

STIRLINGS TO COAST FARMERS

Spring Field Day

2021

STIRLINGS TO COAST



GROWING AGRICULTURE TOGETHER

STIRLINGS TO COAST FARMERS WOULD LIKE TO THANK:

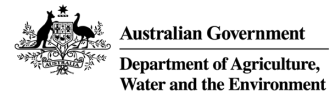
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Welcome!

STIRLINGS TO COAST FARMERS INC

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 facebook.com/Stirlings2Coast

 twitter.com/Stirlings2Coast

On behalf of Stirling to Coast Farmers (SCF) I would like to welcome you all to our Annual Spring Field Day. Nathan and the team have put together a great day and we hope to provide you with some relevant and topical information and update you with some of the latest local trial research from SCF projects and partners/sponsors to help you make the best decisions. If you're not currently an SCF member, hopefully you will find the day valuable and consider joining us to enjoy the benefits of our locally relevant RD&E. Please come forward if you have any ideas on future projects.

SCF has an extensive field trials program, testing a range of cutting-edge research under local conditions to help our members improve their business profitability and sustainability. It's been a tough year to manage but by coming together to share our knowledge and experiences, SCF members are in a better position to adapt and prosper in what is an exciting time for agriculture and to weather out the harder times together as a community. Hosting the trials is so important and always appreciated, it is fundamental to providing Relevant and Credible information. We often have the same farmers hosting, please don't hesitate to volunteer, you have the opportunity to be on the front foot.

Thank you to all our volunteers! SCF is driven by our members, and today would not be possible without the help and support of everyone that has contributed. SCF sponsors are very important, it provides the opportunity to involve our supporting businesses. Agriculture is a huge network of people with many diverse back grounds, Ag relies on all of us being successful. Please make yourself known to our sponsors.

Our AGM will be held before we begin the Spring Field Day proceedings. To stay relevant SCF needs our members' inputs on the direction of the group – consider nominating for the Board or one of our many committees to have your say.

To hear more about SCF's locally relevant trials program head to our website – www.scfarmers.org.au.

Let's keep our fingers crossed for a good harvest!

Jon Beasley

SCF Chair



Grow with the bank founded by farmers for farmers

We have a unique understanding of agriculture and the importance of taking a longer view. That's why, through bumper seasons and leaner years, we'll be here to help you grow.



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Rabobank

PROGRAM

8:30am	AGM	
9:00am	Registration	
9:30am	Welcome	Nathan Dovey, SCF
9:35am	An introduction to carbon accounting: What does it mean? How is it likely to impact my farm business? How do I calculate on-farm carbon emissions? And once I have, what next?	Richard Brake, Richard Brake Consulting
10:20am	Mapping & measuring soil carbon, pH and electrical conductivity in the field, on-the-go.	Jon Smith, Stratus Imaging
10:35am	Producer Panel: Sheep and Cattle Estimated Breeding Values for Valuable Breeding Decisions	Sandy Forbes, Geoff Sandilands, Chris Metcalfe and Ross Williams.
11:00am	Morning Tea	
11:30am	CBH: Current Market Dynamic	Henry Carracher, CBH
12:00pm	Pivotel 4G Network – It's live, here and ready to connect to!	Nick Hart, Pivotel
12:15pm	Skills & training opportunities available for the agriculture sector through Southern Regional TAFE	Diana Fisher, TAFE WA
12:30pm	Mental Health Presentation	Bev Seeney & Gertrude WellEase, Black Dog Ride
12:45pm	Lunch	
1:30pm	Bus heads out to field	
2:00pm	@ Metcalfe's Farm How the Metcalfe's grew +700kg/ha of beef in only 6 months How winter-type canola and other fodder crops can be implemented into your grazing system Controlling red legged earth mites using intensive spring grazing	Tim Metcalfe Dan McGrath, Pacific Seeds Svetlana Micic & Paul Sanford, DPIRD
3:05pm	@ Howard's Farm The Howard method for removing blue-gum stumps and getting the land productive again	John Howard
3:35pm	@ Howard's Farm Nitrogen Strategies on Planet Barley	Keith Gundill, CSBP
3:55pm	Live demonstration of the Veris Ag on-the-go soil testing machine	Jon Smith, Stratus Imaging
4:10pm	Bus returns to South Stirling Hall	
4:25pm	Afternoon tea	
4:40pm	Hands on workshop on how to diagnose root diseases with live plant testing	Daniel Huberli, DPIRD Pathologists
5:30pm	Wrap up & Sundowner	Nathan Dovey, SCF - Sponsored by Nutrien

AN INTRODUCTION TO CARBON ACCOUNTING: WHAT DOES IT MEAN? HOW IS IT LIKELY TO IMPACT MY FARM BUSINESS? HOW DO I CALCULATE ON-FARM CARBON EMISSIONS? AND ONCE I HAVE, WHAT NEXT?

RICHARD BRAKE

**PRINCIPAL CONSULTANT,
RICHARD BRAKE CONSULTING**

Richard has over 30 years extensive international agribusiness experience providing consulting services in business analysis, and farming systems management to corporate and family owned grain, livestock, and horticultural enterprises in the UK, New Zealand, and Australia.

Richard operates an agri-business consulting service to broadacre, horticultural and pastoral businesses throughout Western Australia. He has a deep understanding of the profit drivers within an enterprise and loves challenging owners to deliver business improvement



Notes _____

MAPPING & MEASURING SOIL CARBON, PH AND ELECTRICAL CONDUCTIVITY IN THE FIELD, ON-THE-GO.

JON SMITH

DIRECTOR & GENERAL MANAGER,
STRATUS IMAGING

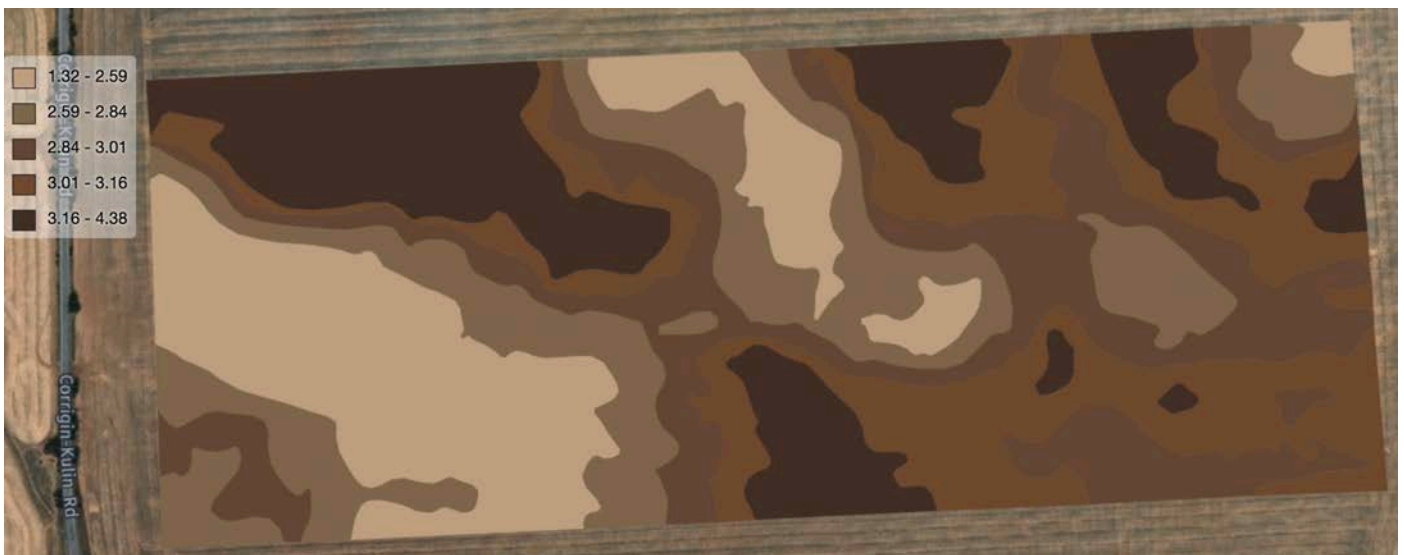
Stratus Imaging specialise in data acquisition and analytics for the Agricultural sector. We gather data on crop health, weeds, disease, insects, nutrient deficiencies, soil variation, soil ph and soil carbon from a variety of sources (including satellite, UAV's and ground based equipment). These insights allow for a variety of variable rate application decisions to be made and implemented, through a single dashboard.

Carbon has become a hot topic within Agriculture, however understanding what this means to growers has not been made clear. Many questions are being asked about how to measure, what changes are required on farm and how will this impact the operation. Now with the ability to measure soil carbon on scale, we can understand the impacts that this has agronomically for the grower and secondary is being able to quantify the levels of soil carbon to add an additional commodity for the grower.



STRATUS IMAGING

Notes



PRODUCER PANEL: SHEEP AND CATTLE ESTIMATED BREEDING VALUES FOR VALUABLE BREEDING DECISIONS



SANDY FORBES

ROYSTON SAMM AND WHITE DORPER

Together, my husband Alan and I run a 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 Sheep Stud, SAMM commercial sheep and 20ha of irrigated Lucerne for hay and chaff production. We moved to Napier from Jerramungup in Feb 2015 where we were running a mixed farming enterprise of stud and commercial sheep and cropping in a 375mm rainfall zone on Alan's parent's original farm. We were also agents for Milne Feeds and Advantage Feeders based on-farm. I have 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. I worked a mix of part time and full time in conjunction with running our farm business. I also ran my own farm consultancy business, was a long term committee member of the Fitzgerald Biosphere Group and am a Nuffield Farming Scholar. I am the National Vice President of the Prime SAMM Society of Australia (INC) and Treasurer of the Western Division.



CHRIS METCALFE

KOOJAN HILLS ANGUS STUD & MELALEUCA MURRAY GREY STUD

Chris is part of a family farm based in Manypeaks running approximately 1,500 breeding cows and 3000 ewes. The cattle enterprise consists of the 550 head Koojan Hills Angus stud, 200 head Melaleuca Murray Grey stud and 750-800 head commercial herd. The Metcalfe's sell around 150 registered herd bulls annually as well as supply bulls into their own commercial herd. Chris and his family aim to grow out the majority of their young commercial steers and heifers and primarily sell them as grass finished cattle to Woolworths, targeting 270 – 280kg carcass weights at 18 months of age. They mate their Dohne ewe flock to White Suffolk rams and sell the majority of the lambs to Fletchers. Chris focuses mostly on the Angus stud and loves the never-ending challenge of trying to breed the "perfect" animal!



GEOFF SANDILANDS

BILLANDRI POLL MERINO

Geoff farms with his wife and young children on 6,000ha across properties in Kendenup, Tambellup and Gnowangerup. They run 10,000 commercial merino ewes along with their 2,000-ewe-strong Billandri Poll Merino performance recorded flock, in a 50/50 balance with cropping. These elite ewes are manually mothered up at birth and continue to have data recorded on them across their lifetime, with selection preference for animals with good MP+ index figures. This index primarily focusses on increased clean fleece weight, reduced fibre diameter, increased yearling weight and increased number of lambs weaned. They operate on a stocking rate of between 12 and 8 DSE across the properties.



ROSS WILLIAMS

Ross farmed at Gairdner for 40+ years before downsizing to a smaller block in Manypeaks in recent years. He originally ran Merino ewes but transitioned to Dorpers when wool prices were poor and management of flystrike prone animals got too difficult given the landscape of his property. He has found the Dorpers to be much easier to manage and selects rams off ASBV's to produce ewes with high fertility and fecundity that have quick growing lambs for an early turn off. This suits his smaller flock structure and enterprise very well.



Supporting our regional mental health.

We have joined with four organisations to improve the mental health of Western Australian regional communities.

Together, we're aiming to make help easier to access for growers and communities so that we can all look after our mental health.

For more information on our program and services our partners offer, visit our website.

cbh.com.au



HENRY CARRACHER

NATIONAL ACCUMULATIONS
MANAGER, CBH

Henry has been in the Grains Industry for most of the last 20 years and has worked in all the major grain producing states of Australia. He has worked for Ausbulk Grain Marketing, ABB Grain, and the last 12 years with CBH, including 6 years in South Australia as the state accumulations manager, before transferring to Perth in his current role.

He grew up on a farm that his parents still own in the West Wimmera of Victoria where they grow wheat, canola, and irrigated lucerne.



Notes

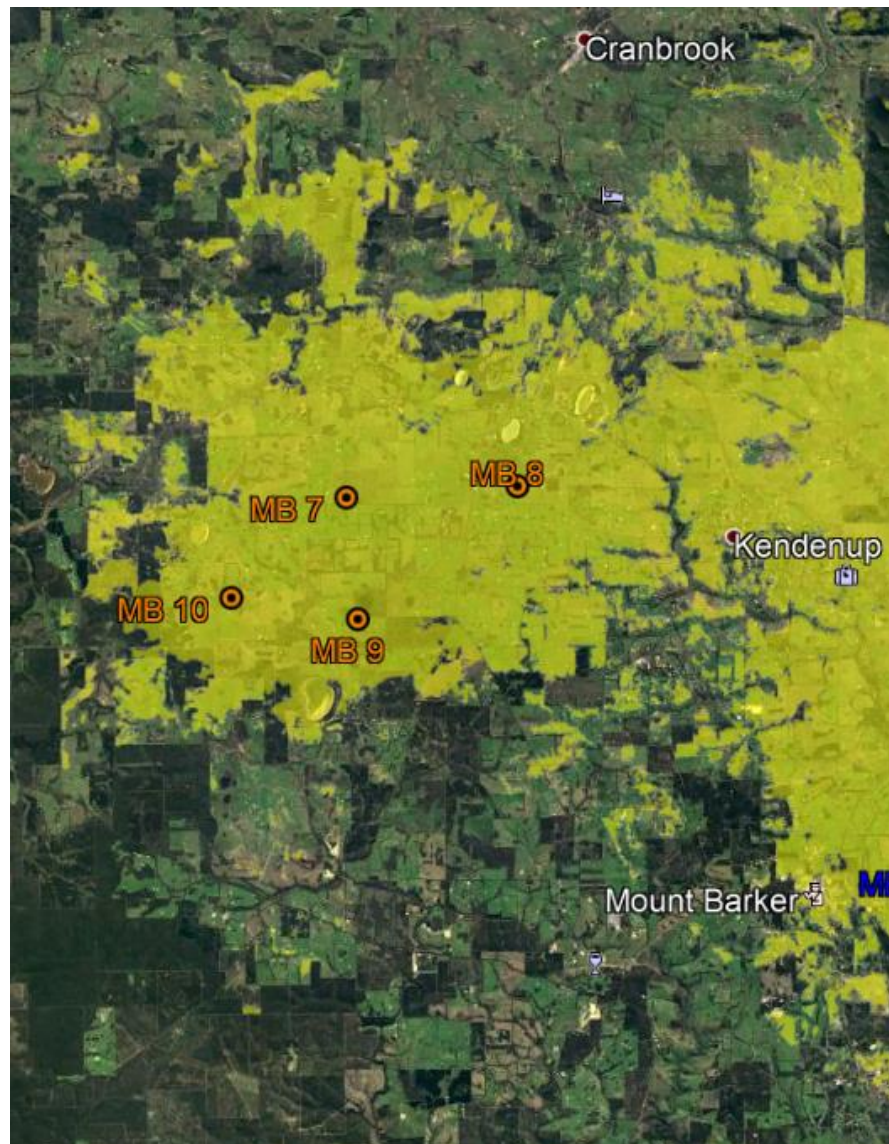
PIVOTEL 4G NETWORK – IT'S LIVE, HERE AND READY TO CONNECT TO!

NICK HART

WA BUSINESS DEVELOPMENT
MANAGER PIVOTEL SATELLITE

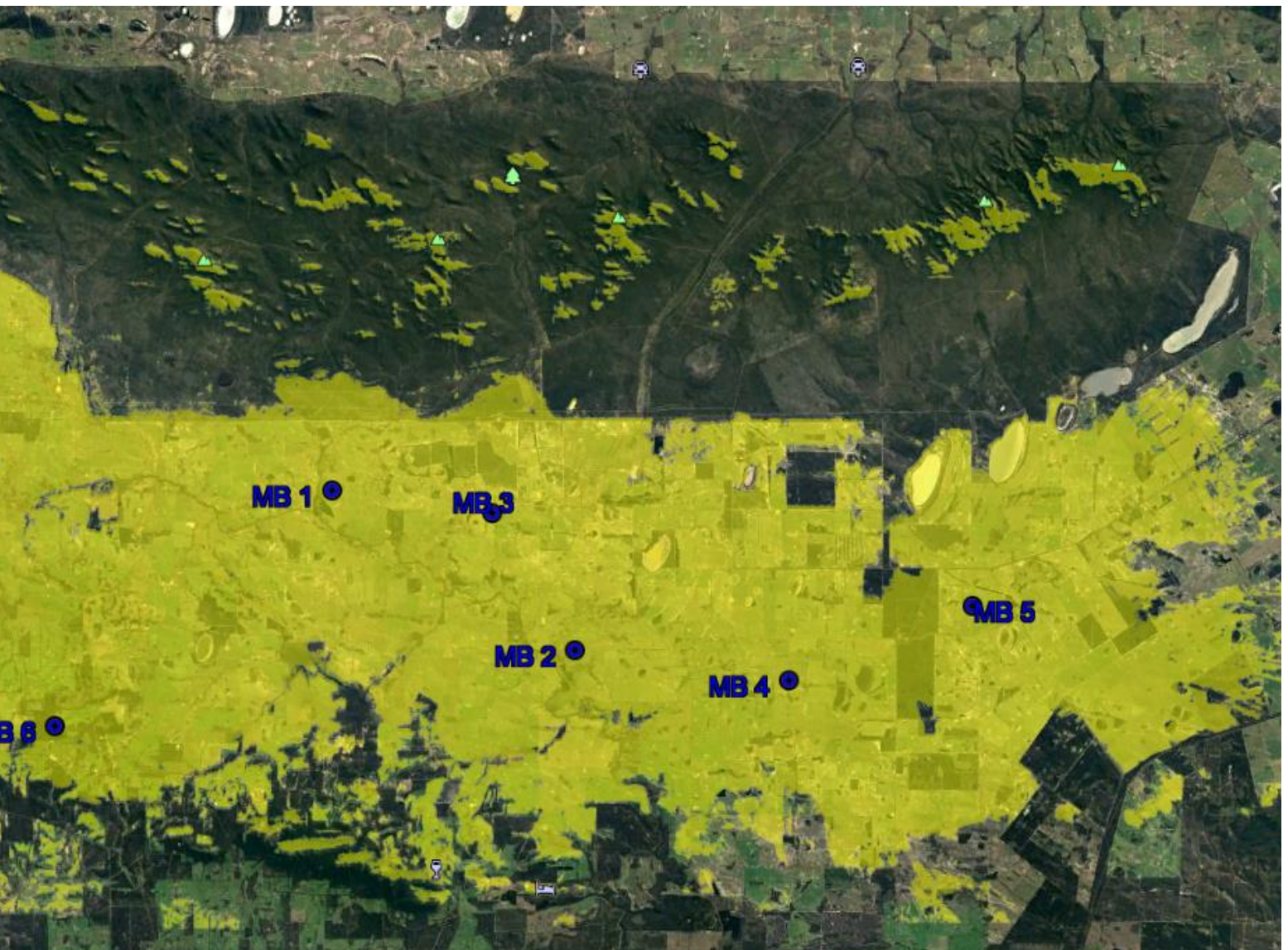
An Executive/Founder and Engineering manager with twenty five years' experience in the global communication industry. A successful track record of launching new satellite services and products in Australia and Asian region. Recently developing broadband satellite services, at Ku/Ka Band with IP Star and O3b Network satellite solutions for IP Trunking, cellular backhaul and end to end VSAT shared access networks and applications for the oil/gas industry. Motivated by developing innovative new services in conjunction with customers, service providers and equipment suppliers, that are profitable for all parties, hence create long term successful strategic partnerships.

pivotel.[®]



SCF Disclaimer: Device coverage, speed & performance depends on where you are, network setup & conditions, the devices in use and whether it has an external antenna(s) attached. This map outlines the approximate, estimated coverage levels for fixed-connections across the Pivotel network, and may require site-verification for accuracy purposes.

Notes



SKILLS & TRAINING OPPORTUNITIES AVAILABLE FOR THE AGRICULTURE SECTOR THROUGH SOUTHERN REGIONAL TAFE

DIANA FISHER

MANAGER INDUSTRY ENGAGEMENT, SOUTH REGIONAL TAFE

Diana grew up on a mixed farming enterprise (dairy, beef, production horticulture) in Capel WA. She completed a Bachelor of Science in Agriculture (Honours) with UWA in 1993. She worked for 2 years with the wine grape industry in the South-West and Great Southern Regions of WA learning all aspects of vineyard production. Diana then accepted a contract position in entomology with the Department of Primary Industries and Regional Development (DPIRD) based in Manjimup working with the WA Production Horticulture Industries. From 1997 – 2019 she worked at DPIRD in various positions within the Horticulture Production Industries, becoming a Project and Program Manager leading all R&D work across the state.

Diana returned to her hometown late 2019. She worked with the South-West Development Commission during the COVID-19 response and recovery before accepting her current position as Manager Industry Engagement with South Regional TAFE June 2020.

Diana is a strong advocate and has a sound understanding of the agriculture sector. She is recognised for building positive relationships with key stakeholders, industry groups, communities and regulatory bodies. Her focus areas during her career have been research, development and extension for production horticulture and more recently VET skills and training needs for all industry and community.

PLAN
1. water
2. fertilizer
3. mowers
4. harvest

skip
A PACIFIC SEEDS INITIATIVE

Predict, plan and manage with one tool.

Smart Knowledge Is Power.

Pacific Seeds has joined forces with ClimateAi and Goanna Ag to create the ultimate on-farm decision making tool for growers. Skip allows growers to crop plan ahead of time, right down to each individual paddock, and with customised alerts it provides growers with timely, relevant and valuable information all-year round.

This innovative tool will be launching Spring 2021.
Scan the QR code and register today.

BLACK DOG RIDE



BEV SEENEY & GERTRUDE WELLESE

Black Dog Ride began on 26th July 2009, when WA businessman Steve Andrews began his solo around Australia motorcycle ride to start conversations around depression in order to foster awareness and prevent suicide, following the tragic death of a close friend to suicide. In April 2010, Black Dog Ride's inaugural 1 Dayer was held, bringing together hundreds of people impacted by mental illness and suicide. In September 2010 the first Ride to the Red Centre was organised, a week-long suicide prevention activity, which established the longevity of the movement. From 2009 to 2014, Black Dog Ride was entirely staffed by volunteers, including 1 fulltime volunteer. Once it became apparent that managing Black Dog Ride required paid employees to continue it's health promotion operations, Black Dog Ride established itself as a Company Limited By Guarantee, obtained charitable status, gained an office and employed two full time staff.

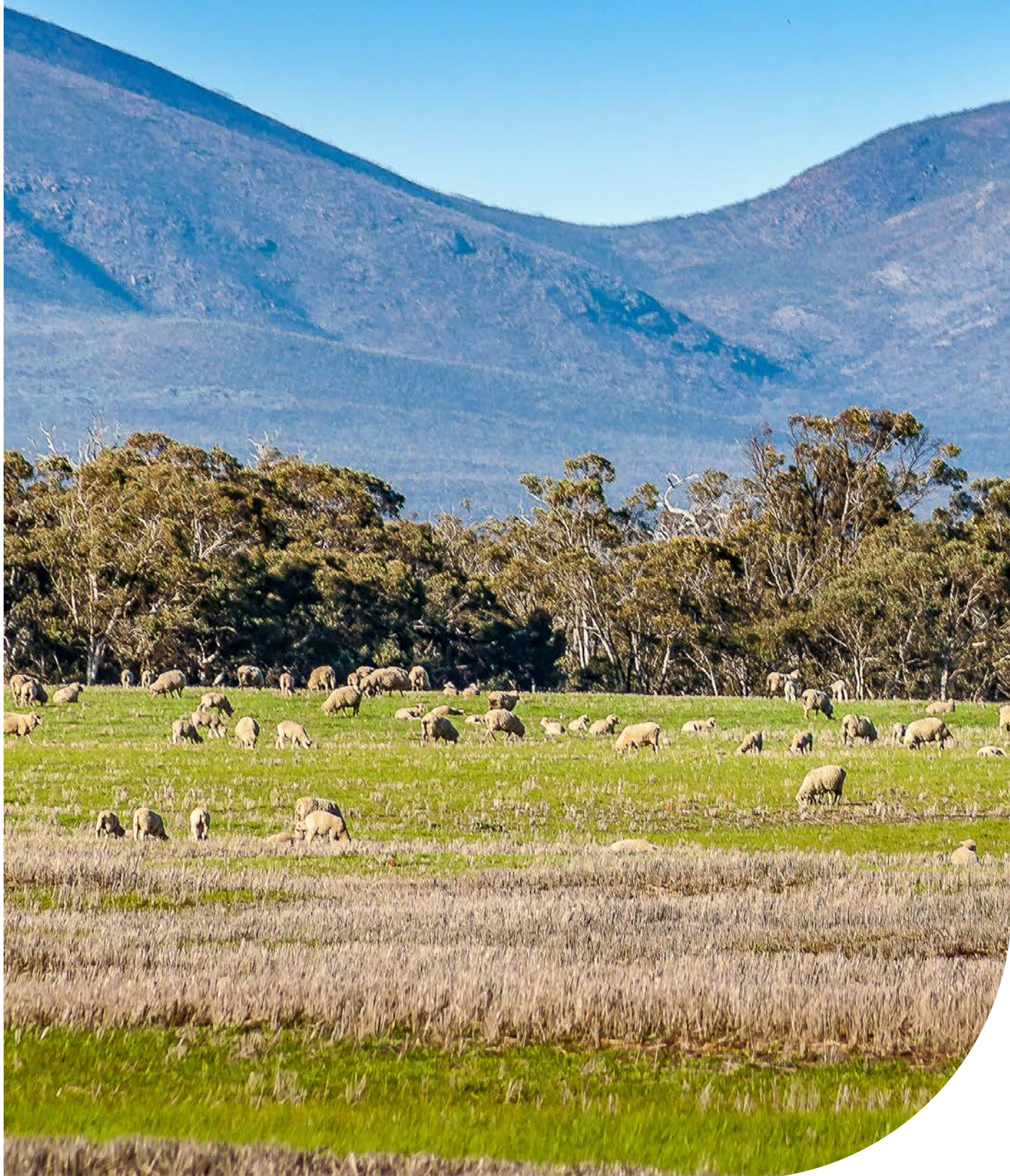
Black Dog Riders have engaged, collaborated with and built the capacity of thousands of Australians from all walks of life, most of whom have lived experience with mental illness or suicidal ideation, whilst raising both awareness of depression and funds for suicide prevention programs. From country women making hundreds of scones for Black Dog Riders on their way through town, to stockmen raising awareness of depression by raising cattle for Black Dog Ride, to being the impetus for people to train as community educators in mental health, Black Dog Ride has inspired the community on a national scale, empowered community members to make positive personal life changes and provided the opportunity for people with lived experience to contribute meaningfully to their community.



STIRLINGS TO COAST



FIELD TOUR



HOW WINTER-TYPE CANOLA AND OTHER FODDER CROPS CAN BE IMPLEMENTED INTO YOUR GRAZING SYSTEM



TIM METCALFE

KOOJAN HILLS ANGUS STUD & MELALEUCA
MURRAY GREY STUD

Tim Metcalfe farms with his wife, parents and brother in the Manypeaks region. They run approximately 1500 breeding cows and 3,000 ewes. The cattle enterprise consists of the 550 head Koojan Hills Angus Stud, 200 head Melaleuca Murray Grey Stud and 750-800 commercial herd.

The Metcalfe's started experimenting with alternate forage crops in 2018 by growing a Pallaton Raphno demonstration crop in conjunction with Elders Albany. This demonstration provided excellent grazing results and led to many graziers in the area trying Pallaton Raphno with some promising results.

Last year Tim Metcalfe tried seeding Hyola 970CL, long-season winter-type canola, for grazing with the possibility of also harvesting seed as a dual-purpose crop. The impressive results of this crop can be seen in the timeline presented in the field day booklet, especially given the extremely wet year. Tim's plan to get some canola seed in 2021 has been dashed, but it remains a possibility if we get a more 'normal' season in the future. Suppose there is such a thing!

The Metcalfe's see the fantastic potential for grazing crops like 970CL canola and Pallaton Raphno to provide feed in the summer and autumn, allowing them to carry more livestock. Tim acknowledges they still have lots to learn about the system but is excited by the preliminary results from grazing in 2021.



DAN MCGRATH

SOUTHERN WA MANAGER, PACIFIC SEEDS

Dan has recently returned to Western Australia from the Southern Regions of New Zealand where he has been involved in High Input Arable Cropping and Intensive Grazing Farming Systems. He held the position of PGG Wrightson Seeds Arable Manager for the Southern South Island. During his time in this role he worked closely with world leading and record breaking cropping farmers and livestock producers. He was also responsible for managing seed multiplication for many global seed businesses looking for the ultimate in isolation and yields. More recently before his return to WA in August 2020 he was managing the BASF arable products portfolio in New Zealand. He is now based in Perth with his young family and is the Pacific Seeds Southern WA Manager. Dan has a passion for sustainably seeking high yields and utilizing the on-farm produced product to deliver high quality red meat protein through vertical integration, he has been fortunate enough to see and be involved in these types of farming operations on a global scale and is always keen to share his knowledge of these experiences.



OCTOBER 11, 2020

OCTOBER 22, 2020

NOVEMBER 3, 2020

NOVEMBER 20, 2020

METCALFE HYOLA 970 WINTER-CANOLA Paddock

Paddock Size: 34 ha
Seeding Date: Late September, 2020
Seeding Rate: 4kg/ha = \$120/ha
Fertiliser: 100kg/ha Urea (November)
 150kg/ha Super phosphate (March)
 100kg/ha Urea (April)
Herbicides: 500ml/ha Clethodim, 300ml/ha Affirm

GRAZING DATA

Date in: 24/12/2020
Date out: 23/02/2021
Days Grazing: 61 days
Livestock Description: 100 steers
Weight gain:
 1kg/day each = 6,100 kg
 6,100kg/34 ha = 179 kg/ha

Windrush 1959-2021 (closest BOM weather station)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	24.8	25.2	60.5	22	75.8	47.8	58.4	180.6	57	21.2	89.2	20.8
2021	15.6	47.4	45.4	97.8	239.4	122	92.5	88.5				
Mean	22.8	24.6	34.7	52.3	75.3	76.7	86.8	83.2	74	60.5	46.8	29.7



DECEMBER 21, 2020

JANUARY 3, 2021

FEBRUARY 14, 2021

MARCH 6, 2021

Date in: 19/03/2021
Date out: 01/05/2021
Days Grazing: 43 days
Livestock Class: 150 steers
Weight gain:
 1.7kg/day each = 10,965 kg
 10,965kg/34 ha = 322.5kg/ha

Date in: 01/06/2021
Date out: 26/06/2021
Days Grazing: 26 days
Livestock Class: 150 steers
Weight gain:
 1.5kg/day each = 5,850 kg
 5,850kg/34 ha = 172kg/ha
Total beef produced from 24 December 2020 to 26 June 2021 = 673.5 kg/ha

CONTROLLING RED LEGGED EARTH MITES USING INTENSIVE SPRING GRAZING

SVETLANA MICIC

ENTOMOLOGIST, DPIRD

Svetlana Micic has been working in broad-acre entomology based in Albany since 2003. Research has covered canola and cereal crops; right now she is the technical adviser to DPIRD for Russian Wheat aphid and is still working on snails, redlegged earth mites resistance testing and management of these pest through grazing.

Svetlana Micic

*Department of Primary Industries and
Regional Development*

444 Albany Hwy, Albany, WA, 6330

Ph: 9892 8591

Email: svetlana.micic@dpiird.wa.gov.au



KEY MESSAGES

Maintaining feed on offer at around 2 t DM/ha for four weeks in spring can effectively control RLEM in the following growing season.

AIMS

To demonstrate if short periods of intensive grazing in spring will control red legged earth mites (RLEM) effectively without the use of insecticides.

INTRODUCTION

Research conducted in the 1990's found that intensively grazing pastures for the whole of spring controls RLEM as effectively as

insecticides. Yet the tactic has not been adopted by producers due to the impractical number of sheep required for months for one paddock. It is however reasonable to expect that some if not all of the benefits could be realised by much shorter periods of intensive grazing.

Insecticide resistance has recently arisen in RLEM populations in parts of the grain belt renewing interest in alternative control methods such as intensive spring grazing around the Timerite® period. Grazing is an attractive option as it possibly has multiple benefits such as improved yields in following grain crops and better weed control in spring pasture.

While any producer with a mixed farming enterprise could benefit from a spring grazing package aimed at controlling RLEM we expect the largest benefits to be for those in the medium to high rainfall zones with more pasture FOO and bigger RLEM populations. The cost to implement this spring grazing package in most cases would be zero however it would require some additional labour.

Given that in the absence of chemical control options resistant RLEM's could reduce crop yields by up to 30% at a loss of around \$74/ha. A spring grazing package could recover a substantial proportion of these losses.

METHOD

In 2019 and 2020, three on farm-demonstrations at Boyup Brook, Cranbrook and Kalgan compared intensive grazing for 2 and 4 weeks in spring, around the Timerite® date, to an ungrazed control. Intensive grazing involved maintaining pasture feed on offer (FOO) at approximately 1.4 tonne dry matter per hectare (t DM/ha). Pastures were assessed weekly and RLEM were sampled fortnightly in spring and following the break of the growing season in the

following year.

RLEM were suction sampled using a Stihl™ blowervac BG55. The nozzle of the blowervac had a sieve with fine mesh (holes at ~10 µm) placed 5 cm into the aperture of the blowervac. The nozzle of the blowervac was held on the ground for 2 seconds and 10 suction samples were taken per sample jar containing 10 mL of 70% ethanol. A total of 10 sample jars were collected per treatment. In spring collections were taken at fortnightly intervals starting from around the Timerite® date and in the following year collections were taken after the break of the growing season and again one month later. Mites were counted under a dissecting microscope. Pasture FOO was determined using the calibrated visual assessment technique of Campbell and Arnold (1973). At each sampling 60 individual visual assessments were made for each treatment using a quadrat (0.1 m²) these estimates were related to actual FOO by taking 7 to 10 calibration cuts.

RESULTS AND DISCUSSION

Boyup Brook

The intensively grazed plots were maintained at approximately 2 t DM/ha of dry matter in 2019 and 1.9 t DM/ha of dry matter in 2020 (Figure 1).

In 2019, by the end of two weeks grazing (2 Oct 2019), there were 95% less RLEM compared to the control (Figure 2). Two weeks after livestock had been removed from this treatment, the numbers of RLEM had increased 5 fold (84%), whereas FOO only increased by 0.5 t DM/ha (Figures 1, 2). Four weeks of grazing led to a 98% reduction of RLEM compared to the ungrazed control and a fortnight later (6 Nov 2019) RLEM populations had crashed, indicating the population was undergoing summer diapause.

Similar trends were seen in 2020, by the end of two weeks of grazing there was a 50% reduction in RLEM as compared to the control (Figure 2); however, when livestock were removed from this treatment RLEM did not increase. And four weeks of grazing led to a 98% reduction in RLEM numbers.

Sampling in early autumn of the following year, RLEM were only found in the ungrazed treatment. In early autumn 2020, only the 4 week grazed treatment had less than 500 RLEM per square metre ($P < 0.05$) (Figure 2). This is ten times less than the threshold for mites in cereals (equivalent to 5000 mites per square metre) and 5 times less than the threshold for canola (equivalent to 1000

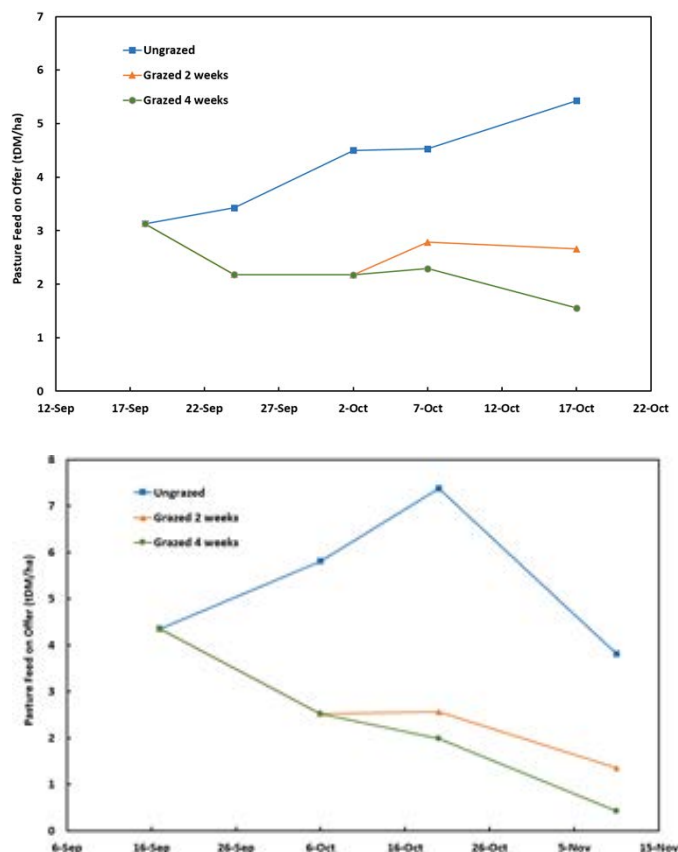


Figure 1. Feed on offer (t DM/ha) of clover based pasture at Boyup Brook in 2019 (left) and in 2020 (right) that was ungrazed, grazed for 2 weeks or grazed for 4 weeks.

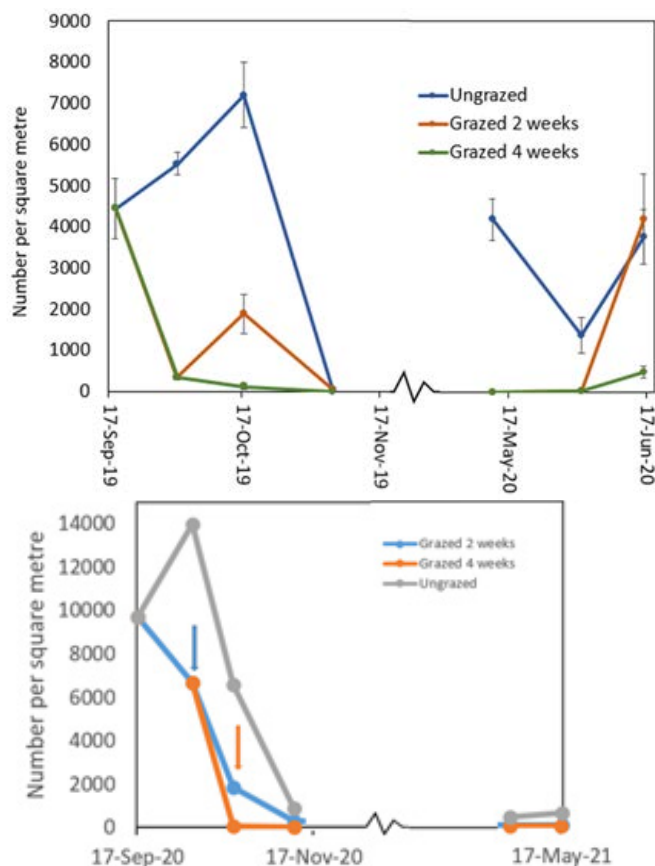


Figure 2. Number of RLEM in pasture at Boyup Brook that was ungrazed, grazed for 2 weeks or grazed for 4 weeks in 2019 (left) and 2020 (right) \pm standard error of mean (SEM). Arrows indicate when livestock were removed, colour indicates treatment.

following year.

Kalgan

In 2019, within a week of imposing the intensive grazing treatment pasture FOO had fallen to 1.6 t DM/ha however by the end of the 4 week grazing period FOO had risen to 3 t DM/ha due to late rain lifting pasture growth rates. In 2020, grazing treatments maintained pastures at approximately 1.9 t DM/ha. (Figure 3).

Compared to the ungrazed control, 2 and 4 weeks of grazing resulted in a 90% reduction in RLEM numbers. When livestock were removed after 2 weeks grazing, in 2019 RLEM numbers only increased by 10%, however, in 2020 numbers increased by 90% (Figure 4). In both years, the 4 week grazing treatment, when livestock were removed, RLEM numbers had decreased to less than 100 per square metre.

When treatments were resampled in the following autumn, in 2020 the ungrazed treatment had 3 times as many mites as the grazed treatments. Both grazed treatments had an average of 1400 mites per square metre, which is below the threshold for growing a cereal crop (Figure 4). However, in 2021, by the end of April (not shown in Figure 4), the four week grazing treatment had RLEM that were six times the threshold for cereal crops, however, this treatment had 70% less RLEM when compared to the control.

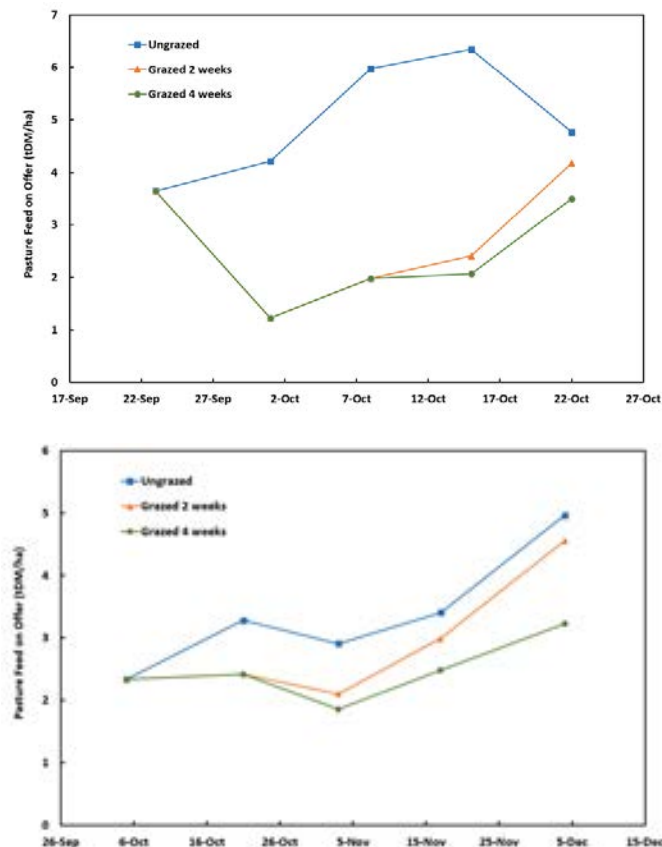


Figure 3. Feed on offer (t DM/ha) of kikuyu based pasture at Kalgan in 2019 that was ungrazed, grazed for 2 weeks or grazed for 4 weeks.

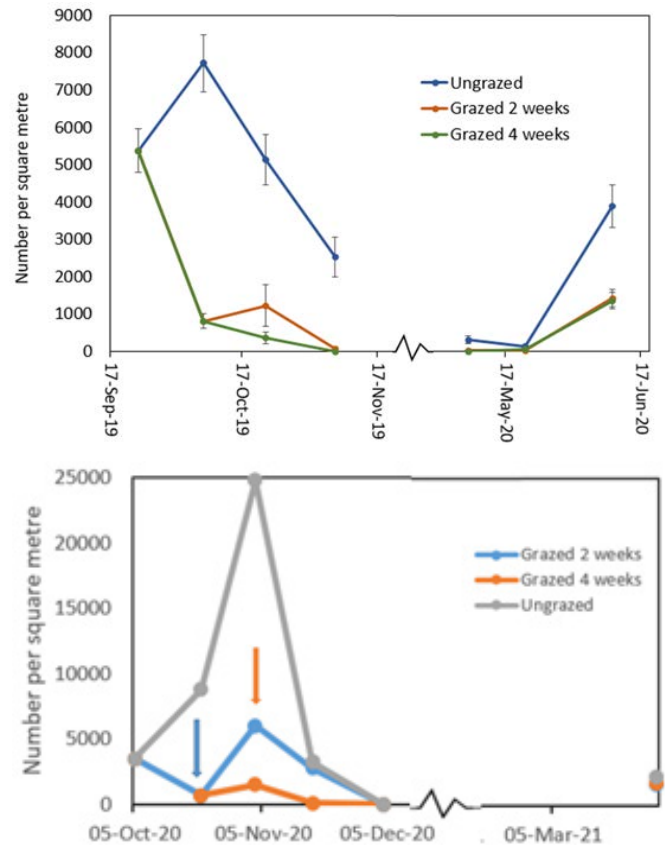


Figure 4. Number of RLEM in pasture located at Kalgan that was ungrazed, grazed for 2 weeks or grazed for 4 weeks in 2019 (left) and 2020 (right) \pm standard error of mean (SEM). Arrows indicate when livestock were removed, colour indicates treatment.

Cranbrook

In 2019 at the commencement of the demonstration pasture FOO was low for a spring pasture at 2.5 t DM/ha. Grazing for either 2 or 4 weeks only reduced FOO to around 2 t DM/ha. At the end of this 4 week period FOO in the ungrazed treatment had only increased by around 0.7 t DM/ha FOO indicating the relatively low pasture growth rates compared to the Boyup Brook and Kalgan sites (Figures 1, 3, 5).

And grazing in 2019 did not cause a significant reduction in RLEM numbers as the population, unlike at the other sites, had declined in the ungrazed plot due to dry conditions. By mid-October, RLEM numbers had crashed (Figure 6). However, by the end of May 2020, the ungrazed plot had 40% more mites than grazed plots, but by mid-June RLEM numbers across all treatments had dropped below 500 mites per square metre.

In 2020, the trial was moved to another property in the same locality. Grazing for 2 weeks reduced FOO to an average 2.9 t DM/ha and for four weeks to 2.2 t DM/ha. Similar, results were found at this site to Boyup Brook and

Cranbrook, where by grazing reduced RLEM on average by 90% when compared to ungrazed treatments. In early spring 2021 there was little differentiation between the treatments (Figure 6). However, by late April (not shown in figure) all treatments had RLEM above crop damage thresholds. The ungrazed treatment had 8 times more mites than the cereal threshold. The grazing treatments had less mites, with treatments that were grazed for 2 weeks having 6 times and the 4 week grazing treatment 2 times the threshold of mites for cereal crops.

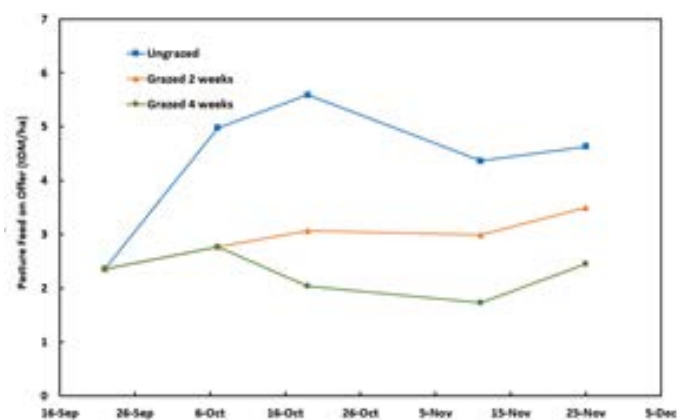
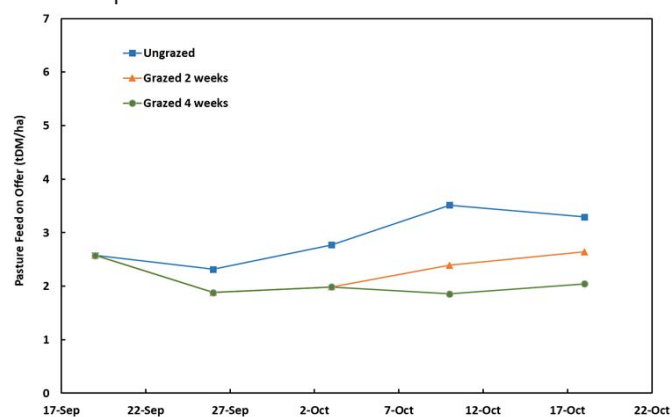


Figure 5. Feed on offer (t DM/ha) of clover, ryegrass based pasture at Cranbrook in 2019 that was ungrazed, grazed for 2 weeks or grazed for 4 weeks.

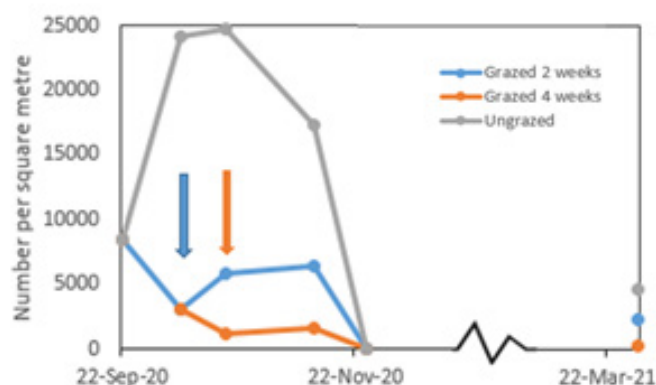
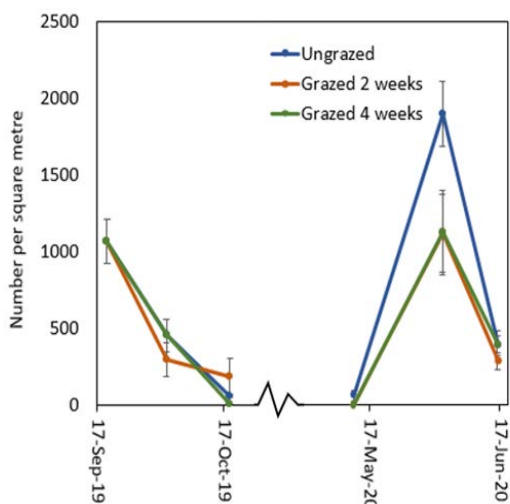


Figure 6. Number of RLEM in pasture located at Cranbrook that was ungrazed, grazed for 2 weeks or grazed for 4 weeks in 2019 (left) and 2020 (right) ± standard error of mean (SEM). Arrows indicate when livestock were removed, colour indicates treatment.

CONCLUSION

Intensive grazing in spring appears promising as a tactic for suppressing RLEM for the following season. However, it should only be used when the population of mites is above 5000 per square metre and FOO is more than 3 t DM/ha. To reduce RLEM's the pasture needs to be grazed to a FOO of 2 t DM/ha or less for 4 weeks around the Timerite period to achieve a significant reduction in mites the following season. The aim is to have less than 1000 mites per square metre in the following season which is below the damage threshold for canola. Control measures for canola, such as seed dressings, may be still be required to protect the crop from RLEM damage.

ACKNOWLEDGMENTS

This research has been made possible by funding from the Small Farms, Small grants, Department of Agriculture and Water Resources. The authors wish to thank Fitzgerald Biosphere Group, Southern Dirt, Gillami and the farmers on whose properties these demonstrations were conducted.

REFERENCES

Campbell NA, Arnold GW 1973 The visual assessment of pasture yield. Australian Journal of Experimental Agriculture and Animal Husbandry 13, 263-267.

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THE HOWARD METHOD FOR REMOVING BLUE-GUM STUMPS AND GETTING THE LAND PRODUCTIVE AGAIN

JOHN HOWARD

GM HOWARD & SONS

John Howard farms with his wife Christine on 5,400ha across properties in Green Range, Takalarup and Bluff creek and is a founding member of Stirlings to Coast Farmers. They run a mixed farm enterprise consisting of 70% cropping and 30% sheep with 3000 merino ewes mated to XB and 2000 mated to Dohne merino rams. John has explored a number of different ways to remove tree stumps from 400ha ex-blue gum and 207ha ex-pine plantations with another 800ha of blue gums to go. Plucking methods trialled by John include a Savannah stump plucker, an excavator and a dozer with a wing keeled ripper. Followed by a lot of chaining, root raking, pushing and burning. John will be discussing his experiences in converting ex-plantation land back to productive farm land.



Notes



Mateno[®] Complete



MATENO[®] COMPLETE NEXT-GENERATION GRASS AND BROADLEAF WEED CONTROL

Combining three complementary active ingredients, including aclonifen, a new herbicide mode of action for Australia.

Expected to be available for the 2022 season.

AT A GLANCE

PRODUCT NAME: Mateno Complete

FORMULATION: Suspension concentrate (SC)

CROPS: Wheat, barley

WEED TARGETS:

Grass: Various grass weeds including annual ryegrass, barley grass, toadrush, silvergrass, annual phalaris, great brome and wild oats

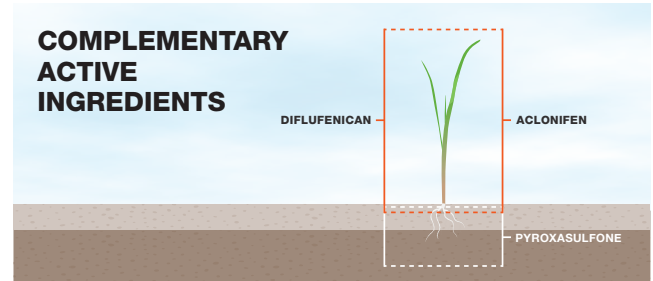
Broadleaf: Various broadleaf weeds including wild radish, capeweed, doublegee/spiny emex and prickly lettuce

APPLICATION TIMINGS:

Pre-sowing (Incorporated by sowing – IBS) or Early post-emergence (EPE) wheat only

APPLICATION RATE:

0.75 – 1.0 L/ha (wheat)
0.75 L/ha (barley)



Active ingredient	Mode of Action (MOA) Classification		Point of Efficacy	Target	Residual Weed control
	HRAC Global	Former			
Aclonifen	32	N/A	Foliar & soil active	Grass & broadleaf	Short – medium
Pyroxasulfone	15	K	Soil active	Mainly grassweed	Long
Diffufenican	12	F	Soil & foliar active	Mainly broadleaf weed	Medium

ADVANTAGES OF MATENO COMPLETE

Mateno Complete will deliver powerful weed-control performance.

- Three active ingredients combine to provide unmatched control of a broad spectrum of grass and broadleaf weeds
- Long residual weed control
- EPE application delivers weed control across the complete soil surface profile (i.e. in-furrow, on-furrow shoulder and in the inter-row)
- Reliability across a range of weed growth stages, driven by multiple pathways of weed uptake (root and shoot)

Mateno Complete will provide the flexibility to enable outstanding weed control in a range of scenarios.

- Use in wheat or barley
- Flexibility to determine the best application timing for your situation (wheat only)
- A range of use rates to deliver value across various broadleaf and grass weed scenarios and rainfall zones
- Recommended for knife point press wheel (wheat & barley) or disc seeding systems (wheat only - under certain conditions)
- IBS 7-day incorporation period

To find out how Mateno Complete can work for you, visit matenocomplete.com.au or speak to your Bayer representative

An application for the registration of Mateno Complete has been made. At the time of publication Mateno Complete is not a registered product. Mateno[®] is a Registered Trademark of the Bayer Group. © 2021 Bayer Group. Bayer CropScience Pty Ltd ABN 87 000 226 022. Level 1, 8 Redfern Road, Hawthorn East, Vic 3123. Technical enquiries: 1800 804 479 enquiries.australia@bayer.com



NITROGEN STRATEGIES ON PLANET BARLEY

KEITH GUNDILL

SOUTH COAST REGIONAL
AGRONOMIST, CSBP

Keith comes from a family farming background near Three Springs in the northern agricultural region of Western Australia. Since since joining CSBP over twenty years ago, he has held agronomy, field research trials and sales roles in Dalwallinu, Perenjori, the Eastern Wheatbelt and Albany. As a result, Keith has extensive plant nutrition knowledge in high and low rainfall environments for broadacre crops and pastures. In his current role as Regional Agronomist and Key Account Manager, Keith continues to share his knowledge and experience with growers to help them make informed decisions about fertiliser use.



Farmer:	Howard
Location:	South Stirlings (-34.623716, 118.158617)
Year:	2021
Crop:	Barley
Code:	ALB_SS_N_BA_2021

TRIAL AIM:

To compare the effectiveness of different nitrogen (N) timings on barley in the South Stirlings area.

BACKGROUND:

This is the third consecutive year comparing N strategies on cereals on the South Coast east of Albany. In 2019, a trial with wheat at Jeff Stoney's Gnowellen farm was unfortunately frosted and yields were less than 0.5 t/ha. Last year at Ashton Hood's South Stirlings property, N increased wheat yields from 3.0 to 4.5 t/ha but variability across the trial meant that differences between timings and placements could not be meaningfully compared.

SITE HISTORY

Year	Crop/Pasture	Amelioration Treatments
2020	Canola	1.5 t/ha lime sand (Walco) 80% NV
2019	Barley	

SOIL ANALYSIS

Soil Type: Sand over clay duplex

Depth From	pH	EC	O C	Nit N	Amm N	P	PBI	K	S
0-10	4.9	0.10	1.8	20	3	42	31	87	10
10-20	4.8	0.05	0.8	5	2	28	29	84	5
20-30	5.0	0.04	0.6	5	1	17	26	83	5
30-40	5.0	0.05	0.6	6	1	12	25	72	6
40-50	5.2	0.06	0.6	6	2	9	46	93	7

MANAGEMENT

Seeding:	6 May	110 kg/ha Planet barley
Fertiliser:	6 May	Seeding fertiliser. 100 kg/ha MoP (basal)
	17 Jun	Z15 Flexi-N
	13 Jul	Z30 Flexi-N
	16 Aug	Z37 Flexi-N
	16 Aug	Z37 Flexi-N treatments applied.
Spray applications:	6 May	2.5 L/ha Boxer Gold, 2 L/ha Roundup Ultramax, 0.4 L/ha Lorsban, PSPE 0.3 L/ha Talstar.
	16 Aug	0.3 L/ha Aviator, 20 ml/ha Trojan.

TREATMENTS

Trt	Description	IBS (L/ha)	Banded (kg/ha)	Banded (L/ha)	Z22 (L/ha)	Z30 (L/ha)	Z37 (L/ha)	N
1	Nil Flexi-N	-	140 MacroPro Extra	-	-	-	-	14
2	Low N banded	-	140 MacroPro Extra	120 Flexi-N	-	-	-	65
3	Low N Z13	-	140 MacroPro Extra	-	120 Flexi-N	-	-	65
4	Med N IBS & Band	120 Flexi-N	140 MacroPro Extra	120 Flexi-N	-	-	-	115
5	Med N Band & Z30	-	140 MacroPro Extra	120 Flexi-N	-	120 Flexi-N	-	115
6	Med N Z13 & Z31	-	140 MacroPro Extra	-	120 Flexi-N	120 Flexi-N	-	115
7	Med N All banded	-	140 MacroPro Extra	240 Flexi-N	-	-	-	115
8	High N Band & Z30	-	140 MacroPro Extra	120 Flexi-N	-	240 Flexi-N	-	166
9	High N Z13, Z30, Z37	-	140 MacroPro Extra	-	120 Flexi-N	120 Flexi-N	120 Flexi-N	166
10	Very High N Band, Z13, Z30	-	140 MacroPro Extra	120 Flexi-N	120 Flexi-N	240 Flexi-N	-	217

HANDS ON WORKSHOP ON HOW TO DIAGNOSE ROOT DISEASES WITH LIVE PLANT TESTING

DR DANIEL HÜBERLI

PLANT PATHOLOGIST, DPIRD

Dr Hüberli is a plant pathologist at DPIRD focusing on fungal cereal root and crown pathogens. He is the national lead on the 'abiotic interactions with diseases' module which is part of the GRDC funded project 'Soilborne disease interaction in Australian farming systems. He leads research to improve the management of crown rot and rhizoctonia bare patch, diseases that cause considerable losses in wheat and barley in WA. His research involves collaboration with CSIRO; Murdoch University; Department of Economic Development, Jobs, Transport and Resources; NSW Department of Primary Industries; South Australian Research and Development Institute; and QLD Department of Agriculture and Fisheries.



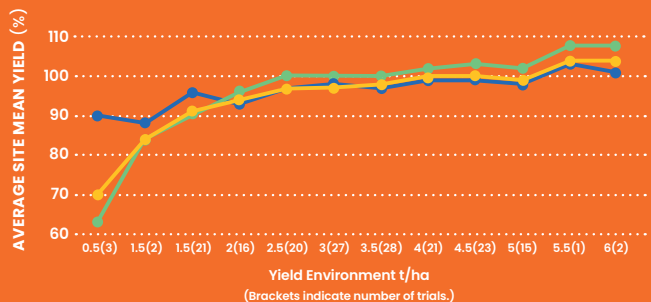
Notes _____



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(Data accessed from the NVT Online website on 03/02/2021.)

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A BIG THANK YOU TO OUR 2021 TRIAL HOSTS

P.16. Ripper Gauge:

Clint Williss - South Stirlings

P.21. HRZ Yield Constraints:

Mal Thomson - South Stirlings

Andrew Slade - Kendenup

P.22. GRDC Non-wetting Soils:

Michael Webster - Tenterden, Kendenup

Peter Van Zeyl - South Stirlings

P.27. Mid Row Banding N:

Reece Curwen - South Stirlings

P.31. GRDC Sub-soil Drainage

Preston Family - West Cranbrook

P.32. MLA Summer Forage

Tim Pyle - Manypeaks

Tim Metcalfe - Mt Barker

Ryan Smith - Green Range

P.33. On the go pH mapping

Wiehl Family - Woogenellup

P.34. Soils Extension

Lime - Mackie family- Kendenup

Lime - Chris Tomlinson- Tenterden

Phosphorus rate response - Preston family- West Cranbrook

Lime & Ripping - Clint Williss- South Stirlings

P.35. Farmer Focus Trials

Hyper Yielding Crops

Jon Beasley- Frankland

Ashton Hood- South Stirlings

Preston Family- Moberup

P.38. Soil Pathogen Demo

Hunt Family - Woogenellup

P.39. Subsoil Manuring

Peter Van Zeyl (FAF)- Green Range

SCF Smart Farm Demonstrations

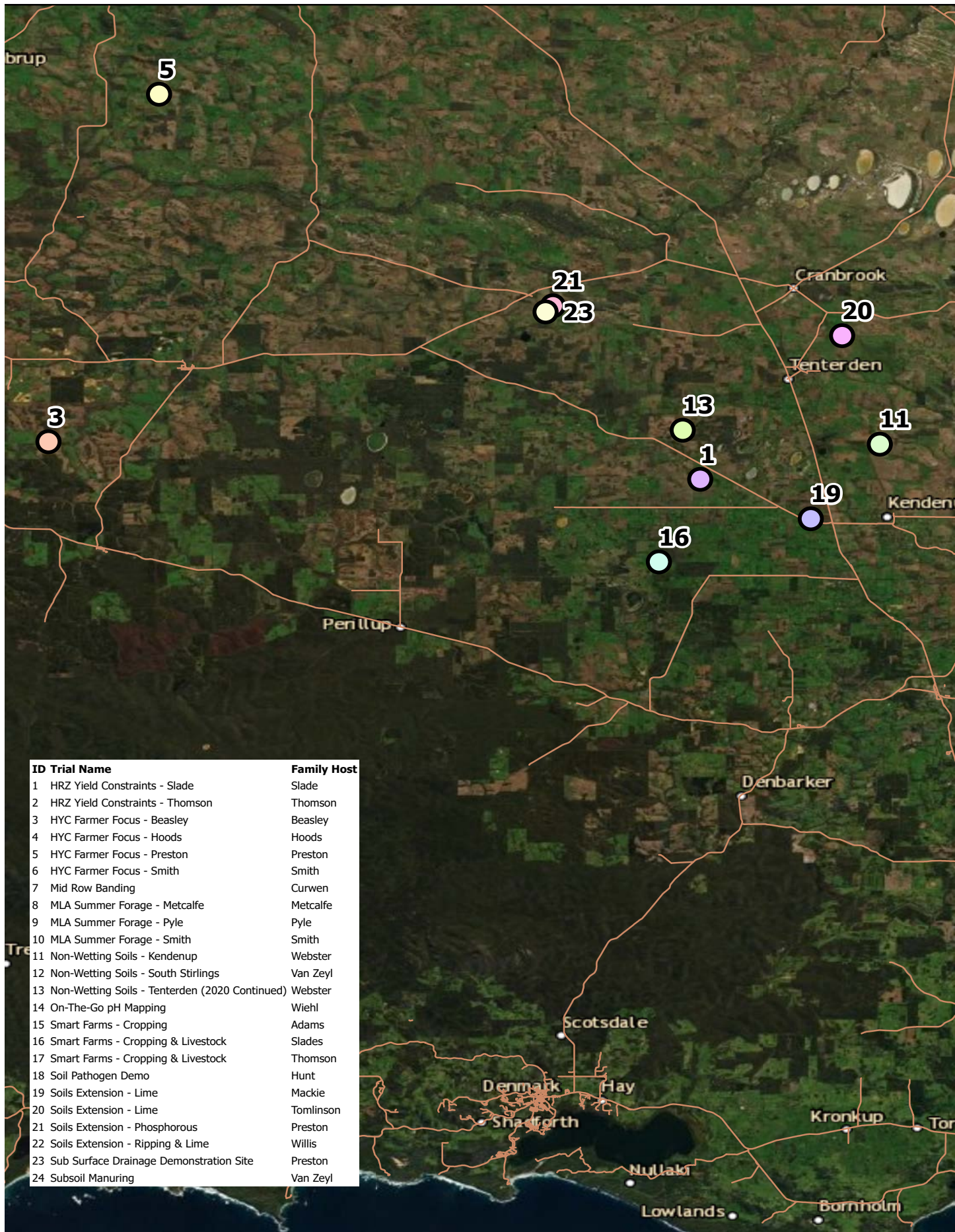
Adams Family- Woogenellup

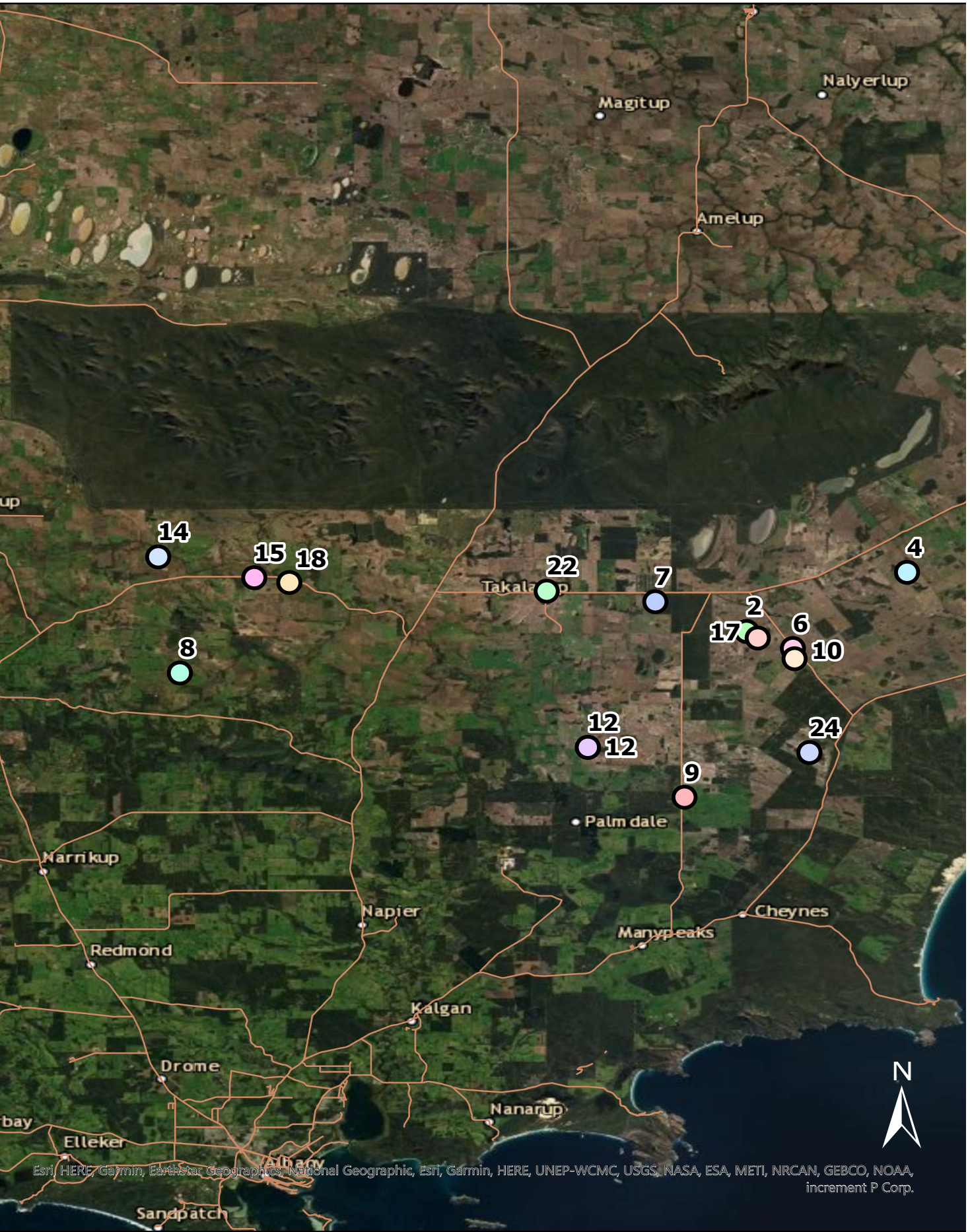
Slade Family- Kendenup

Mal Thomson- South Stirlings



2021 SCF TRIALS MAP





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