SCF Focus

STIRLINGS TO COAST FARMERS WINTER 2019 NEWSLETTER

In this issue

STIRLINGS TO COAST FARMERS

Jottings from the Chair

KEN DRUMMOND, SCF CHAIR

Hello SCF members,

SCF has had a very busy few months, Christine and the team have been very successful in achieving a high rate of return for effort in grant submissions. What a fantastic achievement, congratulations to all the staff and thank you on behalf of our members. SCF is now in a very strong position. Our expansion into livestock is happening, Andrew Slade is forming a Livestock Committee please contact him if you are interested. On that note we would like someone to help us on the Finance Committee. The Committees are a fantastic way to gain experience and have a voice in our future direction.

We have had two very successful workshops recently - the Spreader Day held at Lindsay Watterson's farm (Thank you Lindsay) and the Smart Farm afternoon at Gilbert's Winery. The later emphasizes the growing importance of technology and data management. Our project with Pivotel is instrumental to the success of the two smart farms being set up. Data is becoming a very important part of farming; it will be on your balance sheet in the future. The world is coming to your farm. Who would have thought IoT's (internet of things) could be so important to our businesses? The more IoT's you have providing data (Crowd funding) the more accurate the algorithms are. See what you come up with when you Google Data Co-ops.

Our next event we are hosting is the GRDC's High Rainfall Zone Cropping Workshop on the 24th July 9am start at Green Range. This should be a must attend day for croppers.

Sandy Forbes from Narrikup and David Brown from Woogenellup and Burracoppin have come onto our Board. I would like to welcome them on behalf of our membership and thank them very much for volunteering their time.

High on the agenda is our 10th Anniversary, a bonfire hosted by Mark and Heather Adams (Thank you). I will dust off the Lamb spit, yummy!

All the best for the coming months. In my short career Farming has never been more exciting.

Ken Drummond

Lime Ripping P 6

Smart Farm Project P 13

Future Farmers Student Connect P 18

CEO Update

CHRISTINE KERSHAW, SCF CEO

Winter is here! Thank you SCF members for buying me a small heater for my office! I need it.... not a cold weather gal but hey glad to see some rain, seeding over and crops doing their thing. This time last year we had the fires to contend with and a tricky season start so very pleased that there has been no major damage this year with the elements.

You will notice in this next few months that SCF is making visible progress in the our 'Smart Farming' initiative, which is a strategic program to help our members to gently transition into the new digital age of farming. The first part of this program starts with our network towers going up in July and August across the West Kendenup and South Stirlings areas to connect 50 members to fast and reliable mobile internet services across the farm. This is still a trial to see how well this system can work, so the proof is in the pudding – but let's see how well our project partner Pivotel goes in making this a seamless and reliable service for members. If it works, I am hoping we can get further funding to expand it in the future. As far as I am aware, this NBN-backed data network at this scale is a 'first' for farmers in Australia and another example of how SCF is at the forefront of AG innovation. Hopefully, 50 members will be connected to reliable internet as an SCF Christmas pressie.

SCF will also be announcing our two new 'SCF Smart Farm' demonstration sites during our Spring Field Day on 26 September. If your wondering what all the fuss is about, come along and see what can be done once you are connected with reliable internet on your farm for both cropping and livestock operations. We have partnered with global firm, Hitachi to help us set up the smart farms. Hitachi are coming to visit this month to talk with farm hosts and SCF about what can be done with technology to help improve your bottom line. We don't just want to connect digital tools, we want a central control system that will enable different programs and tools to talk to each other and automatically analyse data and present information back to you in a way that you can use for real time decision making on a daily basis, tailored to the needs of your individual farm. These are exciting times if you choose to embrace it and these systems should SAVE YOU TIME, not create extra burden – that is our challenge. This again, highlights how SCF can benefit you as members - by saving you a world of pain in helping you to navigate what is useful and what is not useful in this new confusing world of digital ag technology.

And don't worry, we have not taken our eye off the ball with traditional R&D trials. We have several new trials starting, which you can read about later in this newsletter and the R&D team are working hard on the snails issue and setting new project priorities with the R&D committee. We currently have $2.8m projects running, so there is an enormous amount of work happening. We will be stepping up our efforts to make more information available to you in the coming weeks on our website and via video blogs but keep an eagle eye out also for local small field walk type events that are often at short notice and mostly driven by our East and West members groups. To learn more, why not go along to some of their gatherings and get involved to get more out of your membership!

I hope to see all of you at our SCF 10th Anniversary Bonfire gathering on August 9 for SCF members and 'friends of'. It will be great night of food and frolic with entertainment and it's family friendly. Don't miss this opportunity to celebrate SCF's success and our farming community. Thanks to Heather and Mark Adams for hosting the event at their farm.

Lastly, the new WA Producers' Co-op is also now completely and legally separate from SCF but will continue to work closely with SCF as the WAPC will be located in offices in the SCF building. If you are wanting to know more about the new co-op and get the benefits of early membership, we have our first members meeting happening at the Mt Barker Hotel 25th June where will be opening the process for signing up for membership.

Cheers to all, Christine

Follow SCF online!

Search **Stirlings to Coast on these platforms:**

YouTube

Introducing new Board Member - Sandy Forbes

ALAN & SANDY FORBES, NAPIER

We are a family farm business based at Napier, 28km north of Albany. We farm 324ha in a 700mm rainfall zone along the Kalgan River where we base our Royston SAMM and White Dorper Sheep Studs, SAMM commercial sheep and 20ha of irrigated Lucerne for hay and chaff production. We moved to Napier from Jerramungup in February 2015 where we were running a mixed farming enterprise of stud and commercial sheep and cropping in a 375mm rainfall zone on Alan's parents original farm. We also were agents for Milne Feeds and Advantage Feeders based on farm.

We have been running our sheep studs for 15 years and have used performance testing through Sheep Genetics Australian Sheep Breeding Values in conjunction with visual traits to produce sheep that perform well commercially in many different rainfall zones. Rams are sold at our annual on-property sale in September. Our commercial sheep flock is based on our Dual purpose SAMM's for prime lambs and producing 4.5 to 5.5kg of 20 – 21 micron wool. Our move from farming in a medium to a high rainfall zone was to give us more security with water supplies and rainfall for our predominantly livestock based business and to give us opportunities for irrigation and diversification.

Alan has been farming all his life apart from five years as Area Manager for Summit Fertilizers. Sandy has a Bachelor of Business (Agriculture) and spent 18 years in the Jerramungup Office of what was formerly the Department of Agriculture working in landcare, cropping, pastures and sheep advisory work. Sandy also ran her own farm consultancy business, was a long term member of the Fitzgerald Biosphere Group and is a Nuffield Scholar.

SCF would like to welcome Sandy as a new Board member and we look forward to her input into our direction and activities in to the future.

> **The move to Napier has given us new opportunities in our farming career and to expand our business in a different farming environment which has been both interesting and challenging over the last four years!**
>
> ALAN & SANDY FORBES, NAPIER

▲ *Lucerne Stand*

▲ *Stud SAMM Ewe Hoggets*

STIRLINGS TO COAST FARMERS

BOOKKEEPER

- **Part time position – up to 15 hours/week**
- **Salary package according to skills & experience**
- **Located in Albany, Western Australia**

Stirlings to Coast Farmers are looking for an efficient, experienced bookkeeper (general bookkeeping duties and payroll) for a part-time position with our dynamic and growing organisation.

Key responsibilities will include but are not limited to: day to day general bookkeeping duties using Reckon Hosted accounting software, payroll (including salary packaging), contract management, asset register, assisting with preparation of financial statements for program acquittals and assisting in the preparation of accounts for annual audit.

HOW TO APPLY:

Applicants must submit their CV and a short written statement (less than two pages) giving details of your work experience, qualifications and background against the selection criteria in the JDF. To obtain a job description form (JDF), please email admin@scfamers.org.au.

Applications should be forwarded to admin@scfarmers.org.au.
For a confidential discussion about the role call SCF Office Manager, Eva Bett on 0408 905 368 or email admin@scfarmers.org.au

Closing date for applications: 5pm Monday 15 July 2019.

EVENTS NOTICEBOARD

STIRLINGS TO COAST FARMERS

10th Anniversary CELEBRATION

WHEN

Friday August 9 from 5pm

WHERE

'Yaralla', Mark and Heather Adams, Woogenellup Road

RSVP

kathi.mcdonald@scfarmers.org.au or 0408 418 531

by 2 August

Sheep on a spit and drinks provided

2019 SPRING FIELD DAY

STIRLINGS TO COAST FARMERS

THURSDAY SEPTEMBER 26

SAVE THE DATE! Further details coming soon!

Liming followed by ripping with inclusion plates to ameliorate subsoil acidity and compaction

Background

Many farmers in the South Stirlings & Green Range areas have deeply compacted soils and subsoil acidity where the soil pH is below the recommended 4.8 in Cacl2. Some SCF members have been spreading lime on the surface to treat top-soil acidity for over a decade and have patiently waited for lime to move into the sub-soil.

SCF members have started to deep rip their compacted sandplain soils which is offering significant yield improvements, measured in SCF and DPIRD research in the area in recent years.

This project, funded through the National Landcare Program (NLP) Smart Farms Small Grants, aims to determine if deep ripping with inclusion plates after surface applied lime improves subsoil acidity (raises the pH) at a faster rate than surface applied lime applications only.

Inclusion plates are designed to allow for top-soil to re-locate deeper into the soil profile down the back of the ripper tyne. If lime has been applied on the soil surface, then some of that lime should also move into the subsoil where it can react with acidity and increase soil pH. If subsoil acidity can be ameliorated faster than the traditional surface lime applications, then productivity gains could occur sooner which accelerates payback.

SCF researchers want to determine if subsoil compaction and acidity can be treated in the same pass of a ripping machine. The only extra cost of this strategy is the wear on the inclusion plates and the extra drag created by them, increasing fuel costs, tractor hours, and depreciation.

Trial design

The trial is hosted by SCF member Clint Willis. Testing was conducted by John Blake to confirm if the subsoil constraints were present at the proposed trial site. The results are summarised below.

Paddock History: Clayed in 2010. Last two years of cropping were 2017 Barley, 2018 Canola, 2019 will be Barley.

Soil Type: Deep duplex sand over gravel/clay at >45cm.

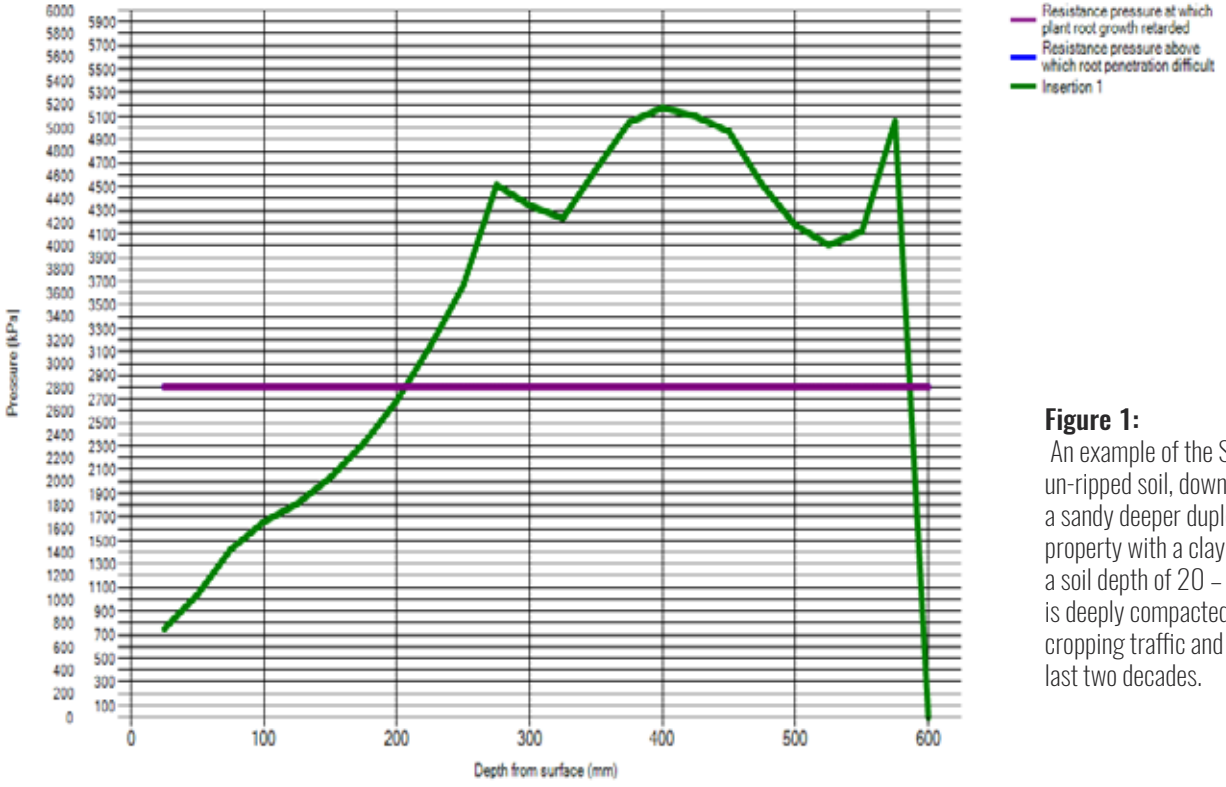


Figure 1:
An example of the Soil resistance, in un-ripped soil, down the soil profile in a sandy deeper duplex soil on Willis's property with a clay layer at 60cm. At a soil depth of 20 – 60cm the subsoil is deeply compacted from intensive cropping traffic and claying over the last two decades.

Sample ID	Soil Depth (cm)	pH (CaCl2)
Willis North Paddock 4a	0-10cm 10-20cm 20-30cm	4.32 4.06 4.10
Willis North Paddock 4b	0-10cm 10-20cm 20-30cm	5.01 3.97 4.29
Willis North Paddock 4c	0-10cm 10-20cm	4.74 4.27
Willis North Paddock 4d	0-10cm 10-20cm 20-30cm	4.93 4.21 4.65
Willis North Paddock 4e	0-10cm 10-20cm 20-30cm	4.87 4.12 4.69
Willis North Paddock 4g	0-10cm 10-20cm	4.52 3.80

Table 1: Soil pH (CaCl2) results of the Lime-Deep Ripping trial site on the Willis's property at Kojaneerup in 2019 prior to liming or deep ripping.

Local lime source

Clint discovered a source of lime on his property with low neutralising values due to a high percentage of the lime fraction being greater than 0.5mm. It was decided to compare the local lime source with Boyanup lime which was tested as 86% neutralising. A summary of the analysis of the two lime sources is listed below.

Table 2:
Summary of the particle size fractions for the two lime sources used in this trial. 5t/ha of Boyanup Lime equals 4.3t/ha of pure $CaCo_3$. 12t/ha of Willis lime equals of 4.2t/ha of pure $CaCo_3$.

Particle size Fractions (% of sample)							%NV
Sample	% Moisture	>2mm	>1mm	>0.5mm	>0.25mm	<0.25mm	
Willis Ave.	16	28	12	18	24	18	35
Boyanup	5	0	1	33	52	14	86

Soil sampling and baseline data collection

Soil tests were carried out by Map IQ on each plot at the trial site prior to treatments being implemented. Each plot (130m by 12m) has had soil samples collected from the topsoil (0-10cm) and sent to CSBP for analysis. Each plot has been sampled from three separate locations within, which are GPS mapped so we can re-test the exact location in following years.

In addition to the top-soil tests, samples were collected from 10cm increments down the profile, to a depth of 50cm. Soil pH from each sample was measured. This data provides a comprehensive snapshot of the current soil pH levels at the Willis trial site in 2019. Soil pH results are presented in Table 1.

Soil compaction

Soil compaction data has been collected from the trial site in April 2019. The full data has not been presented in this document but an example of the soil compaction level at the Willis site is shown in Figure 1.

Harvest yield data

Grain yield will be collected from this site in 2019 and SCF will monitor the soil pH changes over the coming years.

Yield responses due to the 2019 lime applications are not expected this harvest. However, it is expected that there will be yield improvements due to the deep ripping treatments similar to that reported for ripping trials in recent years. However, responses to deep ripping will vary with seasonal conditions which is why we monitor soil amelioration trials over many years.

SUMMARY

- **SCF aim to monitor changes to soil compaction, yield and subsoil acidity for many years.**
- **Map IQ have provided excellent baseline data for soil pH levels which will simplify future comparisons.**
- **Comprehensive soil compaction data has been measured in 2019 to provide baseline data to compare with future compaction assessments.**

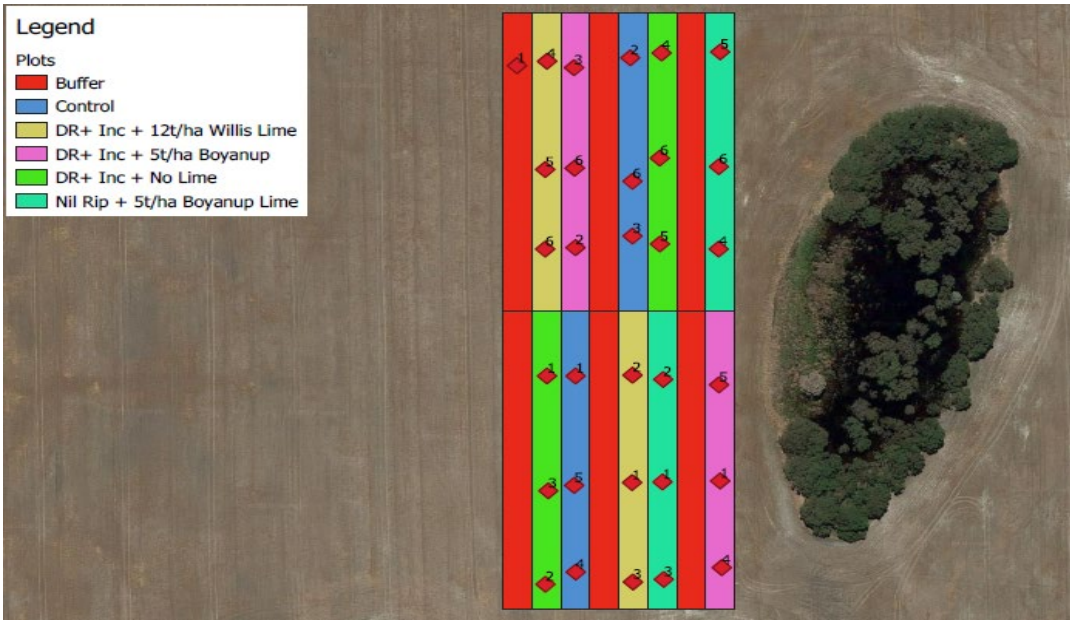
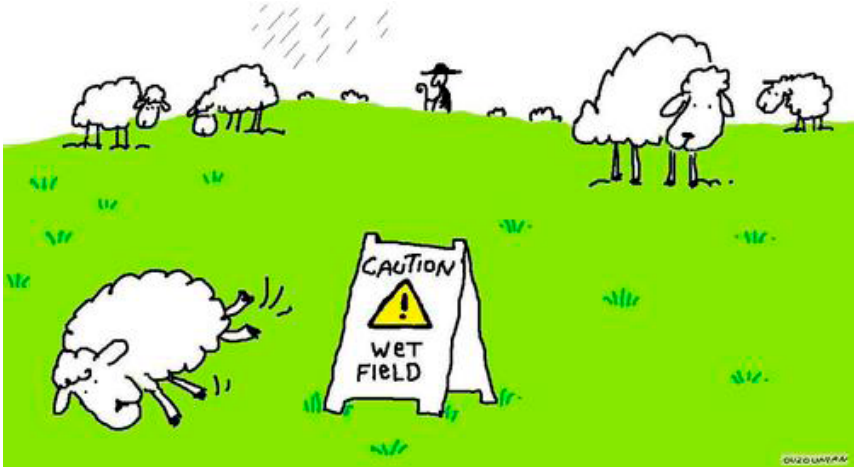


Figure 2: Google earth image of the Willis Deep Ripping and Liming trial established in April 2019 at South Stirlings as part of the Stirlings to Coast NLP2 project "Liming followed by ripping with inclusion plates to ameliorate subsoil acidity and compaction".



Liming followed by ripping with inclusion plates to ameliorate subsoil acidity and compaction - Secondary site

Introduction

A secondary trial site was established at the Curwen's property on Bloxidge Road at South Stirlings. The objectives are the same as the Willis trial site described above. SCF want to evaluate the ability of deep ripping with inclusion plates to move lime into the acidic subsoil.

Trial design

The Curwen site has had 4t/ha of Lime applied in the previous three years and was a pasture paddock in 2018. In 2019 the paddock has been deep ripped and SCF have incorporated the trial to work with normal farming enterprises as much as possible. The treatments are listed below:

1. Deep Rip -Max. 60cm in the sands and 35-50cm in the medium duplex soils, gravel over clay.

2. Deep Rip + Inclusion plates -same soil depth as described above

3. Nil treatment.

Plot widths are 12m which were installed via two ripping swaths of 6m each. A harvester with a 12m front will be used to harvest the plots and the weights will be measured using the SCF weigh trailer. The plots can be broken into individual soil types if required because the plot runs are over 900m long. Soil testing has confirmed the subsoil is acidic (data not shown).

Plot No.	Treatment	Rep. No.
1	Deep Ripping -Max 60cm	1
2	Control – Nil ripping	1
3	Deep Ripping + Inclusion plates	1
4	Control -Nil ripping	2
5	Deep Rip + Inclusion plates	2
6	Deep Ripping -Max 60cm	2
7	Deep Rip + Inclusion plates	3
8	Deep Ripping -Max 60cm	3
9	Control -Nil ripping	3

Table 1:
Displays the trial layout of the deep ripping and lime incorporation trial at South Stirlings, hosted by the Curwen family.

Kalgan pasture productivity site

Stirlings to Coast Farmers (SCF) have established a new and exciting pasture trial at the Kalgan River on South Coast Highway. The trial includes nine different pasture mixes which were sown on June 5-6th by a specialist pasture seeder provided by the Lester family and Direct Seeding and Harvest equipment.

Project background information

New member, Toby Hilder has recently acquired a small block that has been owned by his family for over 100 years. The 40-hectare paddock has had nil fertiliser inputs, herbicide applications or lime amendments added in over 60 years. This has resulted in a paddock that has low fertility and a top-soil pH of only 4.1 (CaCl2). Toby wants to renovate this paddock into a highly productive pasture so that he can maximise sheep carrying capacity as soon as practically possible. Through this project we aim to create a high productivity pasture package for the southern coastal region.

We are also testing different pasture mixes, provided by Heritage Seeds, to assess their fit and suitability for this environment. In addition, 40 tonnes of lime was donated by the WALCO lime pit at Manypeaks, which we used to apply 4t/ha on half of the trial paddock. In the years following we will apply an average of 1t/ha per year to the whole paddock and measure the differences in soil pH change between each section (4t/ha v nil lime in 2019). The final and arguably most important factor to test are the fertiliser applications in 2019 and beyond. Details below

Projects objectives

We aim to measure the effects on pasture biomass growth rates over multiple years and to see which production factors; such as lime, fertiliser, pasture composition, have the greatest impact on biomass production. Expenditure on inputs will be higher than traditional production strategies but current livestock commodity prices allow for higher spending.

The results of this trial work will allow SCF to assess which production factors have the greatest impact on pasture biomass production which will provide local producers with information to direct spending inputs in situations where soil fertility and pH are low. Nutrient deficient soils are common after blue-gum rotations and we are seeing many farms being converted from plantations back to grazing land in the local area. This trial will provide information to guide producers on input spending in the first few years after converting blue-gums stumps to pasture production.

Project input summary

Table 1: Summary of the annual Lime applications proposed for the Kalgan River pasture productivity site hosted by Toby Hilder.

Year	Lime Treatment 1	Lime Treatment 2
2019	4t/ha (applied June 3rd)	0t/ha
2020	1t/ha	1t/ha
2021	1t/ha	1t/ha
2022	1t/ha	1t/ha
2023	1t/ha	1t/ha

Lime discussion

The top-soil pH in CaCl2 at this site was measured at 3.9-4.1. A large application up front will raise the soil pH as quickly as possible and then we will follow up with a maintenance rate of 1t/ha each year after that. The comparison with 1t/ha of lime annually is more conservative but probably still a higher rate used than most local livestock producers.

The trial has been designed to monitor the interactions of the two different liming regimes with the three fertiliser rates and the different pasture mixes applied. We expect there to be additive effects of the high lime rates and the high fertiliser rates.

Year	Fertiliser treatment 1	Fertiliser treatment 2	Fertiliser treatment 3
2019	450kg/ha Super Copper Zinc Moly	150kg/ha Super Copper Zinc Moly	Nil
2020	150kg/ha (as above)	150kg/ha (as above)	Nil
2021	150kg/ha (as above)	150kg/ha (as above)	Nil
2022	150kg/ha (as above)	150kg/ha (as above)	Nil
2023	150kg/ha (as above)	150kg/ha (as above)	Nil

Table 2: Summary of the annual fertiliser applications proposed for the Kalgan River pasture productivity site hosted by Toby Hilder.

Fertiliser discussion

We have mirrored the same line of thinking with the soil nutrition as the soil pH status. Due to zero fertiliser applications in the last 60 years or more we have very low levels of phosphorous, potassium and sulfur at the site. We want to test the soil response to adding a large amount of fertiliser in the first year followed by maintenance rates of Super Copper Zinc Moly from CSBP.

Table 3: Nutrient breakdown of Super Copper Zinc Moly from CSBP.

N	P	K	S	Ca	Cu	Zn	Mo	Mn	Fe	Mg	B	Bulk Density t/m3
	9		10.1	19	0.6	0.3	0.06					1.15

Given the higher cost of this strategy, compared to applying 150kg/ha of product every year, we want to quantify if there are production benefits over longer term as well determine if the return in the first year is significantly different to the 150kg/ha application rate.

By maintaining the Nil application of compound fertiliser, we will be able to assess the longer-term production differences between zero input farming and our attempt at a maximum production package for growing pasture in this region.

Potassium inputs

Soil test results indicate potassium (K) levels are low enough to limit production and seed-set, which will be especially important in 2019. This trial already has multiple treatment factors. Therefore, SCF will apply a basal rate of Muriate of Potash (MOP) in the coming months to ensure that production will not be limited by K. This rate of MOP will be determined through consultation with CSBP collaborators Mike O'Dea and Keith Gundil.

UWA Small Plot trial

In addition to the SCF pasture's trial, UWA pasture researcher Kevin Foster, has installed a small replicated plot experiment in the same trial piece. Kevin is investigating the effects of improved phosphorus nutrition on high oestrogenic clovers (Dinninup and likely others at the site). Oestrogenic clovers are widespread in the moderate to high rainfall areas of southern Australia. However, the older cultivars of sub clover like Dinninup, Dwalganup, Yarloop and Geraldton can cause two forms of infertility in ewes: i) short term, with a return of fertility after removal from the high oestrogenic pastures, and ii) permanent cumulative infertility that increases in severity with continued exposure. The permanent infertility is accompanied by an increase in ewe mortality, difficult births and post-natal lamb mortality. However, because producers are not aware of high-oestrogen cultivars, poor reproductive performance is likely to be mistakenly associated with other husbandry problems.

The magnitude of the oestrogenic problem will vary with pasture composition and nutrient status of the soil and oestrogenicity may also vary during the year and with the season. The concentration of oestrogens is also affected by many different 'environmental factors'. For example, in the high oestrogen varieties of sub clover above, oestrogen concentration can be increased by nutrient deficiency (low phosphorus), by disease or water logging. Low soil phosphorus does not just impair plant growth, but it can more than double the concentration of formononetin in the green leaves of the oestrogenic sub clovers. The practical significance of this research then will be to support earlier recommendations from the 1970's that superphosphate needs to be applied right up to the optimal level for maximum economic return and to reduce the risk of high oestrogenic clover on livestock.

Project collaborators

Stirlings to Coast Farmers would like ttothank the following collaborators for donation of their time and expertise to the project.

- CSBP – Michael O'Dea and Keith Gundil
- Heritage Seeds- Tim O'Dea
- WALCO Lime – Keith Jackson
- Direct Seeding and Harvest Equipment
- Lester family – Manypeaks
- Pacific Seeds- Tristan Wilson-Kerrigan
- Alosca technologies- Floyd Sullivan
- UWA- Kevin Foster

Smart Farm Project 2019-2021

CHRISTINE KERSHAW, MAY 2019

WHAT IS A SMART FARM?

There is a lot of hype about smart farming, Agtech and how the 'Internet of Things', also known as IoT, will disrupt the farming sector. But why is it important to make a farm smarter and what does it actually mean?

A Smart Farm uses technology to increase productivity and reduce costs utilising the farm's resources and assets. This process is referred to as Agtech, which uses IoT capabilities. Historically, the two biggest barriers to farmers creating smart farm environments have been the lack of connectivity and the cost of off the shelf, proprietary products. Thanks to developments in technology, it is now possible to install digital data networks and purchase low cost, non-proprietary solutions, which makes smart farming far more accessible to properties of all sizes, regardless of topography.

PROJECT OUTLINE

The SCF SMART FARM project will operate for a three year period from June 2019 to June 2021.

The objective of this project is to see how digital tools can help farmers to gain significant benefits around yield / production and cost structures.

The project will work with local farmers to establish two SMART FARM demonstration sites (farms) in the Albany region. Each farm will focus on either i) agronomy and soil health or ii) livestock and pasture productivity through the use of IoT and sensors. The idea is to use IoTs to collect data to help farmers make better informed decisions about their farming systems.

The project is looking at ways to implement cost-effective technological solutions to overcome seven main types of farming challenges including:

- Digital connectivity
- Weather interpretation and climate adapatation
- Biosecurity, pest and weed management
- arm security (safeguarding property and assets)
- Livestock and pasture productivity
- Crop productivity
- Occupational Health and Safety

The project will establish a group of members (steering committee) to oversee the set-up of the SMART FARMS and monitor progress of the project. The steering committee will consist of SCF members who have a strong interest in SMART FARMING technology and who want to become directly involved in demonstration events and on-farm activities.

PROJECT ACTIVITIES

ON FARM DIGITAL CONNECTIVITY – partner Pivotel

Fixed wireless network across farm to provide internet and phone connectivity across the farm using custom designed and installed Pivotel data network and digital radio system on 4G. The project will also investigate the use of mobile data network trailers to compliment on farm systems in periods of high data loads or in areas that mobile tower signals cannot reach.

FARM MAPPING AND DRONES – partner Stratus Imaging

All parts of the property to be mapped using GPS and high precision drone imagery.

Using a UAV equipped with a multispectral camera, NDVI imaging will allow for an "eye in the sky" view of the entire crop or mob, giving detailed actionable data and the ability to make informed decisions, saving time and money. High-resolution aerial imaging with the RedEdge® full multi-spectral camera will provide powerful insight to remove yield-limiting factors and respond to crop stress and pasture health indicators to get the most out of every acre.

WEATHER STATIONS and SMART SOIL PROBES – partner DTN

Measuring rainfall, temperature and wind speed is second nature to most farmers, keeping records and analysing the data collected (if at all) is generally not. Traditionally there is only one 'weather station' located on a property, if at all.

Official weather stations provide a great overview and alerts but are not capable of providing the microclimate information you need to manage your business. As a result, you are probably not collecting the right information from the right place at the right time to fully understand your specific microclimate.

The SCF SMART FARM project will install at least one weather station on each SMART FARM property (Davies weather stations). SCF have partnered with DTN (www.dtn.com) to trial the collation of weather information for more accurate and specialized information from one or more weather stations. If this trial proves successful, SCF members and co-op members will be encouraged to install weather stations and participate in an aggregation weather data project.

Not only are we able to collect data from more than one 'weather station', but we can also overlay this information with other data from other

sensors on the farm such as soil probes and digital maps, to obtain a deeper understanding of what is happening in the microenvironment. And most importantly the data we collect is done so on a consistent and regular basis.

Each SMART FARM will also be provided with an SMART environmental monitoring station at one or more strategic points on the property. Most properties have varied topography including high and low lying land. It, therefore, makes sense to collect data from a variety of points to obtain a comprehensive picture of the farms micro-region. With deliberate placement of the weather station(s) and soil probes – we should be able to make some solid decisions based on the data collected in terms of pasture and crop management.

SECURITY - Biosecurity and Farm Security

Understanding who, where and when is accessing your property is becoming one of the key compliance factors for biosecurity. But there are other factors as to why farm security is important, such as theft and even identifying unwanted feral visitors.

Smart ACCESS stations at key access points around the property. Our Smart ACCESS stations include number plate recognition camera, detection beams and a solar panel. There is technology available now that is able to capture every vehicle with a number plate entering and leaving the property, data which the assists with both farm security and LPA biosecurity requirements. We can not only capture who is coming onto our property but whether they are coming or going and, of course, the time and date. This information is stored on a cloud based system and can be displayed on dashboards in head office in addition to alerts being sent to mobile phones.

Asset tracking and remote monitoring

Smart Farm machinery can have, or may already have, asset tracking installed. Not only can you track when your implements leave the shed, but we can also determine which paddock they've been to and when – including how long for. This eliminates the need to physically document the movement of our machinery and frees up time. Information, like all other Smart Farm data, is stored and easily retrieved for overlay and analysis with other data sets allowing informed decisions to be made. This is achieved by small tracking devices placed on the equipment e.g. quad bikes, cars etc.

AUTOMATION

There is also an option of having equipment that help to automate systems on the farm e.g. mustering through the use of automatic gate opening systems (also can be used for security purposes). Automatic Machine to machine automation and guidance systems – more work.

REMOTE MONITORING

1. **Cameras can be used for remote monitoring of equipment, assets, water, stock and crops.**

   In this Smart Farm project we are looking at both paddock and feedlot monitoring systems.

   E.g. data collection on feeding patterns, pasture health and productivity, animal health monitoring and eventually, electronic fencing.

   An example of an ultimate aim may be remote stock mustering and more frequent rotation to avoid overuse, which could be achieved using a network of technology, including automated gates and/or drones to move stock around the property.

   Cameras and other IoTs can also be used to monitor water systems and send alerts if there is a problem with equipment.

2. **Smart Walk over Weigh systems and stock data collection and analysis.**

   Smart Walk over Weighing involves automatically collecting the weight and identification of an animal as it passes through a collection point. Regular data weight patterns are created allowing you to identify trends by individual animal or herd. Deviations from these trends (e.g. weight loss) could indicate health issues and provide the opportunity for early intervention. Overlaying this information with ID and market prices can create a real time valuation of your herd allowing you to capitalise on market opportunities

   Smart WOW collection points can be set up as part of your rotational grazing set up. This allows you to not only weigh your animals but also overlay the data with your water or feed consumption.

   Smart glasses can then also be used to display information on individual animals in real time by scanning it across the paddock or over an individual animal.

3. **Soil probes**

   See earlier.

MANAGEMENT PLATFORM AND ECONOMICS – partner Hitachi

Knowing the value of your assets, livestock or crop at any point in time still requires a 'physical' search through legacy systems and records. Most farming enterprises find it challenging to collect regular, consistent data to create a comprehensive profile of their livestock or crop.

SCF are in the process of partnering with Hitachi to develop a farm management platform template that can be customised for co-op members. This will be able to integrate various other IoTs and management platforms, such as AskBill and AgriWebb into one digital farm management platform that is customised to address specific issues relating to individual farms. Once fully established, this system will also provide marketing and price insights, customised alerts and decision analytics.

Data is quickly becoming one of the world's most valuable resources. The key is to collect, store and analyse data on farm – consistently and regularly – is to create insights which highlight patterns and anomalies that enable SMART DECISIONS to be made which result in better farm productivity and greater profitability and sustainability.

Smart Farming Technology Workshop

DISCUSSIONS CONTINUED INTO THE EVENING WITH REFRESHMENTS AFTER THE OFFICIAL PROCEEDINGS WERE COMPLETE.

There was a full house at Gilbert's Winery on June 19 for the SCF Smart Farm Technology Workshop. The workshop introduced farmers to some of the AgTech options available to them and presenters on the day included many leaders in the Australian Ag Tech industry. Thanks goes to DPIRD's 'E-connect Grain belt' project for funding support to enable us to bring together presenters of such a high calibre.

Derrick Thompson from Hitachi Australia outlined multiple Hitachi solutions and services being introduced into the Australia agribusiness sector. These solutions cover Internet of Things (IoT) deployment, innovative unmanned aerial vehicle (UAV) solutions for data capture, decision support systems and supply chain optimisation. Matt Saunderson and David Kinnear of DTN Weather outlined the many benefits to be gained from on-farm weather station data – better modelling and decision making based on observations and hyper-local forecasts.

Philip Honey from Environmental & Cropping Technologies Australia, based in Esperance, described the pathways to guaranteeing the successful integration of AgTech options on-farm. Philip highlighted three steps to consider in starting your AgTech journey – proper planning and design of the systems required, selecting the right AgTech partner for your farm's needs and remembering to determine what your ongoing support, updates and maintenance requirements are likely to be. SCF member and Nuffield Scholar, Andrew Slade, outlined his Nuffield Scholarship investigating digital agriculture and how different sources of farm data can be integrated into common management platforms to develop better decision support tools. Andrew plans to implement some of his learnings on the family farm at West Kendenup.

Something for the right now included the presentation from CSBP's Keith Gundill and Decipher's Matthew Stewart demonstrating DecipherAg – Technology for Nutrition. This platform allows farmers to collate their soil and plant sampling data and results over many seasons and can provide them with data and knowledge to optimise their yields and improve fertiliser application decision making.

A popular inclusion in the workshop was NSW sheep consultant, Geoff Duddy from Sheep Solutions. Geoff is recognised nationally as a lamb feedlotting specialist and delivers a wide series of workshops and programs covering all facets of sheep reproduction, production, nutrition, finishing and flock management. Geoff outlined some of the technologies

▲ *It was a full house at Gilbert's Winery for the SCF Smart Farm Technology Workshop.*

available to improve the efficiencies of livestock enterprises and was most excited about the potential of EiD tags and walk over weighing, virtual fencing, remote monitoring by drones and automated feeding systems.

Through funding support from the Department of Primary Industries and Regional Development (DPIRD) DecisionAg IoT grants and Meat and Livestock Australia (MLA), SCF are setting up two Smart Farms in the region to test and demonstrate some of the AgTech available to farmers now. The Smart Farms will use digital tools and sensors to collect data to help farmers make better informed decisions about their farming systems. Internet connectivity across the farms will be ensured via the Data Network currently being set up by SCF and telecommunications partner, Pivotel.

Presenter, Geoff Duddy, from Sheep Solutions, NSW describing some new technologies available to farmers to improve efficiencies in their sheep enterprises.

SCF Board member Mal Thomson chats to ABC's Jonathan Daly during the lunch break.

Workshop attendees taking advantage of the networking opportunities and enjoying the sunshine and lovely lunch supplied by venue Gilbert's Winery.

Plan now to manage snails at harvest

By now growers will be aware of the tightening of grain receival standards for snails in barley and canola for the 2019/20 harvest and will be planning how to manage this in their business.

Cleaning snails from grain using a rotary grain cleaner can be hit and miss. In 2002 the University of South Australia (USA) collected grain samples before and after cleaning from four grain cleaning contractors, all using rotary grain cleaners. The researchers noted that for all grain types, regardless of the contractor, there were certain loads that could not be cleaned to specification – see the table below.

Grain	Total loads cleaned	Cleaned loads that did not meet specifications
Barley	11	3
Canola	8	3
Wheat	4	2

Small conical snails proved to be most difficult to remove and the ability to clean a load to the receival standard was not necessarily dependent on the total number of snails present in the load.

The photo below shows small conical snails separated from hybrid canola on the LHS and those unable to be separated on the RHS using a rotary grain cleaner using 2.5 mm slotted screens in the 2018-19 harvest.

Rotary grain cleaners rely on the difference in size between the snail and the grain to screen or aspirate snails out of the grain. There is often a trade-off between removing snails and minimising grain loss. Where there are snails the same size as the grain, rotary grain cleaners will not be able to clean grain to specification without incurring unacceptable grain losses.

The proportion of snails the same size as the grain will vary within paddocks and across seasons, determined by snail breeding and the population dynamics at harvest time. The size of grains will also vary with the season and the variety, with hybrid canola, for example, generally having larger grains than other varieties.

However, since the 2002 trial, snail crushing rollers have been widely adopted in parts of SA, indicating that they are effective at removing snails from grain.

SCF is working with GRDC and CBH to undertake controlled, replicated testing of the snail roller to remove small conical snails from canola and barley or wheat. The hopper opening, distance between rollers and speed of the PTO driving the rollers will all be varied to determine which settings provide optimum snail removal with minimal grain damage. Grain samples will be taken before and after rolling to compare snail number, shell fragments and grain quality.

The trial will also use the SCF snail roller in conjunction with a rotary grain cleaner to get the best snail removal from canola, as per current practise in SA. We will compare the number and size of snails in the canola before and after cleaning and then run the grain through the snail crushing grain roller to see the effect of combining both operations.

CBH have made suitable canola available for our grain cleaning trial, but we still need barley or wheat to work with. Any SCF members with barley or wheat in storage that might be suitable for our trial are asked to contact Nathan Dovey on 0429 468 030.

Further reading

Post-harvest solutions for quality grain. GRDC Project USA-28, 2002.
https://grdc.com.au/research/reports/report?id=2845

Mitigating snails, slugs and slaters in Southern WA
https://www.scfarmers.org.au/

Snail Management Guide for WA Farmers
https://www.scfarmers.org.au/

What's happening in cropping research across the High Rainfall Zone of Australia?

Here's your opportunity to find out and have your say for the future

These workshops have the objective of addressing the constraints that have been, and are being, addressed in three different High Rainfall Zone (HRZ) cropping projects in wheat and canola. These GRDC funded projects from across Australia all have the quest of addressing the key parameters to achieving higher yields in the HRZ. The three workshops, being held in the three Port zones of Albany, Esperance and Kwinana West, will give growers and advisers the chance to catch up with three project leaders currently involved with HRZ research;

- Dr Heping Zhang, CSIRO
- Ms Penny Riffkin, Agriculture Victoria
- Mr Nick Poole, FAR Australia

Wednesday 24 July 2019
9am-12.30pm

Green Range Country Club.
40521 South Coast Highway, Green Range

In association with Stirlings to Coast Farmers

Key technical aspects of three projects will be addressed with time set aside for the views of growers and advisers. In the afternoon there will be a separate workshop led by DPIRD which will be dedicated to helping identify the gaps in WA HRZ research.

To assist with catering requirements, please RSVP to rachel.lowther@faraustralia.com.au by Friday 12th July 2019.

Achieving stable and high canola yield across the high rainfall zones of WA

Dr Heping Zhang, CSIRO

- What is the potential for hybrid canola to increase yield and profitability in the HRZ of WA?
- Is there yield difference between different herbicide tolerance technologies?
- Sowing late-flowering spring canola early is a key to high yield in the HRZ.

Optimising the yield and economic potential of high input cropping systems in the HRZ

Ms Penny Riffkin, Agriculture Victoria

- Opportunities for increasing wheat yields in the HRZ of southern Australia – the journey so far and the path forward.
- Redesigning canola to better utilise available resources in the HRZ - challenges and opportunities.
- Tools to aid fertiliser decisions for maximum profits.

Hyper-yielding cereals – a feed grain initiative

Mr Nick Poole, FAR Australia

Nick will address the management and germplasm challenges for higher yields in the HRZ with reference to research in the Hyper yielding Cereal project. Topics covered will include:

- What are the germplasm attributes for achieving high yields in the HRZ regions of Australia when sowing early?
- Whilst it's important to adjust fertiliser nutrition for higher yield potential, it is equally as important to recognise the role of soil fertility in achieving high yielding cereal crops.
- Disease management strategies for the HRZ – What are the key development periods to get an economic return and sustain the use of our fungicides.
- Managing fungicide resistance – what are the lessons learnt so far in the east that can help with the battle against net blotch in barley in WA?

ADDING VALUE TO THE BUSINESS OF CROPPING

www.faraustralia.com.au

NLP2 Future farmers student connect program update

WA College of Agriculture Denmark visit

As part of the future farmers student connect program SCF R&D Coordinator Nathan Dovey and member Jarrad Beech travelled out to the Western Australian College of Agriculture Denmark. The weather was a bit cold and damp but that didn't dampen the spirits. Year 11 Students were keen to learn more about grazing oaten hay. The school has an oaten hay crop and likes to graze all crops to receive some extra benefit.

After some introductions and a rundown of Jarrad's operation everyone piled onto the bus for a quick tour of the school paddocks sown to oaten hay. The first paddock visited was an immature stand of oaten hay where students learned the twist and pull method to help determine the time of grazing. Other topics touched on included the intensity of grazing and the benefits of grazing. Jarrad has most experience with the hard and fast method of grazing oaten hay while still producing a successful hay crop.

Stuart also took the opportunity to show other paddocks the school was intending to graze. These included a couple where the crop was a bit more mature. With many interesting questions, a great morning of learning was had by all.

DENMARK STUDENTS INSPECTING THE SCHOOL HAY CROP

NATHAN DOVEY AND JARRAD BEECH WITH DENMARK STUDENTS

ALLISON WATSON PRESENTING TO GSG STUDENTS

Great Southern Grammar visit

On Monday June 24 SCF membership officer, Sammy Lubcke and AI Technician Allison Watson headed to Great Southern Grammar where Allison presented a great talk on artificial insemination in cattle. Allison discussed with the Year 11 and 12 Agriculture students the methods of AI and the advantages of utilising AI over traditional breeding methods. Nutrition related to breeding cattle, including the ideal condition score for conception rates and calving was also discussed. The school has their own small herd of Dexter and Angus cattle and are utilising AI techniques to improve the quality of their genetics.

Water – make it safe to drink

Drinking water from rain tanks, bores and even dams is great when you know the water is safe. However, sometimes prolonged dry periods, contamination from dust, livestock, birds, algae and even insect plagues can affect the quality of your drinking water.

Parasites can be ingested from drinking rainwater, particularly after periods of heavy rain or when the tank water is low. Dirt from the roof, including animal faeces as well as germs carried in the wind can blow onto the roof and flow into the tank. This can lead to diseases; such as Bacterial diseases, salmonellosis and acute diarrhoea (caused by E. coli), Viral diseases- gastroenteritis and Parasitic infection like giardiasis

Seepage from septic tanks, intensive farming operations or pesticide drift can also contaminate your drinking water supply. More recently climate variability has increased the number of algal blooms which can also be toxic.

If you suspect water may be contaminated, boil or filter your drinking water.

Remember, think before you drink and treat the water if you are unsure. It is a good idea to take a bottle of clean drinking water with you if you are out on the farm.

Information adapted from:
https://www.farmerhealth.org.au/page/safety-centre/water-make-it-safe-to-drink

Land and water management

National On-Farm Emergency Water Infrastructure Rebate Scheme

The Australian and Western Australian governments are working together to deliver $4.6 million in national rebates to livestock farmers and pastoralists in rural Western Australia for on-farm water infrastructure.

The National On-Farm Emergency Water Infrastructure Rebate Scheme is available to eligible commercial livestock farmers and pastoralists in rural WA.

About the rebate

The rebate is for 25% up to a maximum of $25 000 for the purchase of new water infrastructure, delivery and installation to address animal welfare needs and improves resilience to drought.

Eligible items include water storage devices such as tanks and troughs, pipes, fittings and pumps associated with water distribution systems, new bores and the desilting of dams by a contractor.

Rebates can be applied to costs incurred after 30 June 2018, and applications close 30 April 2021 or when the funding allocation is exhausted, whichever occurs first.

https://www.water.wa.gov.au/planning-for-the-future/rural-water-support/on-farm-emergency-water-infrastructure-rebate

Rabobank News - Vietnam announcement brings glyphosate pressure closer to home


WESLEY LEFROY

Compared with farmers in Brazil, the EU and the US, Rabobank's agricultural analyst Wes Lefroy says "global glyphosate developments over the past 18 months have remained a little more at arm's length for Australian grain farmers".

Vietnam's announcement earlier this year to ban imports of glyphosate, and then ban use all together, does though, he says, bring developments much closer to home for Australian growers.

Mr Lefroy says while Vietnamese farmers will no longer be able to use glyphosate for rubber, coffee, rice and sugar cane production and this might not be of high concern to Australian crop farmers currently making decisions for the 2019 winter crop, the longer-term impacts should be considered.

"Over the last five years Vietnam has been the second biggest importer of Australian wheat behind Indonesia," he says, "and imports of Australian barley have grown at 11 per cent CAGR."

Mr Lefroy says, "from where we currently sit, we see the potential for one of three plausible scenarios to eventuate" – each with a varying degree of likelihood and possible impact on Australian grain exports.

The most likely short-term scenario, he says, would not see any impact on Australian grain exports to Vietnam. In this instance, the Vietnamese government would not alter Maximum Residue Limits (MRLs) at all, or would reduce MRLs to a level in line with Australia's standards. Currently, the glyphosate MRL for wheat and barley exports into Vietnam is 30 ppm (parts per million) for wheat and barley – above the Australian MRL for barley (10 ppm) and wheat (5 ppm).

"This scenario is in line with Vietnam's motive for the ban, with their concern focussed on the impact of chemicals on farmers rather than residues in the food supply chain," he says.

In a tougher, though less-likely, stance, Mr Lefroy says a second scenario could see the Vietnamese government reduce the glyphosate MRL on wheat and barley imports to zero.

"This would require segregation in Australian domestic wheat and barley supply between 'crop-topped' and 'non crop-topped' grain, something CBH has already implemented for feed barley to preserve access into some international markets," he says. "While an extra challenge and cost to supply chains, as CBH has illustrated, this may be implemented quickly in reaction to any potential announcements."

Mr Lefroy says the third and most challenging scenario for Australian grains would not only see Vietnam reduce MRLs to zero, but also give preference to grains and oilseeds imports from origins with a lower dependence on glyphosate than Australia, such as the EU.

"This would have implications for Vietnam," he says. "In particular, there would be an added cost for millers and consumers who would have to absorb higher freight and other costs, given replacement grain would be coming from distances further than Australian ports. Australian imports also have the competitive advantage of a strong track record of quality and supply chain integrity working in their favour."

And in that sense, Mr Lefroy says, "we must also not lose sight of the potential for the growing pressure on glyphosate use to present opportunities for Australia".

"More broadly speaking, this case – together with the other examples from the US, EU and Brazil – illustrates a move away from a scientific evidence-based approach to policy," he says. "And it brings the growing pressure on glyphosate use closer to home for Australian grain farmers."

Rabobank

To find out more about other Rabobank research, contact **Rabobank Albany** on 9844 5600 or download the RaboResearch podcast app.

GREAT SOUTHERN FUELS

Family owned business. Established 1976

Great Southern Fuel Supplies deliver fuel and lubricants to farmers throughout the Great Southern with speed and efficiency.
This is achieved through investment in facilities, infrastructure and most importantly…. PEOPLE.

What happens when you order your fuel from Great Southern Fuel Supplies?

You get quality BP fuel, refined in Western Australia, delivered directly to your farm.

A percentage of your payment becomes wages for over 50 *staff members* employed by Great Southern Fuel Supplies who live and work in the Great Southern.

Those wages are invested into local shops such as lunch bars, pubs, doctors' surgeries, chemists, hardware's etc. It also gets passed on to trades like mechanics, plumbers, electricians, carpet layers, fridge repairers and many other businesses servicing the Great Southern.
At the heart of the Great Southern is community spirit, so some of those wages are generously immersed into sporting groups, theatre productions and local charity events.

So what happens when you order your fuel from Great Southern Fuels?

You're investing back into your community……

ALBANY 9844 3243 KATANNING 9821 1766 JERRAMUNGUP 9835 1531

Grain Growers News - Innovation Generation 2019

Celebrating its 13th year, Innovation Generation has been hosted in six states and territories across Australia and attracted more than 1800 young agricultural enthusiasts.

If you are 18-40 and working in the agriculture industry, Innovation Generation is the one conference you can't afford to miss.

Headlined by Winter Olympian Steven Bradbury, IG is bringing together 13 award-winning speakers, innovators and industry professionals from across the sector.

You will be inspired, challenged and will strengthen your network. https://www.innovationgeneration.com.au/

More information:
Alan Meldrum, Regional Coordinator-WA, 0427 384 760

Australian Grain Imports Information

Many growers have expressed concern about Australia importing grain this year. WA has had a near record harvest, so why is there a need to import grain? Is the Biosecurity risk too high?

GrainGrowers has published summary of the situation and I hope this allays most of the fears.

You can see it https://www.graingrowers.com.au/grains-imports-to-australia-overview-june-2019/

The Glyphosate Debate

We are all concerned about the negative sentiment expressed on social media about agriculture in general and Glyphosate in particular. GrainGrowers has produced a factsheet which is useful if you get the chance to talk with friends who have concerns about this vital tool for grain production both here in WA and around the world. Arm yourself with a well grounded story about Glyphosate and you may sway some opinions.

You can see it https://www.graingrowers.com.au/key-facts-about-glyphosate/

Australia Grain Leaders Program

The Australian Grain Leaders Program (AGLP) is a national leadership program designed specifically for emerging leaders in the grains industry. The program develops leadership skills, knowledge and potential.

The AGLP is designed to give individuals that helping hand necessary to develop, implement and evaluate their own project. The AGLP provides the ongoing support of a trained program facilitator and is open to people under 40 years of age working in the whole of the supply chain in the Australian grains industry.

Applications will be sought in September but now is the right time to see if this program suits you, or someone you know will benefit, for 2020. Details of AGLP are https://www.graingrowers.com.au/leadership-events/australian-grain-leaders-program/

Grain Growers

Grain Growers Limited
Alan Meldrum, Regional Coordinator- WA
M: 0427 384 760
E: alan.meldrum@graingrowers.com.au
W: www.graingrowers.com.au

Summit Fertiliser News - Nitrogen applications to crops after pasture legumes

KEY TRIAL MESSAGES

- Nodulated pasture legumes such as Biserrula capture and fix N, some of which will be available to following crops.
- In this trial we saw that N from preceeding Biserrula was not sufficient to maximise the potential of Sceptre wheat.
- Application of urea and UAN substantially improved yield and returns.

For many farmers, legume pastures provide high quality livestock grazing with the added benefit of fixing soil nitrogen (N) for subsequent crops. How much of that N in organic form is available to the crop however, depends largely on seasonal conditions.

It's an important area of Summit Fertilizers research, because growers need to know if organic N can support the following crop's needs, or if more is needed.

Nitrogen mineralisation from organic matter requires warm wet weather. This mainly occurs in spring or sometimes earlier in the season if summer rains are sufficient to keep the soil moist for an extended period.

In seasons where there is low summer rainfall and as a consequence negligible N mineralization, crop potential may be held back by limited N availability early in the growing season.

To further investigate this issue, Summit established an N trial in the Chapman Valley in Scepter wheat that followed a Biserrula pelecinus pasture phase. Various N rates were applied at seeding or during the season

Yield at the site was high, with almost 300 mm rainfall received for the growing season that started with a break on 25 May. The addition of N as urea at seeding, UAN at the end of July or split between both increased yield by up to 2 t/ha more than reliance on Biserrula-fixed N and showed a trend of higher protein (Figure 1), although the protein difference was not statistically significant.

Screenings in all plots were >5%, resulting in AGP1 delivery grade across the board. Nonetheless, due to the high yields, gross margins were high. All treatments where fertilizer N was applied returned greater profit than where it was not (Figure 2). Some treatments indicated a staggering >$500 increase in profit per hectare over and above a 4 t/ha crop with no N applied.

From the yield produced, grain harvest will have exported between 90 and 140 kg/ha of N. With only up to 60 kg N/ha applied, it follows that a significant proportion of N for the crop came from stored soil N including that fixed by the Biserrula.

It appears that mineralisation did not occur either to the extent required or at the rate required to supply crop demand at all times through the growing season. Supplementary N provided a readily available source of N to drive yield and profit higher than where the crop relied on the Biserrula N fixation alone. In this trial greater benefit was found from later in-season N application and the best agronomic result came from split N.

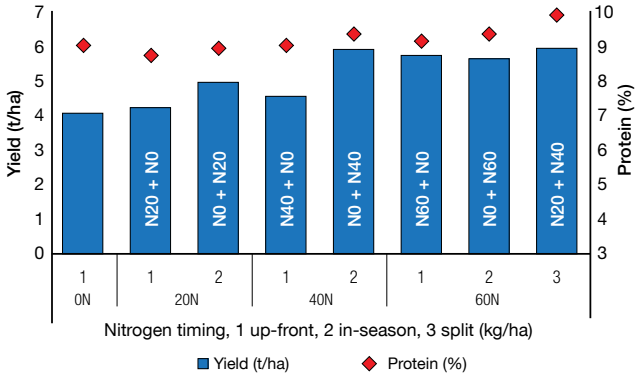


Figure 1. High Scepter wheat yields on a Biserrula stubble were improved by the addition of N in the 2018 Chapman Valley trial, with in-season applications out-performing up-front N.

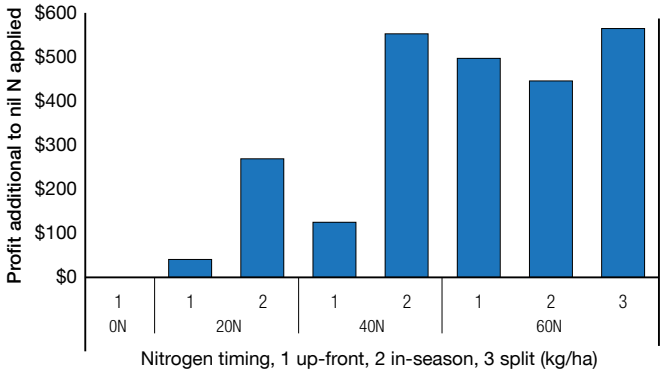


Figure 2. Yield improvement with N application resulted in impressive profit margin increases.

SUMMIT FERTILIZERS

For further information, growers can contact Summit Fertilizers Albany based Area Managers:
Andrew Wallace 0427 083 820
or Peter Warren 0498 223 421.

Photo Gallery...

PHOTOS FROM THE SUCCESSFUL SPREADER CALIBRATION DAY HELD AT LINDSAY WATERSON'S ON JUNE 10

Board Members

Ken Drummond, Chair	9854 1033 or 0427 541 033
John Beasley	0427 552 206
Ian Evans	9842 1267
Darren Moir	0428 279 256
Mark Preston	0427 834 200
Mal Thomson	9854 3038 or 0428 543 038
Clare Webster	0427 555 981
Sandy Forbes	0427 354 036
David Brown	0428 447 036

Office Staff

Dr Christine Kershaw, Chief Executive Officer	0429 236 729
Dr Kathi McDonald, Communications Manager	0408 418 531
Eva Bett, Office Manager	0408 905 368
Samantha Lubcke, Membership Officer	0417 605 784
Nathan Dovey, R&D Coordinator	0429 468 030
John Blake, R&D Consultant	0438 761 950
Dr Alaina Smith, Grains R&D	0438 986 404

The SCF team is based at the SCF office located at 75 Albany Highway (opposite Dome) in Albany.
Staff can be contacted on 9842 6653 or admin@scfarmers.org.au