

UNFS UPDATE



Upper North Farming Systems Newsletter

June 2017



Yield Prophet and Production Wise

Hannah Mikajlo

This year UNFS will be running two different on-line crop production models, Yield Prophet and ProductionWise, both of which provide a range of decision making tools to growers and advisers.



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Local People servicing local growers

Yield Prophet continues on from previous years with new site in 2017, made possible by funding from GrainCorp and EPIC Grain Brokers. This is the first time we are using ProductionWise, which has been made available to the group through sponsorship from GrainGrowers.

During May we collected soil samples from a range of farms throughout the Upper North, including paddocks near Morchard (Peter Barrie), Jamestown (Luke Clark), Wandearah (Graeme and Chris Crouch), Appila (Don Bottrall), Quorn (Paul Rodgers), Port Germein (Barry Mudge), Black Rock (Jim Kuerschner), between Gladstone and Caltowie (Andrew Kitto), and between Booleroo Centre and Murraytown (Dustin Berryman). We

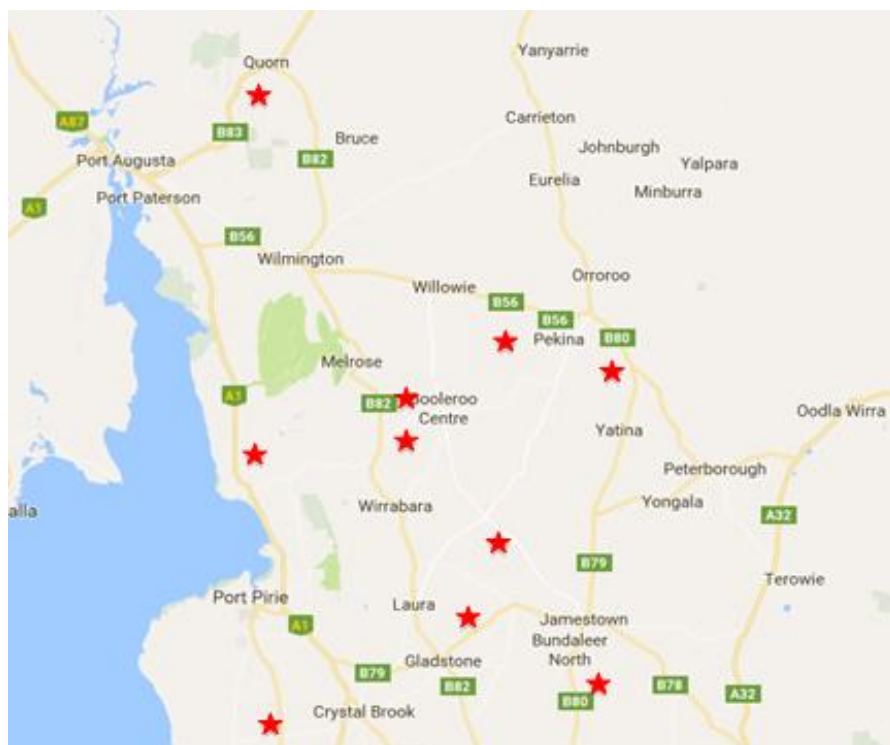


Not your typical bake up. Soil samples in Hannah's kitchen.

also took samples from the site of our "Time of Sowing" trial, located on White Well Road between Booleroo Centre and Melrose. All the soil samples have been sent off to the Australian Precision Ag Laboratory in Adelaide for analysis of organic carbon, nitrate and chloride concentration, electrical conductivity and pH, and we are now awaiting the results.

These sites will be modelled monthly with both Yield Prophet and ProductionWise with the first report out this month. As we haven't used ProductionWise before, it will be interesting to see how the two compare.

Thankyou to those that have agreed to be part of this project and to the GrainCorp, EPIC and GrainGrowers for supporting UNFS.



Locations of Yield Prophet/Production Wise Sites for 2017.



Also In This Issue

- Northern Farmers Post-Sowing Bus Tour
- Time of Sowing Trial
- Should I spray after a frost?
- Frost puts freeze on effectiveness of ryegrass herbicide
- One system for heavy agricultural vehicles on roads
- Booleroo Centre Weather Station
- Weather Web App Display
- Weedsmart Articles of Interest
- Plan to minimise sclerotinia
- GROWING SA Conference and AGMs
- Lower Wrinkle & Dag Reduce Breech Strike Risk
- Be on alert for ascochyta blight this season

Administration Position

The Strategic Board is thrilled to announce the appointment of a new Administration Officer to help with the smooth running of UNFS. Susan Murray from Laura joined the organisation last week to take on the administration roles of the group, including management of memberships and assisting with all of our events and keeping the Board and Operations Committees running like well oiled machines. Susan has a wealth of experience in Administration and has worked within the University sector for many years. Having recently moved to the district she is looking forward to meeting many of you at our upcoming events and learning about your neck of the woods. Welcome to the team Susan!



Northern Farmers Post-Sowing Bus Tour

On Thursday 22nd June there will be a post-sowing bus tour which has been organised by David Humphris in conjunction with the Laura Ag Bureau and the Booleroo UNFS Hub. The tour will leave from Laura at 8:30am and will set off to have a look at fuzzy tramlines with a 60" DBS with Jim Maitland, before moving to Lochiel to see how the Nottles have been using 4" wide paired

row seeding for the past 3 years. The tour will then head over to visit Tim Dixon, who this year used 4" paired row boots on a Borgault Paralink.

The cost is approximately \$30 and the tour is open to anyone. RSVP to Joe Koch (0428 672 161) or Ashley Lines (0429 632



UNFS Time of Sowing Trial

Hannah Mikajlo

UNFS is currently running a SAGIT-funded time of sowing trial in one of Todd Orrock's paddocks White Well Road between Booleroo Centre and Melrose. The trial is aimed at gaining an understanding of how to manage risk of frost and heat stress in the Upper North through manipulation of time of sowing and variety combinations. The trial is comparing five varieties of wheat at three different sowing times. The wheat varieties include the

mid-fast maturing Trojan, the fast-maturing Mace and Hatchet, and the mid-late maturing Cutlass. The fifth variety is called RAC2341 and is a new winter wheat variety developed by AGT.



First TOS Trial up and away in early May.

Source: Todd Orrock



TOS Seeding No. 2 complete.

Source: Todd Orrock

The first and second times of sowing took place on the 18th of April and 5th of May respectively. The third and final time of sowing took place on the 26th of May, and was followed by a short get-together by members of the Booleroo Hub. The first assessment of the site was recently carried out and things are progressing well. The plants sown in April have started tillering while the plants sown in early May have 2-3 leaves. We are still waiting on the third timing to germinate. We will continue to monitor the plants and provide updates throughout the year.

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Should I Spray After a Frost?

Source: Adapted from Crop Smart Article 18/8/2015

Spraying around frosts can affect efficacy and in some cases give crop damage. Ideally plants need to uptake the chemical sprayed on them and they need to be actively growing to do this.

The old rule used to be:

1. After one frost – don't spray for 24 hours
2. After two frosts in a row – don't spray for 48 hours

Recent work by Chris Preston, University of South Australia, has shown that the weather AFTER spraying has more effect on efficacy than BEFORE spraying. His results (below) showed that cold weather before his application had little effect but cold weather after spraying had a larger effect.

Taking this into account a better rule would be:

1. Don't spray if frost is forecast for the following day
2. If frost or extreme cold weather occurs after application expect a variable result or a very slow result.
3. There are many different types of frosts – some plants are still frosted at lunchtime whilst others are gone by 9am – but ensure the plants are actively growing to get the best spray result.

SA Power Networks renews campaign to 'look up and live'



SA Power Networks is reminding farmers to be vigilant when operating machinery around powerlines, following seven incidents in May in which powerlines were brought down – a number involving farm machinery.

While fortunately no injuries occurred, SA Power Networks' Paul Roberts says it is essential that farmers ensure anyone working on their property is aware of the location of powerlines and carry out a safety check before starting a task.

"Farmers need to be aware of the voltage of the line and the appropriate safe distances for working near those lines. The higher the voltages, the greater the clearances required to stay safe," he said.

This information is available online in the SA Power Networks Look Up & Live Powerline Safety Fact Sheet. An A5 Safety Card is also available to place in the console of tractors, trucks and farm vehicles while Look Up & Live stickers are available from SA Power Networks by contacting 13 12 61.

Download these resources from the [SAPN website \(http://www.sapowernetworks.com.au/centric/corporate/safety/look_up_and_live.jsp\)](http://www.sapowernetworks.com.au/centric/corporate/safety/look_up_and_live.jsp)

Frost puts freeze on effectiveness of ryegrass herbicide

Source: GRDC News Release—3/8/16



Grain growers in the southern cropping region are being advised to avoid spraying annual ryegrass with clethodim herbicide when frost is forecast.

Researchers say poor performance of clethodim on annual ryegrass – a weed becoming increasingly resistant to herbicides – can be associated with

cloud cover is present and the risk of frost occurrence is low," Dr Gill said.

He advised growers not to spray annual ryegrass with clethodim two to three days before or after a frost event.

"Ideally, spray small ryegrass plants under warmer and frost-free periods for the best results with clethodim on ryegrass," said Dr Gill when addressing a GRDC Grains Research Update in Campbell Town, Tasmania, on the topic of controlling herbicide-resistant annual ryegrass in canola crops.

Dr Gill's message is particularly pertinent to areas prone to frost at this time of year, when many canola crops are likely to be sprayed for ryegrass control.

In July last year, for example, minimum temperatures recorded at the Cressy Research Station near Campbell Town were sub-zero on 14 occasions in that month alone.

"Stress imposed by frost is a highly significant factor affecting clethodim efficacy on annual ryegrass. We want the ryegrass to be actively growing and stress-free for clethodim to do the best job, so growers need to watch the weather forecasts closely to determine the best time to spray," Dr Gill said.

Clethodim resistance has been increasing in the southern cropping region (Tasmania, Victoria and South Australia) at a steady rate, to now be at a level of 10-15 percent of ryegrass populations.

"In most cases, clethodim still provides fairly good ryegrass control provided weeds are sprayed early and at a time when frost is unlikely to occur two to three days before or after spraying," Dr Gill said.

"The use of weed-suppressive hybrid canola can considerably boost clethodim efficacy on ryegrass. Crop competition should be viewed as an ally in the control of herbicide-resistant annual ryegrass."

Dr Gill said that in order to extend the effective life of clethodim, it was important to maintain ryegrass populations at a low level by integrating pre-emergence herbicides and other tactics such as crop-topping, narrow windrow burning and other forms of harvest weed seed management.

More information on research into clethodim resistance can be found in Gurjeet Gill's [GRDC Grains Research Update paper](#).

For more information:

Gurjeet Gill, University of Adelaide
08 8313 7744



Dr Gurjeet Gill, University of Adelaide Associate Professor in weed and crop ecology, speaking at a GRDC Grains Research Update in Campbell Town, Tasmania, on the topic of controlling herbicide-resistant annual ryegrass in canola crops.

cold and frosty conditions.

Trials undertaken by the University of Adelaide and funded by the Grains Research and Development Corporation (GRDC) have shown that frost treatment, particularly before clethodim application, reduced the herbicide's activity in susceptible annual ryegrass populations.

Clethodim efficacy was further reduced in resistant annual ryegrass populations regardless of whether the frost event was prior to or post clethodim application.

However, the impact was much greater when frost occurred before clethodim application.

"Frosty conditions make it even harder to control annual ryegrass when clethodim resistance is present in the population," said Dr Gurjeet Gill, University of Adelaide Associate Professor in weed and crop ecology.

"Considering these findings and several other field observations by agronomists and researchers, growers are advised to carefully review weather forecasts for their district and spray clethodim when



Nominations called for GrainGrowers Board Directors

GrainGrowers' Board is calling for nominations for two Western Region Directors (WA/SA).

To qualify a candidate must be a member of GrainGrowers; be resident, or in the business of grain production, in Western Australia and/or South Australia; and be passionately committed to the further development of the Australian grains industry.

For more information about qualifications and the calibre of candidates sought, please contact René Johnson at Pacific Search Partners on (03) 9631 1500 or email: theconsultant@pacificsearch.com.au

Applications open on 1 June 2017 and close 30 June 2017.



One simple system for heavy agricultural vehicles on roads

As you know, there are currently too many different rules about moving heavy agricultural vehicles on public roads. But this may be about to change.

The National Heavy Vehicle Regulator (NHVR) is developing a single national notice, called "Class 1 Agricultural Vehicle and Combination Mass and Dimension Exemption Notice" which will apply in Queensland, New South Wales, Victoria and South Australia. The intention is this notice will cover the majority of agricultural vehicles and combinations.

However, to make sure the requirements and exemption limits (vehicle length, width, height, axle loads, etc) in the notice will work in practice, we're asking you to complete a survey about the agricultural vehicles on your farm. The survey will take about 10 minutes and all individual data will remain confidential.

Do you want one simple system for heavy agricultural vehicles on roads?

If YES, Then please take 10 minutes to do this survey and make sure the regulator includes practical mass and dimension limits.

[Complete survey here](#)



GRDC Local Forum – Maitland

Date: Tuesday 20th June 2017

Location: Maitland Football Club

Time: 9am - 12:30pm (*followed by lunch*)

Cost: Free

Topics:

- **Improved Lentil Varieties with Larn McMurray (SARDI)**
Development of improved lentil varieties for yield, quality, disease and weed management and stress tolerance for soil and climate.
- **Crop Diseases with Dr Margaret Evans (SARDI)**

A snapshot of current R, D & E and latest findings for key crop diseases, including Eye Spot relevant to the Yorke Peninsula.

Please RSVP for catering purposes:

Jen Lillecrapp on 0427 647 461 or

jen@brackenlea.com

or via website:

www.regionalcroppingsolutions.com.au



Booleroo Centre Weather Station

Author: Leighton Wilksch, Agbyte



Agbyte has installed a multi-function weather and soil moisture monitoring station at the UNFS trial site at Booleroo Centre. This is the 4th 'Hi-Tech' monitoring site that is now being used by Farming Systems Groups across SA, the other 3 sites are kindly funded by SAGIT and are at Hart FD site, Riverton MNHRZ and Bute NSS site. These monitoring sites contain a standard weather station, but also have some new & novel sensors to assess climatic & crop conditions. Standard sensors are:

- Wind speed & direction
- Air Temperature & humidity at 1.2m
- Rain gauge.

In conjunction to those sensors there are:

- Canopy temperature sensor that measures the temperature of the surface it is looking at, either the ground/stubble or the crop. This will be interesting to follow during frosty conditions
- NDVI sensor that measures the greenness & biomass of the crop on a temporal nature (time), rather than spatial (like a satellite/drone image). This essentially measures crop growth throughout the season
- Leaf wetness sensor. That measures the amount of surface moisture on a scale of 0-100% which has relevance to the application of crop protection products (particularly summer weed spraying), hay baling as well as how tough the crop gets after sun down when harvesting.
- Tower with air Temp & humidity sensors mounted up at 10m to monitor temperature inversions that occur when air is warmer as the height compared to the ground level temperature. This is a major cause of spray drift issues, particularly during early mornings when summer weed spraying occurs
- 1.2m sub surface soil moisture probe to monitor the crop water use from the soil profile, this has sensors every 10cm down the profile (more to come on the soil probe in the next newsletter).

Other outputs from the weather station include:

- Delta T
- Fire Danger Index
- Spray conditions (based on wind speed & inversion risk)
- Wind gust MAX
- Dew point

The monitoring site is easily accessed via a web app that can be saved to your phone. There are instant readings from the respective sensors (the site uploads new data every 15mins – Telstra network dependent!) as well as a range of graphs that show the weather derivatives. Agbyte is happy to take any questions about the site and how it may add value to your business.

For More Information

Leighton Wilksch 0408 428 714



DISTRIBUTORS OF:

- Leak Detection unit for all water meters
- Sub surface soil moisture probes
- Adcon & Tekbox weather stations
- Perten Instruments portable grain protein tester
- Soil moisture interpretation service and agronomic advice



• weather • soil • research

www.agbyte.com.au

or call Leet 0408 428 714

email leet@agbyte.com.au

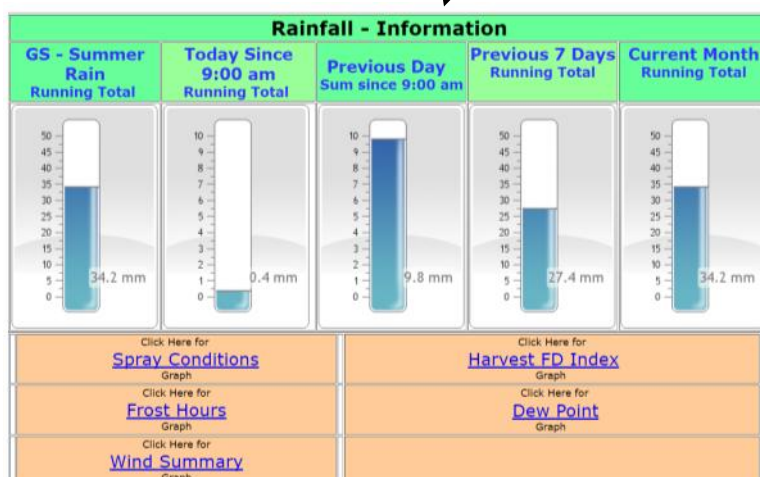
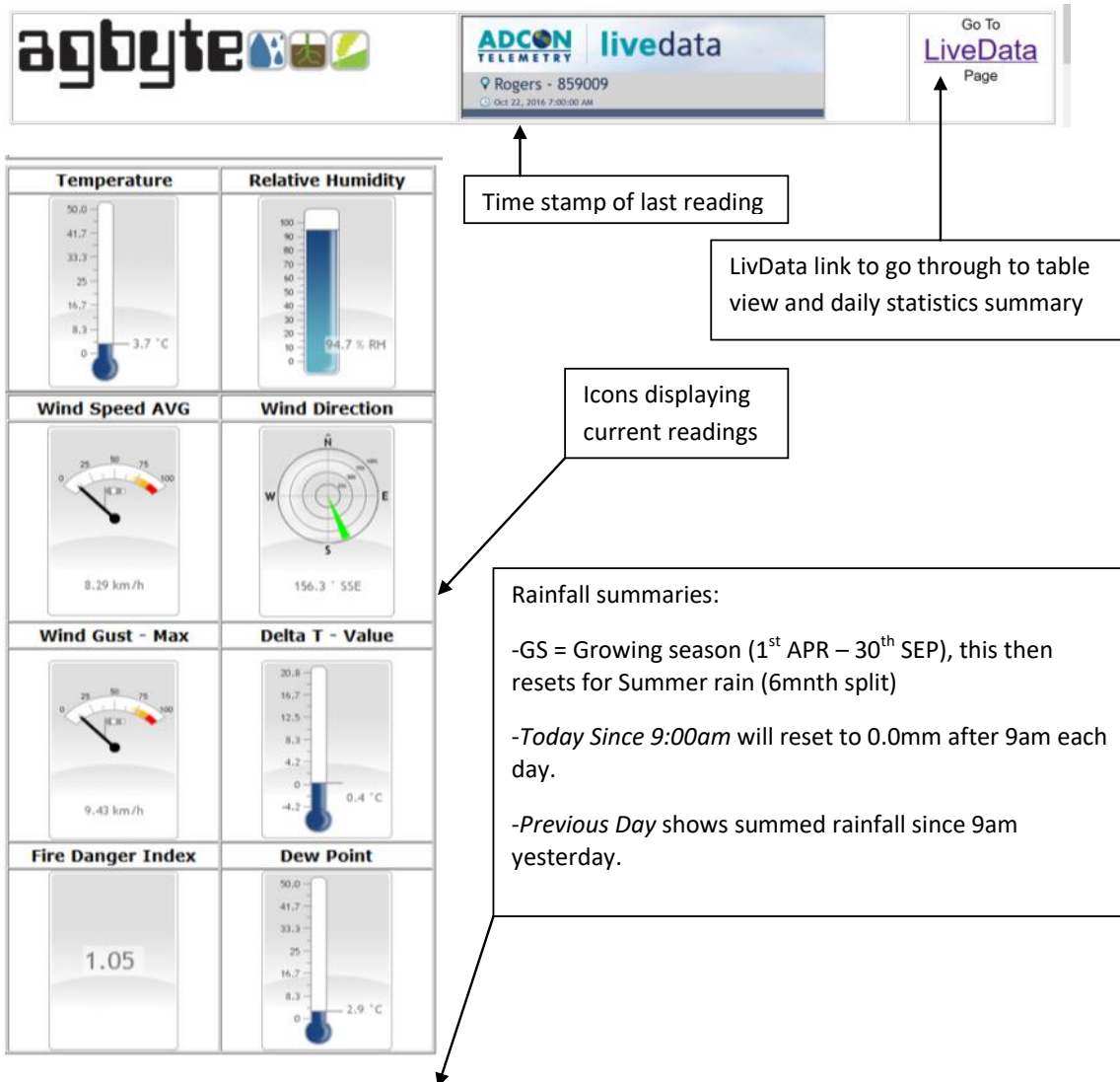
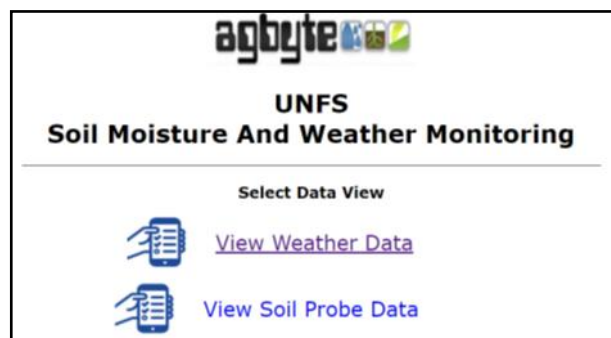
Accessing & Interpreting Weather Station Data

To access the latest weather data click on the below link or type the following address into your web browser :

http://120.150.31.37:8080/custdata/agbyte/unfs/agb_index.html. You will not require a login.

The soil moisture data does require a login however further explanation on access and how to interpret this data will be provided in the July Newsletter.

Weather web app display - dashboard



Post-processed weather derivatives:

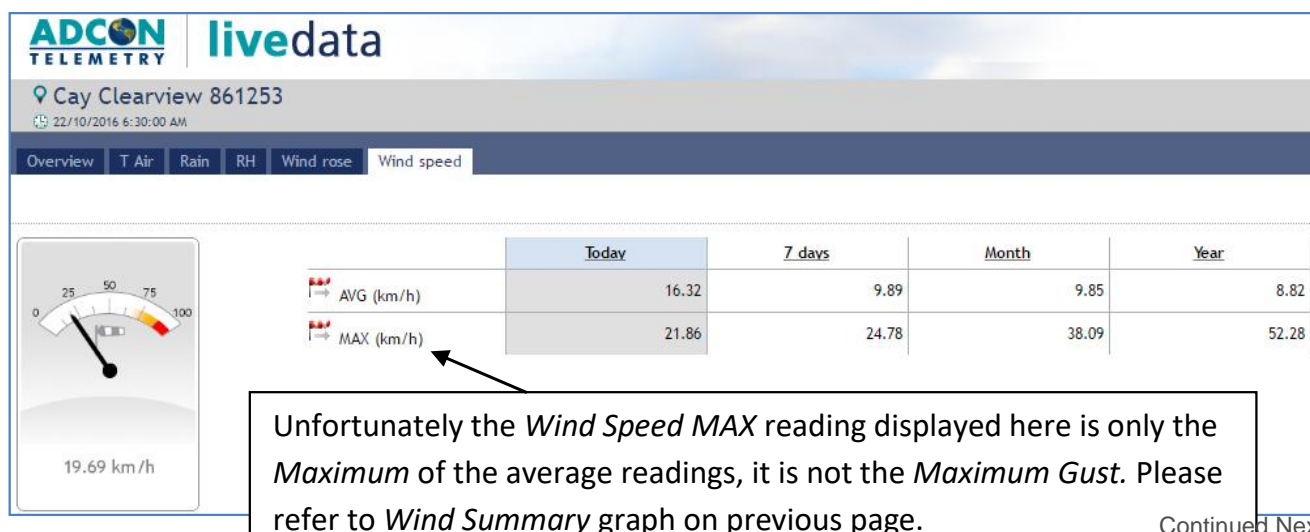
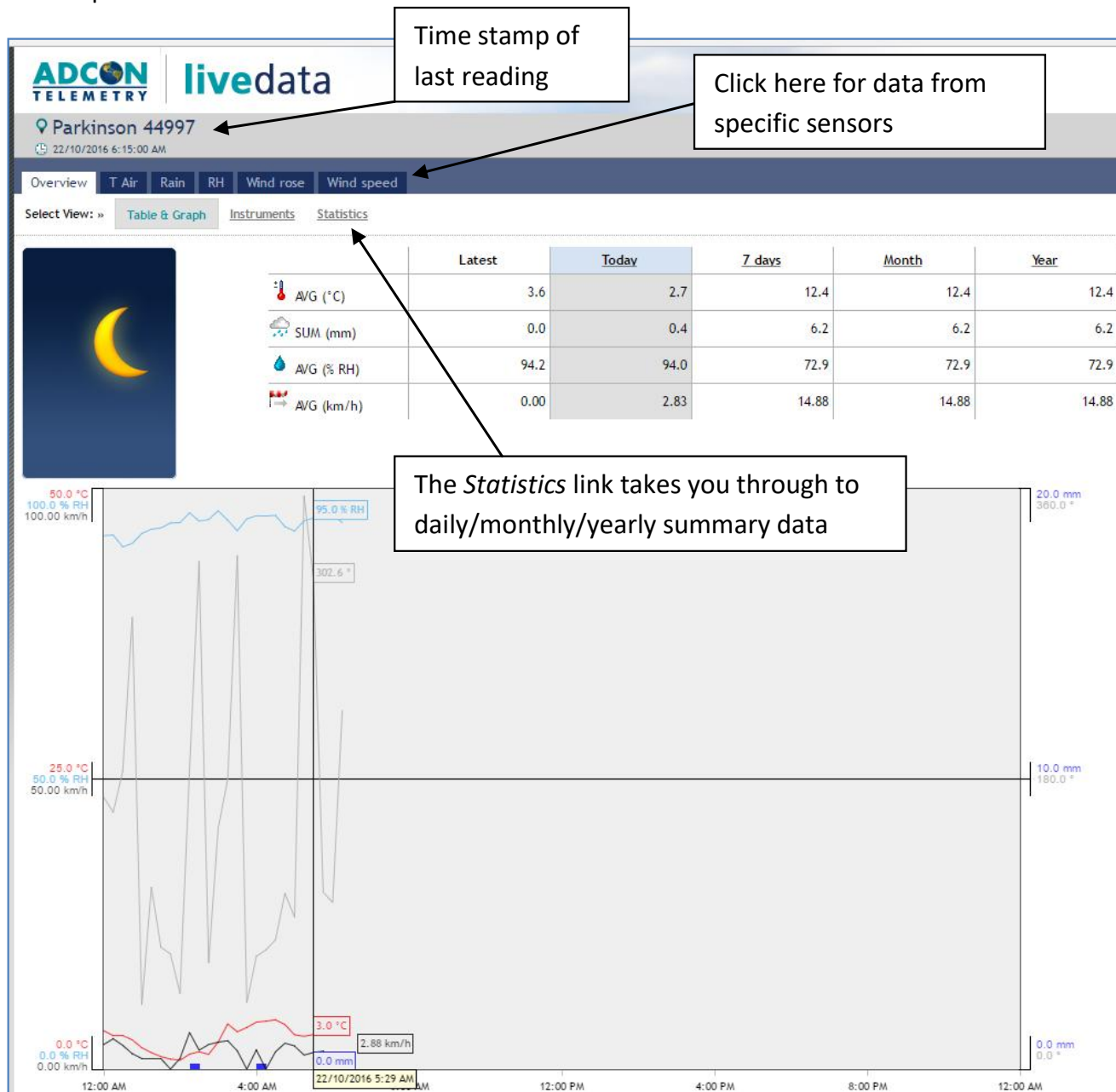
-Spray conditions shows Delta T

-Frost hours shows cumulative frost hrs (below 2.2DegC) to 9am each morning (in dark blue) and red bars to indicate YES/NO of chance of frost

-Wind Summary shows 24hr Max/Ave/Min wind speeds

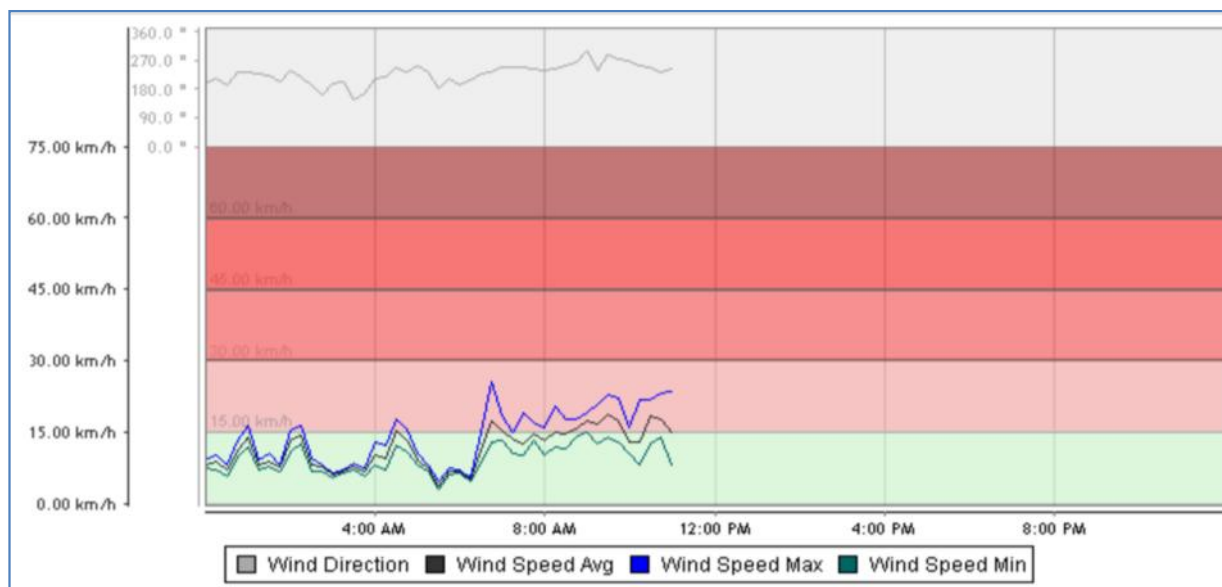
Weather web app display – LiveData

This page displays the data in table & graphical form. It also allows for a slider-ruler to be placed on graphs in order to see what readings were taken at a specific time. It is a bit challenging to do with a mobile phone.



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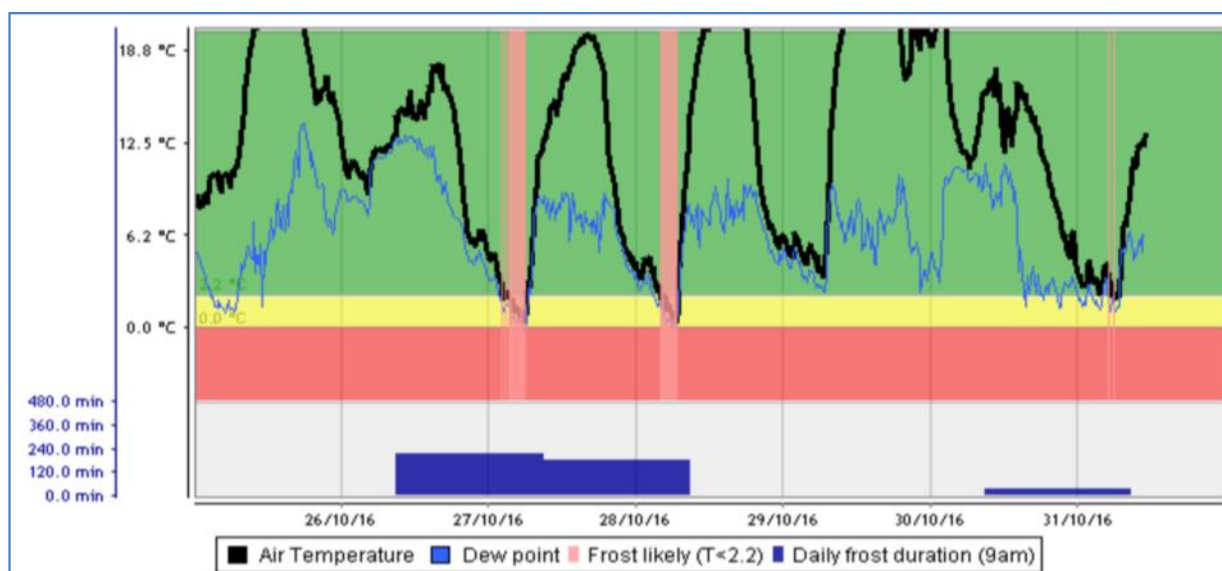
Wind Summary graph shows 24hr Max/Average/Min



Harvest FDI shows Fire Danger Index, based on a 100% curing factor & 2.0m wind speed

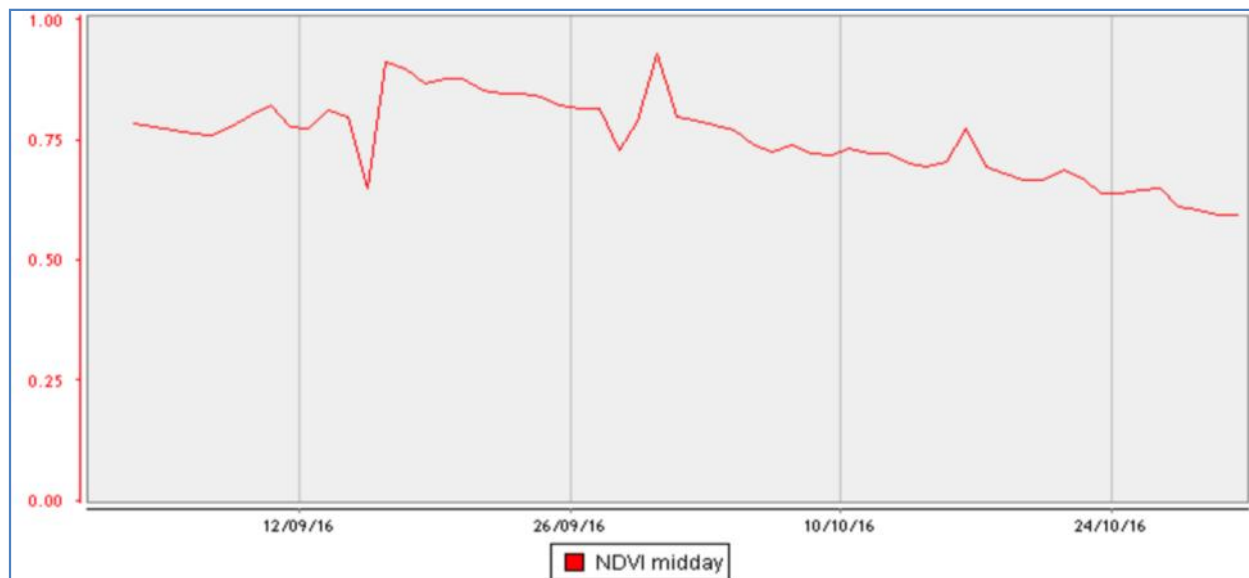


Frost Hours shows daily cumulative hours of frost <2.2°C in blue bars at the bottom. The vertical pink lines show if a frost is likely Y/N. Yellow band is <2.2°C, >0°C.

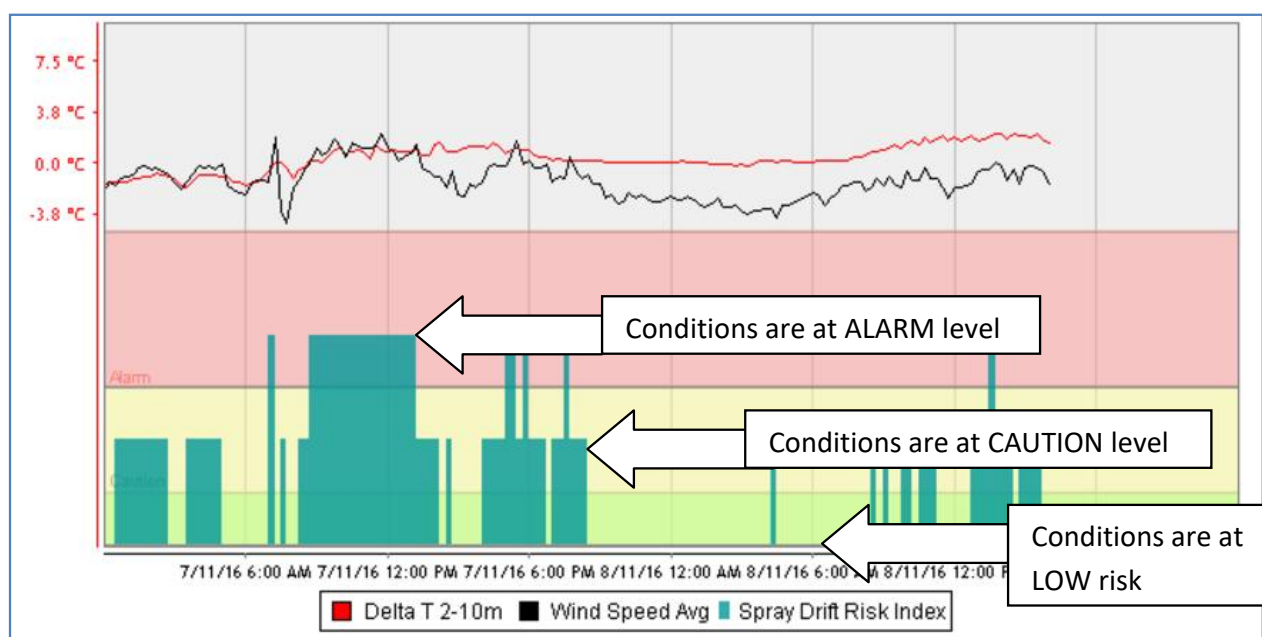


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Midday NDVI shows the crop NDVI reading at noon each day.



Spray Drift Risk Index is a new graph that takes into account wind speed as well as the Delta T variation utilising an air temperature and relative humidity sensor mounted on a 10m tower. The index is to be a **guide only** and local paddock conditions should be observed by grain producers when spraying



For More Information

Leighton Wilksch

0408 428 714

HURRY! Registrations close in 2 days!

Innovation Generation CONFERENCE 2017

TELLING THE AG STORY IN A DIGITAL AGE

3-5 July 2017 Adelaide Convention Centre ADELAIDE, SA

VISIT: www.innovationgeneration.com.au



Weedsmart Articles of Interest

Source: Weedsmart Blog Update June 2017

WEED smart every weed every seed
every farm every year



Don't start mixing until the water quality is right

Water quality is often overlooked as a possible contributor to herbicide failure and can lead to confusion over the herbicide resistance status of weeds on a property.

[Read More](#)



Spray small multi-resistant wild radish twice

Western Australian growers are regaining control over herbicide resistant weeds as a result of widespread adoption of integrated weed management systems.

[Read More](#)

Post-emergent spraying and Global Herbicide Resistance Challenge Conference update! PODCAST

Most of the AHRI and WeedSmart team were over in Denver, Colorado for the GHRC conference, including Ray Harrington and Mike Ashworth, pictured in the snow. Nearly everyone is back in Australia now, including Peter Newman, who is back hosting with Jessica Strauss in this edition.

Pete gives an overview of the conference. Pete also caught up with Aaron Hager from the University of Illinois. We've previously written about Aaron's work with Pat Tranel in the AHRI insight blog.



[Listen to Podcast](#)



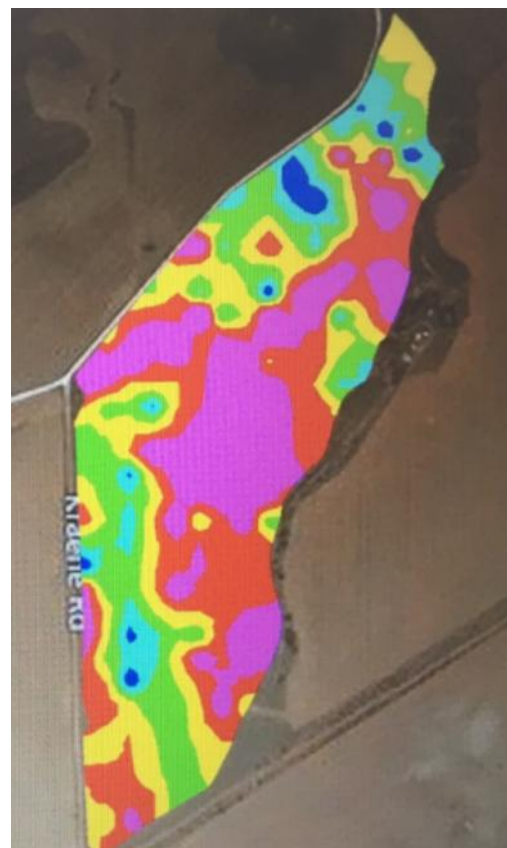
AgTech Services Contract Soil Mapping Services include:

EM38 (Dual Depth)

pH (CaCl₂)

Potassium (Colwell K)

Testing equipment is mounted on a Gator for limited crop damage and ground compaction



Colwell P
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Mapping
Soon!

Plan to minimise sclerotinia risk in 2017

Author: Alistair Lawson; GRDC Paddock Practices Southern Feb 2017

Planning ahead will be critical for canola and pulse growers looking to reduce the risk of sclerotinia stem rot in 2017.



Areas across the southern region which saw outbreaks of sclerotinia in 2016 should be careful to not plant susceptible crops in the same paddock where the disease was seen last year.

The current recorded host range for sclerotinia is more than 400 plant species. This includes common host crops which make up part of dryland cropping rotations in the southern



Sclerotinia stem rot can cause yield losses of up to 30 per cent in canola. **Photo:** Kurt Lindbeck, NSW DPI

region including canola, chickpeas, lentils, lupins and field peas. Broadleaf weeds such as wild radish, shepherds purse and capeweed are also known hosts of sclerotinia.

Crop consideration is one of several pre-season measures New South Wales Department of Primary Industries plant pathologist Dr Kurt Lindbeck is recommending growers take prior to planting the 2017 crop.

Previous research has shown that sclerotinia can cause yield losses of up to 30 per cent in canola. "It is not yet clear just how much yield loss sclerotinia causes to pulse crops, as previously the disease has not been regarded as a consistent enough problem to warrant in-depth research," Dr Lindbeck says. "Canola is a very good host for sclerotinia and now we are starting to see more carryover of the disease into pulse crops as they become a bigger part of the cropping rotation."

Disease development and transmission

The main survival mechanism of sclerotinia is sclerotia, which are hard, black bodies that develop inside infected canola and pulse stems. For this reason, they can be quite easily carried in loads of seed and have been found in canola and pulse grain deliveries across Australia during the 2016-17 harvest.

If growers are retaining canola and pulse seed for planting,

Dr Lindbeck advises them to consider grading the seed to remove sclerotia.

The grain trade tolerates canola grain sclerote contamination levels of 0.5 per cent by weight of the half litre sample (as impurities), which means even bought seed for 2017 may contain sclerotes.

Sclerotia can survive in soil for at least five years, however they have been known to survive in soil when buried at a depth greater than three centimetres for up to 10 years.

Only sclerotia in the top 2.5 to 3cm of the soil germinate, which generally happens when there have been saturated soil conditions for between 12 and 14 days. This length of time provides enough moisture to soften the sclerotia, which then germinate and produce apothecia.



The apothecia produced by sclerotia. **Photo:** Kurt Lindbeck, NSW DPI

Apothecia are small, flattened golf-tee shaped fruiting bodies which release airborne fungal spores – ascospores – that infect canola during flowering.

Dr Lindbeck says early infections at up to four weeks after the commencement of flowering cause significantly more yield loss, as these are likely to form on the main stem. "Yield losses from sclerotinia in canola will vary between seasons, which is largely driven by the timing of infection," he says. "For canola, which we know can flower for up to eight weeks in certain regions, it is the earlier infection events that are the most damaging, while the later infections on lateral branches don't cause the same level of yield loss."

Weather conditions during flowering influence the development of sclerotinia. Dry conditions during flowering and petal fall can prevent the development of the disease, whereas moisture during flowering and petal fall will enable the disease to develop.

The frequency of sclerotinia outbreaks in previous seasons can also help growers to determine their risk of sclerotinia. "The incidence of sclerotinia outbreaks can vary a lot between regions and between years depending on the pattern of spring rainfall," Dr Lindbeck says.

"Districts that see sclerotinia develop every year tend to have reliable spring rainfall patterns, have a high frequency of canola in the cropping rotation and long flowering periods for canola. These districts also tend to have high yield potentials.

"Rainfall patterns were markedly different in spring 2016 compared to recent years. Sclerotinia is a two-stage disease as the petals have to capture the ascospores of the pathogen and when those petals fall into the canopy the disease can develop. In 2016 many canola crops across the southern region had a much wetter crop canopy environment than in 2015.

"There were no real surprises in that areas which develop the disease frequently developed it again last year."

Areas which saw outbreaks of sclerotinia in 2016 will have

replenished sclerotia populations in paddocks for 2017, thus increasing the risk of the disease.

Other areas where the disease is not seen as frequently but was seen in 2016 will have low to moderate levels of sclerotia populations which may increase the risk of infection if another wet spring occurs in 2017.

South Australian Research and Development Institute (SARDI) science leader, plant health and biosecurity Dr Jenny Davidson says sclerotinia is not a common disease in SA, but the wet conditions in 2016 produced an environment that was conducive to sclerotinia development.

"We would not expect a high risk in 2017 for SA crops unless there is a repeat of the high rainfall but the sclerotia will survive a number of years in the soil," she says. "Hence, this disease could reappear in future wet years."

Pre-sowing measures to reduce risk

Besides grading retained canola seed to remove sclerotia, there are a number of other pre-sowing measures growers can take to help manage and reduce the risk of the disease in 2017.

Dr Lindbeck says tight rotations of susceptible crops will only further build up sclerotia populations in the soil. "Continual wheat-canola rotations will only further build up levels of viable sclerotia in the soil, and likewise with other susceptible crops such as lupins, lentils and chickpeas," he says. "Paddocks need more than a 12-month break from a sclerotinia host and so other low-risk crops such as cereals or faba beans should be considered. "New season crops should be sown at least 500 metres away from the previous crop's stubble."

Dr Lindbeck says time of sowing can also have a bearing on sclerotinia risk. Growers are advised to follow recommended sowing dates and rates for their district and not be tempted to sow crops early if they are in a sclerotinia-prone district. "It is important to consider the maturity of the canola variety to be sown," he says. "If growers want to sow canola early then a later maturing variety is best. "Sowing should be timed so that flowering occurs closer to spring rather than early to mid-winter, as it is more likely to be wet and favour infection by ascospores."

Trials conducted at Wagga Wagga have also indicated that early sown pulse crops are also prone to developing significantly more sclerotinia compared to sowing in the traditional 'window'.

In-season management

Fungicides are the only option for control of sclerotinia in canola post-sowing. There are currently no fungicides registered for the control of sclerotinia in pulse crops grown in the southern region.

The products registered for the control of sclerotinia in canola in Australia contain the active ingredients iprodione, procymidone or prothioconazole and tebuconazole.

These fungicides do not have curative abilities and are therefore most effective when applied before an infection of sclerotinia is evident. The decision to spray a fungicide should be weighed up against disease risk, yield potential and cost of application.

"Once canola commences flowering it enters the susceptible

phase," Dr Lindbeck says. "The ideal application for protection against sclerotinia is when canola is at 20 to 30 per cent bloom, which is calculated by counting the open flowers off the main stem. If there are between 14 and 20 open flowers off the main stem (20 per cent to 30 per cent bloom) then spraying can commence."

According to Dr Lindbeck the best time to measure the level of sclerotinia is shortly before windrowing whereby growers or agronomists should randomly check at least 100 plants in each paddock for sclerotinia.

"One of the easiest ways to do this is to walk through the paddock and stop at 10 random locations within the crop and inspect 10 plants at each stop. When inspecting plants note whether the sclerotinia lesion is on the main stem or lateral branches. A main stem lesion indicates an early infection event, while lateral branch infections form later in the season."

This can help to give an indication of what kind of yield loss can be expected from the disease and the level of inoculum that may be present in affected paddocks.

GRDC research

As part of the GRDC-funded National Canola Pathology Program, Dr Lindbeck and his team have been studying the epidemiology of sclerotinia and trying to get a better understanding of the disease under field conditions.

"We would like to get to a stage where we are able to identify the trigger points for a sclerotinia outbreak so growers and agronomists can be on the lookout for the disease.

"We are collaborating with modellers at the Department of Agriculture and Food Western Australia in Perth to develop an online prediction tool which allows growers to estimate a measure of risk," Dr Lindbeck says.

"It's all about decision making tools for producers."

More information

Dr Kurt Lindbeck,
02 6938 1608,
kurt.lindbeck@dpi.nsw.gov.au

Dr Jenny Davidson,
jenny.davidson@sa.gov.au

Useful resources

[GRDC sclerotinia stem rot fact sheet](#)

[GRDC hot topic: reducing the risk and managing sclerotinia stem rot in canola](#)



Sclerotia are the main survival mechanism for sclerotinia. Under the right conditions, they germinate in the soil and produce apothecia which release airborne fungal spores that infect canola during flowering.

Are you growing these varieties?



Source: GrainGrowers Members E-news—15/5/17

A review of the following three “old” wheat varieties (classified more than 10 years ago) is currently under way by Wheat Quality Australia for the Wheat Variety Master List for 2017:

Code	Variety Name	Western Zone	Southern Zone	South Eastern Zone	Northern Zone	Year	Review date
451	BARHAM	AGP*	ASFT*	ASFT	AGP*	2006	2016
443	BULLARING	ASFT	AGP	AGP	AGP	2006	2016
452	LRPB GUARDIAN	ASW	APW	APW	APW	2006	2016

The three varieties comprise less than 0.1 per cent of deliveries over the past four seasons. It has been proposed that these should be removed from the list and this will be confirmed by September.

However, they can continue to be delivered into the approved class for a further two years. After this time grain from these varieties will be received as “feed”.

If you believe any of these three varieties should be retained please advise GrainGrowers. Evidence should be provided to substantiate the claim.

Contact: Dr Michael Southan, email: Michael.southan@graingrowers.com.au, telephone 02 9286 2000.

GROWING SA Conference and AGMs

Grain Producers SA and Livestock SA are partnering to host a joint industry conference this year, called GROWING SA.

It will be first event of its kind in which both organisations have joined together and will be held on Friday 11 August 2017 at the Adelaide Hills Convention Centre, Hahndorf.

Each organisation will host its annual general meeting as part of the day.

The inaugural GROWING SA Conference in 2017 is an opportunity for primary producers to hear the latest in policy developments, farm business advice and commodity research while networking with each other, industry service providers and policy decision-makers.



Through a mix of split sessions and social functions, the conference will:

- Provide the latest policy and farm business information to help producers boost productivity and profitability.
- Highlight the state's broadacre industries as a shining light for innovation, industry growth, and business sustainability.
- Enable producers, industry service providers and stakeholders, politicians and policy-makers from across SA to engage in a two-way dialogue regarding policy issues, plus network, at a once-a-year event.

> Find out more at GPSA's website

This event is supported by the Northern and Yorke Natural Resources Management Board through funding from the Australian Government's National Landcare Programme.



**A practical day of
farm walks and
discussion with a
expert grassland
manager!**

10 am to 4 p.m.

**Meet at the
Wirrabara Hall**

10 am

**Lunch and
morning and
afternoon tea will
be provided**

**Mid North
Grasslands
Working Group**

RSVP:

Anne Brown

0409 684312

JUNE 22, 2017 NATIVE GRASS FIELD WALK WITH DICK RICHARDSON

AGIC scholarships on offer through GPSA

Are you a grain grower 35 or under who wants to know more about the grain supply chain?



Grain Producers SA sponsors two young grain producers every year to attend the Australian Grain Industry Conference from August 2-4, 2017.

It brings together the Australian and international grain industries to network while providing the latest information on international grain markets.

GPSA's sponsorship is valued at \$2500 each and is designed to encourage participation of young producers in the grain industry and help build their skills by giving them exposure to end-users.

> For more information on how to enter, visit the [GPSA website](#). Applications close June 23.

FREE Pest and Weed Management Workshop

Stop new pests arriving and controlling the ones we have.

WEED MANAGEMENT will help landholders and gardeners improve and update their knowledge on weeds and stop their spread. Delivered by Northern & Yorke NRM staff covering a range of weed management principals including:

- Correct identification of weeds
- Goals for weed management
- Control methods
- Best practice management
- Timing of control activities

PEST RABBITS: Focusing on rabbit control. Hear about the range of management techniques for dealing with these pests whether they are in your paddock or your veggie garden.

- Pest control principles
- Rabbit control methods
- Timing of controls

Port Augusta Thursday 22nd June 2017 9am to noon

Australian Arid Lands Botanical Garden, Conference Room, Stuart Hwy Port Augusta
Morning tea and lunch provided

RSVP: By 10th June 2017 to Peter Newman: peter.newman@sa.gov.au

Phone: 0438 642 990 or 8666 2014

Visit the *Pests Cost Us All* website for more workshop details, online training modules and fact sheets www.pir.sa.gov.au/pestscostusall

This initiative has been funded through the Australian Government's Agricultural Competitiveness White Paper, the government's plan for stronger farmers and a stronger economy.



Australian Government
Department of Agriculture
and Water Resources

**PESTS
COST
US
ALL**



Natural Resources
Northern and Yorke



**Government
of South Australia**

Lower Wrinkle and Dag Reduce the Risk of Breech Strike

Source: AWI *Beyond the Bale* June 2017 – Pages 40-41

Breech Wrinkle and Dags are the key breech strike risk traits. Every 0.1 reduction reduces the lifetime risk of breech strike.



As there is a general unfavourable relationship between fleece weight and wrinkle, it is important to pursue sires that are good for both (as well as fertility, growth, structure and the other resilience/welfare traits, in a balanced approach). There are sires and studs that bend this relationship; these “curve benders” are relatively higher in fleece weight and lower in wrinkle.

Wrinkle and Dags are the main causes of breech strike followed by Breech Cover and Urine Stain. AWI-funded research conducted at Armidale NSW (CSIRO) and Mt Barker WA (DAFWA) shows that every 0.1 reduction in breech trait scores, lowers the risk of lifetime breech strike for both mulesed and un-mulesed animals.

Table 1 opposite is a summary of the Australian Sheep Breeding Values (ASBVs) of 158 AI sires from 27 Merino studs, from the MERINOSELECT website, listed in increasing Breech Wrinkle order. The variation in AI sire stud averages are large for Wrinkle, Cover and the key production indexes; Breech Wrinkle averages ranges from -1.2 to +0.9, Breech Cover from -1.3 to 0.3 and the indexes around 60 index points.

The Wrinkle ASBV required to move to a nonmules operation without a large increase in chemical control, varies with factors such as climate, management systems, the size of the commercial property and nutritional value of the pastures. Wrinkle ASBVs can be higher for sheep raised on low protein and low energy country as the sheep ‘express’ less wrinkle when run in these environments. In production systems with high nutritional levels, more emphasis needs to be placed on lower Wrinkle ASBVs. There are 5 non-mules studs listed in the table with differing wrinkle scores; Studs Nine and Ten have an AI sire average Wrinkle ASBVs of -0.3, Stud Five averages -0.8 and Studs Two and One average -1.0 and -1.2.

However, for sheep that are moderate or high in the key breech trait scores, any reduction in Wrinkle, Dag and Cover will reduce the lifetime risk of breech strike. The lower the score pre-mulesing, the lower the score postmulesing.

Breeding for good productivity as well as welfare is important for the commercial viability of the stud and its clients. There is a trend in the table that shows the lower Wrinkle studs have lower Adult Fleece Weight. But some studs buck the trend. Stud Seven has the



highest Adult Fleece Weight at +24 with a relatively low Wrinkle at -0.4 showing the extent to which some studs and sires are bending the curve and thereby reducing lifetime welfare risks and not sacrificing fleece weight.

Studs with similar Adult Fleece Weight and Fibre Diameter can have considerable variation in Wrinkle. Studs Eight, Fourteen, Nineteen and Twenty Three have reasonably similar Adult Fleece Weights (+17, +15, +15 and +14) and Fibre Diameter (-0.8, -1.1, -1.1 and -0.7) but large variation in Wrinkle (-0.3, 0.0, +0.1, +0.4).

There is also considerable variation between the studs’ AI sires for dags and worm resistance. These traits can be important in high worm and dag country and not important in low dag and low worm country.

There is a trend for lower Fertility with increasing Wrinkle and Fleece Weight. However Studs Thirteen, Seventeen and Twenty Two have similar NLW (5%, 4% and 3%) and Fleece Weights (9, 7, 11) but have reasonable differences in Fibre Diameter (-0.2, -2.0 and -1.1) and Wrinkle (0.0, 0.1 and 0.4), which again shows there are curve bending sires.

Studs Twenty Four, Twenty Six and Twenty Seven have low Fibre Diameter (-3.0, -3.0 and -2.5) and high Wrinkle +0.5, +0.6 and +0.9. The path to non-mules without a high reliance on chemicals and other Dag reduction tools is a long one for most low Fibre Diameter Fine and Super Fine studs, but every 0.1 reduction improves lifetime welfare.

As ASBVs become more robust with increasing data being collected by breeders (particularly Adult Fleece Weight, Breech traits and Fertility, at joining, scanning, lambing and weaning) and with the outcomes of the AWI Merino Lifetime Productivity project, the confidence and speed which breeders will be able to improve productivity as well as welfare traits will increase.

Knowing how genetics and environment interact to create an animal’s phenotype on a commercial property is an important step in knowing what targets to set, to maximise lifetime productivity and welfare.

DEFINITIONS

YWT Yearling Body Weight; **AWT** Adult Body Weight; **YEMD** Yearling Eye Muscle Depth; **YFAT** Yearling Fat; **YCFW** Yearling Clean Fleece Weight; **AGFW** Adult Greasy Fleece Weight; **YFD** Yearling Fibre Diameter; **YDCV** Yearling Fibre Diameter Coefficient of Variation; **YSL** Yearling Staple Length; **YSS** Yearling Staple Strength; **YWEC** Yearling Worm Egg Count; **NLW** Number of Lambs Weaned; **EBWR** Early Breech Wrinkle; **EBCOV** Early Breech Cover; **LDAG** Late Dag; **FP+** Fibre Production Plus Index; **MP+** Merino Production Plus Index; **DP+** Dual Purpose Plus Index; **NM** Not Mulesed.

2000 is the base year for Wrinkle, Cover and Dags and 1990 is the base year for all other traits.

TABLE 1. AVERAGE ASBVS FOR AI SIREs LISTED BY STUDS ON THE MERINOSELECT WEBSITE AI SEMEN CATALOGUE (Listed in increasing wrinkle order)

Stud	Mules status	YWT	kg	AWT	YEMD	YFAT	YCFW	AGPW	YFD	YDCV	YSL	YSS	YWEC	NLW	EDWR	EBCOV	LDAG	FP+	MP+	DP+
					mm	mm	%	%	um	%	mm	N/Ktex	%	%	Sc	Sc	Sc	Index	Index	Index
Stud 1	NM	9	8	8	2.3	1.2	14	5	1.6	-1.0	17	1.7	-18	4	-1.2	-0.6	-0.2	100	119	141
Stud 2	NM	12	10	2.8	1.4	18	3	3	0.4	-1.5	25	0.8	-5	5	-1.0	-1.3	0.2	114	137	161
Stud 3		9	8	-0.1	-0.1	21	6	6	-1.4	-1.7	20	1.2	-5	3	-1.0	-0.2	0.1	144	157	156
Stud 4		9	8	2.1	0.7	13	3	3	-0.2	-1.9	11	3.9	0	-1	-0.8	0.0	0.0	127	138	150
Stud 5	NM	9	9	2.5	1.2	18	4	4	0.7	-0.9	22	-0.5	0	1	-0.8	-1.2	0.3	107	125	149
Stud 6		5	5	1.5	1.0	8	-1	-1	0.0	-2.7	13	3.1	-37	8	-0.7	-1.1	0.3	119	126	142
Stud 7		3	2	0.1	-1.0	31	24	24	-0.9	0.1	16	2.4	-14	-1	-0.4	0.1	0.2	163	174	172
Stud 8		7	7	-0.7	-0.3	30	17	17	-0.8	-0.5	13	1.6	6	6	-0.3	-0.3	0.1	145	165	163
Stud 9	NM	5	4	1.3	0.8	10	1	1	-1.2	-1.1	13	-1.8	-7	3	-0.3	-0.8	0.2	118	126	136
Stud 10	NM	1	1	0.2	-0.1	13	7	7	-1.0	-0.7	9	1.3	-4	2	-0.3	-0.1	0.0	136	139	139
Stud 11		11	8	2.2	1.5	25	10	10	-0.1	-1.5	14	3.6	-71	3	-0.2	-0.6	-0.1	142	157	173
Stud 12		10	9	0.5	0.4	24	11	11	-1.8	-1.5	11	0.6	-13	10	-0.1	-0.3	-0.1	166	184	191
Stud 13		7	9	0.7	0.3	18	9	9	-0.2	-0.7	8	1.2	-21	5	0.0	-0.1	0.1	128	145	155
Stud 14		6	4	0.6	0.1	27	15	15	-1.1	-0.3	7	-0.8	23	0	0.0	-0.2	0.2	144	161	162
Stud 15		5	4	0.1	0.4	14	3	3	-1.6	-1.8	7	0.9	-37	1	0.1	-0.1	0.0	146	148	143
Stud 16		3	3	-0.4	-0.2	17	12	12	-0.7	-1.7	10	2.5	16	0	0.1	-0.1	-0.1	138	144	138
Stud 17		3	2	-0.1	0.0	14	7	7	-2.0	0.2	2	0.1	20	4	0.1	0.1	0.0	144	152	151
Stud 18		8	7	0.6	0.1	23	11	11	-1.0	-0.3	10	-1.1	0	0	0.1	-0.5	0.2	136	149	152
Stud 19		7	6	-0.2	-0.2	23	15	15	-1.1	-0.2	13	-0.3	7	1	0.1	-0.2	0.2	145	158	159
Stud 20		4	2	-0.9	-0.7	21	16	16	-1.7	-0.8	8	0.8	20	-1	0.2	0.0	0.1	150	159	147
Stud 21		3	2	-1.0	-1.3	18	12	12	-1.5	-0.9	1	0.0	20	-3	0.3	0.2	0.5	142	150	136
Stud 22		11	11	-0.1	-0.3	23	11	11	-1.1	-0.8	7	0.5	0	3	0.4	-0.4	0.3	143	161	164
Stud 23		4	3	-0.6	-0.6	20	14	14	-0.7	1.1	5	-1.9	0	1	0.4	-0.1	0.1	131	144	140
Stud 24		3	1	0.1	-0.3	17	6	6	-3.0	0.4	6	-3.1	-22	-1	0.5	0.1	-0.1	156	159	149
Stud 25		3	2	-0.8	-0.3	22	13	13	-2.1	-0.6	2	-1.0	-9	0	0.6	0.3	0.3	158	165	155
Stud 26		3	1	0.2	0.2	15	6	6	-3.0	-1.4	1	0.3	-35	-2	0.6	0.1	0.0	162	158	148
Stud 27		4	2	-0.9	-0.7	28	20	20	-2.5	0.0	6	-2.3	0	-2	0.9	0.2	0.1	163	172	157
Min		1	1	-1.0	-1.3	8	-1	-1	-3.0	-2.7	1	-3.1	-71	-3	-1.2	-1.3	-0.2	100	119	136
Max		12	11	2.8	1.5	31	24	24	1.6	1.1	25	3.9	23	10	0.9	0.3	0.5	166	184	191
Range		10	10	3.7	2.8	23	24	24	4.6	3.7	24	6.9	94	13	2.0	1.6	0.7	66	65	55
2015 drop percentile ranges																				
Top 1%		11	11	2.8	1.7	29	21	21	-3.6	-2.6	22	7.1	-72	13	-1.0	-0.8	-0.4	160	173	176
Top 5%		9	8	2.1	1.2	24	17	17	-2.7	-2.0	16	5.0	-53	9	-0.8	-0.6	-0.3	150	159	161
Top 20%		6	6	1.1	0.6	18	12	12	-1.9	-1.1	11	2.8	-34	5	-0.5	-0.3	-0.2	140	147	146
Top 50%		6	3	0.2	0.0	12	6	6	-1.1	-0.7	6	0.6	-14	1	-0.1	-0.1	0.0	129	134	133
Top 80%		6	0	-0.5	-0.5	5	0	0	-0.3	0.1	1	-1.6	9	-3	0.2	0.1	0.1	117	120	121

See www.sheepgenetics.org.au/MerinoSelect and then select 'Sale and semen catalogues'.

Be on alert for ascochyta blight this season

Source: GRDC Paddock Practices
Southern April 2017



Vigilance against ascochyta blight will be critical for pulse growers across the southern region in 2017.

The wet season in 2016 combined with intensive cultivation of some pulse crops and varieties led to outbreaks of ascochyta blight across South Australia and Victoria.

In particular, big changes have been observed by pathologists in the reaction of all chickpea cultivars in the southern region to ascochyta blight to the point where all chickpea varieties are now rated either susceptible (S) or moderately susceptible (MS) to the disease.

Pathologists are advising chickpea growers across all areas of the southern region to carefully consider their risk of ascochyta blight infection prior to sowing the crop and their ability to effectively control the disease.

Furthermore, ascochyta blight isolates collected from lentil crops at Maitland and Mallala, SA, in 2016 caused a susceptible reaction on the resistant lentil variety PBA Hurricane XT in controlled environment tests.

For this reason, growers in these areas should treat PBA Hurricane XT as potentially higher risk to ascochyta blight infection and monitor crops closely.

Ascochyta blight in lentils

During 2016, South Australian Research and Development Institute (SARDI*) research scientist Sara Blake tested 40 isolates of the pathogen *Ascochyta lentis* collected from commercial crops during the 2015 growing season.

Ms Blake says 90 per cent of those isolates caused a susceptible to moderately susceptible reaction on Nipper, which confirmed the variety had lost foliar resistance to ascochyta blight.



Ascochyta blight on a lentil crop.

Photo: Rohan Kimber, SARDI.

However, more concerning was the fact that 11 of the 40 isolates tested caused low disease levels on PBA Hurricane XT which has resistance to ascochyta blight.

"Four of the 40 isolates caused low levels of disease on Indianhead, a resistant parent line for many of the current

commercial cultivars, and the breeding line ILL7537," Ms Blake says. "Both of these lines represent really important sources of resistance for the lentil breeding program.

"We know that the *Ascochyta lentis* population is naturally variable and that aggressive forms of the disease can be selected for in situations with high-intensity cultivation of lentils and short rotations.

"There is the potential that isolates which infect PBA Hurricane XT could become selected for over time, which is something we are watching very closely."

To further investigate, Ms Blake tested another eight isolates of *Ascochyta lentis* collected exclusively from crops of PBA Hurricane XT around Maitland and Mallala on a number of commercial varieties in a controlled environment (table 1).

This testing found there was a susceptible reaction caused by those eight field isolates on PBA Hurricane XT grown under controlled environment conditions, indicating a

Table 1: Reaction of lentil cultivars when inoculated with *Ascochyta lentis* isolates collected from PBA Hurricane XT in 2016 (average per cent of disease in whole plants when inoculated in controlled screening).
Source: Blake et al, 2017.

Isolate collection site	Host varieties								
	Cumra (susceptibility check)	PBA Hurricane XT	PBA Ace	PBA Bolt	PBA Giant	PBA Herald	PBA Blitz	Boomer	PBA Jumbo2
Maitland	2.5	10.0	4.5	0.8	1.7	3.8	2.7	1.9	1.0
Sunnyvale	6.3	5.2	4.8	2.9	1.0	2.3	1.7	1.5	1.0
Mallala	6.3	13.1	4.8	2.7	1.9	4.0	4.0	3.1	1.3
Maitland	7.9	13.3	7.9	3.3	1.7	6.9	5.0	2.9	0.8
Maitland	14.0	5.6	4.8	4.4	10.0	2.3	2.7	1.7	0.2
Maitland	15.8	10.2	6.5	6.7	8.5	4.4	5.0	3.1	2.1
Arthurton	16.0	5.6	10.8	7.1	5.8	5.8	2.7	1.9	0.2
Mallala	18.3	10.0	6.7	12.9	5.4	1.9	2.1	4.0	0.6

Note: 0-4.2 = resistant; 4.3-8.4 = moderately resistant; 8.5-12.6 = moderately susceptible; >12.7 = susceptible

potential shift in the pathogen population.

"Those eight isolates also caused a low level of disease on PBA Ace and PBA Bolt (mostly resistant or moderately resistant), but field reactions on those varieties are not confirmed," Ms Blake says.

"Fortunately, PBA Jumbo2 showed resistant reactions to those eight isolates, indicating that the variety's genetic resistance is still very effective against ascochyta blight."

Ms Blake is advising growers intending to plant lentils, more specifically those growing PBA Hurricane XT, PBA Bolt and PBA Ace around Mallala and Maitland, SA, to treat it as though it is at potentially higher risk to ascochyta blight.

"That means using a thiram-based fungicide seed treatment for early protection against ascochyta blight, followed by foliar fungicide sprays at podding ahead of rain fronts to prevent pod and seed infection," she says.

"Growers will also need to monitor crops closely in case additional sprays are required to control ascochyta blight, especially if there is a wet season like 2016 again."

Ascochyta blight in chickpeas

In both field trials and commercial crops across the 2015 and 2016 growing seasons, severe infections of ascochyta blight were observed in chickpea varieties previously rated resistant to the disease.

As a result of this, all chickpea varieties are now rated either moderately susceptible and susceptible (table 2).

three weeks throughout the growing season ahead of rainfall. Because the pods of all commercial chickpea varieties are susceptible to ascochyta blight, fungicide sprays will be required at pod set."

Ms Blake says growers should also get their chickpea seed tested for ascochyta blight infection.

Ascochyta blight in faba beans

There have been no resistance rating changes in faba bean varieties to ascochyta blight recorded since 2015.

In 2015, 40 isolates of *Ascochyta fabae* were collected from growing regions in SA and Victoria which were tested under controlled environment conditions in 2016.

This screening identified three reaction groups:

- Farah is susceptible to ascochyta blight in the Lower to Upper North regions of SA;
- PBA Rana and PBA Zahra have partially compromised resistance to ascochyta blight;
- PBA Samira and Nura remain resistant.

Further testing conducted in 2016 by SARDI research scientist Dr Rohan Kimber of *Ascochyta fabae* isolates confirmed that these new pathotypes are becoming established on SA's Yorke Peninsula and South East SA.

Table 2: Ascochyta blight categories of chickpea cultivars and disease scores from trials in SA and Vic in 2016. Source: Blake et al, 2017.

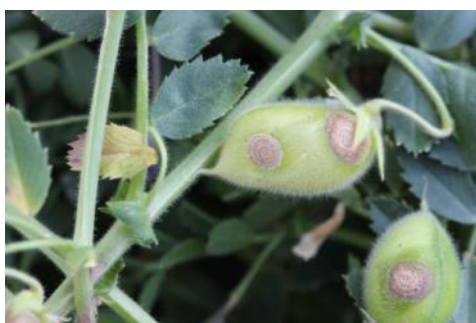
Variety	Ascochyta blight foliage disease scores 2016		
	Rating for 2017	Curyo, Vic 1-9 disease score	Kingsford, SA 1-9 disease score
Desi type			
Ambar ⁽¹⁾	MS	5.8	6.3
Genesis™ 509	MS	6.0	
Howzat	S	8.0	9.0
Neelam ⁽¹⁾	MS	6.3	5.7
PBA HatTrick ⁽¹⁾	S	7.7	
PBA Maiden ⁽¹⁾	S	7.0	7.0
PBA Slasher ⁽¹⁾	MS	7.3	5.3
PBA Striker ⁽¹⁾	S	7.5	7.3
Sonali	S	8.8	
Kabuli type			
Almaz ⁽¹⁾	MS	6.3	6.3
Genesis™ 079	S	7.0	5.0
Genesis™ 090	MS	6.7	3.7
Genesis™ 114	S		
Genesis™ Kalkee	MS	5.5	4.7
PBA Monarch ⁽¹⁾	S	7.5	8.0

Note: MS = score of 5 or 6. S = 7 and above.

Ms Blake says growers will need to consider the risk of ascochyta blight infection prior to sowing chickpea crops, as well as their ability to control the disease.

This advice applies to all chickpea growing areas across the southern region, she says.

"The disease will survive on stubble and organic matter for three years, so a minimum three-year rotation between chickpea crops in the same paddock will be an important step in reducing the risk of ascochyta blight," she says.



Ascochyta blight on chickpea pods .

"Furthermore, it is imperative that all chickpea seed is treated with a thiram-based fungicide seed dressing to prevent seed transmission of ascochyta blight onto emerging seedlings in 2017.

"For moderately susceptible varieties, a minimum of three to four fungicide sprays will be required ahead of rain fronts starting at six to eight weeks post-sowing. Each spray will offer two to three weeks' protection.

"Susceptible varieties will require regular sprays every two to



Sprays during podding should be planned for PBA Rana and PBA Zahra in 2017 to prevent pod and seed infection of ascochyta blight, according to SARDI research scientist

Ms Blake is recommending growers adopt newer PBA faba bean varieties which have superior seed quality to older varieties such as Fiesta, Farah or Nura and therefore greater disease resistance.

"At least three-spray fungicide strategies are now required to control ascochyta blight in Farah because of its susceptibility," she says.

"Sprays during podding should also be planned for PBA Rana and PBA Zahra to prevent pod and seed infection of ascochyta blight. Again, these sprays will need to be applied ahead of rain fronts."

Agronomic factors affecting faba bean seed quality

A project funded by the South Australian Grain Industry Trust (SAGIT) has shed light on some of the agronomic factors affecting the seed quality and incidence of field mould on faba bean seed.

The research, led by SARDI plant pathologist Dr Rohan Kimber, found that variety choice has a significant effect on seed quality and the impact of in-crop practices such as crop topping and windrowing.

Dr Kimber says seed staining is a common symptom caused by ascochyta blight and chocolate spot in faba beans. Deposits on the seed coat such as pod wall residue can result after unfavourable conditions during pod maturation.

"Fiesta, an older variety, was consistently shown to be affected by in-crop practices, examined within the project, resulting in poorer seed quality than newer varieties such as PBA Rana, PBA Samira, and PBA Zahra," Dr Kimber says.

"Similarly, older varieties such as Nura, were found to be most susceptible to the incidence and severity of pod wall residue on seed which could be confused in some instances with field mould in its appearance."

"These findings show that faba bean growers should proactively move towards the adoption of newer PBA varieties as they have superior seed quality and tolerance to agronomic practices."

The research showed that wheel tracks from in-crop traffic affected seed quality predominantly in Fiesta by reducing grain weight and increased staining on seed within the wheel tracks compared to a standing crop.

Dr Kimber says this effect may have minimal impact in crops with controlled-traffic implemented or where crops are treated with equipment that result in few plants surviving in wheel tracks.

"Timely windrowing had no effect on seed quality," he says. "However, a late windrow treatment combined with a late harvest treatment – leaving the windrow for a longer period before pick-up – may result in a significant reduction in seed quality in favourable weather conditions."

"This effect was most noticeable in Fiesta and had little effect on PBA Rana."

Dr Kimber says crop-top timing had a significant effect on seed quality. Early crop-topping prior to the onset of seed maturation can increase seed shrivelling and weather staining and can also reduce grain weight.

"Optimal timing of windrowing, crop-topping and harvest is recommended, particularly in Fiesta, Farah and Nura, which were most affected by these practices," Dr Kimber says.

"If early applications of crop-topping are necessary, the inclusion of a fungicide often mitigated some detrimental effects observed on seed quality."

More information

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Useful resources

[SA Sowing Guide](#)
[Victorian Winter Crop Summary](#)
[National Variety Trials website](#)
[Pulse Australia website](#)

Monthly Commodity Outlook:

Grains & Oilseeds: CBOT wheat now likely to remain below 500 US\$/bu through Q2 2018. But factors closer to home are starting to help Australian wheat into firmer territory.

Beef: More positive signals from global markets may sustain prices into winter.

Sheepmeat: Strong lamb prices are set to continue.

Wool: The breadth of demand, with India and Europe joining China at the table, will sustain prices as the season plays out.

VIEW REPORT



Rabobank

Upcoming Events Calendar

June

- 15 - 16 **Harvesting the Benefits of Digital Agriculture, Melb** [Aust Farm Institute](#) 02 9690 1388
- 20 **Guard Animal Workshop, Wudinna** [Mary Crawford](#) 08 8688 3074
- 20 **GRDC Local Forum—Maitland,** [Jen Lillecrapp](#), 0427 647 461
- 22 **UNFS Post Sowing Bus Tour, Joe Koch** 0428 672 161 or Ashley Lines 0429 632 425
- 28 **EPARF Member Day – Managing Legumes, Minnipa** [Dot Brace](#) 08 8680 6202

July

- 3-5 **Innovation Generation Conference, Adelaide** [More Information Here](#)
- 18 **Hart Field Site Winter Walk,** [Sandy Kimber](#) 0427 423 154

August

- 2-3 **Australian Grains Industry Conference Asia, Melbourne** [More Information Here](#)
- 9 **GRDC Research Update, Spalding** [ORM Communications](#) 03 5441 6176
- 10 **UNFS Members Expo, Theme: Improved profitability through diversification.**
- 12 **GRDC Farm Business Update, Adelaide** [ORM Communications](#) 03 5441 6176
- 14 **20th Precision Agriculture Symposium, Sydney** [Nicole Dimos](#) 0437 422 000
- 15 **GRDC Research Update, Kimba** [ORM Communications](#) 03 5441 6176
- 16 **Grain Industry Expo, Wudinna** **Tracey Lehmann** 08 8627 2304

September

- 6 **MAC Annual Field Day, Minnipa** [Naomi Scholz](#) 8680 6233
- 7 **SA Durum Growers Crop Walk, Roseworthy,** [Ann Price](#) 0429 962 032
- 12 **UNFS Eastern Spring Crop Walk**
- 11-13 **State Community Landcare Conference, Clare,** [Glenn Gale](#)
- UNFS Western Crop Walk—Week of 18th Sept -Date to be confirmed**
- 19 **Hart Field Day,** [Sandy Kimber](#) 0427 423 154
- 24-28 **Australian Agronomy Conference, Ballarat** [More Information Here](#)
- 26-28 **Yorke Peninsula Field Days, Paskeville** [Elaine Bussenschutt](#) 08 88272 040

October

- 17 **Hart Spring Twilight Walk,** [Sandy Kimber](#) 0427 423 154

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Quorn - vacant

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