UNFS update

Upper North Farming Systems Newsletter May 2018

UNFS 2018 Time of Sowing trial

We have now had the first two times of sowing for this year's SAGIT-funded Time of Sowing trial. Thank you again to local farmer Todd Orrock for all his help running the project.

This year the site is located just north of Booleroo Centre, in a paddock near Kettle Corner. Once again we'll be testing five wheat varieties with three different sowing times. This year we have replaced Mace with Scepter, but we've kept the other four varieties the same (Trojan, Cutlass, Hatchet, and Longsword/RAC2341).

The first lot of plots were sown on the 16th of April and the second on the 10th May. The last plots will be sown by the end of the month. We will keep you updated on the trial's progress throughout the year.

Should have enough horsepower!

In this issue;

Upper North Farming Systems

Pest Management Guideline

Mice

The common house mouse or *Mus domesticus*. Photo: JN Stuart

Key Facts

- Stubble retention increases the risk of mouse damage by providing a habitat and food source.
- Monitoring should be performed prior to sowing by looking for burrows or by using chew cards.
- To improve chances of success, baiting of mice should be over a large scale.
- Baiting should take place no later than 24 hours after seeding.

Mice (*Mus domesticus*) are a significant grain growing pest across Australia. Mice begin breeding in early spring and numbers increase through spring and into summer. Populations usually decline in winter. Stubbles, along with growing plants, provide shelter and a food source for mice over the summer.

MICE IN GRAIN CROPPING

Mice build up locally within paddocks and generally travel around 100m to forage for food. Mouse densities of more than 200 mice per hectare will cause economic damage at sowing, with a plague defined as more than 800 mice/ha.

Plagues usually build up over 12 to 18 months and decline after one to two years, though it is possible for plagues to last longer than two years.
Crop damage is most severe for about two to three weeks after crop emergence, then again at seed set. However, mice will sometimes cause damage at stem elongation and tillering.

Factors that promote mouse abundance include:

- Stubble retention.
- Grain left in the paddock from poor harvesting efficiency or weather events.
- Poor grain storage hygiene.
- Rain outside the growing season.
- Summer weeds.

MONITORING

The most important times to undertake monitoring are prior to sowing and in early spring, and the two recommended methods of monitoring are looking for burrows or chew cards. Trapping is not recommended, because it is labour intensive and can trap native animals.

Looking for evidence of active burrows is recommended if abundant food sources are present (see 'burrow monitoring').

Project Information

This management guideline has been developed for the Upper North Farming Systems Group (UNFS) as part of the Maintaining Profitable Farming Systems with Retained Stubble Initiative, funded by the Grains Research and Development Corporation (GRDC).

The Stubble Initiative involves farming systems groups in Victoria, South Australia and southern and central New South Wales, collaborating with research organisations and agribusiness, to address challenges associated with stubble retention.

The GRDC, on behalf of growers and the Australian Government, is investing $17.5 million in the initiative that has been instigated by the GRDC Southern Regional Panel and the four Regional Cropping Solutions Networks that support the panel.

Growers should also use the MouseAlert app and website to both report mouse sightings and to review other growers' reported mouse sightings, to gain a better understanding of mouse populations and the likelihood of an upcoming plague.

MOUSE CONTROL

Mouse control should be conducted over a large area to reduce the likelihood of re-invasion. An area of 1000ha is considered ideal. Working with neighbouring growers to coordinate control over a 1000Ha will give the highest chance of success.

Prevention is better than cure for mouse control as bait costs are high and often increase during plagues due to high demand.

Prevention

Methods to minimise the build-up of mouse populations:

- Ensure harvester efficiency is high or consider grazing to clean up spilt grain.
- Weed seed removal or destruction can minimise food sources in summer.
- Maintain good grain storage hygiene to minimise spilt grain
- Control summer weeds to reduce feed sources.

Baiting

The GRDC provides the following guidelines on mouse baiting:

- If numbers are high, bait six weeks before sowing and again at seeding. If only baiting once, bait at seeding.
- Bait within 24 hours of seeding; any later will not be effective. A bait spreader on the back of the seeder is the simplest method to achieve this.
- Bait at label rates. In trials of zinc phosphide-treated wheat grains at 1kg/ha, 90–95% of the mouse population in the baited area were killed.

BURROW MONITORING

To get an accurate gauge on mouse numbers, growers can use the following guide:

1. Walk 30 metres in from the edge of the paddock and follow a 100 metre long by 1m wide path through the crop, following the furrows.
2. Walk slowly along the path, scanning for evidence of mouse burrows. Be sure to keep within the 1m transect width.
3. Take note of any mouse burrow that looks active.
4. Record the number of burrows per 100m path.
5. Repeat across 2-4 paths to cover a large area.
6. A mouse problem exists if there are more than 2-3 active burrows per 100m.

Source: GRDC

Putting it into practice - farmer feedback on mice

Chris Crouch, Wandearah

Wandearah grower Chris Crouch has seen an increase in mouse numbers in the past 15 years since his family has been retaining stubble, with the stubble supporting a low 'starting' population ready to thrive when the conditions are right.

The two most recent seasons to have had mouse issues, 2011 and 2017, were both characterised by a large harvest the previous year followed by a wet summer.

In 2011 the mice caused problems during establishment and increased operating costs but did not affect yield. In 2017, Chris expected yield losses in chickpeas after a mild winter allowed mice to cause damage in both autumn and spring.

Chris performed significant baiting in spring for the first time in 2017; almost his whole program was baited at sowing and some repeated in spring. This meant he used more bait over the 2017 season than ever before.

The Crouches are prepared to bait regularly, with Chris assessing the benefits as well worth the cost, particularly after recent reductions in the cost of bait.

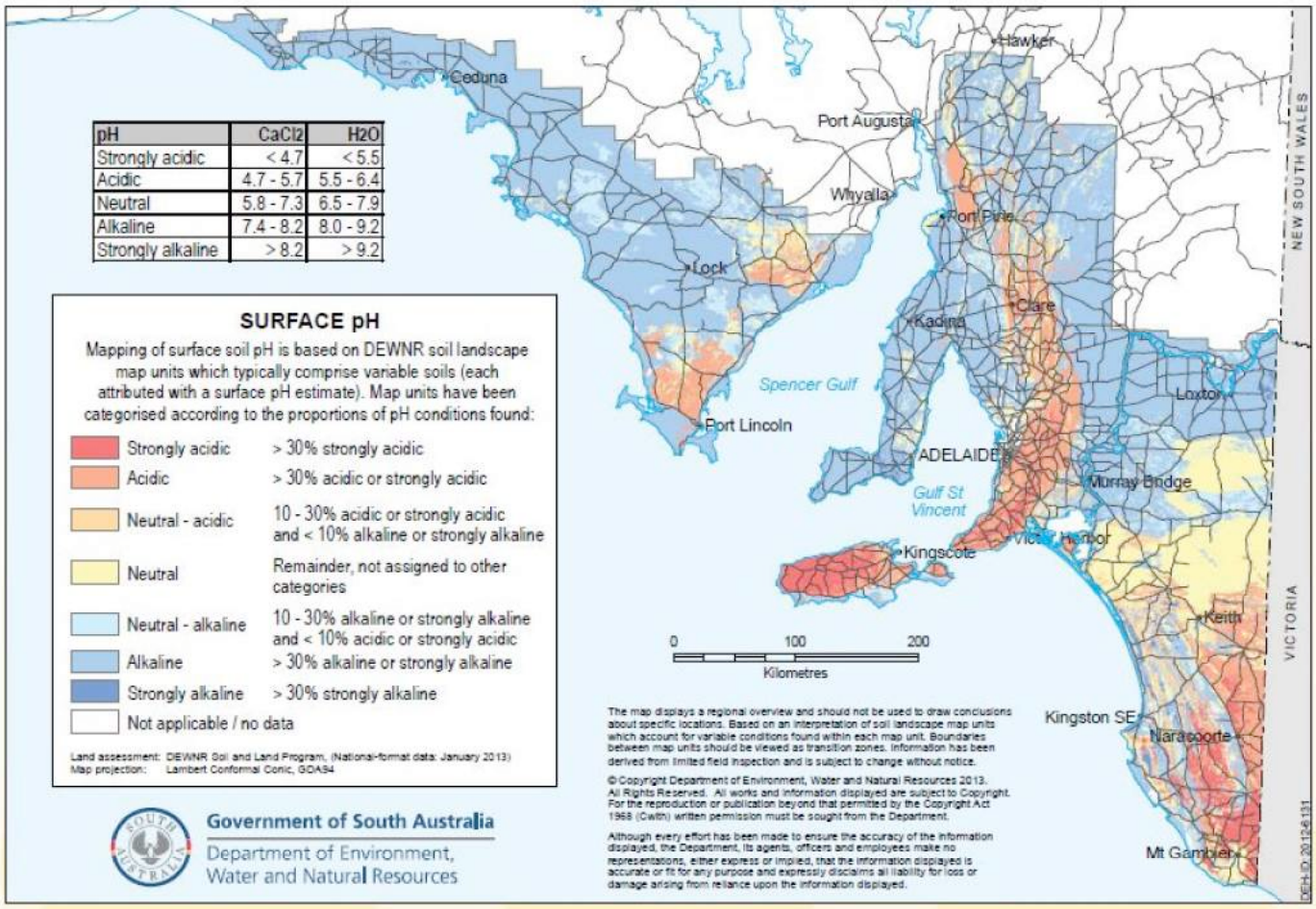
However, they also use many cultural measures to control mice and Chris believes each of the measures play their part in reducing mice damage:

- Cattle graze stubbles in summer to remove spilt grain, with agisted sheep used in 2016/17 to improve the grazing effectiveness.
- When mouse pressure is high, Chris sows some crops deeper to reduce the potential for mice to eat seed.
- Summer weed control reduces alternative feed sources in the lead up to seeding.
- Early sowing from mid-April improves early establishment. In 2017, Chris could sow early after good rainfall but he would also sow dry early if he needed to, with bait applied at the same time.

UNFS soil acidification project

UNFS is currently involved in a project focused on raising awareness of soil acidification in the Upper North region. The project is being funded by Natural Resources SA Northern & Yorke.

Soil acidification is a naturally occurring process, but is being accelerated by more intensive farming systems. Although acid soils have not traditionally been much of a issue in the Upper North, some farmers in the region have recently noticed the pH in some their paddocks is dropping. Acid soils may also be becoming more noticeable due to farmers growing more acid-sensitive crops, such as lentils.



The optimum pH range for most plants is 6-8. The lower the pH reading, the more acidic the soil. While mildly acidic soils can cause problems for sensitive crops, soil acidity becomes a much more serious threat when the pH falls below 5 (when measured in calcium chloride). It is at this point that even tolerant crops and pastures are affected.

Acid soils have a range of negative consequences for productivity and sustainability. Nutrients are more prone to leaching, while phosphorus, magnesium, calcium, and molybdenum are bound up in the soil and become less accessible to plants. At the same time, aluminium in the soil is released and can cause toxicity problems and stunt root growth. Microbial activity also declines. This can be a particular issue for legumes which struggle to nodulate effectively in acidic soils.

(continued on next page)

Soil pH is raised by adding lime or other liming materials. How much lime needs to be added will depend on a range of factors, including the current pH, the desired pH, the soil texture and the lime source being used. The equation below can help when determining the rate of lime required.

Lime requirement (t/ha) = (target pH – current pH) x soil texture factor

Texture factor and lime required to raise the soil pH by 1 unit:

- Loam to clay loam: 4
- Sandy loam: 3
- Sand: 2

Example: to raise the pH of a clay loam with a pH of 4.9 to pH 5.5;

(5.5 – 4.9) x 4 = 2.4 t/ha lime required

Lime's effectiveness at improving soil pH will also depend on its quality, defined by its 'neutralising value' and its particle size. The neutralising value is determined by the lime's calcium carbonate content. Good lime or liming material should have a neutralising value of 80% or greater. Finer material with a smaller particle size will neutralise the acid in soils much faster than coarser material, but is harder to spread and can block up spreaders. For this reason, it may be better to have a mixture of fine and coarse liming material. Ideally, 60% of the lime will also pass through a 0.3 mm sieve.

Natural Resources
Northern and Yorke

Wirrabara lime trial update

Last month, UNFS ran a soil acidity awareness workshop in Laura. Our guest speaker Andrew Harding, Senior Consultant, Rural Solutions SA (PIRSA), gave an update on the lime trial being carried out at Wirrabara.

The trial was established in partnership with the Laura Agricultural Bureau in 2015. Many farmers in the region had been relying on Nutrilime® which was a by-product from the soda ash manufacturing plant from Adelaide. This was an effective source of lime however, with the closure of the plant only a small amount of product is now available. The trial was set up to compare and evaluate other lime sources for the region.

The site is a sandy loam over a medium clay. The top-soil (0 – 10 cm) had a pH of 4.3 (CaCl2) and the sub-surface (10-20 cm) had a pH of 4.7 ($CaCl_2$). The lime products being tested included Clare Quarry lime, Kulpara dolomite, Angaston Penlime® and Nutrilime®.

(continued on next page)

The products were also being tested at two different rates: a 'normal rate' of 3 t/ha and a higher rate of 6 t/ha. A higher rate of 6 t/ha is not recommended but it was only used to 'push' the system. There was a control treatment and sulphur was also added as another treatment to determine the effects of increased acidification. The lime was broadcast on the surface (i.e. not incorporated) to fit in with the farmer's no-till farming system.

The site was sown to wheat in 2015, barley in 2016 and faba beans in 2017. In 2015, there were no differences between treatments. The lime would not have had time to move down the soil profile to be effective.

In 2016, there were significant yield differences with the lime treatments and barley yields especially with the lime sources at the higher rates. In 2017, there were quite clear visual differences between the lime treatments and the bean growth and biomass however at harvest there were no significant differences between the yields. This could have been due to frost damage.

Soil test results (replicate 1) in April 2017 (two years after application) has shown that most of the lime sources have increased the soil pH above 5.0 ($CaCl_2$) at 25 – 50 mm depth and that the lime has moved to a depth of about 50 – 75 mm.

The trial was sampled in April 2018. The lime had not moved as much compared to the first two years and it appears that the movement of lime has slowed down and may have become nearly fully neutralised.

Soil testing has shown that for most treatments, there is still a low soil pH between 50 – 125 mm, as low as pH 4.5 ($CaCl_2$). This has created an *acid throttle* in the root zone and it is likely to affect the survival of *Rhizobia*, reduce plant root development and uptake of nutrients and reduce nodulation. This may have also been the reason why there were no significant differences with the bean yields and lime treatments.

A lime trial at Marrabel and Kapunda in 2008 with faba beans on a red-brown earth soil increased yield by 70% compared to the control by raising the soil pH from pH 4.4 to 5.2 ($CaCl_2$). With this trial the lime was incorporated to a depth of 10 cm.

To be more effective and to increase crop yield it is recommended that the lime is incorporated to at least 10 cm to overcome the issue of pH stratification and the problem with the *acid throttle*.

The trial will be sown to canola this year. It will be sampled again in April 2019 to determine the effect of lime on the soil pH and the movement of lime down the soil profile.

The trial was established with funding from the Northern & Yorke Natural Resources Management Board through the Australian Government's National Landcare Programme, GRDC and the Department of Environment, Water and Natural Resources.

For further information contact Andrew Harding, Rural Solutions SA (PIRSA) on 0417 886 835.

Acknowledgements to: Craig Woolford for allowing the trial on his property; John Nairn and Philip Rundle, SARDI for harvesting the trial and Brian Hughes, Senior Consultant for technical support and assistance with soil and tissue testing.

Sheep Technology & Innovation Day

Shed & yard design - Satellite water telemetry - Drones - Virtual fencing

Tuesday, 25 September, 2018

9.00 am - 4.30 pm at 'The Oaks', Hawker

Venue: "The Oaks", The Oaks Road, Hawker (turn off Flinders Ranges Way 11 km south of Hawker on to The Oaks Road)

Trade Displays include:

- Telemetry
- Drones
- Shed and yard design
- Sheep handling equipment
- Farm and livestock software
- PIRSA Biosecurity
- SA Arid Lands NRM (Wild dogs, weed and pest management)
- Plants for your homestead

Further Information

Michael: 0418 803 685, Jodie: 0428 103 886
www.sheepconnectsa.com.au @sheepconnectsa

Event Sponsors

awi | sheep connect south australia | SOUTH AUSTRALIA | Government of South Australia

This project is supported by Primary Industries and Regions SA , SA Sheep Industry Fund and South Australian Arid Lands Natural Resources Management Board.

Tips for more effective weed management in stubble-retained systems

Although using herbicides in stubble has its challenges, there ways to maximise the success of weed control:

Start managing stubble at harvest — Ensure trash is spread evenly across the header width. Trash concentrations in the header row can bind to herbicides impacting weed control. Remember, the header row is also where many weed seeds concentrate. Consider tools to reduce chaff and control weed seeds at harvest, such as windrow burning or chaff carts.

Leave stubble standing — Straw choppers on headers mulch and pulverize stubble into chaff, which breaks down faster. This is much better than slashing, chaining or harrowing, which leaves stubble in long lengths acting as an impenetrable thatch, limiting herbicide access to the soil surface.

Increase water rates — Use high water rates (>80L/ha) with larger non-air-inducted droplets (coarse at a minimum) to deliver more herbicide to the soil. Even the more water-soluble herbicides (Boxer Gold, Sakura) control annual ryegrass better when applied at higher water rates.

Use the right spray nozzles — Non-air-inducted nozzles produce droplets with more capacity to 'bounce' off stubble, and still reach the ground. Air-inducted droplets do not bounce as readily and are more likely to stay on the stubble they hit.

Match spacings — Matching row spacing and nozzle spacing on real time kinetic (RTK) guidance allows precise positioning of nozzles between stubble rows, minimising stubble shadowing of herbicide.

Choose a suitable product — Select herbicides that are more suited to high-stubble-load situations (see Table 1). Most herbicides are washed off stubble residues with 5mm of rainfall, with more herbicide being washed off with increasing rainfall and following rainfall events.

Understand your product — Some pre-emergent herbicides are sensitive to sunlight and need to be incorporated or covered by soil to minimise losses. Herbicides like trifluralin only need a light cover of soil to reduce photodegradation. Some herbicides are volatile and can be lost to evaporation, especially from wet soil.

Up the rate — Use higher herbicide rates, particularly for products like trifluralin, which has label recommendations that support higher rates of product for use in higher-stubble-load situations.

Manage inter-row soil throw — In most no-till sowing systems the soil from the sowing row is thrown to the inter-row space, reducing the rate of application of soil-applied herbicide near the seed and increasing the effective application rate in the inter-row. Pay attention to detail during sowing and ensure soil throw on the inter-row while maintaining a seed furrow free from herbicide. Concentrated chemical soil in the furrow can damage crops and reduce plant vigour.

Close the furrow — Ensure the seed furrow is closed to prevent herbicide washing onto the seed. Sowing systems vary in their ability to 'close the slot'.

Monitor sowing depth — Ensure even seed depth placement (typically 3–5cm of loose soil on top of the seed in cereals for optimal crop safety). This is a key safety mechanism. Whatever else you do, keep the seed more than 3cm deep if in marginal moisture conditions, or in crops sensitive to particular herbicides. If you can't – wait for better conditions!

Consider spraying conditions — If applying herbicide onto dry sandy soil where there is a risk of significant rainfall (more than 25mm) the chemical can move rapidly through the soil profile and damage the crop. Stubble cover will slow infiltration rates and act as a buffer to improve crop safety.

Consider herbicide timing — Incorporate by sowing (IBS) rather than post sowing pre-emergent (PSPE) to improve crop establishment and early vigour.

Take a toolbox approach — Establish a toolbox approach to weed management in retained-stubble systems. Stubble interferes with herbicide target contact, reducing efficacy. Plan to tackle escape weeds with tools such as crop rotations, windrow burning, chaff carts, seed destructors and targeted in-season and at-harvest spray applications. Emerging weeds develop within the retained-stubble system — keep on top of them before they get out of control.

Start managing stubble at harvest to make weed management easier later on. Photo: UNFS

PO Box 138 Burra SA 5417
P 0418 841 331
E admin@agex.org.au
W www.agex.org.au

Mid North Mesonet Update

Tuesday, May 15, 2018

PIRSA / Regions SA have approved funding for the establishment of a mesonet (mesoscale weather network) comprising 40 automatic weather stations in the Mid North of South Australia.

The mesonet is funded mainly by the SA Government and will be managed by the Ag Excellence Alliance. Ag Ex works with SA broad-acre grain and livestock farmer networks to improve their profitability and sustainability. Ag Ex has assembled a project team to lead the project, and includes Mark Stanley, project manager; Mick Faulkner and Peter Cousins, independent farm consultants; Sarah Noack, Hart field Site Group; and Warwick Grace, Grace Research.

Mesoscale refers to weather events that range in size from 2 to 200 km and duration from several minutes to several hours. Mesoscale events include thunderstorms, fogs, land and sea breezes. Without densely spaced weather observations, these mesoscale events might go undetected.

The information from the network will allow farmers to avoid spraying pesticides when weather conditions indicate spray drift and off-target damage are likely. Such damage is estimated at up to $200 million annually in the Mid North. So ultimately the test of the network will be whether that damage bill is reduced.

Reducing spray drift damage is the main purpose of the mesonet. However there are many other general purpose benefits – one or two examples are: frost diagnosis and near-real-time rainfall monitoring; also some of the stations will be especially useful for fire weather monitoring.

Ag Ex will keep you informed as the role of the weather station network proceeds over the next 12 months.

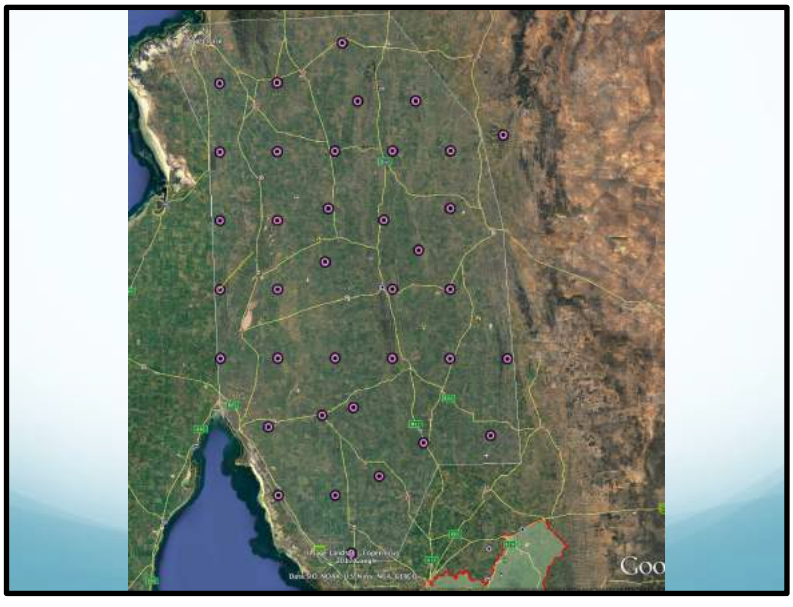


Figure 1. Approximate locations of the mesonet automatic weather stations. The area covered stretches from near Port Pirie to near Kapunda.

On behalf of the Ag Ex Mid North Mesonet project team - Peter Cousins, Mick Faulkner, Sarah Noack, Warwick Grace and Mark Stanley.

Establishment pests to look out for in emerging crops

(http://pir.sa.gov.au/research/services/reports_and_newsletters/pestfacts_newsletter/current_issue/pestfacts_issue_3_2018/establishment_pests_to_look_out_for_in_emerging_crops)

As crops emerge, a range of invertebrates also become active. Young crops are particularly susceptible to damage from pest attack for the first 3-5 weeks following emergence. Where possible, use agronomic practices to ensure rapid establishment, after which crops can often outgrow moderate damage. Best practice pest management in emerging crops involves regularly monitoring crops to ensure early detection of pest issues, and correct identification to inform the selection of appropriate controls as required. It is important not to assume that pre- and post-emergent insecticides will adequately control pest issues – different pests require specific management, and monitoring is the only way to be sure!

A range of earth mites, Lucerne flea, beetles and weevil species are commonly seen in emerging crops in South Australia. Know what to look for:

Earth mites and Lucerne flea

Reports from agronomists from most key regions of South Australia indicate that earth mites are yet to be sighted in crops, while Lucerne flea has been observed in some areas. At least four earth mite species groups attack seedling crops. For earth mites, correct identification is critical for effective control, as different species can vary in their susceptibility to certain insecticide groups, either naturally or through insecticide resistance. Key features for the major species to watch for are provided below:

Redlegged earth mite (RLEM)

Widespread hatching of redlegged earth mite (RLEM), *Haylotydeus destructor*, is expected to occur in many cropping districts following recent weather conditions. We observed young RLEM attacking clover on roadsides around **Minlaton** on Yorke Peninsula. In the South East region, sightings of RLEM commenced in early May in clover pastures, in many cases in densities warranting control.

RLEM hatches from over-summering eggs following sufficient rainfall and cool temperatures (approximately 10 days with temperatures less than 16°C, and over 5mm rainfall). Damaging infestations of RLEM typically occur 2-3 weeks after first sighting. Inspect susceptible crops from autumn to spring for mite presence and evidence of damage. RLEM often feeds in groups of 30 or more individuals. Monitoring is best conducted during cooler conditions in the morning, late afternoon, and on overcast days.

Recently, in 2016, resistance to synthetic pyrethroid and organophosphate insecticides was detected in RLEM in South Australia, around the Upper South East and Fleurieu Peninsula regions. To help manage resistance, use chemicals only when needed, and where required, rotate insecticide groups.

Sources of reports: Adam Hancock (Elders, Naracoorte), James Heffernan (Landmark), SARDI.

Red legged earth mite feeding aggregation (Photo: K. Perry)

Blue Oat Mite (Photo: C. Svilans)

Blue oat mites

Blue oat mites (BOM), *Penthaleus* spp., are similar in appearance to RLEM, but have a distinct orange-red patch on their back that is visible under a hand lens. BOM also typically feed singularly or in small groups, which can help differentiate it from RLEM. BOM has also been observed at **Minlaton** on Yorke Peninsula. BOM are best detected when feeding on leaves in the cooler conditions during the morning, late afternoon and overcast days. Monitor crops regularly for 3-5 weeks after sowing.

Bryobia mites

Bryobia mites, or clover mites, *Bryobia* spp., are relatively small mites up to 0.75mm in diameter with a flattened body, and long front legs up to 1.5 times their body length. *Bryobia* mites have been observed on vetch at **Mayfield**, and also at **Wirrabara** in the Mid North. They prefer warmer conditions and are often seen earlier in autumn than other species, but populations decline during winter. Inspect paddocks during warmer parts of the day, as *Bryobia* mites are difficult to detect in cooler, wetter conditions. Check the lower and upper surface of leaves for mites and characteristic feeding trails on leaves. Organophosphate insecticides are reported to give better control than synthetic pyrethroids. In recent seasons, there have been reports of *Bryobia* mites surviving treatments with the registered insecticide bifenthrin.

Source of reports: Steve Richmond (Landmark, Jamestown)

Bryobia mite (Photo: S. Richmond)

Balaustium mite

Balaustium mite

Balaustium mite, *Balaustium medicagoense*, are relatively large, slow-moving mites up to 2mm in length. They are often observed feeding at the tips of leaves. Inspect susceptible crops (e.g. canola, lupins, cereals) after sowing from autumn to spring for mite presence and evidence of damage. Balaustium mites can be difficult to find during dewy or wet conditions, and are best detected during warmer parts of the day. Balaustium mite is tolerant to several insecticide groups and often survives treatments targeting redlegged earth mites. Pyrinex Super is the only registered product for this species (and only in canola).

Lucerne flea

Lucerne flea, *Sminthurus viridis*, hatches following adequate rainfall. Activity has been observed in the Mid North on vetch and oats around Mannanarie, on establishing vetch at Huddleston (east of Crystal Brook) and on cereals north of Snowtown. It attacks a range of crops and pastures, causing characteristic ‘windowing’ of leaves. This pest is often more abundant in higher rainfall regions and areas with heavier soils but may occur anywhere. Lucerne flea often occurs in hotspots in paddocks.

Inspect crops immediately following crop emergence when plants are most susceptible. Where necessary, treatment of infested areas is best timed to occur three weeks after hatching in autumn allowing further hatching but before adults lay eggs. For this pest, avoid synthetic pyrethroids; organophosphates are recommended. Predatory mites, spiders and ground beetles all prey on Lucerne flea.

Source of reports: Steve Richmond (Landmark, Jamestown), Simon Honner (Honner Agribusiness).

Lucerne flea

Mandalotus weevil (Photo: K Perry)

Mandalotus weevil

Mandalotus weevils, *Mandalotus* spp., are a group of native Australian weevils. While their taxonomy is not fully resolved, at least ten species are known to attack crops in parts of south-eastern Australia. Areas at higher risk include regions with lighter soil types, particularly the Mallee, and paddocks or paddock areas where problems have previously occurred. In these areas, it is recommended to check canola crops for weevils or damage (missing seedlings, leaves and cotyledons) 1 week after crop emergence.

Adults are often difficult to find; search at night using a torch, or during the day in the top 1cm of soil at the base of weeds or damaged seedlings. Adults are 3-5mm long, and emerge during late autumn onto the soil surface to feed, mate and lay eggs. The most effective management strategies at present are to use agronomic practices to ensure rapid canola establishment, and early detection and intervention with a foliar insecticide registered in-crop to control adults as required. Once stems thicken at around the 2-4 leaf stage, seedlings can often outgrow attack from moderate adult densities.

Vegetable weevil

The vegetable weevil, *Listroderes difficilis*, is a sporadic pest with a wide distribution across Australia. Adults are 8mm long and have grey-brown bodies, a prominent weevil snout and a distinctive pale-coloured 'V' on their back. Larvae are legless, yellow to green in colour with an orange-brown head. Check emerging canola crops for damage along crop edges or near areas with host weeds, particularly capeweed. Adults and larvae feed on plant foliage at night during early winter.

Vegetable weevil larvae

Southern false wireworm

Larvae of the southern false wireworm, or vegetable beetle, *Gonocephalum sp.*, have been observed in a paddock near Kimba, Eyre Peninsula, after groups of crows in the paddock prompted a check. At this stage, infested patches will be flagged with a stake and monitored as the cereal crop emerges. Larvae are minor pests of winter cereals, attacking germinating seeds underground, while adults can attack emerging canola at ground level. Larvae are cream, yellow or tan with cylindrical elongate bodies. Adults are small, matte dark grey-black coloured beetles.

Source of reports: Troy Maitland (EP Ag `n` Fert)

Southern false wireworm larvae (Photo: T Maitland)

Adult southern false wireworm adult (Photo: A Hancock)

Bronzed field beetles (Photo: K. Perry)

Bronzed field beetle

Larvae of bronzed field beetle, *Adelium brevicorne*, are also active in autumn, and were recently sighted on the soil surface in paddocks at Stansbury on Yorke Peninsula. Larvae attack canola at ground level, causing seedling losses. Removal of surface trash is an effective management strategy for this pest in problem areas. Adults are shiny black beetles up to 11mm long with a slight bronzed colour,. Larvae are up to 12 mm in length, dark and shiny with two upturned spines at the tail end.

Earwigs, millipedes and slaters

Earwigs, millipedes and slaters are primarily organic matter feeders. In recent years, densities of these pests and reports of crop damage have increased, which is thought to be associated with increased moisture retention and organic carbon under stubble retention practices. Their management was discussed in PestFacts Issue 2, 2018. An update on slaters is provided in a separate article in the present issue.

Black Portuguese millipede

Slater

Juvenile earwig

Photos: K. Perry

PestFacts is a free service designed to keep growers and advisors informed about invertebrate pest issues in grain crops during the winter growing season.

PestFacts relies on your reports of pest and beneficial invertebrate activity in grain crops. Please contact us directly to report an observation or ask a question.

SARDI provides a **free insect diagnostic service** for subscribers. Send multiple specimens in a non-crushable container along with collection details to: PestFacts, GPO box 397, Adelaide SA 5001.

Follow us on Twitter @PestFactsSARDI

PestFacts map is an interactive tool that allows users to search and view historical pest reports from across south-eastern Australia. PestFacts is provided by the South Australian Research Development Institute (SARDI) Entomology Unit with the support of the Grains Research and Development Corporation.

Previous PestFacts Editions

Contact: Kym Perry
Phone: (08) 8303 9370
Mobile: 0421 788 357
kym.perry@sa.gov.au

PREMIUM FOOD AND WINE FROM OUR CLEAN ENVIRONMENT

SOUTH AUSTRALIA

GRDC GRAINS RESEARCH & DEVELOPMENT CORPORATION

Government of South Australia

SARDI

UPCOMING EVENTS

Pulse group meeting: UNFS will be running its next pulse check group meeting on 20th June. We will provide more details closer to the date.

UNFS stubble event: the GRDC-funded Stubble Initiative, which UNFS has been involved in since 2013, is coming to an end this year. Towards the end of June we are planning to hold a final event as a last hurrah for the project. We will provide more details soon.

GRDC Farm Business Update: 21st June in Maitland.

GRDC Grains Research Update: 8th August in Riverton.

UNFS

Upper North Farming Systems

Upper North Farming Systems

Contact Details

Strategic Board Members

Matt McCallum Chairman - Booleroo/Willowie
matthewmcag@bigpond.com
0438 895 167

Matt Nottle— Vice Chairman
matt.nottle@hotmail.com
0428 810 811

Barry Mudge Board Member
theoaks5@bigpond.com
0417 826 790

Joe Koch Financial Officer - Booleroo Centre
breezyhillag@outlook.com
0428 672 161

Jim Kuerschner Board Member - Orroroo/Black Rock
jimkuerschner@bigpond.com
0427 516 038

Chris Crouch Board Member
crouch_19@hotmail.com
0438 848 311

Ian Ellery Equipment Officer - Morchard
elleryprops@hotmail.com
0400 272 206

Matt Foulis Project Development Officer - Willowie/Wilmington
matt@northernag.com.au
0428 515 489

Patrick Redden Extension Review Officer
PRedden@ruraldirections.com
0400 036 568

Andrew Kitto Board Member and Gladstone Hub Rep - Gladstone
ajmkkitto@bigpond.com
0409 866 223

Kym Fromm - Public Officer - Non-Committee Member - Orroroo
fromms@bigpond.com
0409 495 783

Operations Committee Members

Booleroo
Tyson Christophersen
tysonchrisso7@gmail.com
0407 040 602

Industry Representatives
Michael Richards
michael.yp@bigpond.com
0427 547 052

Jamestown
Luke Clark
clarkforestview@bigpond.com
0429 840 564

Ladies on the Land
Jess Koch
Jessica.breezyhill@outlook.com
0419 982 125

Melrose
Andrew Walter
awalter@topcon.com
0428 356 511

Morchard/Orroroo/Pekina/ Black Rock
Gilmore Catford
catclub8@bigpond.com
0400 865 994

Nelshaby Hub
Leighton Johns
leightonjohns@hotmail.com
0400 804 876

Wilmington
John Carey
maidavale1@bigpond.com
0428 675 210

New Farmer Representatives
Matt Dennis
mattdennis96@outlook.com
0407 117 233

Nathan Crouch
nathan.crouch3@hotmail.com
0407 634 528

Executive Officer and Project Manager

Ruth Sommerville

Spalding - Part-time

(Currently on Maternity Leave)

E: unfs@outlook.com

M: 0401 042 223

Finance Officer

Mary Timms

Part-time

E: accounts@unfs.com.au

M: 0428 580 583

Project Officer

Hannah Mikajlo

Jamestown - Full-time

E: projects@unfs.com.au

M: 0449 676 024