

# Liebe Group Newsletter



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## LIEBE EVENTS

- ▷ **Strategic Plan Day**  
Thursday 16th Feb
- ▷ **Crop Updates**  
Wednesday 1st March
- ▷ **Women's Field Day**  
Tuesday 20th June
- ▷ **Post Seeding Field Walk**  
Thursday 20th July
- ▷ **Spring Field Day**  
Thurs 14th September

## GENERAL MEETING DATES

- ▷ AGM 16th February
- ▷ Monday 13th March
- ▷ Monday 10th April

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.

## HAVE YOUR SAY IN THE DIRECTION OF THE LIEBE GROUP!

2017 marks the 20th anniversary of the Liebe Group, and coincides with the development of a new strategic plan. The group is in the process of planning future growth, opportunities and pathways to increase the support for the local region.

Over the last twenty years the group has attracted millions of dollars of research into the region, supported faster adoption of technology and built the capacity of more than a generation of farmers to make effective decisions on the productivity of their businesses.

Now is the time to review and plan for the next five - ten years of the Liebe Group at the Strategic Plan review!

**Date: 16th February 2017**

**Time: 9am - 4.30pm**

**Venue: Dalwallinu Bowling Club**

This one day strategic planning workshop will delve into the goals and aspirations of you, the Liebe Group members, to ascertain how to progress the group into the future. We want to ensure we remain relevant, sustainable and of value to the local agricultural industry.

The AGM will be held during this day, at 1.30pm. Following the Strategic Plan Review, we will be hosting a Sundowner with oysters and champagne, kindly sponsored by Scott's Watheroo Dolomite.

RSVP to the office on 9661 0570 or [admin@liebegrup.org.au](mailto:admin@liebegrup.org.au)

A promotional poster for the "Liebe Group Sundowner" event. The text reads: "Kindly Sponsored by: Watheroo Minerals Pty Ltd Scott's Watheroo Dolomite". The main title is "Liebe Group Sundowner" in large blue letters. Below it, it says "Celebrate the future of Liebe" and "Thursday 16th February from 4:30pm". A handwritten-style note says "with oysters &amp; champagne". The background features a bottle of champagne and glasses. A small logo in the bottom left corner says "CELEBRATING 20 YEARS IN 2017".

## DIAMOND PARTNERS



# EO REPORT

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

Welcome to the first edition of the Liebe Group newsletter for 2017 and my first as EO of the Liebe Group. I hope you all enjoyed a great Christmas and New Year break and are feeling revitalised for the coming season.

I would firstly like to recognise the efforts of Clare Johnston (departing EO) for her 5 years with the Liebe Group and thank her for her amazing contribution during these years. In 2016 the Liebe Group also said farewell to Lilly who dedicated 3 years as our Research and Extension Agronomist and Jenni Clausen for her year as the Research and Development Coordinator. We would like to thank them again for their hard work and dedication.

2017 marks the 20th year of the Liebe Group and we are excited to celebrate this major milestone with you. Throughout the year we will be reflecting on the past 20 years of the group

and looking back at some of the major achievements.

The upcoming Strategic Plan review on Thursday 16th February will start the year off and determine how members want the group to operate moving forwards. The AGM will be held at 1.30pm on this day. We will also be holding a sundowner after the review to celebrate the 2016 season and kick start our 20th year with oysters and champagne kindly provided by Scott's Watheroo Dolomite.

Soon to hit your mailbox will be the R & D Book which contains a wealth of information generated from the work conducted by our trial partners and the group in 2016. The book is a huge team effort with particular thanks to Clare and Katrina who worked hard to pull the final book together.

The upcoming Crop Updates on 1st March is set to be an



informative day with a range of speakers and presentations. Check out page 4 for the full agenda.

The new Liebe office is continuing to develop with works on site to commence in the coming months. The Liebe Group is also very excited to announce we were successful in obtaining a further \$200,000 funding through the Royalties for Region's Grant Scheme and Community Chests Fund to assist in the construction of the building and the internal fitout.

A big thanks to all involved for assisting in the success of this application. Thanks is also due to the Building Committee and in particular Deb Metcalf (Project Coordinator) for their hard work over the summer period. We look forward to providing you with progress updates of the build throughout the year.

I look forward to meeting and catching up with you all at our upcoming Liebe events and wish you all the best for the upcoming 2017 season.

## GOLD PARTNERS



## SILVER PARTNERS

Syngenta

Adama Australia

Australian Grain Technologies

4Farmers

GrainGrowers

Scott's Watheroo Dolomite

Pacer Legal

Landmark

Refuel Australia

Agrimaster

Pacific Seeds

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## GENERAL MEETING DEBRIEF

Katrina Venticinque, Administration Manager, Liebe Group

TUESDAY 20TH DECEMBER 2016, DALWALLINU DISCOVERY CENTRE

- 1. Staff Update:** The committee were updated on the recent staff changes, including the resignation of Executive Officer, Clare Johnston. The process is underway to employ an Executive Officer and Research Agronomist and Coordinator.
- 2. Building Update:** Deb Metcalf has been appointed Project Coordinator, with work underway to acquire and compare a second quote for the building. The building is targeted to be finished by January 2018, as per the NSRF milestones.
- 3. Crop Updates Planning for 2017:** The committee were provided a draft agenda for the Crop Updates on the 1st March, and the presentations were discussed to ensure on target with member expectations. The pricing for entry of non-members was discussed.
- 4. Project Update:** The committee were updated on the opportunities open for Liebe to investigate for funding including Royalties for Regions Grower Group Grant and NACC funding.
- 5. Strategic Plan Review & AGM:** The committee were provided details of the upcoming Strategic Plan day, which will incorporate the AGM into the agenda.
- 6. R&D Book Update:** The staff are currently in the early stages of compiling the book, with around 50% of the articles received. Farmers will be approached in the coming weeks to assist with reviewing the articles.



## FAREWELL TO CLARE JOHNSTON

Katrina Venticinque, Administration Manager, Liebe Group

After five dedicated years, the Liebe Group would like to extend our thanks and appreciation to Clare Johnston, who has departed the group to explore her career opportunities in the industry. Clare has been an invaluable staff member, both in her time as R&D Coordinator and in her recent role of Executive Officer.

To celebrate and acknowledge Clare's contribution to the group, over 30 members came together on the 2nd February at the Dalwallinu Discovery Centre to reminisce and wish her all the best for her future endeavours. Many comments were made on Clare's development within the group, originally coming straight from university to progress into the leading role; bringing many opportunities, projects and funding to the group, including the successful National Stronger Regions Fund application for the new Liebe office building.

The Liebe Group would like to thank Clare for the passion, loyalty and enthusiasm she brought to the group and are pleased to hear that she is staying in Dalwallinu to continue in the local agribusiness industry.



8.30 REGISTRATION			
9.00	<b>Rebecca McGregor</b> (Liebe Group Executive Officer) Welcome & housekeeping		
9.10	<b>Shane Love</b> (MLA) & <b>Geln Carlshausen</b> (Liebe Group Building Committee member) Liebe Group building and announcements		
9.20	<b>Stuart McAlpine</b> (Liebe Group member) Celebrating 20 years of Liebe in 2017		
9.30	<b>Crawford Taylor</b> (Rabobank) Commodity outlook on market trends		
10.00	<b>Judy Snell</b> (RSM) Succession planning and resisting change		
10.30 MORNING TEA			
10.55	<b>Dave Ward</b> (Farnanco) An overview of 2016 and 'The decision making time line'		
11.25	<b>Mel Adams</b> (Pacer Legal) How to protect your interests when leasing farming land - legal considerations, tips and traps		
11.55	<b>Richard Simonaitis</b> (AEGIC) Extracting more value from the grains industry		
12.25	OVAL ROOM	LUNCH	BASKETBALL COURT
1.10	<b>Wayne Parker</b> (DAFWA) Deep ripping on heavy soils	<b>Ross Brennan</b> (DAFWA) Micronutrients for cereal grain yield: present research	
1.45	<b>Yvette Oliver</b> (CSIRO) Soil water probes and economically combatting subsoil constraints	<b>Angus McAlpine</b> (CSBP) Potassium nutrition	
2.20	<b>Andrew Lindsay</b> (Sheep Alliance) The WA sheep population decline: Your industry's response	<b>Michael Macpherson</b> (Imtrade Australia) & <b>Joe Delaney</b> (Elders Scholz Rural) Chemical options for knockdown	
2.50 AFTERNOON TEA			
3.15	<b>Neil Bennett</b> (Bureau of Meteorology) WA Wheatbelt radars project		
3.45	<b>Symon Still</b> (Paraplegic Benefit Fund, sponsored by CBH Group) The importance of injury prevention and safety		
4.15	<b>Joshua Russel</b> (CSBP) & <b>Rick Horbury</b> (Bayer) Product compatibility, what does it mean? Differences between physical and biological compatibility and its implications on infield performance		
4.45	<b>Katrina Venticinque</b> (Liebe Group Administration Officer) Evaluation		
4.55	CLOSING Liebe Group President		

Stay & enjoy a social BBQ dinner and drinks

Day includes morning & afternoon tea, lunch, BBQ dinner and a wealth of information!

#### DIAMOND PARTNERS



#### EVENT PARTNERS



**Come along to the Liebe Group 2017 Crop Updates**

Members: Free  
Non-Members: \$100  
Student: \$30

## NEW R&D BOOKS HAVE ARRIVED!

Katrina Venticinque, Administration Manager, Liebe Group



With much anticipation, it is time to announce that the 2017 R&D Books are in the office and ready to be distributed to members.

Please feel free to duck into the office to grab your members copy, otherwise they will be given out out at the Strategic Review day and Crop Updates, and afterwards posted if required.

## MEMBERS CELEBRATE TOGETHER AT LIEBE CHRISTMAS PARTY

Katrina Venticinque, Administration Manager, Liebe Group



To celebrate the end of another fantastic year, the Liebe Group hosted a BBQ sundowner, with 20 Liebe members and partners and staff. The night brought with it an atmosphere of fun, with laughter and conversation, recollecting the past season, end of the busy harvest season and how fast the year went by!

It was great to see so many families bringing the next generation of the community together.

## LIEBE COMMITTEE OPPORTUNITIES

Katrina Venticinque, Administration Manager, Liebe Group

Are you interested in being a part of the driving force behind Liebe's research and development? Do you want to have your say in the direction of the Liebe Group into the future? Now is an excellent time to join one of our exciting, thought-provoking committees for 2017:

- Management Committee
- R&D Committee
- Women's Committee
- Finance Committee

Come along to the AGM on Thursday 16th February, at 1.30pm to register your interest.

# LIEBE GROUP STRATEGIC PLANNING DAY AGENDA

## THURSDAY 16TH FEBRUARY - DALWALLINU BOWLING CLUB - 9AM TO SUNDOWNER

Time	Activity
8.45am – 9.00am	<i>Registration</i>
9.00am – 9.40am	Welcome and housekeeping
9.40am – 10.00am	<b>Liebe's Major Achievements</b> <ul style="list-style-type: none"> <li>- Milestones from 1997 to now</li> <li>- What have we learnt?</li> </ul>
10.00am – 10.30am	<b>Values of the Group</b> <ul style="list-style-type: none"> <li>- What drives the group?</li> </ul>
10.30am – 11.00am	<i>Morning Tea</i>
11.00am – 11.30am	<b>Context Building</b> <ul style="list-style-type: none"> <li>- What has happened in the last five years that has impacted the group?</li> <li>- Financial trends of the Liebe Group</li> </ul>
11.30am – 12.00pm	<b>Threats and Opportunities</b> <ul style="list-style-type: none"> <li>- How do the changes and drivers of the group impact the Liebe Group business model?</li> </ul>
12.00pm – 12.30pm	<b>Value Proposition</b> <ul style="list-style-type: none"> <li>- What value does Liebe provide?</li> <li>- What future value could Liebe provide?</li> </ul>
12.30pm – 1.00pm	<b>Key Opportunities</b> <ul style="list-style-type: none"> <li>- What key opportunities should Liebe explore?</li> </ul>
1.00pm – 1.30pm	<i>Lunch</i>
1.30pm – 2.00pm	2017 AGM
2.00pm – 4.00pm	<b>Strategy Development</b> <ul style="list-style-type: none"> <li>- <b>What are possible business models?</b></li> <li>- <b>What are the key supporting strategies?</b></li> </ul>
4.00 – 4.15pm	Reflection
4.15pm – 4.30pm	Close Workshop
4.30pm onwards	Sundowner with oysters and champagne (Sponsored by Scott's Watheroo Dolomite)

Please feel free to come along to the Sundowner, from 4.30pm if you can't make it to the Strategic Plan Review.

FANTASTIC DOOR PRIZE as well as champagne and oysters sponsored by



Watheroo Minerals Pty Ltd  
Scott's Watheroo Dolomite

# SAVE THE DATE



## FREE HERBICIDE RESISTANCE WEED SEED TEST KIT

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

The Liebe Group currently have 10 FREE herbicide resistance kits to give away to Liebe members. They are available first in best dressed. These kits normally cost \$420 for a 4 x herbicide mode of action test.

### What do you need to do?

Contact Katrina at the office on 9661 0570 or email [admin@liebegroup.org.au](mailto:admin@liebegroup.org.au) to express your interest.

### How to sample for a weed seed test

Sampling will depend on the resistance situation of each paddock. If resistance is widespread, then collect seeds following a W shaped area every 10-20 metres across the suspected paddock or problem area. Alternatively, you may collect seeds from weed patches in the paddock where the weeds seem to have survived the herbicide (especially for wild oats). Do not bias the samples by collecting seeds from a small number of plants but aim to collect a similar number of seeds from each plant. If collecting seeds after harvest, look between

the crop rows or alternatively from header screenings.

Dry seeds must be sent in PAPER envelopes (NOT in a plastic bag) or similar packaging.

### How many seeds?

To complete a resistance seed test, about one cup equivalent of clean ryegrass seed heads, or 3 cups of wild oat seed heads, or a 2 litre container full for wild radish seed pods for a 4-8 herbicide resistance test is sufficient. Alternatively, an A4 sized envelope full of seed heads will also be enough. Please ensure you send sufficient seed otherwise the test will be limited. Sending more seed is better than not enough.

Timeline for the testing is 8-12 weeks (including breaking of dormancy). The seeds will need to be sent as soon as possible. Providing paddock details such as a herbicide history, rotations, etc. will aid in interpretation.

This testing is conducted by Plant Science Consulting, SA - <http://www.plantscienceconsulting.com.au/>. These have been pre-paid for by Bayer Crop Science so all you need to do is take the seed, fill out the envelope (which is at the Liebe Office and can be posted to you if you cant pick up) and send it off to Plant Science.

# BACKPACKERS TAX EXPLAINED: EMPLOYERS PLEASE TAKE NOTE!

Judy Snell, Director, RSM

A collective sigh of relief could be heard across the country on 5 December 2016 when the Federal Government finally passed the Working Holiday Maker Reform Bill 2016.

For the past 18 months the issue had been debated in Parliament and in the community with varying rates of tax being considered and many industry groups becoming increasingly concerned about the impact such debate would have on their workforce and therefore their businesses.

The changes come into effect from 1 January 2017. If you employ working holiday makers or intend to employ working holiday makers, it is your responsibility to ensure that you meet the requirements of this new legislation.

## What rates of tax now apply under the new rules?

The main subject of debate was the tax rate that applies to those working holiday makers who earn less than \$37,000. From 1 January this rate has reduced from 32.5% down to 15%. This means that working holiday makers will pay tax at 15% on every dollar from \$1 - \$37,000 and no tax free threshold applies. So on \$37,000, the tax payable is \$5,550. (Just for noting, an Australian resident pays \$3,572 plus the Medicare levy.)

For incomes over \$37,000 there are no changes to the existing non-resident income tax rates that applied pre 1st January 2017.

## What is a working holiday maker?

A working holiday maker is an individual holding one of the following temporary visas:

- Subclass 417 (working holiday) visa.
- Subclass 462 (working holiday) visa.

A working holiday maker may also be an individual who holds a bridging visa permitting the individual to work in Australia if:

- The bridging visa was granted under the Migration Act 1958 in relation to an application for one of the visas referred to above.
- The Immigration Ministers decision on that application is yet to be made.
- The most recent visa, other than a bridging visa, held by the individual was a subclass 417 (working holiday) visa or subclass 462 (working holiday) visa.

## What does an employer need to do before employing a working holiday maker?

Once the employer has registered they can then withhold at a rate of 15% on the first \$37,000 of income.

If you employ, or plan to employ, a working holiday maker you must have registered with the Australian Taxation Office before 31 January 2017 (note: this date has been extended from the original date of 1 January 2017 due to issues with the ATO website in December 2016).

## Employers can register online using the following link:

<https://www.ato.gov.au/business/registration/work-out-which-registrations-you-need/taxation-registrations/employer-registration--working-holiday-makers/>

## What are the penalties for the employer if they do not register with the ATO?

If you fail to register as an employer of working holiday makers, then you must withhold at 32.5% on the first \$37,000 of income. The ATO have also advised that penalties may apply for those who do not register, however there are no indications as yet as to what those penalties may be.

## What about my payroll software?

The ATO will be issuing new withholding tax tables before 1 January 2017. You should ensure that your payroll software recognises these changes. Your accountant will be able to help you with this if you are unsure whether your software has the correct rates from 1 January 2017.

## What about payment summaries?

Where a business already employed working holiday makers before 1 January 2017, it will need to issue two payment summaries to employees for the year – one for the period 1 July 2016 to 31 December 2016 and another for pay periods from 1 January 2017.

Any further enquires please Contact Judy Snell at RSM  
Phone: 08 9651 1606

# CBH GROUP UPDATE

**Matt Stenhouse, Business Relationship Manager, CBH Group**

The beginning of each calendar year is an important time for CBH - with the release of our Annual Report in January and our Annual General Meeting in February each year.

By now CBH members would have received an email with a link to the report on our website and have hopefully taken a look at what their cooperative was up to in 2015 -16.

As a business CBH Group had a big year.

In 2015 -16 we received and shipped a 13.6 million tonne crop, invested \$132.4 million in capital projects and maintenance across the network and recorded a net profit of \$49.8 million, introduced a Network Strategy to deliver an efficient and cost-effective network for the future - all while conducting an in-depth review of CBH's structure and governance, which resulted in almost eight out of ten members wanting CBH to remain a co-operative.

In 2015 -16 you sold us more than 47 per cent of your grain as an average across Western Australia - As always, thank you for your support.

Our Marketing and Trading arm performed well despite a challenging global trading environment where worldwide supplies put pressure on grain prices. We maintained our position as Australia's largest grain exporter, exporting around 30 percent of Australia's bulk grain and delivered more than

seven million tonnes to our international customers.

We chartered vessels for more than 65 percent of the tonnes exported - providing positive supply chain efficiencies for our international customers and CBH as a whole.

As a result of these sales, we were able to provide our members with a \$1.20 per tonne rebate for tonnes sold to us - in addition to the \$3.00 per tonne Operations rebate.

CBH's Pre-Pay Advantage product provided more than \$140 million in finance to more than 560 farming entities and in addition, we introduced two new marketing products in 2015 -16: Grain for Fert and Warehouse Advance - providing an innovative and competitive finance solution for our growers.

Our team hosted more than 100 customer delegations in 2016 helping to create a better understanding of the unique supply chain provided by the CBH Group and we held technical seminars in a number of countries across Asia providing our customers with valuable quality information about the Australian crop - an important avenue to further promote your grain.

We invested more than \$1.8 million into your communities - in a wide range of community and industry organisations including new partnerships with the Clontarf Foundation and Leeuwin Ocean Adventure Foundation.

We also introduced two Grass Roots Fund rounds of infrastructure funding for rural communities to the value of \$300,000.

Now, it's time for our AGM - and this year we are doing things a little differently. We want to engage with you openly, so we are introducing a member forum before the AGM, where you can come and hear from CBH's senior managers about the performance of each business unit.

There will be sessions about 'Understanding CBH's Grain Processing Investments', 'How CBH markets your crop' and 'Storing, Moving and Shipping your grain'.

There will be plenty of opportunities to ask questions and following the formal proceedings of the AGM, you will have the opportunity to network with Directors, CBH representatives and our community partners at a cocktail function.



More information is available on our website at [www.cbh.com.au/2017-member-forum-and-agm](http://www.cbh.com.au/2017-member-forum-and-agm). We look forward to seeing you there.

# WATER QUALITY AFFECTING SUMMER SPRAYING

Joe Delaney, Agronomist, Elders Scholz-Rural

With the recent rains that have occurred in the district, attention turns to summer spraying in the next few weeks. One aspect that seems to get overlooked in this operation is the water that is used. Water plays a critical role in the process of controlling weeds. In fact, it usually makes up around 99% of the spray solution. Considering that, it should be no surprise that the chemistry of water added to the spray tank greatly impacts herbicide effectiveness, especially during the summer as this period presents some of the toughest conditions (dry and dusty, hot temperatures, and varying weed sizes) for herbicides to work. A few factors that play a critical role are listed below:

## Hard Water

Firstly, the main component that affects the efficacy of summer spraying is the hardness of water. Total hardness is a measure of the number of cations (positive ions) such as calcium, magnesium, sodium, iron and bicarbonates in the water, usually expressed in parts per million (ppm) or mg/L as calcium carbonate equivalents (e.g. CaCO<sub>3</sub> mg/L).

Description of water	Hardness expressed as mg/L of CaCO <sub>3</sub>
Soft	Less than 50
Moderately Soft	50 - 75
Slightly Hard	75 - 150
Hard	150 - 300
Very Hard	150 - 300 plus

Table 1: Classification of water hardness.

Positively charged cations such as calcium and magnesium found in hard water can interact with negatively charged products such as the weak acid herbicides like glyphosate, to form insoluble complexes rendering the herbicide inactive. Hard water can also affect the performance of surfactants, leading to problems such as poor wetting, suspensions “dropping out” and nozzle blockages. Water hardness above 250 to 350mg/L (typically seen in water from bores in the district) should be treated with ammonium sulfate-based products that are registered as adjuvants. This is a very cost effective way of resolving the hardness problem.

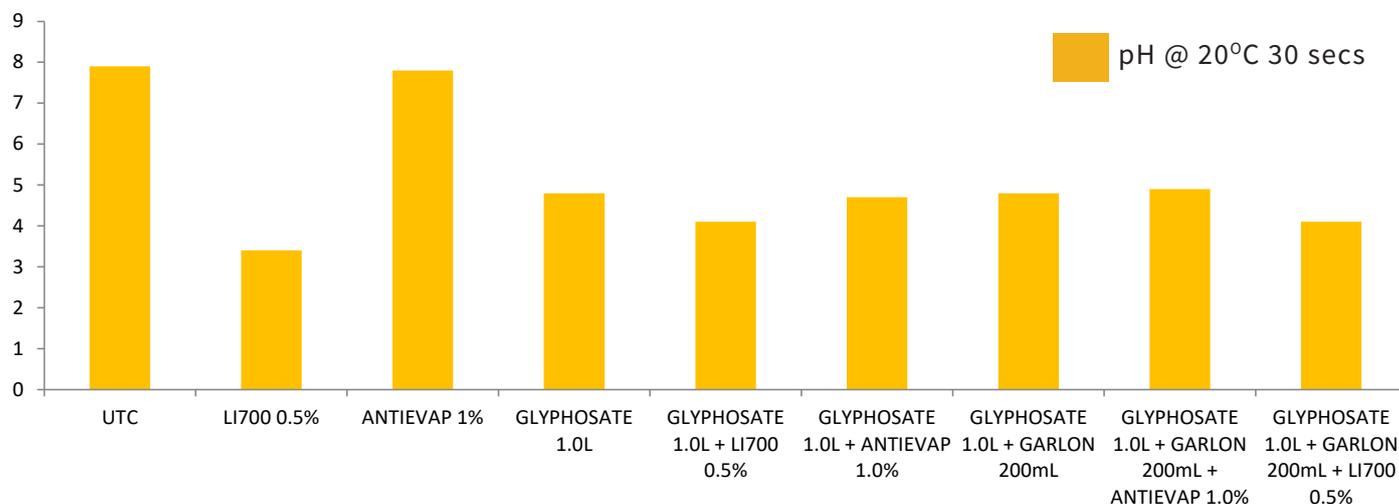
## Water pH

Another factor that can affect the efficacy of products is the pH of the solution in the boomspray tank. The optimum pH range to achieve suitable efficacy for glyphosate is 4.5 to 5.8, however you don't need acidifiers to achieve that. When you add glyphosate to your spray tank it naturally drops the pH within this range, as glyphosate is acidic enough on its own. Growers are led to believe that an acidifier (e.g. LI700) should be used to acidify the solution. However some of the water that is used is not alkaline enough to warrant the use of LI 700 as the glyphosate acts as a buffer reducing the pH in its own right, See Graph 1.

It's very important that you don't over-acidify your spray tank. Growers that think they have alkaline water and warrant the use of an acidifier, should do a jar test of the spray solution in the spray tank using litmus paper or a pH meter to check the pH level. If the pH solution is between 4.5 and 5.8 an acidifier is not necessary.

# WATER QUALITY AFFECTING SUMMER SPRAYING CONT...

Graph 1: Glyphoste effect on Ph



Product	Hardness above 250ppm	pH
Glyphosate	Add Ammonium Sulphate	Works best between 4.8 – 5.8
2,4-D Ester	Generally tolerant to hard water	Tolerates the range of pH normally found in the field
Triclopyr	Same as above	Same as above
Atrazine	Same as above	Same as above
Paraquat	Slight loss of activity due to ionic bonding in very hard water	Acidic water is usually OK. Highly alkaline water may cause loss of efficacy
Ally	Generally tolerant to hard water	Efficacy will be reduced in an acidic solution under pH 5

Table 2: Summer herbicides Interaction With Water Quality.

Water testing from a reputable laboratory, should be done on a regular basis, especially when using bore water, to find what is needed to improve the efficacies of the herbicides used when summer spraying. This is an easy and very cost effective way to increase the efficacy of summer spraying and should not be overlooked. If you have any enquiries on water quality or testing don't hesitate on calling me on 0418 212 961.

## APP OF THE MONTH

myCSBP is an online portal for CSBP customers that lets you look at and interact with your fertiliser account and nutritional information, whether you're in the paddock or in the office. Your data, accounts, and transactions can be easily accessed and myCSBP helps you to easily manage your business administration and fertiliser operations. myCSBP is accessible on desktops, tablets and smartphones.

Please forward any suggestions to [admin@liebegrup.org.au](mailto:admin@liebegrup.org.au) Please note: Applications included in the newsletter are suggestions from Liebe members for information purpose only and are not an endorsement by the Liebe Group.



# SOIL MANAGEMENT STRATEGIES FOR IMPROVING pH ON RED LOAM

Debbie Gillam and Laura Dorman, Mingenew-Irwin Group

## Key Messages

- Tillage machinery: Offset disc- 36-inch discs, 6.6 m wide, 6.6 km/hr  
Deep Digger - 3.5 m wide, 4.5 km/hr  
One-way plough – 24-inch discs, 5.0 m wide, 8 km/hr
- Lime rates (applied 2014): 0, 3, 6 and 12 t/ha lime
- In 2016 Canola crop significant treatment differences have only been observed in Oil %, not in yield.
- Over the 3-year period of the trial the One-way plough with 6t/ha lime recorded the highest returns \$/ha with treatment cost subtracted.

## Trial Details

Property	JH & VI Rowe and family, Wongoondy
Soil Type	Red loam
Soil pH	0-10cm: 4.43 10-20cm: 4.37 20-30cm: 4.58 30-40cm: 4.78 40-50cm: 4.97
Plot Size	30m x 40m
Trial Size	420m x 520m
Sowing Date and Rate	20/04/2016 3 kg/ha Bonito canola
Sowing Machinery	JD Box, DBS Bar, knife points, press wheels, 300mm (14.7m)
Paddock History	2015 wheat, 2014 wheat, 2013 Albus lupins, 2012 wheat, 2011 wheat
Paddock Ave. Yield	1.2 t/ha
Rainfall	280mm, GSR 250mm

## Trial Background

This long term trial is part of the GRDC funded project “Working together to deliver multiple benefit messages to growers through a whole systems approach to soil management, LIE00008”. The trial was established in 2014 and 2016 has been the final year of research at this site.

It is well established that soil pH increases more quickly when lime is incorporated into acidic soil. The trial aimed to investigate the interaction of different soil cultivation methods and lime rates over a 3 year period on the whole system - soil pH, soil health and crop yield.

This trial contains four replications and twenty-four combinations of lime rates and tillage incorporation systems. Extensive soil sampling was conducted to identify the base soil characteristics at this site and any variability between plots at establishment. Soil pH measurements showed both topsoil (0-10cm) and subsurface (10-30cm) soil acidity.

## Paddock Inputs

Fertiliser	Pre-seeding: 50 kg/ha Amsul Seeding: 50 kg/ha DAPCZ Post Emergent: 90 kg/ha Urea <b>Total cost: \$91.7/ha</b>
Chemical	Knockdown: 1.7L/ha Roundup Pre-emergent: 1.7L/ha Treflan, 0.5%amsul, 0.2% wetter Post emergent: 2kg/ha Atrazine, 340ml/ ha Select, 1% Amsul, 1% Hasten Insecticide: 200ml/ha Lorsban, 200ml/ha Dominex <b>Total cost: \$44.16/ha</b>

## SOIL MANAGEMENT STRATEGIES FOR IMPROVING pH ON RED LOAM CONT...

Lime	Cultivation	Lime Yield t/ha	Cultivation Yield t/ha	Interaction Yield t/ha	Lime Oil %	Cultivation Oil %	Interaction Oil %	Oil Bonus \$/ha
Nil	Nil	1.34	1.37	1.18	47.0	45.2	44.7	26.13
	Off set Disc		1.34	1.30		46.7	48.3	66.22
	Mouldboard		1.47	1.42		47.1	47.5	63.67
	One way Plough		1.42	1.35		48.7	48.0	66.32
	Spader		1.51	1.48		47.8	48.2	74.96
	Deep Digger		1.54	1.30		45.2	45.4	36.16
3 t/ha Lime	Nil	1.42		1.32	47.6		47.6	60.03
	Off set Disc			1.23			46.8	47.92
	Mouldboard			1.49			48.0	72.99
	One way Plough			1.36			48.8	75.44
	Spader			1.48			49.1	86.02
	Deep Digger			1.62			44.3	29.87
6 t/ha Lime	Nil	1.48		1.43	46.7		44.9	33.81
	Off set Disc			1.36			46.1	45.09
	Mouldboard			1.51			46.4	54.24
	One way Plough			1.56			49.2	91.07
	Spader			1.56			49.0	89.21
	Deep Digger			1.49			44.5	29.76
12 t/ha Lime	Nil	1.48		1.46	45.8		43.8	21.51
	Off set Disc			1.43			44.5	29.27
	Mouldboard			1.44			46.1	47.54
	One way Plough			1.39			47.7	64.02
	Spader			1.60			47.8	75.91
	Deep Digger			1.59			44.9	37.65
	P value	0.142	0.072	0.975	0.18	<.001	0.356	
	L.S.D (0.05)	0.14	0.15	0.33	1.4	1.50	3.4	
	CV %	16.3			3.5			

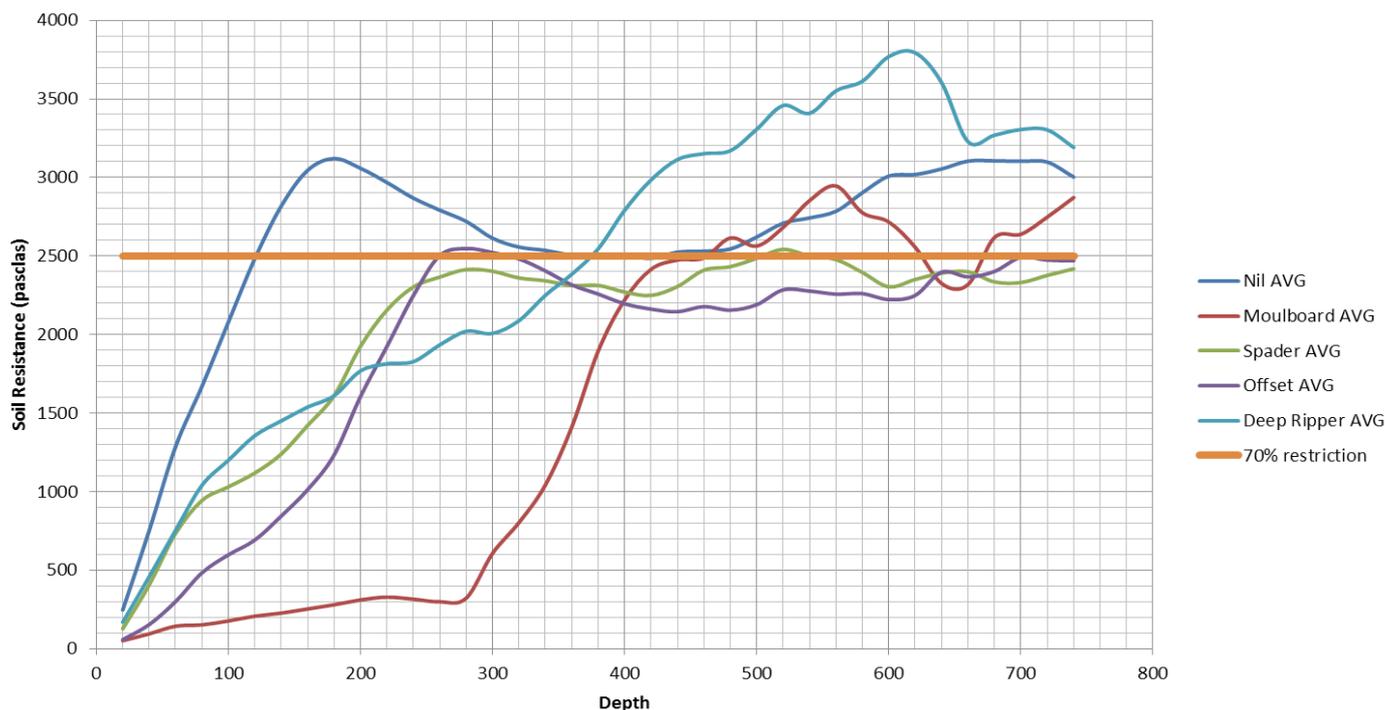
**Table 2:** 2016 Yield and Quality results. The cultivation and Oil Yield: The response to cultivation - average yield and oil of each cultivation treatment regardless of lime rate applied.

## SOIL MANAGEMENT STRATEGIES FOR IMPROVING pH ON RED LOAM CONT...

Lime	Tillage	Treatment Cost \$/ha	2014 Returns \$/ha	2015 Returns \$/ha	2016 Returns \$/ha	Total Returns minus Treatment cost \$/ha	Change in returns relative to untreated
Nil	Nil	\$0	AUW1 \$401	AGP1 \$474	CAN1 \$671	\$1,546	
	Off set Disc	\$45	AUW1 \$453	AGP1 \$477	CAN1 \$773	\$1,658	\$112
	Mouldboard	\$120	AUW1 \$433	AUW1 \$327	CAN1 \$835	\$1,475	-\$71
	One way Plough	\$45	AUH2 \$498	APW1 \$541	CAN1 \$803	\$1,797	\$251
	Spader	\$150	AUH2 \$452	AUW1 \$381	CAN1 \$881	\$1,564	\$18
	Deep Digger	\$60	AUH2 \$480	AGP1 \$518	CAN1 \$745	\$1,683	\$137
3 t/ha Lime	Nil	\$63	AUW1 \$398	AUW1 \$432	CAN1 \$781	\$1,548	\$2
	Off set Disc	\$108	AUW1 \$412	AUW1 \$355	CAN1 \$720	\$1,379	-\$167
	Mouldboard	\$183	AUW1 \$428	FED1 \$221	CAN1 \$884	\$1,350	-\$196
	One way Plough	\$108	AUH2 \$512	AGP1 \$533	CAN1 \$815	\$1,752	\$206
	Spader	\$213	AUH2 \$495	AUW1 \$334	CAN1 \$894	\$1,510	-\$36
	Deep Digger	\$123	AUH2 \$509	AGP1 \$537	CAN1 \$915	\$1,838	\$292
6 t/ha Lime	Nil	\$126	AUH2 \$471	AGP1 \$534	CAN1 \$811	\$1,690	\$144
	Off set Disc	\$171	AUW1 \$431	AUW1 \$356	CAN1 \$787	\$1,403	-\$143
	Mouldboard	\$246	AUW1 \$404	AUW1 \$296	CAN1 \$876	\$1,330	-\$216
	One way Plough	\$171	AUH2 \$521	APW1 \$647	CAN1 \$940	\$1,937	\$391
	Spader	\$276	AUH2 \$489	AUW1 \$346	CAN1 \$939	\$1,498	-\$48
	Deep Digger	\$186	AUH2 \$495	AGP1 \$521	CAN1 \$840	\$1,670	\$124
12 t/ha Lime	Nil	\$252	AUW1 \$397	AGP1 \$507	CAN1 \$818	\$1,470	-\$76
	Off set Disc	\$297	AUW1 \$454	AGP1 \$415	CAN1 \$810	\$1,382	-\$164
	Mouldboard	\$372	AUW1 \$422	AUW1 \$365	CAN1 \$830	\$1,245	-\$301
	One way Plough	\$297	AUH2 \$504	AUW1 \$420	CAN1 \$819	\$1,446	-\$100
	Spader	\$402	AUH2 \$536	AUW1 \$353	CAN1 \$948	\$1,435	-\$111
	Deep Digger	\$312	AUH2 \$477	AGP1 \$579	CAN1 \$903	\$1,647	\$101

**Price Notes:** All prices net delivered Geraldton and GST Exclusive, Costs for each cultivation treatment are in line with cost estimates used by DAFWA. The highest returns for each rate of lime is highlighted in green.

## SOIL MANAGEMENT STRATEGIES FOR IMPROVING pH ON RED LOAM CONT...



**Figure 1:** Compaction under Different Tillage Systems on Red Loam, measured in 2014. Depth in mm, Above 2500 pascals is under compaction stress.

### Comments

Compaction measurements were taken in June 2014 and showed a severe compacted hardpan at 12-35cm.

Using a mouldboard plough resulted in the least compaction of all treatments, to a depth of 30cm. However, at depths greater than 30cm, the use of the offset disc resulted in soil with the least resistance.

In 2016, while the highest yields corresponded with the highest rates of lime this improvement was not statistically significant and resulted in a negative return on investment for all tillage treatments except deep digging. While tilling the soil with the deep digger didn't improve yield in 2016, there was an economic advantage regardless of the amount of lime applied. Similarly, use of a one-way plough also

provided an economic benefit for all lime application rates except for 12 t/ha.

There was an economic cost to the use of a spader, off-set disc or mouldboard plough to incorporate lime. Use of the Deep Digger did not reduce returns and the returns of the one-way plough were only negative for the 12t/ha Lime treatment.

The Offset discs and the One-way plough were the cheapest tillage treatments used in this trial, spading was the most expensive (high fuel usage).

In 2016, there was an increased usage of deep tillage in the MIG region. It is difficult to draw conclusions from this trial but it does highlight the time taken to recover treatment costs. However, returns from the one-

way plough and deep digger treatments are consistently some of the highest and still positive with up to 6 t/ha lime for the one-way plough and 12 t/ha lime for the deep digger. These results suggest that removing the hardpan is a benefit and that using cost-effective deep tillage and incorporation approaches can result in faster return on investment. More research into deep tillage will continue in this

## SOIL MANAGEMENT STRATEGIES FOR IMPROVING pH ON RED LOAM CONT...

region in 2017.

### Acknowledgements:

Many thanks to Steve Rowe for the trial site and assistance during the life of the project. Many thanks to the following Growers and Industry for supply of the machinery and lime used in this trial:

- McIntosh & Son for supplying the Tiny 36-inch Grizzly offset disc and Deep Digger
- Afgri for supply of the mouldboard plough
- The Mills family for supply of the one-way plough
- The Broad family for supply of the spader
- Chris Leigh-Fairbank for the donation and cartage of lime.
- This research has been funded by GRDC through the **LIE00008** project. The Mingenew Irwin Group would also like to acknowledge the support from DAFWA with the harvest of this trial is much appreciated. Thankyou to Stephen Davies, DAFWA, for reviewing this report.



## LIEBE 20th ANNIVERSARY CELEBRATORY SUB-COMMITTEE MEMBERS WANTED!



Liebe Crop Updates at the Buntine Hall in 2001.

### It's time to celebrate!

The Liebe Group has achieved the massive milestone of it's 20th Anniversary this year!

We are looking for members who would be interested in helping coordinate how to celebrate this achievement.

If you would be interested in joining this sub-committee please get in touch with Katrina at the office on 9661 0570 or email [admin@liebegroup.org.au](mailto:admin@liebegroup.org.au).

# A GUIDE TO FARM LABOUR #14

## 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 instalment 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.

### Dispute resolution

The general steps for dispute resolution are:

1. Try to resolve the issue or dispute in the team. The matter should be discussed between the employee and their direct supervisor.
2. If the conflict is not resolved in step one, the matter should be discussed further with more senior management where applicable.
3. If the conflict remains unsolved, an independent person should be appointed to help. The first step for the independent person is to try to help both sides reach an agreement. The mediator must be neutral, make no proposals and offer no advice. Their role is to help the parties talk through the issues and find a mutually agreed solution.
4. When everything else has failed, the parties can, together or individually, refer the matter to the Fair Work Commission or some other independent person to settle the dispute.

The employee is required to work as usual while the dispute is being resolved unless there are reasonable concerns about workplace health and safety and there is no other work available.

### Performance based issues

If the issue is performance

based, try and identify why the employee is not performing to your expectations, and rectify. If the problem is skill based, training might be a solution.

If the issue is around conduct or performance concerns you can provide a written warning to the employee. More information on the warning process can be found in the Termination section of this ‘A Guide to Farm Labour’. Please get in contact with the Liebe Office to request a copy.

In some instances, when there is significant work pressure, employees may revert to drugs to attempt to stay awake and prevent burnout. It pays to be mindful, particularly during peak work periods, of changes in behaviour and the dangerous impact drugs, alcohol and fatigue can have in the operation of farm machinery, vehicles and other equipment. These are prime examples of when you need to act swiftly and decisively.

### Workplace bullying

As an employer you need to appreciate the significance of workplace bullying. For example when a new, often younger, person joins an established team, workplace bullying has the potential to be an issue. It is characterised by unwelcome, persistent and repeated negative or aggressive behaviour that

creates a risk to health and safety.

Workplace bullying can be verbal, physical, social or psychological abuse by an employer, a manager or a work colleague.

As an employer you have a legal obligation to prevent workplace bullying. If you need help to respond to workplace bullying, contact the relevant workplace health and safety body or farming federation in your state.

**TIP:** Outline your bullying policy to all employees, letting them know what is and isn't acceptable workplace behaviour.

### Should I provide training and personal development opportunities?

Training and development opportunities can be embraced to up-skill and keep employees engaged at work.

**TIP:** Identify with the employee if they have any career or development goals and how they can be met.

External training and stimulation provides an opportunity for the employee to learn new skills and bring ideas back to the farm business. In addition to accredited training courses, there are a number of other relevant external training opportunities

# A GUIDE TO FARM LABOUR #14 CONT...

such as field days, crop walks, GRDC Updates and so on. External training opportunities should be addressed closely to ensure they are relevant.

For upcoming training and development opportunities, keep in touch with your local farming systems group and refer to GRDC's event page. Other reference points are Rural Skills Australia and Agrifood Skills Australia.

On-the-job training and instruction is often undervalued, however it can be extremely useful when delivered well. Remember to provide opportunities and time for this to occur.

Teaching and coaching new employees can be difficult and required though. Refer to GRDC's 'A guide to communication for

farm families' for insight into different personalities and learning styles.

### Retaining employees

Retaining employees that have a good fit with your farm business should be a priority. When employees leave, knowledge and skills are lost which can be extremely difficult and costly to replace. In addition, the time it takes to replace the employee impacts productivity. Look to identify things you can do to keep employees for a reasonable period of time. It is a good idea to have some deliberate actions to encourage people to stay. This applies equally to family members that work on the farm.

There are many reasons why an employee stays in a business, see below figure. The reasons generally relate to 4 main areas:

- Position
- Business culture
- Personal
- external

Consider how you can have a positive impact on these factors for each employee and create a satisfying workplace. Each individual will have different priorities, which may vary at different life stages. Satisfied employees are likely to:

- know what is expected from them each day
- have quality supervision.
- be able to speak their mind freely without repercussions
- use their existing skill set regularly in their workplace
- regard their workplace as fair

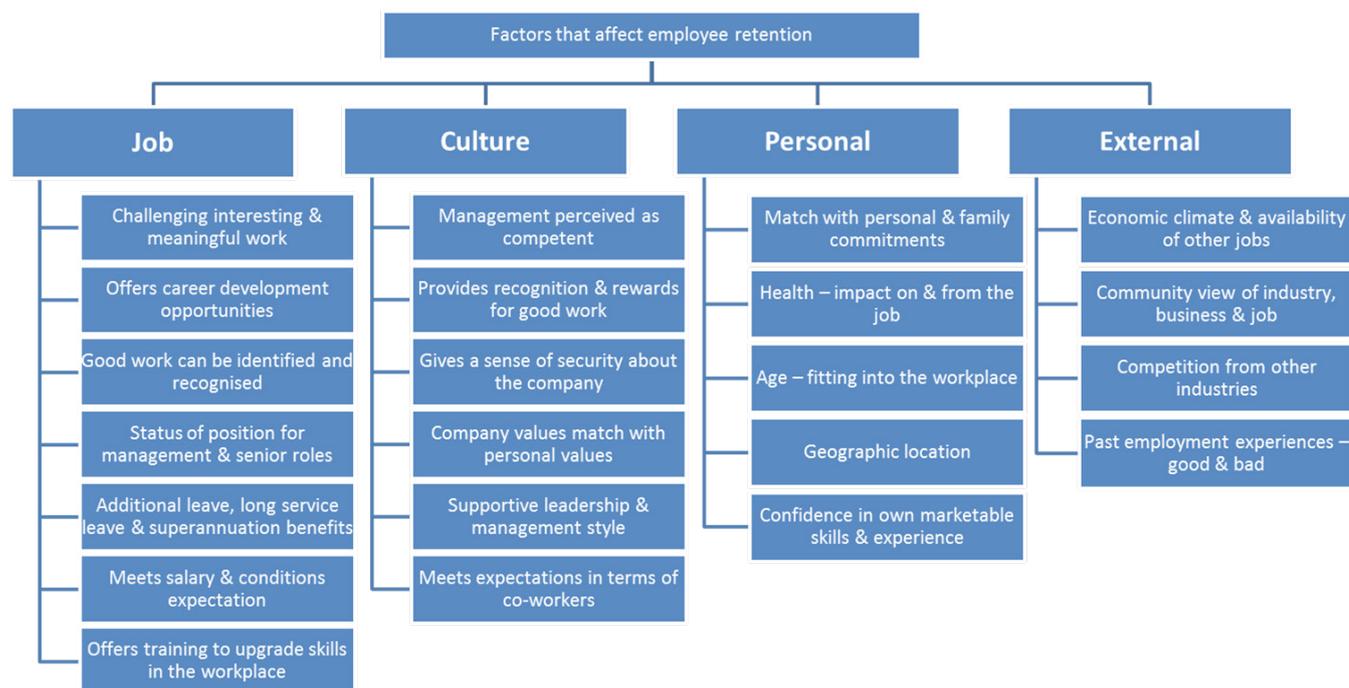


Figure 1: Why people choose to stay

# KIDS PAGE

- |               |              |
|---------------|--------------|
| AIR           | ENERGY       |
| ATMOSPHERE    | EVAPORATION  |
| BAROMETER     | FOGGY        |
| BLIZZARD      | FORCE        |
| CIRRUS        | GAUGE        |
| CLIMATE       | HAIL         |
| CLOUDY        | HEAT         |
| CONDENSATION  | HUMIDITY     |
| CUMULONIMBUS  | HURRICANE    |
| CYCLE         | HYGROMETER   |
| LIGHTNING     | STRATOSPHERE |
| MASS          | STRATUS      |
| METEOROLOGY   | SUNNY        |
| OVERCAST      | TEMPERATURE  |
| PRECIPITATION | THERMOMETER  |
| PRESSURE      | THUNDER      |
| RAINBOW       | TROPOSPHERE  |
| SLEET         | VAPOR        |
| SMOG          | WATER        |
| STORM         | WIND         |

## Weather Word Search

B R A I N B O W N O B W E E G J L K T D  
M A S S O S L E E T E L T P A A L Q E H  
S Q R Y J A R F S C H A I S P W U N M U  
U H R O D T L A R T M E M Z P R O G P M  
E Y C D M K H O V I R R R G Z I N R E I  
E G O Z E E F U L A O A C M T A I R R D  
C R N P T H T C N T T C T A O Z R V A I  
U O D R E A W E S D W M T O C M E D T T  
M M E E O I A C R E E I O W S I E V U Y  
U E N S R L T Y N I P R N S D P R T R C  
L T S S O N E C V I H D T D P V H R E M  
O E A U L W R L C W S U N N Y H G E U R  
N R T R O Y E E W V K Z R J A N E X R S  
I E I E G R R P F O G G Y R I A W R V E  
M S O L Y P R C L O U D Y N I Q N R E Q  
B M N S T R A T U S L L T E B C O Q V G  
U O V E R C A S T B X H M F R P A X W T  
S G Z Y N C L K W G G Q Y Z A V M N A A  
M E V A P O R A T I O N K V O S U E E O  
K Q E N E R G Y L T R O P O S P H E R E

## Riddles & Jokes

- 1: What stays in a corner but goes around the world?
- 2: Who is the king of all school supplies?
- 3: Why is 2+2=5 like your left foot?
- 4: What is as big as you but does not weigh anything?
- 5: What can you hold without using your arms?



Answers: 1 Stamp, 2 The ruler, 3 Because it isn't right, 4 Your shadow, 5 your breath

	3	4	1
4	1	2	
3	2	1	
	4	3	2

These sudolu puzzles were solved by

3	2	1	4
1			2
2			1
4	1	2	3



To:

POSTAGE  
PAID  
AUSTRALIA



From: Liebe Group  
PO Box 340, Dalwallinu, WA, 6609  
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## NEXT GENERAL MEETING MONDAY 13TH MARCH

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### CALENDAR OF EVENTS

Event	Date	Location
Strategic Planning Day, AGM & Sundowner	16th February	Dalwallinu Bowling Club
Crop Updates	1st March	Dalwallinu Recreation Centre
Women's Field Day	20th June	Dalwallinu Recreation Centre
Post Seeding Field Walk	20th July	Dodd's Property, west Buntine
Spring Field Day	8th September	Dodd's Property, west Buntine