



# PESTFACTS

## South-Eastern



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PestFacts is a free service designed to keep you informed about invertebrate pest-related issues - and solutions - as they emerge during the winter growing season. The service is supported by the GRDC's National Invertebrate Pest Initiative, with a focus on pests of broad-acre grain crops in south-eastern Australia.

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## WHITEFRINGED WEEVILS

Agronomist, Nathan McIntosh (GrainCorp), has reported weevils attacking an established lucerne paddock near Parkes in the Central West Slopes and Plains district of New South Wales. Based on the description of the weevils and damage being caused, it is likely that they are whitefringed weevils (*Naupactus leucoloma*), a common pest of lucerne in many parts of southern Australia. The weevils are present in high numbers (10-20 per plant) and have destroyed approximately 40 acres of a 50-acre paddock. The adults have been chewing the lucerne crowns and the larvae are attacking the plant roots. Given the severity of the infestation, some form of intervention is necessary and control options are now being considered. There are currently no insecticides registered to control whitefringed weevils in lucerne.

District agronomist, Phil Bowden (NSW DPI), has also reported observing whitefringed weevils in several lucerne paddocks around Cootamundra in the South West Slopes district of New South Wales. Phil says they can be easily found at the tops of stems chewing on leaves, however the lucerne is well established and growing quite vigorously after recent rainfall, which, combined with periodic grazing, appears to be enough to avoid significant damage. Whitefringed weevils were also identified in samples from lucerne paddocks in similar regions of New South Wales in March and April this year.

The larvae of whitefringed weevils are fat, legless grubs that live in the soil and feed predominantly on the tap-roots of plants, generally from late autumn to early summer. They have a yellowish body with a light-brown head and can be up to 13 mm long. Larvae can cause significant damage to plant root systems, reducing the productivity of crop plants. Crops likely to be attacked include lucerne, pastures and some pulses.



Adult whitefringed weevils grow to about 15 mm long and have a short, downward pointing snout. They are grey-brown in colour with a characteristic white stripe running along either side of the body. Adults emerge from the soil in summer and feed on plant foliage producing characteristic notched or saw-toothed edges. Damage to plants caused by adult weevils is usually minor compared with that caused by larvae.

Click [here](#) for images of whitefringed weevils.

## APHIDS AND BYDV

District agronomist, Phil Bowden (NSW DPI), reports finding oat aphids (*Rhopalosiphum padi*) and corn aphids (*Rhopalosiphum maidis*) on several grass weeds around Cootamundra, in the South West slopes district of New South Wales. Although they have not yet been found on any crops, this should serve as a reminder to be on the lookout for aphids as they may move into establishing crops from surrounding weeds and grasses. Aphids that arrive in crops in autumn and persist in low numbers over winter can lead to large, damaging populations that peak in late winter and early spring. Importantly, aphids can also transmit several important plant viruses.

Both oat aphids and corn aphids are vectors of [barley yellow dwarf virus](#) (BYDV), one of the most important diseases of cereals worldwide. BYDV can cause significant losses in cereal crops, particularly when transmission occurs to young plants. The risk of BYDV transmission increases when summer rainfall results in the growth of weeds and grasses that act as alternative host plants for aphids. Effectively controlling these weeds is a good way to prevent the build up of aphid numbers as it removes the 'green-bridge' between cropping seasons. If chemical control of aphids is required in establishing crops, selective insecticides (such as pirimicarb) are available, which are aphid specific and less harmful to other invertebrates. In some cases a border spray can be effective in preventing aphid numbers building-up in crops.

Insecticide seed dressings are another option that provides protection to young seedlings from attack by aphids, as well as several other important establishment pests (eg. earth mites). Key Account Manager, Ken Blowers (Bayer CropScience), says it is important to ensure seed has been professionally treated so the maximum benefits are gained. Seed treatment equipment needs to be calibrated correctly to achieve proper grain coverage across each and every seed. Studies in 2008 found that some seed treatments ranged between 50% and 120% of the label rates across a single batch of seed. This inconsistency will result in variable performance in the field. Ken says this is important with seed treatment insecticides (and fungicides) where specific amounts of product are required on each and every seed.

Corn aphids and oat aphids (sometimes called 'cereal aphids') are similar in appearance but can be distinguished in the field relatively easily. Corn aphids have an oblong shaped, light green to olive coloured body with two dark areas on the abdomen near the base of the cornicles. They have antennae, which extend about one-third the body length. Oat aphids are similar in colour but have a pear shaped body with a rusty red patch at the end of the abdomen, and have antennae about half their body length. Corn aphids tend to occur mostly on barley, whereas oat aphids are generally found on oats and wheat; but both species may attack all cereals. Both corn aphids and oat aphids can attack crops at any stage and heavy infestations can result in yield losses. Click [here](#) for more information on these aphids and other species which also occur in cereal crops.

Click [here](#) for images of corn aphids and [here](#) for images of oat aphids.



## LUCERNE FLEA

Researcher, John Roberts (CESAR), reports finding [lucerne flea](#) (*Sminthurus viridis*) nymphs in several pasture paddocks around Colac, in the Western district of Victoria. Lucerne flea hatch following periods of good soaking autumn-winter rainfall and can cause significant damage to emerging crops and pastures at this time of year. They can also cause considerable damage to older crops if numbers build up under favourable conditions throughout the season. John says judging by their size, the lucerne fleas appear to have hatched quite recently and have not yet built up to numbers where significant damage is evident. With the recent rainfall experienced across much of south-eastern Australia, lucerne flea are now likely to also be hatching in other regions. They are generally a problem in regions with loam/clay soils.

Adult lucerne fleas are approximately 3 mm long and appear yellow-green to the naked eye, although their globular abdomens are often a mottled pattern of darker pigments. They 'spring off' vegetation when disturbed. Lucerne fleas have a wide host range and will attack most broad-acre crops, including canola, lucerne, pastures, cereals and some pulses. Feeding results in the appearance of distinctive transparent 'windows'. Click [here](#) for images of the lucerne flea.

There are several options available to growers for controlling lucerne flea in crops and pastures. **Foliar insecticides** should ideally be applied approximately three weeks after lucerne flea have been observed in a newly emerged crop. This will allow for further hatching of over-summering eggs but will be before lucerne flea reach the adult stage and begin to lay winter eggs. If spraying is required, do not use synthetic pyrethroids. In paddocks where damage is likely, a border spray may be sufficient to prevent movement of lucerne fleas into the crop from neighbouring paddocks. As lucerne flea are often distributed patchily within crops, spot spraying is generally all that is required; do not blanket spray unless the infestation warrants it.

**Cultural control** techniques such as clean fallowing and effective weed management within crops and around perimeters, especially of capeweed, can help to reduce lucerne flea numbers. In paddocks which have a history of lucerne flea damage it is best to avoid sowing highly susceptible crops such as lucerne and canola. Crops are more likely to have problems where they follow a weed infested crop or pasture in which lucerne flea have not been controlled.

## LOOK OUT FOR OTHER INVERTEBRATE PESTS

**Redlegged Earth Mites and Blue Oat Mites** emerge from their summer diapause eggs in autumn. For redlegged earth mites, it takes approximately two weeks of exposure to favourable conditions (<20°C and >10mm rain) for over-summering eggs to hatch. This releases swarms of mites, which can attack delicate crop seedlings and emerging pasture plants. Earth mites attack pastures and a variety of crops such as cereals, oilseeds, lupins and lucerne, as well as a variety of weeds.

**Bryobia Mites** are most active in warm conditions in autumn, spring and summer. They attack clovers, lucerne, lupins and canola, and may currently be active in many regions. The feeding damage is characterised by a long trail of whitish-grey spots on the upper side of cotyledons and leaves.

**Cockchafers** can be problematic in autumn and winter when they feed on emerging crops and pastures. Redheaded and yellowheaded cockchafers are primarily root feeders, whereas blackheaded pasture cockchafers come to the surface at night and collect plant material for



consumption in their tunnels during the day. To check for cockchafer grubs, dig in affected areas or look on the soil surface for tunnel entrances. Be aware that if you did not have problems with cockchafer last year, it does not mean that you won't have this year as adult beetles achieve long distance dispersal over summer.

**Cutworms** can be a problem to a variety of germinating crops. Prolonged autumn green feed in areas can allow grubs to develop to a large size by the time crops start emerging. Check crops, especially pulses and pasture legumes, by inspecting the base of plants; damage is often patchy.

**Slugs** are stimulated out of their summer aestivation following autumn rains, generally in paddocks where they have previously been a problem. All seedling crops and pastures may be attacked, however canola is particularly susceptible. Slug numbers can be monitored by placing tiles or flowerpots on the soil surface and counting the number under them after a few days.

## OBSERVATIONAL REPORTING PROFORMA

An online observational reporting proforma was developed in 2008 to facilitate the reporting of invertebrate issues and occurrences in south-eastern Australia. The aim of this form is to make the reporting process more efficient and simpler for PestFacts subscribers in South Australia, Victoria and New South Wales.

The continued use of this form will ensure that information collected is standardized, allowing us to track on-going changes in pest importance/abundance, as well as address future issues on regional and national scales (e.g. changing distributions, widespread problems versus localised problems, impacts of climate change).

Click [here](#) to view the NIPI reporting proforma and/or to make a pest report. Please note that this new service does not replace the 'traditional' reporting methods of email or a phone call; these are still very much welcome. The proforma was developed in conjunction with Ken Henry and Judy Bellati (SARDI Entomology), and can also be found on-line at the SARDI website.

A free pest identification service is also available to all PestFacts subscribers. Click [here](#) for instructions on correct methods for collecting and sending samples for identification.

## PESTFACTS SERVICE

PestFacts is sent directly to readers via e-mail (subscription free). This service is produced on an 'as-needs' basis in response to pest observations and reports. Your support and feedback are essential to the success of PestFacts. If you have recently observed invertebrate pests (or beneficials) in crops and pastures, contact Stuart McColl on (03) 9329 8817 or email [stuart@cesarconsultants.com.au](mailto:stuart@cesarconsultants.com.au)



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