br>Robyn and Meg Cousins, Manavi Farm Pasturised Eggs |
| 9.40am | **Rabobank FX; building team agriculture**<br>Sue Lefroy, on behalf of Rabobank |
| 9.55am | **Daughters in family farm businesses; fostering women's entrepreneurship and leadership in the Agricultural industry**<br>Katrina Sasse, Nuffield Scholar |
| **10.35am** | **Morning Tea** |
| 11.05am | **100 things to do by tomorrow; getting more value out of your time**<br>Hellene McTaggart, Partners in Grain |
| 11.30am | **Can we simplify and make farming operations more efficient using IT networks and systems?**<br>Annie Brox, Origo Digital Agriculture |
| 12.05pm | **From dust to the Olympics**<br>Ashleigh Nelson, Hockeyroo and RUOK? Ambassador |
| **12.45pm** | **Lunch** |

| | Oval Room | Basketball Court |
|---|---|---|
| 1.55pm | **Reading between the lines; how to understand your financials**<br>Keiran Sullivan, RSM | **Don't shoot for the clouds; the importance of setting targets in grain marketing**<br>Chris Tonkin, Ten Tigers |
| 2.25pm | **Digging deeper into soil data & decisions**<br>Edward Scott, Injekta Field Systems | **Key profit drivers in a farm business**<br>Rob Sands, Farmanco |
| 2.55pm | **Communication; is it becoming a lost art?**<br>Owen Catto, Regional Mens Health Initiative | |
| 3.20pm | **Evaluation and close**<br>Deb Metcalf, Liebe Group Women's Committee Chair | |

## Sundowner with champagne and grazing table from 3.30pm

**RSVP BY 14TH JUNE**

**Tickets available online now!**
*Online* - http://tix.yt/liebewfd
*Liebe Office* - 08 9661 0570
*Email* - admin@liebegroup.org.au

**Includes morning tea and two course lunch with wine**
Gourmet hamper door prize sponsored by Agrimaster

Rabobank RSM CSBP AFGRI EQUIPMENT

**Diamond Partners**

CBHGROUP

**Diamond Partner & Event Sponsor**

# Liebe Mentoring Project: A personal experience

Sarah Barnes, Liebe Group

When you think of the word mentoring what do you think of? The things that come to mind are people transferring knowledge and experience to others, regardless of their age or skill level. One just has to have a desire to learn and the other to teach.

Last year the Liebe Group sent out expressions of interest to host a mentoring program. The group were able to match up 11 mentoring partnerships and provided guidance for them on their mentoring journeys by giving tips and information to help along the way.

I myself have been involved with the program and was paired up with my very own mentor, Wendy Sawyer. I signed up for the process knowing, in some way, what to expect as I had been involved in a similar project with the Liebe Group and Rabobank in 2016.

During my first experience in a mentoring process, I found it difficult to really get into the whole experience. After our initial catch up and workshop session, I was unsure of what I wanted to get out of the relationship and ultimately felt like I could be wasting my mentor's time and knowledge.

When I saw the new program being advertised I knew it was too good an opportunity to miss out on again so, I sat down and really thought 'do I want to go through that again and end up with the same result or, do I want to actually get something out of it?'

I was partnered with Wendy Sawyer which I was really excited about, whilst I knew Wendy a little mostly through my previous work at the Liebe Group I didn't know much about her. It has been great to get to know her and talk about how her experiences can help me. Like myself Wendy has moved her life to Dalwallinu after marrying a farmer and starting a family here. We have discussed a number of things including working off the farm, transitioning into on farm jobs, dealing with staff and accommodation, challenges and rewards of living in a small rural town and working with your family. I would really like to thank Wendy for her words and hope she knows how much she has helped me.

This time around I have found the experience to be highly beneficial and I am thankful to have had the chance again to be involved in this type of program. Below are a list of tips that I have found crucial in making my experience work for me this time around:

- While you don't have to have all the questions in your head from the first meeting, it is good to have some sort of idea or goal to work towards.
- Be open and honest with your mentor.
- Be open to different ways of thinking.
- Don't ever think that you are wasting your mentor's time; if you are learning something from them you aren't wasting anything.

The project "Implementing change and innovation through a farmer-based mentoring program" is being delivered by the Liebe Group and is supported by the Northern Agricultural Catchments Council, through funding from the Australian Government's National Landcare Programme.

Australian Government | National Landcare Programme | NACC Managing Natural Resources

## Calling all Liebe men!

Are you handy around the kitchen and have a couple of hours to spare on Tuesday the 20th June?

We are looking for volunteers to help out in the kitchen at our upcoming Women's Field Day. This will involve preparing and serving lunch and clean up afterwards.

Please contact Katrina in the office on 9661 0570 for more information.

# Women of Liebe
## Wendy Sawyer

We 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.*

**What is your background?**
Born in Yorkshire, England and my parents brought my four sisters and I to Australia to live in 1971. I then grew up in the northern suburbs of Perth. I began working for the Commonwealth Government in 1979 in clerical/administration type roles. Following my engagement to local Farmer, Rob Sawyer, I moved to Dalwallinu in December 1987 as I got the position of Shire Clerk Secretary. We then married in February 1988, living in a shire house for the first 18 months. We then moved into a new transportable home on the home farm, Wimmera Farm, in July 1989. I finished working at the shire in September 1990 to have my first of three sons and be a stay at home Mum. In 1998, when my youngest was in Pre-Primary, I began working at Jolly & Sons in Dalwallinu and continued there for twelve years until 2010. My main role was finance and business administration and during this time I also completed a Certificate of Business Finance with Edith Cowan University.

**What is your role in your farm business?**
I am the office administration person, handling all the budgeting, liaising with financiers, accounts receivable and payable, payroll, basic accountancy and general administration. It is a fairly major role and takes up much of my time. I am pretty much on call all the time and have learnt how to do as much as possible on my phone for when I am away from the farm. I love my role on the farm as it keeps me in touch with what is happening in the paddock and I have learnt a great deal since being in the office.

**What do you enjoy most about living in a rural area?**
Having raised three boys on the farm, the best thing I have enjoyed and continue to enjoy is the wide-open spaces. I also really appreciate the sense of community living in a rural area and knowing that people band together to help each other when needed.

**What is your involvement in the Liebe Group?**
As the Office Administrator on the farm, my major involvement with Liebe is attending the Women's Field Day event and some of the courses that Liebe arrange either independently or in conjunction with other organisations, such as Partners in Grain.

**What have you gained through the Liebe Group?**
I have learnt many things from attending their courses, such as the Myers Briggs Personality course, office and employment procedures and of course, the opportunity to network with many like minded people.

**Who or what inspires you?**
First and foremost my parents for having the courage to move to Australia and leave a huge family network behind in England. They worked extremely hard to achieve the best they could for us girls and provide us with a good education and instil in us a good work ethic.

Wendy and Rob Sawyer at the Liebe Dinner in 2016.

Secondly, Ken Jolly and the Jolly family, for giving me an opportunity to work and still be a Mum who could drop the kids at school, pick them up and be there for them any time I was needed. My experience at Jolly & Sons was one that I have been able to draw upon in our farming business to help us build a great family business that our staff enjoy being part of too.

**What are your life aspirations?**
My goals for the future are to live a happy and healthy life here in Dalwallinu, surrounded by great friends and a wonderful family. I would also love to travel as much as time permits to seek out new places in the world and experience different cultures.

**What does the Women's Field Day mean to you?**
I have attended all the Women's Field Days since 2009 when I was winding down my job at Jolly's. I have enjoyed the variety of speakers over the years and hopefully gained at least a little knowledge from each of them. I appreciate the networking with other Women involved in Agriculture, whose lives are very similar to mine and being able to swap stories and tales of life on the farm.

## Growing Leaders Scholarship Program

The Growing Leaders Scholarship is an exciting new initiative to support existing and emerging regional grower leaders to develop their leadership potential. The Grower Group Alliance (GGA), in partnership with the CBH Group, are facilitating opportunities for up to three individuals to access the highly esteemed Leadership WA Signature and Rising Leadership Programs. The program is aimed at building and strengthening tomorrow's leaders of the WA grain industry. The initiative offers three scholarship positions to access two of Leadership WA's programs; Signature Leadership Program and Rising Leadership Program. Applications for this program close Wednesday 31st July.


For further information regarding applications contact Annabelle Bushell, T: 08 6180 5759, E: abushell@gga.org.au.

## New Doppler Radar unveiled at Watheroo

The Keamy family at the opening of the Watheroo Doppler Radar.

The Watheroo Doppler radar is up and running with images now available on the Bureau of Meteorology's website. The radar is third and final Doppler radar installed as part of a $23 million project managed by the Department of Agriculture and Food (DAFWA) and made possible by Royalties for Regions investment.

The Watheroo radar was officially opened on Thursday 8th June by Alannah MacTiernan MLC, Minister for Regional Development, Agriculture and Food. The radar is the only one of its kind to be situated on private land and is hosted by property owners and Liebe Group members the Keamy family.

The Watheroo radar will provide real-time rainfall and wind information and is updated on a six minute cycle. This will allow farmers in our region access to real time information to help transform the way they make on-farm business decisions.

For more information about the WA Wheatbelt Radars Project go to www.agric.wa.gov.au/r4r/doppler-radar-investment

## Dry Starts 2017

**Gary Butcher, Liebe member, written 25th May 2017**

If your good paddocks are not going to be great then your bad paddocks will be worse so leave them out.
It never rains in a dry year.
Get into a job that you wanted to do but seeding or hot weather stopped you from doing.
At least you will have that out of the way and have some job satisfaction.
Know your break even point and stick to what it tells you.
We are now looking at a " late break" so be ready to go but only if you actually get rain.
Don't start again on a promise of rain.
Remember it never rains well in a dry year.
If we only get 10 mm it will bring the crop up but won't turn the bad paddocks into diamonds.
Get some after seeding jobs done around the home as spraying, when the crop comes, will all need to be done "yesterday "
Talk to your mates.
Don't brood on your own.
Ok crops can come from a late June break.
You are not on your own and it's not your fault.

# Utilising Precision Agriculture Technologies to manage climate variability and improve nutrient use efficiency

**Tyrone Henning, Director/Agronomist, Tek Ag and Alana Hartley, Liebe Group**

**Key Messages**

- AFGRI demonstrated machinery that has the technology for VRT application, which worked successfully.
- Varied inputs to suit requirements of management zones and soil types were effectively implemented through the use of VRT technology.
- Test runs were incorporated to see if the rates were correct for the season and what level of inputs were potentially 'wasted' or production was lost.
- The results that were obtained from the harvest data indicated that each input zone reacted according to the hypothesis that yield would plateau at its ideal rate of input.
- Both the medium and high input zones reached the expected yield based on units of P supplied.
- The demonstration was adversely affected by frost rendering the results inconclusive.

**Aim**

To demonstrate new machinery that is capable of delivering prescriptions via Variable Rate Technology (VRT) in 2016.

**Background**

The ability to maximise production potential is becoming more attainable with the rapid adoption of Variable Rate Technology (VRT). The Liebe Group, in collaboration with AFGRI Equipment Australia and Tek Ag, implemented a 145 hectare Variable Rate Technology (VRT) demonstration on Michael Dodd's property at Buntine. The paddock is a broad scale demonstration of the environmental, agronomic and economic benefits of VRT.

The paddock selected has three distinct soil types which were identified from aerial imaging, grower knowledge and was soil tested to ground truth the production zones. Tek Ag generated a prescription map from soil test and yield data, to establish the required rates for each of the treatment runs. Muriate of Potash (MOP) ranged from 0 kg/ha, 15 kg/ha and 30 kg/ha and, Mono-ammonium phosphate (MAP) rates ranged from 0 kg/ha, 30 kg/ha and 60 kg/ha.

Urea was also included as a separate prescription within the paddock and was applied using a Marshall Multi-spreader. Due to the application of Urea ammonium nitrate (UAN) prior to Urea spreading, all urea prescriptions were reduced by 40 kg/ha. No low treatments were conducted due to the lack of low production zone soil available for the demonstration. The low production zones were already allocated to MAP and MOP treatments.

The demonstration was seeded with a 12m (40 ft) Equaliser bar and a three bin John Deere air cart equipped with VRT and section control. The demonstration was harvested using the grower's Case IH 8240 with a 40ft McDon front.

# Utilising Precision Agriculture Technologies to manage climate variability and improve nutrient use efficiency cont...

## Trial Details

| | |
|---|---|
| **Property** | Niribi – Buntine W.A. |
| **Plot size & replication** | MAP: 0.24 ha x 18<br>MOP: 0.24 ha x 9<br>Urea: 0.48 ha x 9 |
| **Soil type** | Sand – Gravel – Loam – Clay Loam |
| **Colwell Potassium (av.)*** | 0-10cm: 94.9 10-20cm: 62.1 |
| **Soil pH ($CaCl_2$) (av.)** | 0-10cm: 6.0 10-20cm: 5.2 20-30cm: 5.3 |
| **EC (dS/m)** | 0-10cm: 0.039 10-20cm: 0.0514 20-30cm: 0.0581 |
| **Paddock rotation:** | 2013: Wheat 2014: Wheat 2015: Wheat 2016: Wheat |
| **Sowing date** | 6th, 7th and 8th May 2016 |
| **Sowing rate** | 65kg Mace |
| **Fertiliser** | MAP: Low – 0 kg/ha Medium – 30 kg/ha High – 60 kg/ha<br>MOP: Low – 0 kg/ha Medium – 15 kg/ha High – 30 kg/ha<br>Urea: Low – 25 kg/ha Medium – 45 kg/ha High – 60 kg/ha<br>02/06/2016: 40 L/ha Flexi-N<br>12/07/2016: 42kg/ha Urea (for VRT runs) |
| **Herbicides, insecticides & fungicides** | Pre Seeding: 1.8L Treflan<br>08/06/2016: 400mL Paragon |
| **Growing season rainfall** | 231mm |

## Results

The purpose of this demonstration was to maximise yield and quality potential through the adoption of VRT. Prescription maps were used to administer specific treatments of MAP, MOP and Urea across each input/production zone; low, medium and high.

Soil tests were taken from ten locations (Table 1), to a depth of 30 cm across a variety of soil types which were then used, along with aerial imaging, to determine the VRT production zones (Figure 1).

**Table 1:** Soil Test results.

| Depth | Site | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0-10 cm | pH | 6.2 | 5.85 | 6.3 | 6.4 | 6.1 | 5.6 | 5.6 | 6.1 | 7.1 | 5.3 |
| | EC | 0.032 | 0.026 | 0.021 | 0.032 | 0.039 | 0.037 | 0.053 | 0.048 | 0.052 | 0.048 |
| | OC | 0.86 | 0.59 | 0.46 | 0.73 | 1.05 | 0.54 | 0.79 | 0.79 | 0.62 | 0.83 |
| | NO3+ | 4 | 6 | 4 | 5 | 10 | 4 | 7 | 11 | 4 | 10 |
| | NH4+ | 1 | 2 | 1 | <1 | <1 | 1 | <1 | <1 | <1 | 2 |
| | P | 24 | 32 | 26 | 24 | 29 | 30 | 27 | 24 | 21 | 40 |
| | K | 157 | 59 | 40 | 164 | 165 | 38 | 104 | 59 | 191 | 72 |
| | PBI | 32.1 | 26.6 | 32.6 | 27.4 | 62.0 | 27.4 | 37.2 | 32.8 | 57.3 | 31.0 |
| 10-20 cm | pH | 5 | 4.7 | 4.5 | 6.6 | 5.2 | 4.5 | 4.7 | 4.9 | 7.4 | 4.6 |
| | EC | 0.038 | 0.039 | 0.043 | 0.051 | 0.061 | 0.051 | 0.082 | 0.055 | 0.042 | 0.053 |
| | P | 7 | 16 | 4 | 6 | 9 | 5 | 10 | 10 | 2 | 14 |
| | K | 162 | 49 | 28 | 187 | 32 | 29 | 81 | 51 | 43 | 39 |
| 20-30 cm | pH | 5.3 | 4.9 | 4.3 | 7.9 | 4.4 | 5.1 | 4.8 | 4.7 | 7.5 | 4.4 |
| | EC | 0.044 | 0.039 | 0.050 | 0.136 | 0.039 | 0.042 | 0.057 | 0.058 | 0.060 | 0.056 |

# Utilising Precision Agriculture Technologies to manage climate variability and improve nutrient use efficiency cont...

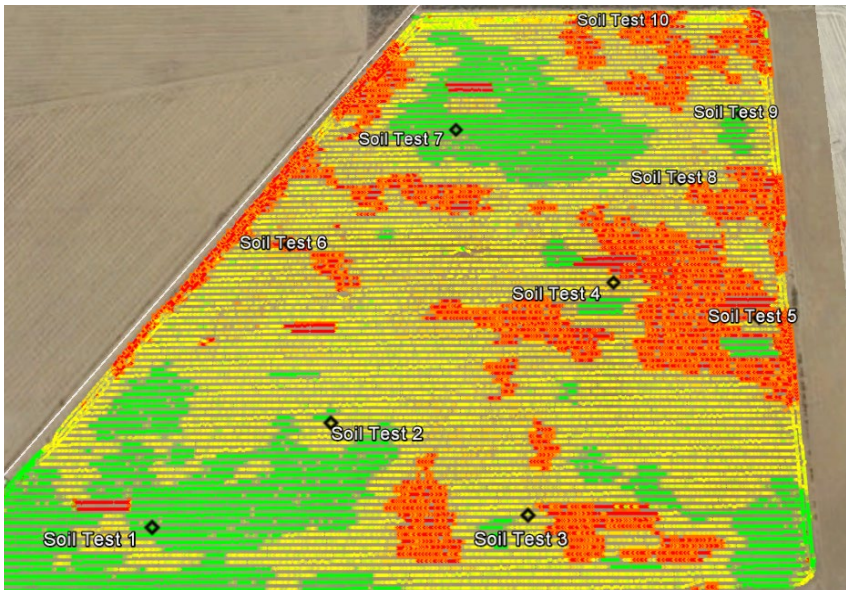


**Figure 1:** Soil test sites with overlay of VRT map.

Application data was collected from the seeder and spreader, along with yield from the grower's harvester. A frost event in spring caused variable yield losses across the paddock, including the demonstration runs.

When the demonstration was seeded, a 1.5m drift in GPS location of each run occurred. This error was unable to be mitigated completely at harvest. Yield results were obtained using seeding GPS data as a reference for which areas were appropriate for harvesting and collection of yield data. An economic analysis has not been completed for this demonstration however; continuation of the demonstration in subsequent years will provide scope for economic analysis.

The results that were obtained from the harvest data did indicate that each input zone reacted according to the hypothesis that yield would plateau at its ideal rate of input.

Figure 2 provides a comparison of results for applications of MAP across each input zone. The rates of MAP (0, 30 and 60 kg/ha) were selected using 2015 yield data and calculating replacement phosphorus (P). Working on the rule of thumb that 1t of wheat uses 3.5 units of P (Summit, 2017), it was expected the prescribed rates were sufficient for crop growth and expected yield, whilst retaining current soil P bank.

The high yield of 2.03 t/ha for the high input zones and nil fertiliser treatment were not as expected. The general hypothesis for a high performing area of the paddock which is supplied nil fertiliser is; yield will be compromised considerably without adequate nutrition. The seasonal conditions at the site were such that this expected drop in yield did not occur in the high input zones where yields reached 2.01 and 1.97 t/ha respectively in each input zone with 30 kg/ha and 60 kg/ha. The 0.3 t/ha yield penalty across the high input zone and 60 kg/ha fertiliser rate was due to frost affect.

If the yield potential was near 3 t/ha before the frost event, it could be hypothesised that the high input zone and high fertiliser rate could have yielded greater than 1.97 t/ha. It is suggested however, by the Department of Agriculture and Food WA, to avoid high fertiliser inputs on frost prone areas as the loss in yield is far greater than if a conservative level of inputs were applied (Biddulph, 2017).

# Utilising Precision Agriculture Technologies to manage climate variability and improve nutrient use efficiency cont...

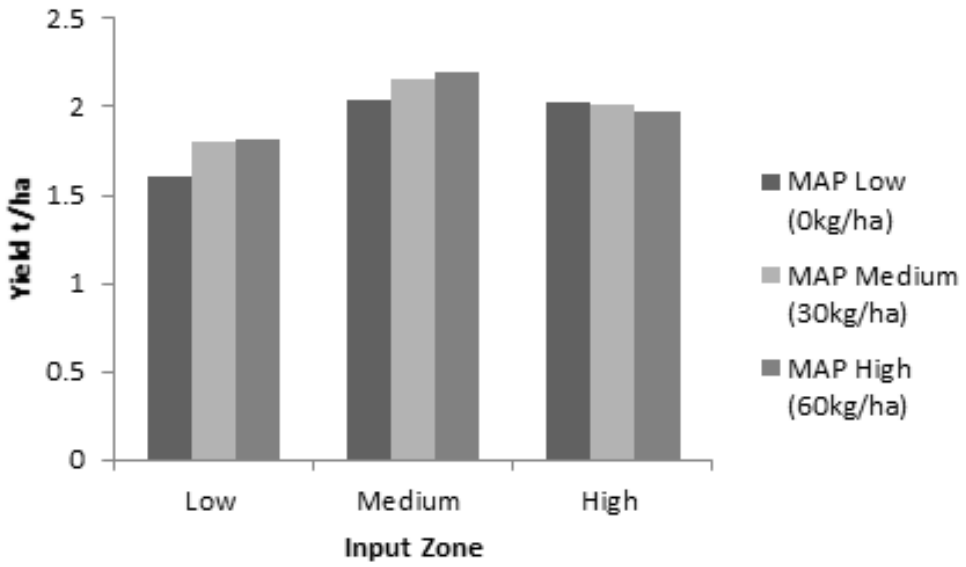


**Figure 2:** MAP yield (t/ha) across each input zone.

Both the low and medium input zones indicated a positive trend toward yield improvement with increasing MAP supply. Low input zone increased yield from 1.6 t/ha with nil MAP to 1.81 t/ha with 60 kg/ha applied MAP. The Medium input zones reacted similarly where yields improved from 2.04 t/ha with nil MAP to 2.2 t/ha at 60 kg/ha MAP.

Soil test results (Table 1) indicate that potassium (K) is not limited at this demonstration site however; some individual sites such as sites 3, 5 and 6 did indicate marginal level of K between 28 and 32 mg/kg at a depth of 10-20 cm which was managed accordingly. While this is the case, the role of potassium in producing plants with stronger cell walls, improves regulation of stomata and water use efficiency (Anderson & Garlinge 2000), is critical. Potassium does not limit yield directly, yet affects peak biomass, dry matter produced in the upper internodes (stem area between nodes) and ears, which contributes to the formation of grains (Anderson & Garlinge, 2000) in each wheat head.

Potassium is similarly managed to Nitrogen in that the crop uses similar quantities during the season and it is important to replace these nutrients as they are used. Typically, a wheat crop will use 4 units of K per tonne of grain harvested (Summit, 2017). Applications of potassium come in the form of MOP and Sulphate of Potash (SOP). This demonstration used MOP to manage crop removal of K, supplying rates of 7.5 units for medium rates of application and 13 units at the higher rate. Together with soil K reserves, it was calculated by Tek Ag that 7.5 units of K, applied as 15 kg/ha MOP would suffice for the medium rate fertiliser treatments and, approximately double this for the high rate of 30 kg/ha.

Yield results (Figure 3) were only taken where all treatments of fertiliser were applied. As Potassium was not limiting at all soil sample sites, the medium input zone was not adversely affected by not having MOP applied (Figure 3). Yields in the medium input zone saw a range between 2.75 t/ha with nil MOP and 2.57 t/ha with 30 kg/ha MOP. The slight drop in yield was due to some frost affect. Due to the improved soil type in the high input zone, yield was affected by the lack of MOP in the nil treatments where the crop relied heavily on soil K reserves. This zone only yielded 1.68 t/ha compared to 1.94 and 1.81 t/ha in those treatments which received 15 and 30 kg/ha MOP respectively. Frost affect must also be considered for the poor yield result in the high input zone which received medium and high rates of MOP.

# Utilising Precision Agriculture Technologies to manage climate variability and improve nutrient use efficiency cont...

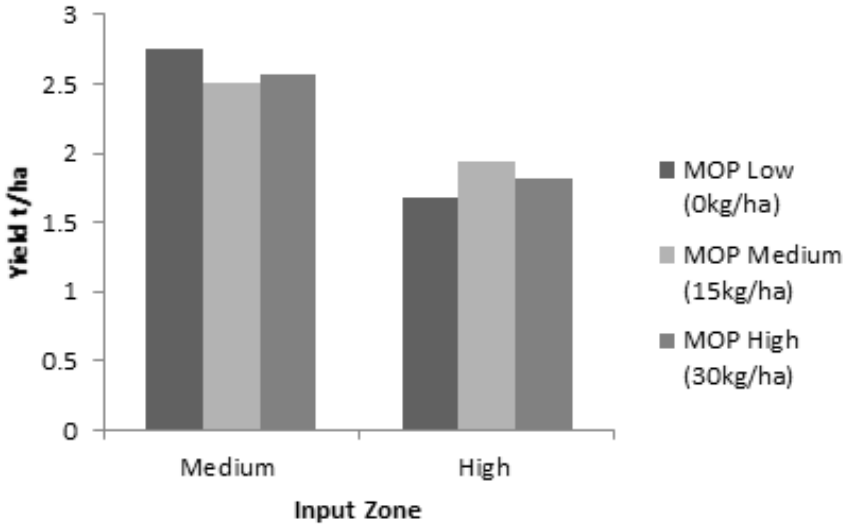


**Figure 3:** MOP yield (t/ha) across each input zone. No comparison was made in low input zone due to lack of soil type available for demonstration runs.

As suggested by the Department of Agriculture and Food WA (Biddulph, 2017), increasing inputs can adversely affect yield in years where frost events occurred during flowering or grain fill. The results for Urea treatments, when compared across each input zone, were inconclusive as there was a yield decrease however; when assessed just on single input zone and urea rate applied, there was a positive trend in yield improvement (Figure 4).

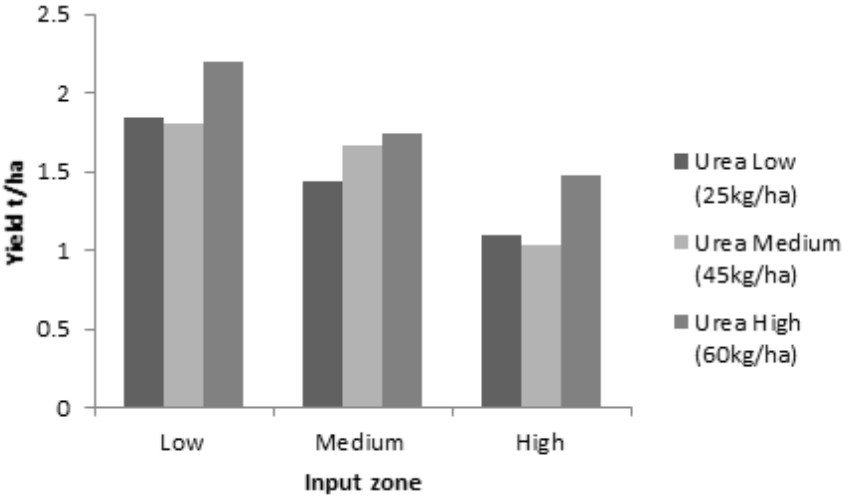


**Figure 4:** Urea yield (t/ha) across each input zone.

Yield in the low input zone responded to increasing application of urea where nil urea yielded 1.85 t/ha and the high urea rate of 60 kg/ha yielded 2.2 t/ha. This was an improvement of 0.35 t/ha across that one input zone. A similar pattern occurred across the medium and high input zones where the yield with nil urea in the medium input zone only reached 1.44 t/ha and then improved by 0.3 t/ha to 1.74 t/ha, when urea was increased to 60 kg/ha. While the high input zone was affected by frost, causing yields to be lower than those in the low and medium input zones, the positive trend in yield due to increasing urea rate remained. With nil urea, the crop in the high input zone would have relied on mineralised soil N, causing yield to only reach 1.1 t/ha compared to those treatments receiving 45 and 60 kg/ha urea which yielded 1.03 and 1.48 t/ha respectively.

# Utilising Precision Agriculture Technologies to manage climate variability and improve nutrient use efficiency cont...

**Comments**

Due to effects of frost, reliable yield data was not obtained. With frost, as is with drought, nutrition is not usually the limiting factor as can be seen in the figures above.

Afgri Equipment's seeding demonstration worked both in the field establishing the crop and delivering the fertiliser inputs to where they were prescribed, this was checked through the application data.
The same can be said for the spreading of urea through the Marshall spreader.

The demonstration runs and VRT machinery demonstration will aim to be continued in subsequent years, allowing for economic analysis over time.

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Biddulph, B. 2017, 'Frost and Cropping'. https://www.agric.wa.gov.au/frost/frost-and-cropping?nopaging=1 Viewed 24 May, 2017.

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**Acknowledgements**

This demonstration was supported by Northern Agricultural Catchments Council (NACC) through funding from the Australian Government's National Landcare Programme.

Many thanks to the Dodd family for hosting the site and assistance with management and harvesting the demonstration. Thanks to Ty Henning, TekAg for technical support, Afgri Equipment for the seeding of the demonstration and Matt Roesner, Marshall MultiSpreader.

**Paper reviewed by:** Clare Johnston, Elders Scholz Rural

**Contact**

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# End of Financial Year - Are you prepared?

**Judy Snell, Director, RSM**

There are less than 30 sleeps until we are again finished for the year.

Below are some general strategies to consider:

1. Delay deriving assessable income.
2. Bring forward deductible expenses or losses.
3. Pre-pay up to 13 months of next year's expenses.
4. Shift income to a taxpayer with a lower marginal tax rate.
5. Negative Gearing on property or shares.
6. Make payments that receive special tax treatment e.g. certain superannuation contributions or farm management deposits.

Every year, there are some basic tax planning concepts to consider:

- Timing of Income: consider whether there is an opportunity to defer income to future years or bring forward deductions to the current year. This strategy needs to be considered in light of changes in tax rates for companies and individuals.
- Prepayments: with the removal of the repayments rule it is worth considering prepaid interest or insurance costs etc.
- Bad debts: Where there are doubtful debts recorded in the balance sheet, you should consider whether these items can be written off as bad debt before year-end in order to claim a tax deduction.
- Depreciation claims: A review of the depreciation schedule may give rise to a number of opportunities, including the ability to scrap and write off amounts, Furthermore, the small business concession may give rise to outright deductions for up to $20,000 on single assets; see below
- Gifts and donations: A gift of cash or property to an appropriate Deductible Gift Recipient may be deductible if made prior to 30 June 2017, which could be used to offset against taxable income.
- Tax losses: You may be able to offset prior year tax losses against taxable income. However, this can be subject to a number of carry forward loss rules, including the continuity of ownership test, the same business test, and the income injection test.

**Accelerated Depreciation Write Off**

The accelerated depreciation write-off for assets up to $20,000 acquired by small businesses was announced in the May 2015 budget. The write off threshold was previously $1,000 and the concession only applies to businesses in 2015/16 with an aggregate annual turnover of less than $2 million. However, as a boost for small businesses, the Government has extended access to a number of small business tax concessions by increasing the annual turnover eligibility threshold from $2m to $10m. These measures apply from July 1, 2016.

From a tax planning perspective some business owners may look at the timing of their expenditure to maximise the tax benefits of the instant write off.

The $20,000 threshold only applies to assets that were first acquired at or after 7:30 pm (AEST) on 12 May 2015 and they were first used (or installed ready for use) on or before 30 June 2017. From 1 July 2017, the threshold will revert back to $1,000. The increased threshold is available to all small businesses (including those who previously opted out of the simplified depreciation rules). Depreciating assets that do not meet these timing requirements would continue to be subject to the $1,000 threshold.

# End of Financial Year - Are you prepared? cont...

- The asset can be new or second-hand.
- The deduction is claimed in the income year in which the asset is first used or installed ready for use.
- The write-off is for the 'taxable purpose proportion' of the asset which is the proportion of the asset's use in an income year for producing assessable income.
- The requirement that an asset be 'first acquired' at a particular time is not a feature of the current regulations and limits access to the increased threshold to a small business entity's "new" assets. Don't be confused, the acquired asset can be new or second-hand, but it must be a 'new' asset of the business. The 'first acquired' rule is designed to disqualify assets acquired at an earlier time, temporarily disposed of, and then re-acquired at or after the 7:30 pm start time.
- Depreciating assets that are first acquired prior to the 7:30 pm start time would continue to be subject to the existing $1,000 threshold, irrespective of when they are first used or installed ready for use. The existing $1,000 threshold would also apply to depreciating assets that are first acquired from the 7:30 pm start time but were not first used or installed ready for use on or before 30 June 2017.
- Small business entities can claim an immediate deduction for depreciating assets that cost less than $1,000 if the asset is first used or installed ready for use on or after 1 July 2017.
- Small business entities can claim a deduction for an amount included in the second element of the cost of a depreciating asset (e.g. an amount spent on improving or transporting a depreciating asset) that are first used or installed ready for use in a previous income year. The total amount of the cost must be less than $20,000 and the cost must be incurred at or after 7:30 pm (AEST) on 12 May 2015, and on or before 30 June 2017. Costs that are incurred outside of these times would continue to be subject to the $1,000 threshold.
- Primary Producers are also eligible for accelerated depreciation on the following items acquired after 12 May 2015 such as the immediate deduction for the cost of Fencing and Water Facilities such as dams, tanks, bores, irrigation channels pumps, water towers and windmills. It also includes the cost of Fodder Storage assets such as silos and tanks used to store grain and other animal feed can be depreciated over 3 years.

**Information to Include on Employees' PAYG Withholding Payment Summaries**
PAYG Withholding Summaries are required to be issued to employees by 14 July 2017 and are now required to show the Reportable Fringe Benefits and the total of Salary Sacrificed Superannuation contributions which have been deducted from each employee's wage or salary. Should you require any assistance in relation to preparation of these PAYG Payment Summaries please contact our office.

If you have any queries on the above to do not hesitate to contact our office on phone number 96 511 606.

# Wheat Strategy 2017

Ryan Duane, Farmanco

Global wheat stocks are forecast to increase in 2017/18t to a record high of 258.3mmt. Although world production will fall by 15.2mmt, a sharp decline in demand leads to the stocks increase. Unless there is a significant production issue in 2017, it is difficult to see a sustained rally in wheat prices.

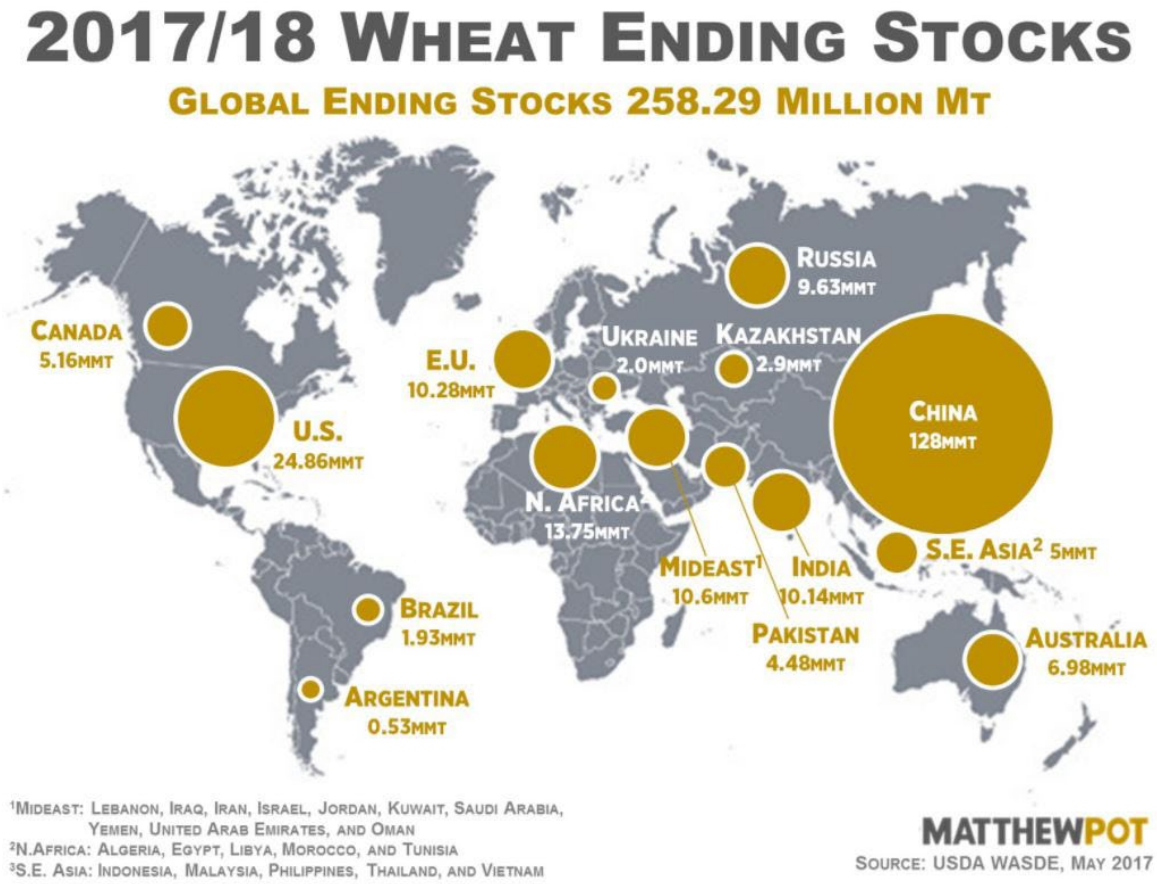
**Strategy – 2016/17 (Old Season)**
Strong shipping pace, tighter local old season stock and a dry start to the new season has recently contributed to moderate price support for most old season grades.

The price (and spread) for ASW1, AGP1 and APW2 have improved the most. For example, the APW1 / ASW1 Kwinana spread was more than $25/t at harvest, now it is less than $5/t. This has created a good opportunity to finalise sales of old crop wheat of lower grades.

Unfortunately, we have not seen similar movements for the higher protein grades. Currently the spot months on Chicago and Kansas are trading at parity, which partly explains the moderate spread between APW1 and H2. It is difficult to see the spread widening significantly given current futures values, although there is some concern with the US HRW wheat crop.

Similarly, the noodle spread has remained fairly constant in response to last year's record crop and ample supply. Again, it is hard to see a strong rally unless the trade become concerned over new season supply.

Consider finalising sales over June and July on any small rallies. Alternatively consider holding a portion of grain to protect against new season dryness. Be mindful of shipping demand post July in your respective port zone.



## Wheat Strategy 2017 cont...

**Strategy – 2017/18 (New Season)**

Prices have been trading around $260/t FIS over May, which is the bottom 25% of prices over the last 10 years. However current fundamentals indicate a price rally is unlikely unless there is a major production issue.

Given this outlook, consideration should be given to commencing or adding to sales in the short term or on any price rally or spike. We are currently recommending targeting sales at $270/t FIS or better for MG wheat Kwi (spreads to other zones) for a portion of expected production.

As always, only make sales as production risk allows. There are still large parts of the state that need rain. If this is the case then hold on sales, or sell only a conservative portion of production.

How the WA season unfolds over the next few weeks may have a significant influence on price (and basis) direction. It may present opportunities with growers fortunate enough have received adequate rainfall to get a good germination and crop establishment and have moisture profiles combine.

Dec-17 AUD swaps are currently being bid at around $230/t. Given implied basis, our preference is to look to sell cash over swaps in the current market should production allow. Should swaps values rally closer to $250/t and/or basis softens - swaps should be considered.

If local conditions improve and there are no issues elsewhere, risk is to the downside. Have in place targets and dates to review over the next few months, and consider making sales to protect to the downside.

Note budgeted prices and break-even values. If the price at the time is profitable (factoring in your current estimated yield), and production allows, consider additional sales at recommended targets and on any rally.

**For more information**

The experienced Farmanco Marketing team provide year-round advice on reducing risk and protecting profits. Contact us on (08) 9295 0222, marketing@farmanco.com.au or via www.farmanco.com.au. You can also find us on Facebook or follow us on Twitter (@Farmanco).

## Save the Date!

### PreDicta B Workshop

Tuesday 8th August

8.30am - 4.00pm at Dalwallinu Discovery Centre

Liebe Group and SARDI are hosting a PreDicta B workshop for all growers.

- Date: Tuesday August 8th
- Cost: TBC

The day will include all you need to know about root diseases in our area, what we can do about them and why the PreDicta B test can help you identify and manage root disease on your farm. A field walk and interactive session in the afternoon will allow you to fire your root disease questions at our presenters from SARDI, DAFWA and Farmanco and have a look at the disease up close. Please contact the office on 9661 0570 to express your interest or for more information.

# What is happening with my pre-sowing herbicides?

Bevan Addison, Adama

With the low levels of patchy rainfall around the state and particularly around the area covered by the Liebe group, it is timely to think about what is happening to pre-em herbicides. Grasses in cereals are the major concern as there is such a heavy reliance on pre- em herbicides and a lack of effective options post-em options.

Table 1. below is a composite of parameters of most of our common pre-em herbicides to give some comparison between their characteristics.

| Product | Volatility Vap Press (mPa @ 25) | Solubility. (mg/L @ 20C) | Adsorption to soil and OM | DT 50 (days) | Degradation pathways | Comments |
|---|---|---|---|---|---|---|
| Prosulfocarb | Low (0.79) | Low (13) | Moderate - high | 10 (7 - 13) | Microbial | Low soil mobility, low volatility loss, binds to trash and soil particles, needs good rainfall |
| Tri-allate | High (12) | low (4) | Moderate - high | 46 (8 - 205) | Microbial and volatilisiation | Low soil mobility, highly volatile, needs incrorporation |
| Trifluralin | High (9.5) | Very low (0.22) | High | 170 (35-375) | Microbial / photo degradation | Low soil mobility, highly volatile, will bind to trash needs incrorporation |
| S metolachlor | Moderate (3.7) | Moderate (480) | Low -mod | 15 (11 - 31) | Microbial and photodegradation | Relatively soil mobile, washes off trash, minimal volatility losses |
| Atrazine | Non volatile (0.0039) | Low -mod (30) | Low | 60 (6 - 108) | Microbial and hydrolysis depending on pH | moderately mobile, activates with low - mod rainfall, washes off trash |
| Pyroxasulfone | Non volatile (2.4 x $10^{-3}$ ) | Low (3.5) | low | 22 (16 -26) | Microbial | moderately mobile, very low volatility, needs good moisture to activate but will move in root zone. |

All of these herbicides work better under moist seedbed conditions but the more soluble they are the less rainfall needed to activate them. In addition, the area of their primary activity in the plant will have an effect on how well they work under different circumstances.

**Prosulfocarb (Countdown®)**

This active ingredient has been around for several years now but this season is the first as a stand-alone product. Prosulfocarb has low solubility but relatively high binding to OM. The good news, it won't leach under wet conditions; the bad news, it takes a bit of moisture to get it fired up and needs some help when conditions are a bit patchy.

It also works primarily on the mesocotyl of the weed. This is the area immediately next to the seed which has rapid cell division to push the coleoptile to the surface during seedling emergence. Once the coleoptile has pushed through, mesocotyl development basically stops. There is some activity via the roots and shoot but most happens very early in emergence.

**Prosulfocarb + S Metolachlor (Boxer Gold®)**

This product has the addition of the more soluble S Metolachlor component which can aid performance in less than ideal conditions. The downside; you can have crop effect when conditions are very wet as S Moc can be damaging to wheat if you get furrow fill via rain and/or wind and then get wet conditions.

# What is happening with my pre-sowing herbicides? cont...

**Trifluralin**
This is one that works relatively better in drier conditions. Trifluralin is fairly volatile and while this is problematic if you leave it uncovered on the soil surface, it is good when it is mixed through the topsoil or covered by dirt throw. It works by inhibition of cell division with a combination of activity via root and through the shoot area so weeds will pick it up as they push through the soil. It has very low solubility so pretty much stays where you put it.

This is why all our recommendations have been to use prosulfocarb + trifluralin. It hedges your bets on the season and gets 2 modes of action working on 2 different key sites in the weeds.

**Pyroxasulfone (Sakura®)**
This has low volatility so does not need incorporation immediately, but is more root active. It has relatively low solubility but has low binding to organic matter OM so will move into the root zone with moisture. On sandy soils with too much rain this can be problematic also as it can leach. Low binding to OM means it can wash through stubble better than trifluralin.

**What about post-em prosulfocarb?**
Last year many people tried and were successful with post-em use of Boxer gold. Remember the season... rain every few days, nice moist soils all through the early part of the growing season. This adds up to perfect conditions for applying Prosulfocarb plus a more soluble S Moc (Boxer gold). Applying stand-alone prosulfocarb that has low solubility in poor moisture conditions.....not a good outcome. This is why it is not registered post–em.

**What about stubble?**
Trifluralin and Prosulfocarb bind more than Sakura. Good water volumes and droplet penetration have been shown to help all of these chemical and potentially a greater issue than total stubble is the distribution of stubble. All herbicides wash off stubble better when stubble is initially dry, the rainfall event occurs soon after seeding and there was a larger single event rather than smaller events.

Checkout the article from this season's crop updates. "Effect of crop residue and rainfall on the availability of pre-emergent herbicides in the soil" by Yaseen Khalil from UWA http://www.giwa.org.au/2017researchupdates

**Assess your own situation**
In our trial work there have been a couple of key take home points.

1. All the main products and mixes work but consistently top out in the mid to high 80% weed control. Don't expect mid 90% job from any of them or you will be disappointed. Across a range of sites, seasons and soil types there is not much difference between them.
2. Good conditions make all of them work better and results from all of them can be variable under poor conditions.

If you applied your herbicides with good water volumes, droplet spectrum, and had low stubble burdens, you have started well. What has happened since? If there has been no rain and soil was dry, some products will not have broken down very much. A decent rain and you may still have some reasonable control. If on the other hand application was patchy, you have half wet and half dry soils and patchy crop emergence, there is a fair chance your herbicides will struggle and may have some breakdown prior to a major "activating" rainfall.

The other part of the puzzle is the timing of ryegrass emergence. Despite often seeing an early germination at times, the vast majority of ryegrass still need colder moist conditions to germinate. Even under great

## What is happening with my pre-sowing herbicides? cont...

seeding conditions, our herbicides may have been activated and lost some of their punch before the bulk of the ryegrass germinates.

A competitive crop is a big bonus in any weed control so if you crop got into some moisture and is up and away despite the poor start, it will out compete later germinating weeds especially if they are suppressed by the chemical, even if it isn't doing the full job. Start planning your weed seed set control options now as even low numbers will set some seed.

## Our mental health and wellbeing; dealing with difficult times

**Owen Catto, Regional Mens Health**

With the latest challenges facing farmers and agribusiness around the break to the season (or lack of it) and lack of early winter rain, it is easy to start blaming ourselves. Men struggle because we think we are failing, rather than battling issues beyond our making and/or control. It is normal that we may question our ability to be a good farmer and/or in another context to be a good bloke.

As human beings when we become aware that we are facing new, serious and unexpected challenges our response is to either ignore them, hoping they are an apparition, or we go to the other extreme and visualize the worst possible outcomes. Is this a normal response to an abnormal event? While both these positions are legitimate, depending on your personality type, the reality of the situation and the solution to the challenge is somewhere in between.

I believe there are several things that can be done to help us deal with the difficult times we are facing right now (lack of opening rains) in a positive way to protect our mental health and wellbeing. These points can also be used for any contextual issue we may be facing in our lives.

- Keep a positive personal attitude. Recognize your ability as a good farmer (or in another context a good bloke) who made the right decisions with the information you had at the time.
- Talk to whoever needs to be informed about your situation. This includes family, business partners, financiers and advisors.
- Look for realistic solutions not someone to blame. These problems have caught most people off guard and unprepared.
- Don't panic or over-react. Most challenges take a little time to unfold and hasty decisions can create additional problems.
- Start to consider your options. As you consider your alternatives keep those affected in the loop.
- Consider this as a challenge more than a problem. When things are problems we usually think negatively when they are challenges we think positively.

In life we have many experiences that require us to use our best judgment, based on the knowledge we have, to ascertain the best way forward. If we are well informed it is easier to respond. This is always helped by increasing communication by both talking with and listening to all concerned in the challenges facing us. Down the track with the benefit of hindsight we are able to test the wisdom or our responses.

Primary Care is what we can do to look after ourselves and to look out for others. Talk to a mate – realize you are not alone. Keep an eye out for others – drop into a neighbor and have a chat and a coffee.
Most importantly look after yourself, you are ultimately responsible for your own health and wellbeing.

# TEAM PRODUCTIVITY & TIME MANAGEMENT WORKSHOP: BEING A BETTER BOSS

PinG
Partners in Grain

## A one day interactive workshop about getting the best out of yourself and those in your farm business

Following on from the grower demand and positive feedback of the Being a Better Boss workshops, PinG has just developed the third instalment in the series.

This workshop focuses on team productivity, time management and being able to recognise your management style and how it impacts others.

***Too busy to attend a workshop? This one is for you.***

This workshop has been designed specifically for farm businesses and is for members of the business who want to improve the way they work with their staff and farming partners.

## TOPICS COVERED

- Self leadership and achieving results
- Bringing out the best in others
- Communication and interaction skills
- Managing conflict and difficult people
- Enhancing the relationship between employers, employees, family and business partners

**Minimum 8 farm businesses.**
**Maximum 20 participants.**
$165 (inc GST) for the first person from a farm business.
$110 (inc GST) for any other members of the same business.
Includes workshop manual & catering.
(No discount for non-farm businesses)

**PinG workshops are recommended by 98% of participants at over 80 workshops across WA.**

## DALWALLINU

Dalwallinu Discovery Centre (Johnston Street)

## MONDAY 21 AUGUST 2017

Arrive for a 9am sharp start- finishing 3pm
Online registration essential.

**WORKSHOP DELIVERY SUPPORTED BY:**

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

**REGISTER NOW** via WA Events page at www.partnersingrain.org.au

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# Wheat - Yield losses from delayed sowing (or emergence)

**Christine Zaicou-Kunesch[1] , Brenda Shackley[2], Bob French[3] and David Ferris[4] Research Officers Tactical Wheat Agronomy for the West project, Department of Agriculture and Food [1]Geraldton, [2]Katanning, [3]Merredin and [4]Northam office.**

**Key messages**

- Yield potential of crops emerging in June can still be reasonable depending on location and seasonal conditions.
- Delayed sowing (especially into June) can have a significant impact on yield potential compared to crops sown into moist soil in May.
- Average yield losses of 26kg/ha/d (NAR) and 28kg/ha/d (CAR) were observed from DAFWA trial of sowing trials.
- Carefully consider yield potential and the level of stored soil moisture before committing resources to late sown or emerging crops.

**Introduction**

This season, most wheat crops are emerging on rainfall that fell in late May. However, sowing or emergence has been delayed in some situations. This article draws on trial results (2008 to 2011) and uses APSIM modelling to assess the likely yield penalty of delayed sowing or emergence.

**Research trials**

The results from 29 time-of-sowing trials, undertaken between 2008 and 2013 in Western Australia, have been collated to compare the impact of delayed sowing on yield. The analysis compared the yield of mid-to-late May sown crops with June sown crops. The average yield loss (kg/ha/day) for Mace wheat has been calculated for trials which included sown dates in the 1 to 4 weeks of June or July. The percentage yield loss is relative to the yield achieved with a May sowing.

The trials were grouped according to region. The Northern Agriculture Region (NAR) included trials from Badgingarra, Coorow, Mullewa and Mingenew. The Central Agriculture Region (CAR) included trials from Wongan Hills, Pithara, Merredin, Corrigin and Quairading.

**APSIM modelling**

APSIM modelling was used to predict wheat yield response to sowing time at seven locations in Western Australia between 1976 and 2016. For each year of analysis, the meteorological data up to 24 May was replaced with 2017 observations. The median yield results are displayed by location. Assumption were: Mace wheat sown on 10 May, 20 May, 30 May, 9 June, 19 June, 29 June on a shallow sandy duplex (APSOIL database no. 507) at Esperance, Kojonup, Newdegate, Merredin, Mullewa, Mingenew and Wongan Hills; in addition, 30 kg/ha N applied as urea at sowing and 100 kg N applied as urea 30 days after sowing (i.e. a 'luxury' N rate to ensure no N deficiency).

**Results**

**Yield loss**

Between 2007 and 2011, delayed emergence of wheat crops into June either resulted in a small yield gain or a significant yield loss of up to 48 kg/ha/day compared to crops emerging in May (Table 1). Seasonal conditions such as frost, terminal drought, heat stress or late rain during the growing season are likely to have influenced these responses. Yield losses for the SCAR averaged 13 kg/ha/day compared to 23, 28 and 26 kg/ha/day for the GS, CAR and NAR respectively (2008 -2013). It is important to note that the size of these penalties are relative to mid-to-late May sowings i.e. the analysis does not include any yield comparison with earlier sowing times (April or early May).

# Wheat - Yield losses from delayed sowing (or emergence) cont...

**Table 1:** Mace wheat yield loss (kg/ha/day) with delayed sowing from May into the weeks of June. Averaged yield loss based on trials conducted between 2008 and 2011 from the northern (NAR), central (CAR), great southern (GS) and south coastal area (SCAR).

| Week Sown | Yield Loss (kg/ha/day) NAR | No. of trials | Yield Loss (kg/ha/day) CAR | No. of trials |
|---|---|---|---|---|
| 1st week in June | 16 | *7* | 48 | 3 |
| 2nd week in June | 19 | *2* | 16 | 1 |
| 3rd week in June | 34 | *6* | 33 | 3 |
| 4th week in June | | | 28 | 3 |
| July | | | 16 | 4 |
| Average yield loss | 26 | *15* | 28 | 14 |

Source: Wheat time-of-sowing trials funded by DAFWA and GRDC (DAW00218, DAW00147). Note: To gain an understanding of yield reduction (kg/ha) with delayed sowing multiply the yield loss by the number days between sowing times.

The APSIM modelling will provide an understanding of predicted yield loss over a wider range of seasons. Predicted yield losses with delayed sowing averaged ranged from 16 to 48kg/ha/day depending on locations and sowing date (Table 2).

Predicted yield losses differed between the observed (Table 1) and predicted values (Table 2). These differences may be due to the assumptions used for the APSIM modelling, the grouping of time-of-sowing trials based on region or the date of the May sowing. However, the information provides a good indication of the range of yield losses which growers may observe if sowing is delayed until June.

**Table 2:** The predicted Mace wheat yield loss (kg/ha/day) with delayed sowing from 20th May at four locations in Western Australia using a 2017 start to the season. Yields based on APSIM modelling from 1976 – 2016.

| Week sown | Mullewa | Mingenew | Wongan Hills | Merredin |
|---|---|---|---|---|
| 30-May | 14 | 26 | 54 | 25 |
| 9-Jun | 21 | 33 | 52 | 24 |
| 19-Jun | 21 | 31 | 42 | 22 |
| 29-Jun | 21 | 29 | 38 | 20 |
| Average | 19 | 30 | 47 | 23 |

**Yield potential**

The impact of delayed seeding on yield potential differed between locations and seasons (Figure 1). In some years such 2009, there was no stored moisture and dry conditions in the CAR compared to the SCAR which had significant stored moisture. In 2017 there are varying levels of moisture between districts. The value of stored moisture, assuming the crop can access it, will be higher yield potentials however this will decline as seeding or emergence is delayed in to June (Figure 1).

The crops yield potential will influence yield losses. In 2006 and 2007 yields were extremely low in some districts because of low rainfall and delayed seeding opportunities in to June. In the sowing time trials at Wongan Hills, Wyalkatchem yields ranged from 3 to 1.8 t/ha with delayed sowing mid-May to mid-July (Figure 2). This was a yield loss of 23 kg/ha/day. In contrast at Buntine yield loss per day was low because the yields achieved were less than 0.5t/ha at all sowing times in a low rainfall year.

# Wheat - yield losses from delayed sowing (or emergence) cont...

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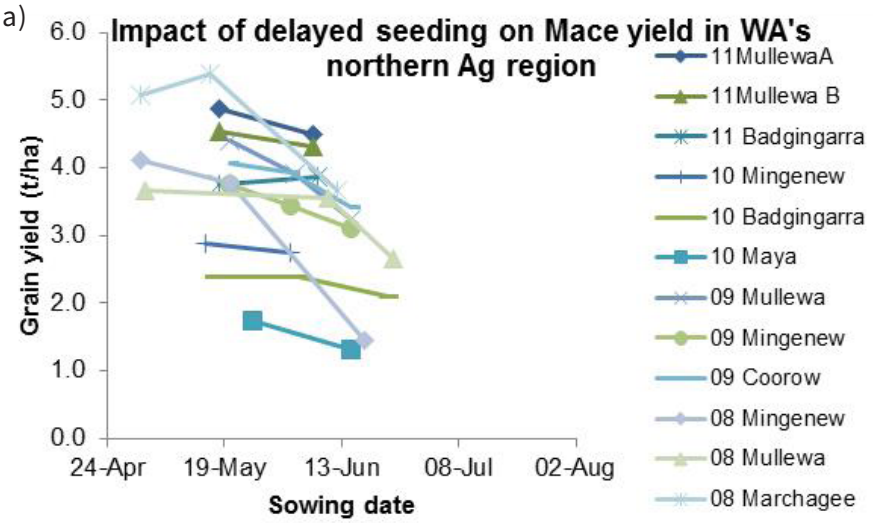



1b)

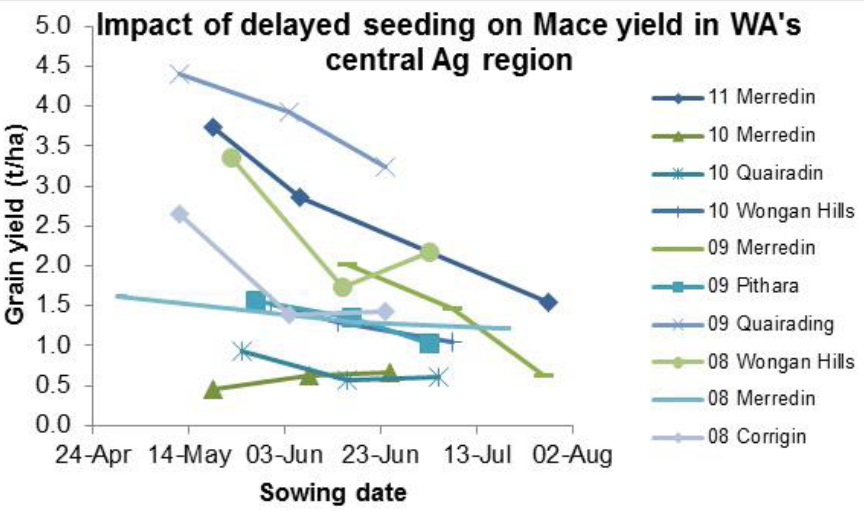



**Figure 1 a and b:** Impact of delayed seeding on Mace yields for research trials conducted at locations in the a) NAR, b) CAR of Western Australia between 2008 and 2013. Source: Wheat sowing time trials funded by DAFWA and GRDC (DAW00218, DAW00147).

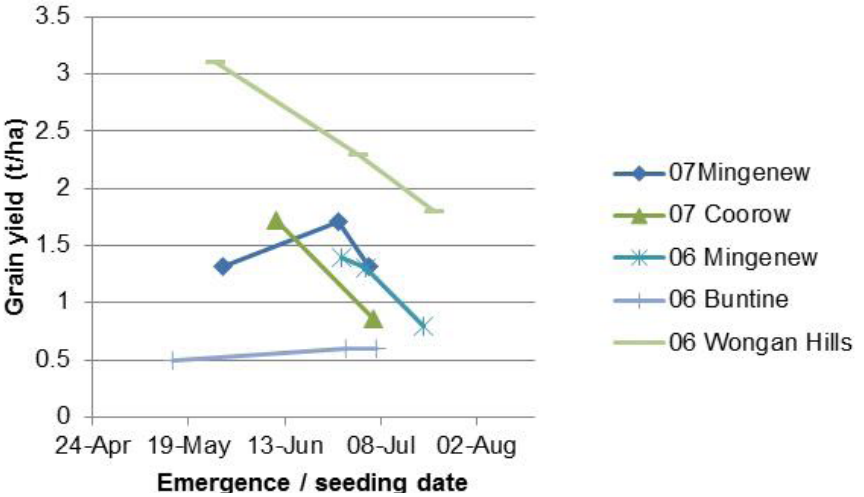



**Figure 2:** Impact of delayed seeding on Wyalkatchem yields in research trials conducted in 2006 and 2007.

APSIM modelling for 2017 indicates significantly different yield potentials between locations in WA (Figure 3). The yield potential at each sowing time in Kojonup and Esperance are higher than the other locations. The yield potential of wheat crops emerging in June at Mullewa and Merredin are less than 1t/ha. When committing resources for your crops which are yet to emerge, consider its yield potential and the stored moisture in the profile.

**Implications**

Crops emerging in June can have good yield potential depending on location and seasonal conditions.

Yield losses with delayed sowing into June can have a significant impact on yield potential.

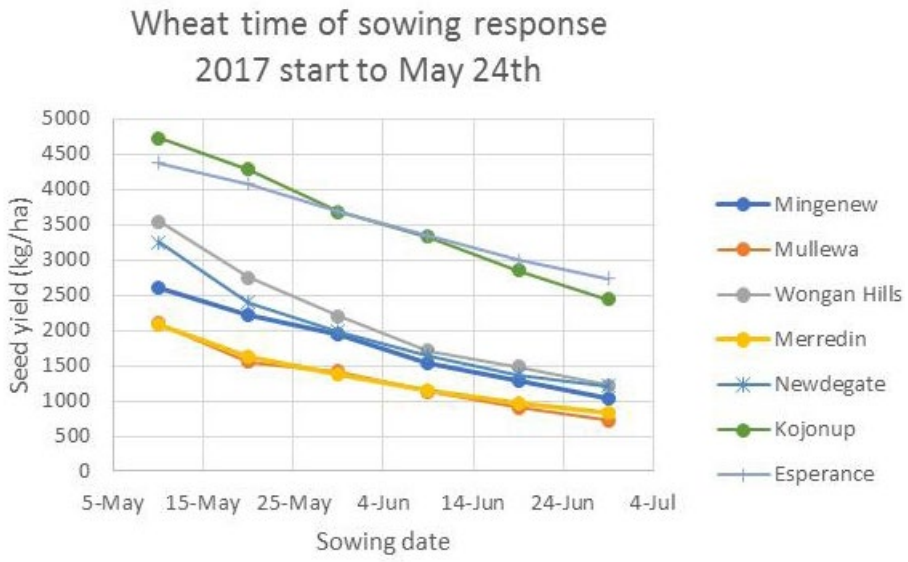
Average yield losses of 26kg/ha/day (NAR) and 28kg/ha/day (CAR) were observed from DAFWA trial of sowing trials.

When committing resources for your crops which are yet to emerge, consider its yield potential and the stored moisture in the profile.

**Acknowledgement**

The financial support of growers through the GRDC is gratefully appreciated. Technical support provided through DAFWA is invaluable and appreciated. Grower groups provide access to research locations and communication opportunities which enables delivery of key message to industry and this is appreciated.

## Wheat - yield losses from delayed sowing (or emergence) cont...




**Important disclaimer**
The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.


**Figure 3:** Impact of sowing time on predicted Mace yields based on APSIM modelling. (Note: median yields based on meteorological data over 40 years to 2016 with a 2017 start to May 24th.

# Bigger department better for agriculture

**Department of Agriculture and Food, WA**

Western Australia's agriculture and food sector will reap the benefits from the amalgamation of key agencies working to support the State's primary industries and regions.

From 1 July, the departments of Agriculture and Food; Fisheries; and Regional Development are joining with the staff of the nine Regional Development Commissions to form the new Department of Primary Industries and Regional Development (DPIRD).

These major structural changes are happening across the public sector to create more collaborative departments to deliver services in a more efficient and effective way.

The new combined department officially starts operating from July, with all staff brought under the one banner, but the full transition of functions and services will take some time longer. A project management team, including representatives from DAFWA, has been established to guide this transition.

Ralph Addis has taken on the role of acting Director General of DPIRD. Ralph was the Director General of the Department of Regional Development. He hails from a family farm near Cranbrook and has a first-hand appreciation of the challenges of modern agribusinesses.

DAFWA's acting Director General Mark Webb is moving on to head up the new Department of Biodiversity, Conservation and Attractions.

Mark Sweetingham will keep the focus firmly on agriculture and food as he takes the lead as DPIRD's Deputy Director General for Agriculture, and will help navigate this latest evolution of the department. Mark was previously the Executive Director of Grains Research and Development Transformation.

He is excited about the future of agriculture and the synergies and opportunities to be generated by working together in a bigger more collaborative department.

During this transition process it is 'business as usual' for the agriculture and food staff, who continue to work with the expertise and passion for which they are renowned.

Valued partnerships remain strong and the department's research and development activities will stay on track with universities, grower groups and research organisations.

The Department of Agriculture and Food has had many incarnations over the past 124 years. This is another chapter in that proud history, which will enable the department to tap into the skills and resources of other aligned departments and pursue significant activities that advance the capability and prosperity of the sector.

# CBH Harvest Opportunities

**Kate Dewar, CBH Group**

Ever thought your casual job would lead you to a rich and fulfilling career? CBH's Commercial Manager Andrew Mencshelyi didn't – yet his time as a harvest casual for CBH has led him to a career with CBH Group spanning more than 23 years.

As a teenager I was really excited to get out and work on the CBH bins at harvest. It was a chance to be independent from Mum and Dad, get a well-paid job and was really the first chance to live life like an adult. My Dad and all of my uncles worked at the grain receival sites and the experiences, stories and characters they talked about made it sound like the biggest adventure a city kid could get.

I got my first job at 16 at the Merredin bin and over the next eight years spent every summer working for CBH at Gairdner, Binnu, MGC and Beaumont. I then did a harvest in the UK for Hampshire Grain.

Working as a casual at harvest teaches you about the real world. Mum isn't back at the hut cooking you dinner and doing your washing and Dad isn't there when a grower gives you a serve for not doing your job properly.

Having been lucky enough to work in every zone in the State over a number of harvests, I have a good understanding of the anomalies across WA's vast grain growing region - in terms of weather, grain quality, market access, supply chain constraints and grower culture. It has also allowed me to foster long lasting relationships with some staff and growers.

At the time it was just a great way to earn money – but I now understand how important the harvest roles are for CBH in our focus of creating and returning value to growers.

It teaches you the ethos of the CBH business, why the co-operative exists and exactly what growers' value. I have taken these as fundamental learnings and use them intuitively, even in my current role as Commercial Manager, to assess the value to growers of a new initiative.

Last year we brought in the State's largest ever crop of 16.6 million tonnes. The harvests are getting bigger and so too is the job of getting all this grain into our system. In 2016 we employed 1700 casuals ranging in ages from 17 up to 78 and without them this job would have been impossible. Sampling, weighing, unloading and filling storages with over 500,000 truckloads will always require a large team of hard working people with a great attitude to bring the grain in safely and efficiently.

History will show that many careers at CBH begin as a harvest casual; it becomes part of your DNA and once you understand what growers value and have been on the frontline at harvest, you can use that in any role at CBH.
So I encourage you to tell family and friends who may be looking for a job from October this year

CBH Group's Commercial Manager Andrew Mencshelyi
Photo credit: Rural Press

that we have now opened up recruitment for the 2017-18 harvest.

It's a great chance to learn an incredible amount about agriculture, farming, supply chains and get a thorough understanding of how one of the largest players in Western Australia's economy actually operates.

If someone you know is keen to work for CBH from October, our harvest casual positions are open for applications now. Visit the www.careers.cbh.com.au website to apply. Applications are open until 31 July 2017.

CBHGROUP

# Innovation Generation Conference moves to Adelaide in 2017

Alan Meldrum. Grain Growers

The Innovation Generation (IG) conference is a wonderful opportunity for young grain growers in Australia to gather and dive into the issues that matter for sustained grain production. IG is the leading event for 18-35 year-olds in the grain growing industry and will be held in Adelaide, 3-5 July 2017. Registrations are now open with full details at the IG website, Innovation Generation 2017.

The networking opportunity is too good to miss. You will learn and share with young grain growers from across Australia about all aspects of grain production along with the dealing with the pressures of grain production in a variable climate.

The Perth IG conference in Scarborough last year was a resounding success with glowing reports from those attending. Adelaide will be just as good and will only be better with a strong number of WA growers.

The 2017 conference theme is 'TELLING THE AG STORY IN A DIGITAL AGE'.

The advent of the digital age, social media included, provides tremendous opportunities for Australian farmers and the greater ag sector. It also provides challenges. IG 2017 will explore how as a collective Australian farming can put its best foot forward in this virtual world. The speaker line-up will include stories from those who already have a digital 'ag' footprint and those with big ideas on how it can work into the future.

Through collaborative sessions, IG delegates will work together to decide what exactly the message is that we want to portray for our industry. Discussion will then turn to practical steps as to how to get this message out!

**ABOUT IG**

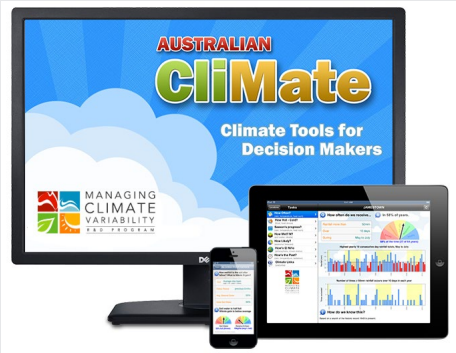
Innovation Generation, established in 2006, is GrainGrowers' flagship event. Innovation Generation is the leading annual gathering for under 35s working in this industry. This event has gained widespread recognition among its target audience and industry leaders and continues to provide access to the latest products, research and technology allowing delegates to attend the forum to learn about efficiency and productivity developments.

The conference provides an opportunity for young agricultural enthusiasts across all commodities to connect, share and gain knowledge to enhance their careers and businesses. IG enables young growers who are establishing themselves in their farming businesses to participate in a conference that focuses on key industry issues relevant to their generation.

More information from Alan Meldrum, Regional Coordinator WA:
Phone: 0427 384 760 Email: alan.meldrum@graingrowers.com.au

## APP OF THE MONTH - Australian CliMate

CliMate is a suite of climate analysis tools delivered on the Web, iPhone, iPad and iPod Touch devices. CliMate allows you to interrogate climate records to ask questions relating to rainfall, temperature, radiation, and derived variables such as heat sums, soil water and soil nitrate, and well as El Nino Southern Oscillation status. It is designed for decision makers whose business relies on the weather.



# Managing risk when constrained by climate

**Bob Nixon, Nuffield Scholar**

**Abstract**
The need for techniques to improve grain yields and manage costs in the face of a drying climate is common to many areas around the world, but in the Eastern Wheatbelt of Western Australia it is even more critical with its comparably low rainfall and yields.

2014 Nuffield Scholar Bob Nixon has looked into ways of reducing risk in the cropping system focusing on adding low risk crop diversity, as well as techniques to manage costs and lower the break-even yield.

"A 10-15 per cent decline in winter rainfall and an increase in seasonal variability has created serious challenges for farm businesses in the Eastern Wheatbelt of Western Australia (WA)," Mr Nixon said.

"On many Eastern Wheatbelt farms, the ten-year wheat average has dropped 250kg/ha since the end of the 1990's," Mr Nixon said.

"Crop rotation and diversity are powerful tools in managing cereal production costs because they lower disease and weed burdens in a paddock whilst enhancing cereal yields. In the Eastern Wheatbelt, canola has replaced legumes as the main rotation crop due to factors like the soils high salinity, acidity, sodicity and the current dry and variable climate."

Mr Nixon and his family operate a 18,500 ha broadacre cropping and sheep property near Kalannie, in the Central Wheatbelt. The operation consists of wheat, barley and canola and are currently selling their Merino sheep enterprise. Mr Nixon's scholarship was supported by the Grains Research and Development Corporation (GRDC).

For his studies, Mr Nixon travelled to Canada, USA, Mexico, Brazil, Argentina, Kenya and Italy and he has concluded that crop rotation is essential to maintaining crop yields.

Mr Nixon recommends growers in the Eastern Wheatbelt adopt several strategies in their farm management plans.

"Break crop strategies where growers are combining a chemical fallow and improved oilseed traits will underpin ongoing success in the Eastern Wheatbelt.

"Lighter soil types play a larger role in generating profit in drier years. It is important to cost-effectively fix soil constraints like pH to maximise their production"

"There is also a need to retain ground cover to protect soil and keep it soft and friable to support dry seeding, so the use of livestock should be evaluated. Dry seeding is the main driver of improved machinery and water use efficiency in the Eastern Wheatbelt."

"The agricultural industry needs to focus on up-skilling management and employee capacity to manage economies of scale. As farm size increases, so must the capability to pay attention to detail with management becoming the limiting factor.

"Without significant government subsidisation, multi-peril crop insurance will struggle to gain widespread grower adoption, so growers should focus on other ways to manage risk."

Mr Nixon says that business diversification and value adding are difficult to achieve in the Eastern Wheatbelt due to lack of water, high labour costs and limited product range for value adding.
"We have
no choice but to rise to the challenge to be the most efficient, lowest cost producers in the world with the flexibility to adapt to change," he said.
"High input costs will most likely be here to stay so the goal is to achieve the same yield with more efficient use of inputs."

To read Bob's report go to nuffield.com.au/scholar-profile-bob-nixon/

Bob Nixon, Liebe Grower and 2014 Nuffield Scholar.

# A GUIDE TO FARM LABOUR #15

## Grains Research and Development Corporation

Over the course of the last few years the Liebe Group has been including snippets of information from the publication "A Guide to Succession - Sustaining families and farms" and "A Guide to Communication for Farm Families" for the Liebe growers. This continues with the third installment of "A Guide to Farm Labour - How to find and retain on-farm staff". All three books can be obtained from the Liebe office, and the group invites you to request a free copy - it is worth the read. The book is compiled and written by ORM Pty Ltd and has been published by the Grains Research & Development Corporation.

**Dismissal process and procedures**
If you are a small business (fewer than 15 employees) and are going to dismiss an employee for under performance or misconduct you should follow the Small Business Fair Dismissal Code. The Code is not compulsory but provides an easy to use checklist to help you comply with fair dismissal regulations.

**TIP:** Where there is an unfair dismissal claim, the Fair Work Commission will take into account whether, as a small business, the employer has followed the Code.

There are a number of areas that you should be familiar with if you are going to dismiss an employee due to under performance or misconduct, Table 12. Make sure you highlight the performance and behaviour standards you expect from your employee right from the beginning, and have identified and addressed any issues with that employee along the way.

The employee should be given written warnings that are documented and kept on record. A written warning should:

- Clearly identify the problem and indicate the areas that you expect the employee to improve;
- State that dismissal might occur if the problem continues or performance doesn't improve; and
- Set a time in the near future to review the employee's performance or behaviour.

If improvements don't take place, you will need to provide the employee with a written termination of employment letter in person. The letter should:

- Outline the reasons for termination;
- Specify the notice period or if the employee will be paid in lieu of notice; and
- Advise the employee of their last day of work.

**TIP:** Keep comprehensive notes about all performance and termination discussions. Make sure the notes are accurate and include relevant work related information. Do not use deformation, discriminatory and demeaning language, in person or in writing, emails or text messages.

**Exit Interviews**
An exit interview provides a good opportunity to find out why an employee left your business and will enable you to get some feedback about the business and employee management.

Think about who is best placed to conduct an exit interview. It is unlikely you will get honest feedback if the direct supervisor

| Period of continuous service | Example dismissal process for under performing employees |
|---|---|
| 1. | Clearly warn the employee, preferably in writing, that they are not fulfilling the position properly and have to improve their conduct or performance or otherwise be dismissed. |
| 2. | Provide the employee with a reasonable amount of time to improve their performance or conduct. |
| 3. | Offer the employee any support, training or skills development opportunities that may assist them. |
| 4. | Monitor the employee for any improvement and provide feedback on their performance. |
| 5. | Before dismissing the employee, tell them the reason for dismissal and give them a chance to respond. |
| 6. | Keep records of warnings made to the employee and of any discussions on how his or her conduct or performance could be improved. |

**Table 12:** An example dismissal process for under performing employees.

# A GUIDE TO FARM LABOUR #15 CONT...

is conducting the interview. Make sure that you get positive as well as negative feedback so that you have useful information for retaining good employees in the future.

**TIP:** Ask questions about their satisfaction with the initial induction process, and whether they have any feedback for improvement.

**Final pay and entitlements**
When an employee stops working for you, according to the ATO, you must:

- Make any final PAYG payments;
- Send a payment summary to the employee'
- Retain the employee's TFN declaration for the current and next financial year;
- Include the details of any final payments made to the employee in your PAYG payment summary statement; and
- Keep the necessary PAYG withholding records.

The final pay must include:

- Remaining wages, including allowances and penalty rates;
- Pay for any annual leave that hasn't been taken and annual leave loading if applicable;
- Pay for any long service leave that hasn't been taken;
- Redundancy pay entitlements if applicable;
- Payment in lieu of notice if applicable; and
- Superannuation (note. a lump sum termination payment does not attract superannuation).

**Unfair and unlawful dismissal**
**Unfair dismissal**
An unfair dismissal refers to a situation where there was no valid reason for dismissal, or the termination process used by the employer was harsh, unjust or unreasonable, the employee was not given a fair go, or in the case of redundancy, it was not genuine.

Employees can only make a claim for unfair dismissal after they have been employed for the minimum employment period. This period is 12 months for a small business that has fewer than 15 employees, or six months for employers with 15 or more employees.

**TIP:** Use the Small Business Fair Dismissal Code to make sure you don't unfairly dismiss an employee.

**Unlawful dismissal**
It is unlawful to dismiss an employee for reasons based on discrimination, such as:

- Race, colour, sex, sexual preference, age, physical or mental disability, marital status, family or carer's responsibilities, religion, political opinion, or social origin;
- Temporary absence from work because of injury or illness. An employee can be absent for up to three months with medical certificates if they are not on paid sick leave;
- Maternity leave or other parental leave;
- Temporary absence from work for a voluntary emergency activity, if reasonable; and
- Trade union membership or activities or non membership of a trade union or acting as an employee representative.

For more useful information on unlawful dismissal of employees visit: www.fairwork.gov.au.

To:

POSTAGE
PAID
AUSTRALIA

From: Liebe Group
PO Box 340, Dalwallinu, WA, 6609
Phone: (08) 9661 0570 Fax: (08) 9661 0575
www.liebegroup.org.au

## NEXT GENERAL MEETING
## MONDAY 10TH JULY

## STAFF

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## CALENDAR OF EVENTS

| Event | Date | Location |
|---|---|---|
| PING Farm Office Efficiencies Workshop | 13th June | Dalwallinu Discovery Centre |
| Women's Field Day | 20th June | Dalwallinu Recreation Centre |
| Post Seeding Field Walk | 20th July | Dodd's Property, west Buntine |
| PreDicta B Workshop | 8th August | Dalwallinu Discovery Centre |
| PING Being a Better Boss: Team Productivity and Time Management Workshop | 21st August | Dalwallinu Discovery Centre |
| 20th Anniversary Dinner | 25th August | Dalwallinu Hall |
| Spring Field Day | 14th September | Dodd's Property, west Buntine |

## Keep an eye out for your invitation

To celebrate the 20th Anniversary of the Liebe Group we are inviting all past and current Liebe members and partners to a night dedicated to celebrating the achievements of the group over the past 20 years.

**Friday 25th August 2017 at the Dalwallinu Town Hall**