



Issue No. 3, 28th May 2014

CONTENTS

Lucerne flea

Earth mites

Aphids active in crops

- Green peach aphid
- Cereal aphids
- Other aphids

Mandalotus weevils

Ryegrass mealybug

Rutherglen bug

Resources

Lucerne flea

Hatching of **Lucerne flea** (*Sminthurus viridus*) has commenced following recent soaking rainfall. The pest is active in canola at **Cleve** (Sarah Traeger), in numerous paddocks around **Blyth** and damaging wheat at **Nantawarra** (Simon Honner), attacking vetch pasture at **Mannanarie** (Steve Richmond), lentils at Crystal Brook (Iain Todd), barley at **Whitwater** (Patrick Redden), and cereals and other crops around upper **Yorke Peninsula** (Chris Crouch, Ian Koch). High numbers and damage have warranted treatment in some crops. We recommend re-checking emerging crops and spot treating areas warranting control as needed before they reach adult stage, 3-4 weeks after initial egg hatch. More information: [PestFacts Issue 2, 2014](#) (pdf).

Earth mites

Earth mites are now active across a wide range of districts including the Fleurieu Peninsula, the Mid-North and Eyre Peninsula.

Redlegged earth mite (RLEM) (*Halotydeus destructor*) are hatching in clover pastures at **Inman Valley, Parawa** (Greg Mitchell, FP Ag), and the **Strathalbyn** district (Ryan Bateman) on Fleurieu Peninsula, in turnip weed on road verges at **Hardwicke Bay**, Yorke Peninsula (Helen DeGraaf) and pressuring plants and weeds at Manoora in the Mid-North (Lauren Philp). Also in the Mid North, mixed populations of RLEM, *Balaustium* mite, and blue oat mite are reported in vetch at **Mannanarie**, and *Balaustium* in canola at **Gum Hill** (Steve Richmond). *Balaustium* mites are also present in canola in near the SA/Victoria border, north of the Dukes Highway.

Bryobia mites are widespread across several locations on Eyre Peninsula. Severe cupping and silvering of cotyledons occurred in patches throughout a canola paddock at **Mt. Hope** (Nigel Myers). They are also attacking canola crops at **Mt Damper** (Josh Hollitt), and lupins and medic northwest of **Cleve** (Sarah Traeger). Canola crops near **Cleve** that are treated with Cruiser Opti[®] seed treatment appear to be tolerating *Bryobia* pressure, reducing the

need to treat, while other crops are being treated with omethoate (Caleb Prime). *Bryobia* numbers are now on the decline with the onset of cool winter conditions. More information on mites: [PestFacts Issue 1, 2014](#) (pdf).

Aphids active in crops

The current extended warm spell after good rainfall has created ideal conditions for aphid activity, and moderate populations of cereal, canola and pulse aphids have been observed colonising crop edges.

○ Green peach aphids

Green peach aphid (GPA) (*Myzus persicae*) has colonised emerging canola crops at **Whyte-Yarcowie** (Steve Richmond), **Halbury** (Craig Davis), and north of **Spalding** (Joseph Batten, Michelle Bammann). Aphids are on the undersides of leaves, generally in low to moderate numbers below economically damaging levels despite some crops showing minor symptoms of stress (curling of leaf edges). GPA was confirmed from lupin seedlings at **Strathalbyn**, where moderate numbers are being found in lupin crops in the general area, causing minor curling of leaf tips (Ryan Bateman). The presence of parasitised aphid ‘mummies’ in the samples indicates that beneficial parasitoid wasps have also colonised crops early this season, a good sign for potential biological control in spring.

In most instances it will not be necessary to control GPA to prevent direct feeding damage. Healthy plants growing in warm soil with adequate moisture should outgrow the effects of aphid attack. There are no threshold guidelines for aphids for the prevention of virus. The literature suggests that foliar sprays following aphid detection are not effective in reducing spread of persistent viruses, as viruses can be transmitted by few individuals. Seed treatments are the most effective insecticide option for reducing virus spread.

Helen DeGraaf (SARDI) is still collecting GPA populations for resistance testing and would appreciate being contacted with any sightings on (08) 8303 9543 or helen.degraaf@sa.gov.au. More information: [PestFacts Issue 2, 2014](#).

○ Cereal aphids

Cereal aphids are active in crops around **upper Yorke Peninsula** (Chris Crouch), and moderate infestations of corn aphid (*Rhopalosiphum maidis*) are reported in the edges of wheat and barley crops around **Walker Flat** on the Murray Flats (Craig John).

Cereal aphids are important vectors of Barley Yellow Dwarf Virus (BYDV) which can be detrimental to crops, particularly when infection occurs early in the season. The risk of virus is typically increased in higher rainfall regions (>500mm p.a.), following good pre-season rainfall, or when virus was an issue the previous spring. In those circumstances, taking steps to reduce early aphid attack and the risk of virus spread, such as seed treatments, may be justified. Note that the presence of aphids in crops does not necessarily mean crops will become infected with virus.

In 2013, high populations of cereal aphids developed in winter cereal crops across several regions of South Australia following a warm autumn which led to early season aphid infestation. Some unsprayed crops are likely to have suffered yield losses. Given similar conditions this season, we recommend monitoring aphid numbers in cereal crops during late winter to assess whether an early treatment is needed to prevent escalation of aphid populations. Decisions should be based on aphid population trends, forecast weather and levels of beneficial activity. More information on cereal aphids and BYDV: [Cereal aphids - DAFWA](#), [Barley Yellow Dwarf Virus - GRDC](#) (pdf), [Managing BYDV - DAFWA](#).

○ Other aphids

Canola aphids are colonising canola crop edges at **Bowhill**, SA Mallee (Geoff Bond), turnip aphid (*Lipaphis pseudobrassicae*) at **Mt. Cooper**, Eyre Peninsula (Josh Hollitt), and **cabbage aphid** (*Brevicoryne brassicae*) on volunteer canola around **Cummins** district (Nigel Myers). These species are unlikely to require control at this time of the year.

Cowpea aphid (*Aphis craccivora*) is reported in pulse crops at **Warrambo**, Eyre Peninsula (Josh Hollitt), in heavy infestations in vetch pastures at **Whitwater** (Patrick Redden) and around **Kadina**, Yorke Peninsula (Chris Davey). Cowpea aphid attacks a range of pulses including lupins, faba beans, lentils and vetch as well as other legumes. All stages of the aphid are black with black and white legs.

Mandalotus weevils

Mandalotus weevils (*Mandalotus*, multiple spp.) are emerging from the soil and attacking emerging canola crops in a number of regions. In the SA Mallee, *Mandalotus* is causing some ringbarking of 3-4 leaf canola crops at **Bowhill** (Geoff Bond) despite bifenthrin applied at sowing. Significant damage has reportedly occurred in a number of germinating canola crops around **Karoonda** (Geoff Bond), in some instances where growing of canola is relatively new. It is likely that weevil populations have been resident in these paddocks for a number of years feeding on less susceptible crops and pastures. Minor damage is occurring in seedling canola at **Balgowan**, Yorke Peninsula (Sam Holmes) and **Mt. Hope**, Eyre Peninsula (Nigel Myers).

In Western Victoria, *Mandalotus* was confirmed from a canola crop between **Nhill** and **Kaniva** (Adam Pearce). Damage (ring-barking and lopping of stems and cotyledons) was mainly confined to the area with sandy loam soil on the paddock perimeter. Imidacloprid seed treatment and applications of alpha-cypermethrin and chlorpyrifos at sowing appeared to afford little protection from *Mandalotus* attack, consistent with our research.

Biology: *Mandalotus* is a large genus of native Australian weevils. More than ten species have damaged crops in South-eastern Australia since the late 1990s, and several of these appear to be undescribed. Recent SARDI research showed that these weevils have an annual lifecycle. Adults emerge from the soil from mid-late April and begin feeding, mating and laying eggs. Emergence continues until late June or early July when the entire population is present on the soil surface. Larvae feed in the soil profile through winter, spring and early summer, probably on plant roots. After pupation, newly emerged adults over-summer deep in the soil profile (at least 12-40cm deep) before emerging in autumn.

Control: The weevil's mostly subterranean lifecycle limits management options. There are no practical options during the non-crop period. Chemical control of adults on the soil surface in autumn and winter is currently the most effective option. Our research shows that fipronil seed treatments provide some control of adults but do not protect seedlings against high weevil populations. Upper label rates of bifenthrin applied at sowing for redlegged earth mite provide 50-70% control of surface active adults. Bare earth treatments of alpha-cypermethrin or chlorpyrifos were not effective (0-20% control) in our trials. We do not recommend blanket sprays of bifenthrin as these exacerbate problems with lucerne flea and in some cases *Bryobia* mite due to removal of natural enemies and competition from other species. For this pest, we recommend targeting pre-emergence pesticide strategies to higher risk paddocks and areas of paddocks where there is a history of problems. After sowing, be prepared to intervene immediately with insecticide if unacceptable levels of *Mandalotus* damage are occurring, as damage occurs rapidly. Canola is highly susceptible until the main stem thickens (approx. 4-leaf stage).

Monitoring and identification: Mandalotus problems often occur in the same areas of paddocks across seasons. Use paddock history to identify areas at risk. From late April, check under weeds for adults in the top 1cm of soil at the base of plants. We recommend carefully checking canola crops at one week after emergence, when damage is usually first noticed. Mandalotus weevils are 3-5mm long, dull brown and resemble a cod of dirt. They have rows of thick, paddle-shaped hairs on their backs. More information and images: [Mandalotus weevil - SARDI](#) (pdf).

Ryegrass mealybug on Yorke Peninsula

A grass mealybug species, suspected to be ryegrass mealybug (*Phenacoccus graminicola*), is reported damaging barley crops north of **Ardrossan**, Yorke Peninsula. Ian Koch reported that mealybug feeding had destroyed 90% of a 40 hectare paddock, requiring re-sow. A similar situation was reported in the region in 2010 (see [PestFacts Issue 7, 2010](#)). At the time, Ian reported that dimethoate treatment was unsuccessful but chlorpyrifos provided reasonable control. Chris Crouch (YP Ag) also reported patchy damage across a 160 hectare barley paddock north of Ardrossan, where volunteer cereal had been present prior to sowing.

Historically, mealybug infestations have occurred infrequently in cereal crops in South Australia. Barley appears most susceptible. Infestations in 2010 and this year have been associated with paddocks with volunteer cereals over late summer and autumn, good pre-season rainfall and humid weather. Little is known about the biology of this insect.

Rutherglen bug

Rutherglen bug (*Nysius vinitor*) has been reported damaging 4-5 node vetch pasture at **Mannanarie** (Steve Richmond) having moved in from an adjacent volunteer canola paddock. Rutherglen bug is a highly opportunistic pest that breeds rapidly under favourable conditions. Damage can resemble that from aphid feeding. Targeted or border spraying affected areas (including adjacent weeds) is often sufficient. More information: [Rutherglen bug - Qld DAFF](#) and [Plant bugs - NSW DPI](#) (pdf).

Resources

- ❖ **Insect diagnostics:** SARDI Entomology offers an insect diagnostic service for PestFacts subscribers. Please send at least two intact specimens in a non-crushable container along with host food, collection details, description of crop damage and contact details, to: NIPI diagnostics SARDI Entomology Unit GPO Box 397, Adelaide SA 5001.
 - ❖ **PestFacts map** is a new interactive service available on the SARDI website at www.sardi.sa.gov.au/pestfacts-map. The map allows users to search and view all historical pest reports across South Australia and Western Victoria. Search by crop, pest or beneficial invertebrate, and time period of interest. The map will be updated with each issue to include new reports.
 - ❖ **Snail and Slug blog** <http://asnugblog.wordpress.com/2014/03/31/17/>
 - ❖ **Best Bet IPM Strategies** <http://ipmworkshops.com.au/resources/best-bet-ipm-strategies/> for advice on decision making for insect management in grain crops.
 - ❖ **IPM guidelines for grains.** The new national 'IPM Guidelines for Grains' website provides a comprehensive collection of tools and strategies to manage pests in grain cropping systems across Australia. **The website can be found at www.ipmguidelinesforgrains.com.au.**
- [Previous issues of PestFacts](#) • • [PestFacts map](#) • [Images of insects and damage](#) • [I SPY manual](#) • [Crop mites: back pocket guide](#) • [Crop weevils: back pocket guide](#) •

PestFacts is a *FREE* service providing updates throughout the growing season on an “as-needed” basis of the latest information on invertebrate pests in broad acre crops in South Australia and western Victoria. It is supported by GRDC’s National Invertebrate Pest Initiative (NIPI). All information is sent by email to subscribers. Please email a coordinator to be placed on the circulation list. Your support and feedback are essential to the success of PestFacts.

Disclaimer: The material provided in this service is based on the best available information at the time of publishing. The South Australian Research and Development Institute (SARDI) and the Grains Research and Development Corporation (GRDC) makes no warranty of any kind (expressed or implied) concerning the information presented in this email service. All liability or responsibility to any person using this information/advice is expressly disclaimed by SARDI and GRDC, their employees and agents. Products may be identified by proprietary or trade names to help readers identify particular types of products but this is not, and is not intended to be, an endorsement or recommendation of any product or manufacturer referred to. Other products may perform as well or better than those specifically referred to. **Permission of the publisher is required for articles reproduced.** © SARDI 2014