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Aphids damage continues

○ Green peach aphid

Damage from high populations of **green peach aphid** (GPA) (*Myzus persicae*) in canola crops has reportedly continued to increase in a number of regions of South Australia.

Across the Mid and Lower North, GPA has been found in canola paddocks associated with severe stunting of plants, at **Eudunda** (Andrew Pfitzner, Landmark), **Riverton** (Andrew Parkinson, Landmark), (Mike Faulkner, Agrilink Consultants) and in the SA Mallee at **Karoonda** (Orville Hildebrand FPAG). These aphids have caused unacceptable levels of damage to 4-6 leaf canola at **Kapunda**, and are causing concern at **Koonunga Hill** and north of **Kapunda** (Peter Wendt, Farmer Johns). Reports indicated that where stunting of plants has occurred, crops sown into standing stubble appeared less affected than those sown where stubble had been knocked down or incorporated, however relative aphid numbers in these areas have not been assessed. In many instances, the levels of crop damage appear more severe than would be expected from aphid feeding alone, and possible interactions with virus, potentially transmitted by GPA, is being investigated.

Testing for Beet Western Yellows Virus (BWYV) is currently being carried out on plant samples from damaged canola at Eudunda, Riverton and Karoonda, by VIC DEPI (Frank Henry, Horsham). Initial results suggest that severe stunting in canola is associated with high rates of BWYV infection. This plant virus is hosted by broad-leaf weeds including marshmallow, fleabane, blackberry nightshade, and various thistles and brassica weeds. Marshmallow is particularly widespread this season. Over summer and autumn, these weeds and volunteer plants provide a green bridge that provides a potential reservoir of both GPA and BWYV. After crop emergence, aphids may colonise crops and, if infected with BWYV, may transmit the virus to healthy plants during feeding. BWYV is persistently transmitted by aphids, which means that once an aphid has acquired the virus by feeding on infected plants, it continues to transmit the virus for the duration of its life.

On Eyre Peninsula, GPA was found on 6-7 leaf canola (Chris Pearce, Elders) and in many early sown canola crops now at bud formation (Denis Pedler, Carrs' Seeds). On the Murray Flats, a canola crop infested with GPA was treated with dimethoate (Craig Johns, Coopers Farm Supplies). On upper

Yorke Peninsula, 50% of a 45 hectare 6 leaf canola crop was lost to GPA damage at **Arthurton**, with mature leaves destroyed and the growing tips deformed. Surprisingly, a neighbouring crop of canola showed no signs of aphid attack (Paul Ackland, Landmark).

Transform™ insecticide has been reported as the only reliable control option for GPA. Treatments of dimethoate have not been effective, which may reflect known resistance in Australian GPA to organophosphates and other chemical groups. More information: [PestFacts Issue 4, 2014](#) (pdf).

○ Cowpea aphid

In the Mid North, [cowpea aphid](#) (*Aphis craccivora*) were confirmed on peas at **Port Davis** (Iain Tod, Kerin Agencies). Higher numbers were present on plants suspected of having suffered attack by redlegged earth mite. Significant damage to around 20% of the crop resulted in the decision to spray. More information: [PestFacts Issue 4, 2014](#) (pdf).

○ Spotted alfalfa aphid

An aphid sample from Eyre Peninsula was confirmed as a mixed population of spotted alfalfa aphid (*Therioaphis trifolii*) and cowpea aphid (*Aphis craccivora*). High aphid numbers had caused extensive damage to medic pasture, with spotted alfalfa aphid the predominant species. Large numbers of ladybird adults and larvae, which are voracious aphid predators, were present but appeared to be having little impact on the aphid population (Hayden Whitwell, Agsave).

○ Cereal aphids

Cereal aphids are active in cereal crops on the Murray Flats, with reports from **Mt. Pleasant** (Craig Johns, Coopers Farm Supplies), **Sedan** and **Cambrai** (Peter Wendt, Farmer Johns), and corn aphid (*Rhopalosiphum maidis*) with moderate parasitism at **Walker Flat** and **Mannum** (Craig Johns, Coopers Farm Supplies). Aphids were reportedly increasing in cereal crops on Yorke Peninsula but numbers will be re-monitored following a recent 20 mm rain event (Craig Wissell, Team Wiss). More information on cereal aphids and BYDV: [PestFacts Issue 4, 2014](#) (pdf).

○ Possible virulent bluegreen aphid biotype

Bluegreen aphid (BGA) (*Acyrtosiphon kondoi*) has been reported attacking medic in a trial within a cereal paddock at **Karoonda**. Approximately 50% of the medic was beyond recovery with the remainder infested and under pressure. It is suspected that an apparent breakdown of resistance to BGA in resistant cultivars of medic may be due to the population being of a more pathogenic BGA biotype (SARDI).

Adult BGA are 3 mm long and may have wings. From grey-green to blue-green the siphuncles are long and extend beyond the base of the abdomen. Normally they are found on the upper part of the plant clustering on growing tips. BGA attack a range of crops including lupins, lucerne, annual medics, vetch and subterranean clover pastures. The aphid can vector plant viruses and in high numbers can cause sooty mould.

Monitoring should begin in autumn using visual searching, sweep netting or yellow sticky traps. In disease-prone areas monitoring is critical in pulses for management of viruses. Check at least 5 points over the paddock visually searching for aphids on a minimum of 20 plants at each point and count the number of infested plants. Control measures to avoid yield loss should be considered if >20% of plants are infested with aphids.

SARDI Livestock and farming systems group would appreciate any reports of BGA causing similar problems in medics and lucerne this season, especially in resistant varieties. Please send your observations to PestFacts. More information: [Aphids and viruses, GRDC](#) (pdf).

Wheat curl mite

Wheat curl mite (WCM) (*Aceria tosichella*) has been reported in significant levels affecting crops on Eyre Peninsula, from **Streaky Bay**, through **Warramboo** to **Cleve** and down to **Cummins** (reported in SARDI Crop Watch).

WCM colonises wheat and transmits wheat streak mosaic virus (WSMV) after feeding on infested plants. Mild summers with rain encourage good growth of volunteer wheat and grasses, creating a 'green bridge' that favours mite survival and virus build up. Crops most affected are those where volunteer wheat was retained for grazing following summer rains. To break the cycle, volunteer plants should be managed, not just within individual paddocks but ideally throughout the cropping landscape. Chemical control is ineffective as the mites are protected inside curled leaves. If the virus is present and WNC numbers are high, serious outbreaks of WSMV can occur. More information on WSMV: [Crop Watch, Issue 3 2014](#) (pdf), and on WCM: [Wheat Curl Mite, GRDC](#) (pdf).

More ryegrass mealybug

We have received more reports of ryegrass mealybug (*Phenacoccus graminicola*) damaging cereals on Yorke Peninsula. Mealybugs were reported in very high numbers on wheat sown into bean stubble, and also sheltering within the bean stubble, at **Minlaton** (Craig Wissell, Team Wiss). In the Mid North, mealybugs were confirmed infesting patches of a 30 hectare barley crop, and also causing concern at **Snowtown** (Peter Cousins, Peter Cousins Consulting). More information: [PestFacts Issue 4, 2014](#) (pdf).

Pasture tunnel moth

Pasture tunnel moth (*Philobota productella*) was confirmed causing patchy damage to a 2-leaf wheat crop near **Eudunda** in the Lower North (Jeff Braun, Agrilink Agricultural Consultants). The affected patches were treated with a synthetic pyrethroid which should provide good control.

Pasture tunnel moth is a pest of cereals, mainly in higher rainfall districts, and is often found in association with black-headed pasture cockchafers. Most damage from this pest occurs during July and August, and the risk is higher in paddocks previously in pasture. We recommend inspecting cereal paddocks for signs of damage. Larvae construct silk-lined tunnels that protrude above the soil surface, often forming 'soil chimneys' on the soil surface which are characteristic of this pest. These chimneys can be washed away after rainfall. Larvae are slender, (2-3mm wide), grey in colour, up to 35 mm long with a black head with long sparse hairs. They emerge from tunnels at night to feed on nearby plant stems or leaves at ground level in crops or pasture. There are no thresholds established for cereal crops, but over 70 larvae per m² are considered to be damaging densities in pastures. If treatment is warranted, a standard insecticide at similar rates for black-headed cockchafers is usually effective.

Pasture webworm

In the Mid North, pasture webworm (*Hednota* spp.) larvae were lopping off cereal plants and dragging leaves into their tunnels (Geoff Schnaars, NTS Rural). Like almost all cases of pasture webworm damage in cereals, this paddock had been in pasture for the previous two years. Pasture webworm may attack establishing crops of wheat, barley and ryegrass. They feed at

night and hide in web-lined tunnels beneath the ground by day. They typically feed on plant material at the soil surface or within their tunnels in the soil. Larvae are usually light to dark brown in colour, growing to about 18 mm long with a smooth body and shiny dark heads. Check cereal paddocks previously in pasture. Search at night for larval feeding. Alternatively, during the day, careful digging at the base of recently damaged plants may expose web-lined tunnels containing larvae. Look for leaves protruding from tunnels in the soil. Crops sown into paddocks where fine, dry grasses were prevalent during autumn are most at risk. More information: [Pasture webworm, SARDI](#) (pdf) and [Ute Guides, Pasture Webworm, GRDC](#).

Cutworms

Various species of cutworms have been found in low to moderate densities damaging cereal crops on Eyre Peninsula and the Mid North. Pink cutworm (*Agrotis munda*) and white-tailed black cutworm (*Proteuxoa atrisquamata*) were confirmed from a canola crop near **Cleve** (Chris Pearce, Elders). Cutworms have also required treatment in large areas from **Elliston to Wirrulla** (Andy Bates, Bates Agricultural Consulting). In the Mid North, cutworms have caused damage over large areas to late sown barley crops at **Gladstone**, where some crops may need re-sowing (Darryn Schilling, YPAG Agriservices). More information on cutworms: [PestFacts Issue 7, 2013](#) (pdf), [Cutworm, DAFWA](#), and [Diagnosing cutworm in canola, DAFWA](#).

Other pest activity

o Grass antherid

[Grass antherid](#) (*Pterolocera* spp.) is present in crops on Eyre Peninsula (Andy Bates, Bates Agricultural Consulting). Grass antherid is a minor pest of pastures and cereals. These moths occur in South Australia, mainly on the West Coast of Eyre Peninsula, and the larvae generally cause only minor damage. They have one generation per year and usually build up in grassland or pastures before moving into and damaging the edges of cereal crops in late winter and early spring. Larvae are brown with black and yellow markings, covered with tufts of stout hairs, and can grow up to 50 mm in length.

o Diamondback moth in canola

Diamondback moth is still active in canola crops. In the SA Mallee, (DBM) (*Plutella xylostella*), larval feeding in 6-8 leaf canola south of Loxton had caused some holes in leaves but did not warrant treatment (Michael Collins, Elders). Larvae are damaging newly formed buds in canola in the Mid North (Craig Davis, AW Vater & Co), and present in crops around **Malalla** and **Wakefield** (Michael Brougham, Elders). Larvae have also caused minor damage to canola on Eyre Peninsula (Denis Pedler, Carrs' Seeds). We expect that the recent heavy rainfall experienced across many districts in South Australia will have reduced larval populations in canola crops. More 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.

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