



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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AUSTRALIAN PLAGUE LOCUSTS

Swarms of Australian plague locusts have continued to develop in central west New South Wales in recent weeks. The Australian Plague Locust Commission APLC, who coordinate monitoring of locust populations in inland eastern Australia throughout the year, have warned that further swarms are likely to form during November in the Coonamble–Gulargambone–Baradine, Quambone–Warren, Nyngan–Tottenham and Tullamore–Peak Hill areas. High density egg laying is particularly likely in those areas that received heavy rainfall in late October. Landholders in affected areas are advised to continue reporting any locust activity to their relevant Livestock Health and Pest Authority (LHPA).

Agronomist, Matthew Burkitt (Central West Agricentre), reports finding isolated patches of locust 'hoppers' in the areas northwest of Parkes and southwest of Peak Hill, in the Central West Slopes and Plains district of New South Wales. Some crops in the region have experienced some minor losses (defoliation), and a small number of paddocks have been sprayed to prevent larger losses. Matthew says that if locust numbers continue to increase in the coming weeks the crops of most concern will be those which still have some green material remaining, including some later sown cereals and field peas.

[Australian plague locusts](#) (*Chortoicetes terminifera*) can cause severe damage to pastures and a range of field crops if they are not controlled. To prevent the build up of large populations, locusts need to be controlled during their early stages as 'hoppers' when they are unable to fly. Once locusts reach the adult stage, controlling them becomes difficult and expensive. Adults can move long distances very quickly and have been recorded travelling hundreds of kilometres in one night driven by wind. Several chemicals are available for controlling Australian plague locusts.



Australian plague locusts are readily distinguished from other locust species by the large dark spot present on the tip of each hindwing and red coloured shanks on their hindlegs. Adults are up to 40 mm long with a variable body colour of grey, brown or green. They are the most important pest species of locust in Australia due to the area infested and frequency of plagues. Click [here](#) for images of the Australian plague locust, and refer to the [APLC](#) website for further information on the current locust situation, as well as the [NSW DPI](#) website for information and maps of recent locust reports and swarming activity.

ARMYWORMS

Early instar armyworms have been detected in an oat crop south of Ararat, in the Western district of Victoria. Agronomist, Craig Drum (Tatooon Rural), reports finding very low numbers of caterpillars when sampling with a standard sweep net, and says there are no signs of any feeding damage to the crop at this stage. [Armyworms](#) (Family: Noctuidae) may attack cereal crops and grass pastures, and are usually most damaging toward the end of spring when crops are close to harvest. The larvae chew through the last remaining green part of the plant stems (just below the head), causing the heads to drop off. Given the low numbers and small size of these caterpillars, it is unlikely that they will have any significant impact prior to the crop being harvested.

Armyworms have three parallel white stripes running from the 'collar' behind the head, along the body to the tail end, making them easily distinguishable from cutworms and native budworm, with which they are sometimes confused. They also have large heads and smooth, fat bodies that are usually pinkish, green or brown in colour. They can grow up to 40 mm in length. Adult moths are grey-brown in colour and have a stout body with a wingspan of approximately 40 mm.

GRASS ANTHELID

Grass antheiid (*Pterolocera* spp.) caterpillars have been identified for agronomist, Eoin Flett (Williams & Jackson Pty Ltd.), from several pasture paddocks south of Geelong, in the Central district of Victoria. In this instance, high numbers of caterpillars were observed, however Eoin says they did not appear to be causing any significant damage. This report follows the recent unusual occurrence of very high numbers of grass antheiids in multiple pasture paddocks around Ballarat, as reported in [PestFacts Issue No. 12](#).

Grass antheiids are a relatively minor pest of pastures and cereal crops. They have an annual life cycle, with larvae active in late winter and spring. Larvae are covered in tufts of stout hairs and can grow up to 50 mm in length. Male adult moths are buff with brown markings, and have very large antennae, and adult females are flightless. The species encountered in this instance appears to be the same, or closely related to those found around Ballarat, however species within the *Pterolocera* genus are not well understood. These caterpillars have a tawn coloured body covered in tufts of hair, and very distinct yellow markings.

GRAINS STORAGE PESTS

With many crops now being harvested it is timely to think about on farm grain storage issues. Harvested grain is at its highest quality when it is first loaded into storage. If the storage environment is not managed correctly the quality will steadily deteriorate. Grain insects, end-user requirements and maintaining quality are important issues to consider.

Generally, grain to be stored for more than 6 weeks should be treated with an insecticide. Grain can be treated with a protectant when it is added to storage or fumigated in a sealed



silos. Most contact insecticides provide between 3-6 months protection, although this is dependent upon the moisture content and temperature of the grain. High moisture content and temperatures can lead to the rapid breakdown of chemicals and leave grain vulnerable to attack. Always aim to store grain at a moisture content of 12% or less and at a temperature of 25°C or less. This will also help to limit the activity of insects and avoid grain spoilage from moulds and fungi.

One of the most important things for growers to understand is the markets they wish to supply and their requirements. This takes careful planning and could mean improving storage facilities. Markets are increasingly demanding grain free of chemical residues. In sealed storage, grain can be fumigated effectively, providing quick, inexpensive and long-lasting insect control without the problem of pesticide residues.

Phosphine fumigation is one of the most commonly used techniques for protecting stored grain from insect pests, with at least 80% of Australian grain fumigated with phosphine each year. Unfortunately the widespread use of phosphine has led to the development of resistance in four common insect pests of stored grain: [the lesser grain borer](#) (*Rhyzopertha dominica*), [the saw toothed grain beetle](#) (*Oryzaephilus surinamensis*), [the flat grain beetle](#) (*Cryptolestes* spp.) and [the rust red flour beetle](#) (*Tribolium castaneum*).

These pests are all small (between 2-3 mm long) and dark reddish-brown to grey in colour. Check for these species in grain residues in harvesting and grain-handling equipment, and in storages. Strong resistance in these pests has now been detected in populations from all states in eastern Australia. However, this resistance can be managed by ensuring phosphine is only used when absolutely necessary and that fumigation takes place only in airtight storages. Fumigating in unsealed storages will worsen the resistance problem by selecting for resistance.

Grain handling equipment also requires some routine maintenance in order to minimise the possibility of contributing to grain contamination. Seals on silos should be checked before each filling and replaced if worn or damaged. Headers, carriage equipment (trucks, bins), augers and storages should be thoroughly cleaned down after use. Clean up spillages in areas around silos and destroy all residues to prevent re-infestation.

For further information on stored grain pest issues refer to the [GRDC website](#).

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 8816 or email stuart@cesarconsultants.com.au. A free pest identification service is available to all PestFacts subscribers.



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