

MONITORING MICE IN AUSTRALIA.

NOVEMBER 2014.



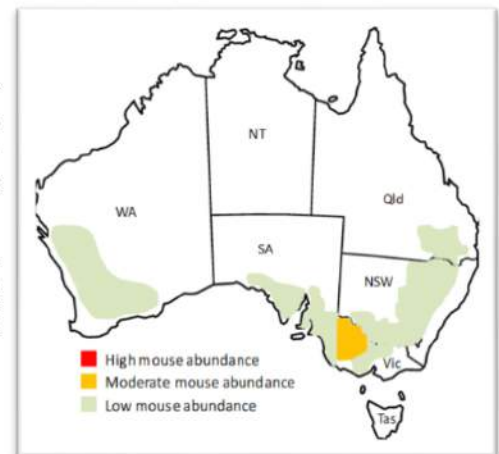
Issue 5



Landcare Research
Manaaki Whenua

Summary

- **Moderate mouse abundance in some small pockets of north-west Victoria** – some damage might occur to maturing crops. Breeding started in early spring and mouse abundance could continue to increase. Farmers need to monitor mouse activity before harvest and manage mice to protect their crops.
- **Low mouse abundance in Western Australia, South Australia, Victoria, New South Wales and Queensland** – mice are not likely to cause much damage as crops mature, but farmers should continue to monitor.

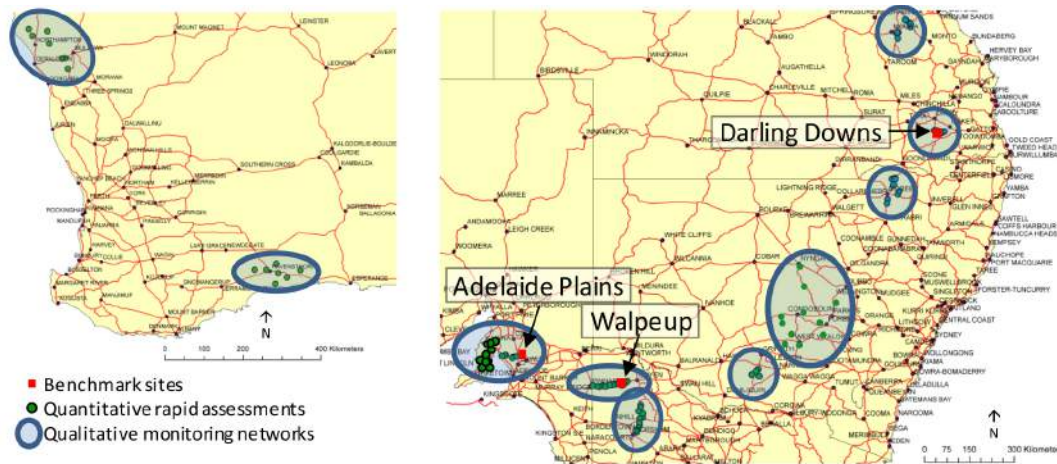


Background

This is an update on mouse populations across the grain-belt of Australia for September/October 2014. Mouse populations were monitored in typical grains farming systems in Western Australia, South Australia, Victoria, New South Wales and Queensland during early spring 2014 (September/October). 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:

- **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 in 11 sites.
- **Qualitative monitoring networks:** using data from farmers and agronomist in 11 sites.

This is part of 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 Flagship and the Invasive Animals Cooperative Research Centre.



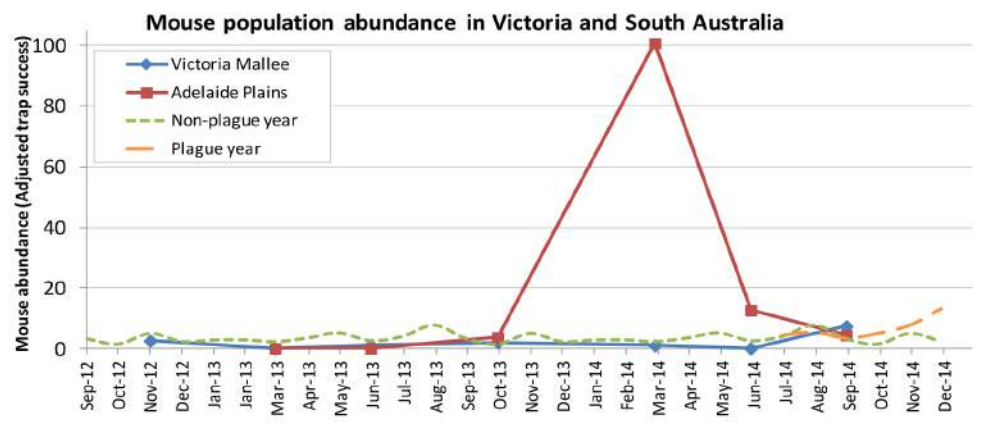
Approximate locations of mouse monitoring occurring in WA, SA, Vic, NSW and Qld. New quantitative monitoring sites have been set up at 10 locations on Yorke Peninsula in October 2014.

Current situation

In all locations, mouse abundance is relatively low except for higher than normal mouse abundance in northwestern Victoria (Mallee). Breeding commenced in early spring, and mouse numbers will increase through spring, into summer and reach a peak in autumn. Mice are unlikely to cause significant damage to maturing winter crops across southern Australia, although there could be pockets of damage in northwestern Victoria (Mallee).

- **Western Australia:** mouse activity is very low, Geraldton (November): nil activity (6/6 sites); Ravensthorpe (November): nil activity reported, although it has been very wet.
- **South Australia:** Mouse numbers now low across most of SA. The high mouse abundance observed in March has declined to low levels in June and September. The chew card monitoring in Yorke Peninsula in October confirmed that mouse activity has declined to low levels. Damage to maturing crops is unlikely.
- **Victoria:** Mouse abundance is generally low but increasing. Mouse numbers are slightly higher than usual for this time of year, particularly in northwestern Victoria (Mallee). Low levels of damage could occur to maturing crops, with some damage likely at sowing in autumn 2015. Growers will need to be vigilant leading up to sowing.

Current mouse populations at benchmark sites in Victoria and SA compared to outbreaks in the past.



- **Central & Southern NSW:** Generally low activity (nil or very low chew card activity), but some chew cards eaten along a weedy roadside, and observations of an odd mouse around. **Data for Central NSW were collected as part of the Central West Farming Systems “Rain Grain and Stubble” GRDC project.**
- **Queensland & Northern NSW:** Very few mice around on the Darling Downs and Central Queensland. Very dry on the Darling Downs. Monitoring in northern NSW will occur in early December 2014.

Predictions of a mouse outbreaks

Central Darling Downs (QLD): There is a low likelihood of an outbreak in Autumn 2015 (The medium-term probability for low density in May 2015 is 0.51). The Darling Downs model has achieved a 78% success rate from these long-term predictions over the period of 1989 to 2003.

Northwest Victoria: There is a low likelihood of an outbreak in autumn 2015 (probability of 0.12). The prediction for Northwest Victoria is dependent on rainfall in December. If December rainfall is low (eg 0 mm), then mouse abundance will remain low. If December rainfall is average (25 mm) then mouse abundance will increase to around 20% and could cause low levels of damage. If December rainfall is high (eg 50 mm), then mouse abundance will increase to 30-40% and could cause some damage at sowing.

Future activities

The next scheduled monitoring will be conducted in autumn (March 2015) on all sites. The Smartphone “app” (*MouseAlert*) was launched through various workshops with growers in SA, Vic and NSW. See www.mousealert.org.au. We encourage you to report mouse abundance (presence or absence!) on your farm from your smart phone, tablet or computer and to check what other mouse activity is being reported locally and elsewhere.

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:

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MouseAlert Smartphone app