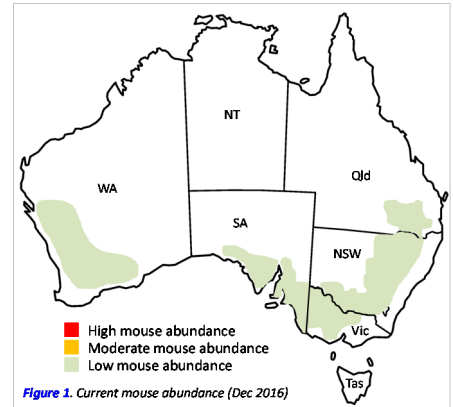


Monitoring mice in Australia – Dec 2016

Summary

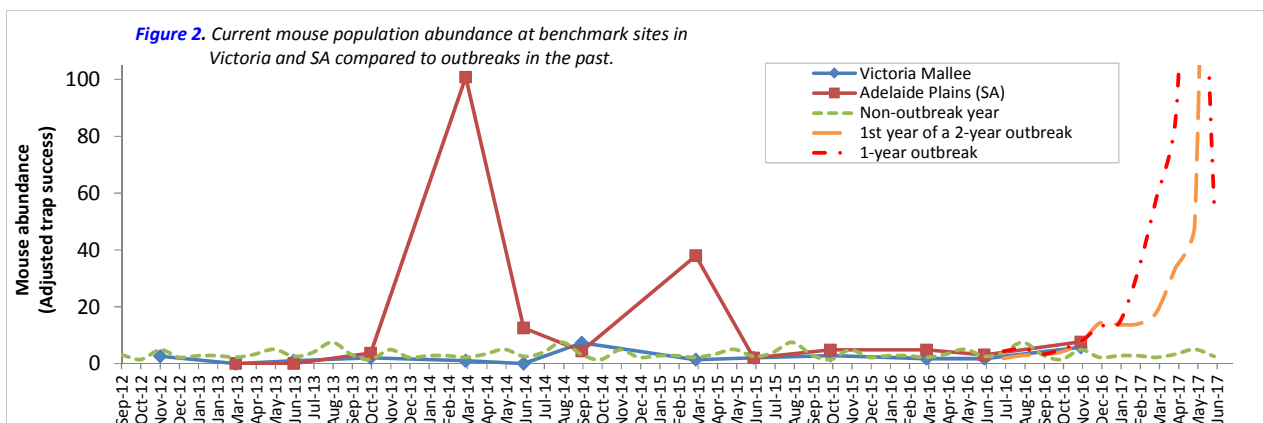
- **Mouse abundance is low across all monitoring sites** (see below) (Figure 1) – Trapping, mouse chew cards and active burrows were low on all sites. Mice should not cause damage to ripening crops.
- **Breeding in Northwest Victoria started in early August (earlier than usual)** and combined with good rainfall, we expect abundant food supply and moderate mouse abundance in autumn (April/May). The forecast is for moderate trap success of 35-50% depending on December rainfall, and the **probability of an outbreak in autumn is 0.58** (similar to 2010). The next routine monitoring is March/April 2017.
- **Growers are recommended to harvest crops as cleanly as possible** to reduce the amount of residual food available for mice, and limit breeding.
- **Please continue to use MouseAlert.** Please report and map mouse activity using *MouseAlert* (www.mousealert.org.au) so other growers can see what mouse activity is being observed in their neighbourhood. Follow on twitter using @MouseAlert.



Current situation

Mouse abundance remains relatively low across all monitoring sites (Figure 1). Mice started breeding in early August in the Victorian Mallee and Adelaide Plains (earlier than usual). While abundance is low (<10% trap success), we expect numbers to build up over summer and autumn, particularly given the excellent rain and good food supply available for mice. Growers should be vigilant for signs of activity or damage leading up to sowing in early autumn 2017 and take appropriate action. Please report activity on *MouseAlert*.

- **South Australia: Mouse numbers are low in all locations.** Mouse abundance has remained low on the Adelaide Plains, Yorke (although some activity is being reported) and Eyre Peninsulas (Figure 2). Trap success was 8% in November. Growers should remain vigilant and act accordingly if damage is likely.
- **Victoria: Mouse abundance is low in all locations.** Mouse numbers are low across Mallee and Wimmera regions (Figure 2). Trap success was 6% in November. Growers should remain vigilant and act accordingly if damage is likely.



- **Queensland: Nil to very low activity across the Central Darling Downs:** Live trapping and chew cards revealed that the high densities in June have declined to very low (as predicted in the July 2016 Mouse Update #10). The next scheduled monitoring is January 2017. Mice are not likely to be a problem, but if growers observe any activity, they should report it on *MouseAlert*.
- **Northern, Central & Southern NSW: Mouse numbers are low in all locations.** Low activity on all sites (Riverina, Central West and around Moree). Some Central NSW sites were affected by flooding. Data for Central NSW were collected as part of the Central West Farming Systems “Rain Grain and Stubble” GRDC project.

- **Western Australia:** Mouse activity is low in all locations. Ravensthorpe: Nil or low activity reported. Geraldton: Nil or low activity reported.

The 'Mouse Forecast'

Northwest Victoria: There is a **high** likelihood of an outbreak in autumn 2017 (probability of 0.58, similar to 2010). The forecast for mouse abundance in autumn (Apr/May) for NW Victoria depends on December rainfall:

- If rainfall is low (eg 0 mm), then mouse abundance will remain low (15-25%).
- If rainfall is average (25 mm) then abundance will increase to 35-40% and could cause low levels of damage.
- If rainfall is high (eg 50 mm), then abundance will increase to 50-55% and could cause some damage at sowing.

Central Darling Downs (QLD): The density index for the mouse population is currently very low (<1%). The probability of High density in May 2017 is 0.03, for Moderate density is 0.34 and **Low density is 0.55**. The Darling Downs model has achieved a 78% success rate from these long-term predictions over the period of 1989 to 2003.

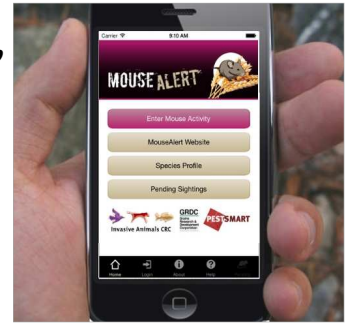
Future activities

Please continue to report mouse abundance on your farm (presence and absence!) using **MouseAlert** (www.mousealert.org.au) on your smart phone, tablet or computer and to check what other mouse activity is being reported locally and regionally. There are now more than 380 records despite low mouse numbers. We welcome any information at any time. You can also follow progress on **Twitter** (@MouseAlert).

You can now download the App for **MouseAlert** from:

- iTunes app store: <https://itunes.apple.com/au/app/feralscan-pest-mapping/id975407187>
- Google play: https://play.google.com/store/apps/details?id=com.invasiveanimals.feralscan_pest_mapping

MouseAlert Smartphone app
www.mousealert.org.au

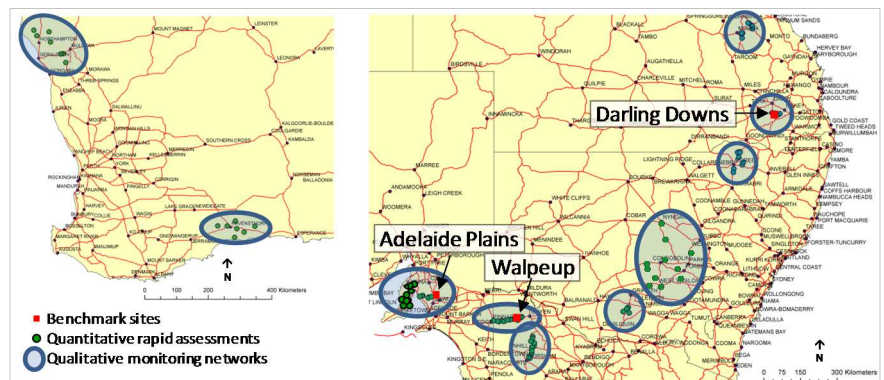


Background

This is an update on surveillance of mice across the grain-belt of Australia for Sep-Nov 2016. Monitoring was delayed because of significant rainfall. Mouse populations were monitored in typical grains farming systems in WA, SA, Vic, NSW and Qld during spring 2016 (Oct-Nov). The monitoring provides data on the size (abundance) of mouse populations, their breeding status and overall activity. This information is used in models that have been developed progressively over the last 20-30 years to predict mouse outbreaks. Monitoring was conducted on (Figure 3):

- **Benchmark sites:** live trapping data collected for use in models in Adelaide Plains (SA), Walpeup (Vic) and the Darling Downs (Qld).
- **Quantitative rapid-assessment sites:** using mouse chew cards and active mouse burrows assessments on 86 transects across 11 sites.
- **Qualitative monitoring networks:** using data from farmers and agronomists in 11 local areas.

Figure 3. Approximate locations of mouse monitoring occurring in WA, SA, Vic, NSW and Qld.



This is part of an 18 month extension to a 3-year study funded by the GRDC to monitor mouse populations and forecast the likelihood of mouse outbreaks. The project is a collaboration between Landcare Research (New Zealand), CSIRO Agriculture and the Invasive Animals Cooperative Research Centre. The project will finish in June 2017.

Further information

For further information about the monitoring or models, or if you have observed mouse activity in your area, please contact the people below, or see www.mousealert.org.au.

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