



Issue No. 9, 11th August 2014

CONTENTS

Update on green peach aphid and beet western yellows virus

Other aphids

Native budworm

Blackheaded pasture cockchafer

Other pest activity

Resources

Update on green peach aphid and beet western yellows virus

Testing of crop samples for Beet Western Yellows Virus (BWYV) by Vic DEPI virologists is continuing. The latest results and information can be found on the [eXtension website](#).

Cold and wet winter conditions have reduced aphid populations and activity in many districts. Heavy frosts and/or rainfall will have caused some mortality. Aphid population growth is expected to increase when temperatures rise with the approach of spring.

We recommend that growers and agronomists continue to monitor green peach aphid populations closely. Check for the build-up of numbers and the production of significant numbers of winged aphids in population, which signal that flights may be about to occur. As previously advised in recent editions of PestFacts, we recommend continuing to use sticky traps to monitor for evidence of increased aphid flight activity in crops. In higher risk areas, be prepared to protect susceptible crops using appropriate insecticides. Further information on monitoring for aphids, including sourcing sticky traps, can be found in [PestFacts Issue 7](#) (pdf).

cesar are currently testing a number of GPA populations from various locations in South-eastern Australia for resistance to a range of insecticides. See the [Latest resistance testing results for South-eastern Australia](#). In South Australia, seven populations from Yorke Peninsula, Lower North, Mid North and the SA Mallee have shown high levels of resistance to synthetic pyrethroid organophosphate, and carbamate insecticides. No evidence of resistance to Transform Insecticide has yet been detected.

Note on the use of Transform™ insecticide: To help minimise selection for resistance in GPA to this chemistry, and thereby prolong its effective life, the manufacturer is recommending that Transform Insecticide be used conservatively (only where warranted). Over-use of this or any single product creates high selection pressure, which could lead to resistance and the potential loss of an important management tool. The manufacturer is recommending that Transform use should be restricted to a single application per crop per year, despite provisions on the product label for up to two applications.

Transform is expected to provide protection for between 2 and 3 weeks. Note that where crops are well established and green peach aphid is present on the underside of lower leaves, sub-optimal spray coverage could limit spray effectiveness. To control other canola aphids, such as cabbage aphid and turnip aphid, carbamates applied under optimal conditions (as per label directions) are expected to provide good control, and conserve

important aphid natural enemies such as hoverflies, lacewings, ladybird beetles and parasitic wasps. To assist with correct identification of aphids: [Aphid identification](#)

Update on the risk to pulse crops, and control options

Pulse crops may also be at risk of BWYV infection from winged virus-carrying GPA transferring BWYV into these crops in spring. Chickpeas, lentils, faba beans and field peas are all susceptible to BWYV, however lupins are not affected. The latest information from plant virologists is that cowpea aphid (*Aphis craccivora*) does not transmit BWYV. Therefore, aphid control strategies to minimise the spread of virus should focus on GPA. SARDI pathologist Dr. Jenny Davidson says not to assume that virus symptoms are caused by BWYV, as a number of viruses are found in pulses. Search for aphids and ensure the correct identification. Cowpea aphid is common in faba beans earlier in the season.

APVMA emergency use permit: The Australian Pesticides and Veterinary Medicines Authority (APVMA) have now approved an emergency use permit ([PER14981](#)) for the use of pirimicarb to control GPA and cowpea aphid in winter pulses, including faba bean, chickpea, lentil and field pea.

Note that Transform insecticide is *not* registered in pulse crops. For more information on aphid monitoring, management, and insecticide options, refer to More information: [PestFacts Issue 7, 2014](#) (pdf).

Minimise the risk of pesticide exposure to bees

As crops are (or moving into) flowering, growers should be considering the effects of insecticide applications on foraging bees.

Bees provide a valuable service to agriculture by improving pollination and increasing crop yields, as well as being an important primary industry in the production of honey. They are vulnerable to insecticides when foraging on treated crops or other flowering plants (i.e. nearby weeds), while accessing water that contains chemical residues, from direct contact while present in or flying through a target area, and from spray drift directly onto bees or hives. Bees taking chemicals back to the hive can result in mass bee deaths, devastation of entire hives, and contamination of the honey.

Crop owners and bee keepers are reminded that communication is a key to keeping each other informed of activities and developing a mutually acceptable chemical program. Bee keepers should advise all adjoining crop owners before placing hives, and leave adequate eye-catching signage and contact details in the area. Growers should avoid applying insecticides that are toxic to bees while bees are foraging. If an urgent spray is needed, growers can take a number of precautions to minimise the risks of bee poisoning:

- Advise bee keepers with hives in the area that you intend to spray, giving as much notice as possible (at least 48 hours) to allow them time to close down or move hives for the risk period.
- Choose chemicals that are less toxic to bees - carefully read all product labels (particularly Protection of Livestock statements) to check the toxicity to bees.
- Avoid applying insecticides at times when bees are foraging. Consider spraying in the very early morning (low hazard/short residual chemicals only) or in late evening after bees have stopped foraging.
- Take care to avoid spray drift and contamination of water supplies.

Further information: [Canola insecticides and honeybees - grower awareness, PIRSA](#) (pdf) , [Canola insecticides and honeybees - apiarist awareness, PIRSA](#) (pdf) and [Honeybee insecticide poisoning, RIRDC](#) (pdf).

Information sessions: SARDI scientists Jenny Davidson (Pathology) and Greg Baker (Entomology) have conducted several information sessions in South Australia on the GPA and BWYV issue. The next session will be held at **Eudunda, 21st August, 8:30 am at the Eudunda RSL Hall**. If you have not had the opportunity to attend an information session the presentation is available on-line: [GPA/BWYV presentation](#) (ppt).

Other aphids

Bluegreen aphid (*Acyrtosiphon kondoi*) was confirmed in lentils at **Mallala**, with winged aphids present and aphid mummies indicating approximately 40% parasitisation (Michael Brougham, Elders). Bluegreen aphids were observed in sticky traps within canola near **Strathalbyn** on Fleurieu Peninsula (Orville Hildebrand, FPAG), and in low numbers on lentils at **Agery**, Yorke Peninsula (Stephan Schmitt, AG Consulting).

Cereal aphids appear to be increasing on Eyre Peninsula. High numbers were causing direct feeding damage to flowering heads of wheat, and 1-2 up to 30-50 oat aphids per plant present in tillering cereals near **Kimba** (Hayden Whitwell, Agsave Merchandise). Numbers are also increasing on Lower Eyre Peninsula, and some growers will apply pirimicarb along with planned fungicide applications (Nigel Myers, Cummins Ag). More information: [PestFacts Issue 5, 2014](#) (pdf).

Native budworm

Native budworm (*Helicoverpa punctigera*) larvae 10 mm in length caused light foliar damage to early flowering pea crops at **Wandearah** in the Mid North (Iain Tod, Kerin Agencies). On Eyre Peninsula, larvae were also confirmed from a wheat crop near **Buckleboo** (Amy Murray, Agsave Merchandise), and moths have been observed in crops between **Cleve** and **Minippa** (Craig James, Advanced Agricultural Services), on Eyre Peninsula.

Monitoring for native budworm larvae should commence in pulse crops entering the susceptible flowering and podding stages. Larvae grow to 40mm in length and have bumpy skin with sparse stiff black hairs. They usually have dark strips along the body and may show substantial colour variation. The last (8th) abdominal segment is angled sharply downward. More information on native budworm thresholds and management: [Native budworm, DEPI Vic](#) and [Budworm in canola and pulse crops, DAFWA](#).

Blackheaded pasture cockchafer

Blackheaded pasture cockchafer (*Acrossidius tasmaniae*) was found in several paddocks in the **Warrooka-Yorketown** area on Yorke Peninsula causing small bare patches in both wheat and barley crops and was also found in pastures. All wheat and barley crops affected were pasture paddocks last year. High numbers of larvae were found in the soil and crops were to be treated (Craig Wissell, Team Wiss).

Black-headed pasture cockchafers are important pests of cereals and pastures in parts of south-eastern Australia. They are usually more problematic in higher rainfall districts. Feeding causes loss of plants and the appearance of bare patches during autumn to late winter. Larvae emerge onto the soil surface at night to feed on foliage, typically in response to rainfall and heavy dews. Other cockchafer species (e.g. redheaded and yellow-headed cockchafers) are primarily root feeders and remain underground.

Black-headed cockchafer larvae are 'C' shaped and grow up to 20mm long. They have a creamy grey body with a black-brown head capsule. The presence of holes and soil mounds

at tunnel entrances on the soil surface can help identify this cockchafer species. Check for cockchafers by digging in the soil to a depth of 10-20cm in affected areas. Adults are dark brown to black scarab beetles, approximately 10-12mm long. They emerge in mid-late summer and disperse by undertaking flights on warm evenings. Females prefer to lay eggs in areas of bare soil. Adults are capable of long distance dispersal in summer, and therefore paddocks without a history of problems can still be at risk.

BHPC can be controlled with a surface application of a registered insecticide. Check product labels, rates and grazing withholding periods before use. Other cockchafer species cannot be effectively controlled with insecticides, therefore correct identification is important. Cultivation at sowing can kill grubs directly and expose them to attack by natural enemies such as insectivorous birds. If cockchafers cause continual problems, consider sowing tolerant pasture species such as phalaris and cocksfoot. Avoid overgrazing during summer and maintain short, open pastures with a high clover content to help lessen their incidence. More information: [Blackheaded cockchafer, NIPI](#)

Other pest activity

o More sawfly larvae

Sawfly larvae (family: Pergidae) have been reported at up to 10 larvae per 30 cm² causing widespread damage to clover east of **Robertstown** in the Mid North. High numbers of glossy shield bug nymphs (*Cermatulus nasalis*) were feeding on the larvae (David Pratt, Ag Biz Consulting). Further information: [PestFacts Issue 8, 2014](#) (pdf).

o Diamondback moth in canola

Diamondback moth (DBM) (*Plutella xylostella*) is being consistently found in canola crops throughout Yorke Peninsula (Craig Wissell, Team Wiss), sweep netted in low numbers at **Agery** (Stephan Schmitt, AG Consulting), and larvae were confirmed causing light damage to canola at **Rudall** on Eyre Peninsula (Cindy Martin, Cleve Rural Traders) and at levels of 10 larvae per 10 sweeps in the **Cowell-Cleve** area and across to **Minnipa** (Craig James, Advanced Agricultural Services). More information: [PestFacts Issue 7, 2014](#) (pdf).

o Earth mites and lucerne flea

Redlegged earth mites have been reported to be in high numbers in crops across the north of Eyre Peninsula from **Cleve** to **Minippa** (Craig James, Advanced Agricultural Services), and low numbers of blue oat mite were found in a sample from **Agery** on Yorke Peninsula which also contained very high numbers of lucerne flea (Stephan Schmitt, AG Consulting). Further information: [PestFacts Issue 4, 2014](#) (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.

- ❖ **'Best Bet' IPM strategies** for major pests of grains crops are available in easy-to-use tables, downloadable from the [IPM workshops website](#).
- ❖ **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.
- [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*