Invasive Animals Cooperative Research Centre
CSIRO
GRDC Grains Research & Development Corporation
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Landcare Research Manaaki Whenua
Issue 6

Monitoring mice in Australia – April 2015

Summary

- **Moderate to high mouse abundance in Yorke Peninsula, Adelaide Plains, parts of Eyre Peninsula (SA) and Macalister (Qld)** (Figure 1) – some damage might occur at sowing of winter crops. Mice are still breeding and abundance will peak around sowing. Growers need to monitor mouse activity before sowing and manage mice to protect their crops.
- **Low mouse abundance elsewhere in South Australia and Queensland, and low across Western Australia, Victoria, and New South Wales** – mice are not likely to cause serious damage at sowing, but growers should continue to monitor activity.
- **The National Mouse Census Week is set for 13-19 April 2015.** 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***.

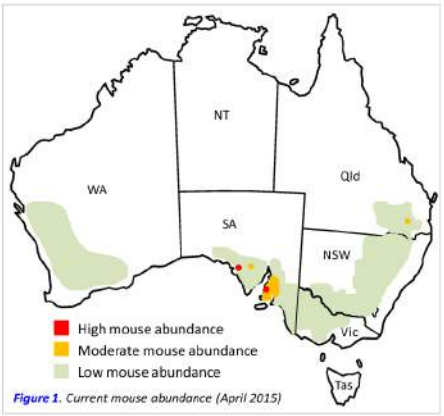


Figure 1. Current mouse abundance (April 2015)

Current situation

Mouse abundance remains relatively low across all monitoring sites, except for higher than normal mouse abundance in Yorke Peninsula and parts of Eyre Peninsula (SA) and Macalister (Qld) (Figure 1). Mice continued to breed through summer and into early autumn, and abundance will peak in autumn at sowing of winter crops in southern Australia. Where mouse abundance is moderate to high, mice could cause damage at sowing.

- **South Australia Mouse activity is moderate in Yorke Peninsula, the Adelaide Plains, and isolated parts of Eyre Peninsula (Ceduna and Buckleboo), but relatively low across remaining SA**. Mouse abundance increased on benchmark sites in Adelaide Plains in March (Figure 2) and activity is moderate to high on Yorke Peninsula. Damage at sowing is possible. Growers should remain vigilant.
- **Victoria: Mouse abundance is generally low**. Mouse numbers are low across Mallee and Wimmera regions (Figure 2). Damage is unlikely at sowing, but growers should be vigilant leading up to sowing.
- **Queensland: Moderate mouse abundance around Macalister, but very few mice observed on the Darling Downs and Central Queensland** (Figure 3). There is abundant food for mice in lodged sorghum crops after heavy rains. Mouse abundance could potentially increase.
- **Northern, Central & Southern NSW: Generally low activity**. Nil chew card activity on most sites, but some activity at Alectown (in paddock) and Euabalong (native vegetation), Central West NSW. 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**, Ravensthorpe: 3/5 sites nil chew card activity, and 3/5 sites some mouse activity observed; Geraldton: nil chew card activity (4/4 sites) with some active burrows present.

Figure 2. Current mouse population abundance at benchmark sites in Victoria and SA compared to outbreaks in the past.

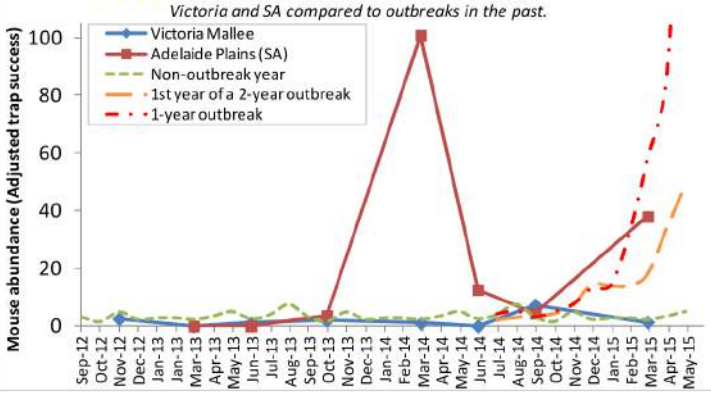
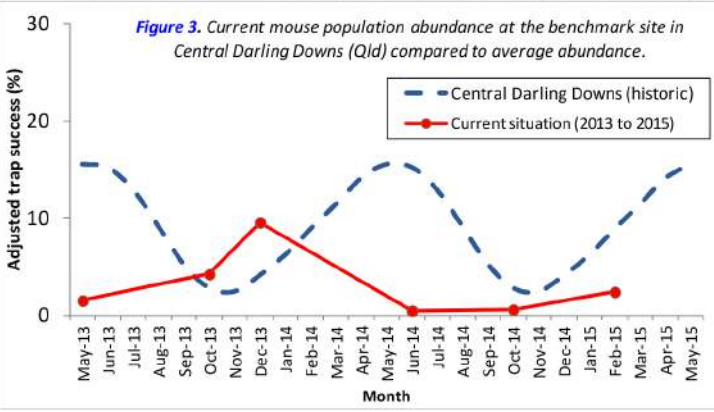


Figure 3. Current mouse population abundance at the benchmark site in Central Darling Downs (Qld) compared to average abundance.



Monitoring of mouse populations across Australia – March/April 2015

The 'Mouse Forecast'

Central Darling Downs (QLD): There is low likelihood of an outbreak in autumn 2015 (The expected May 2015 population density index is Low). 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 from April to October, plus November and December. Rainfall in December was low (2 mm), so mouse abundance should remain low.

Future activities

National Mouse Census Week (13-19 April 2015) – we need your input! We encourage you 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. You can now Download the App for ***MouseAlert*** from the App Store or ITunes https://itunes.apple.com/au/app/feralscan-pest-mapping/id975407187. We welcome any information at anytime. You can also follow progress on **Twitter** (*@MouseAlert*). The next scheduled monitoring will be conducted in winter (June 2015) on all sites.

MouseAlert Smartphone app
www.mousealert.org.au

Background

This is an update on surveillance of mice across the grain-belt of Australia for March/April 2015. Mouse populations were monitored in typical grains farming systems in WA, SA, Vic, NSW and Qld during early Autumn 2015 (March). 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 4):

- **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 agronomist in 11 sites.

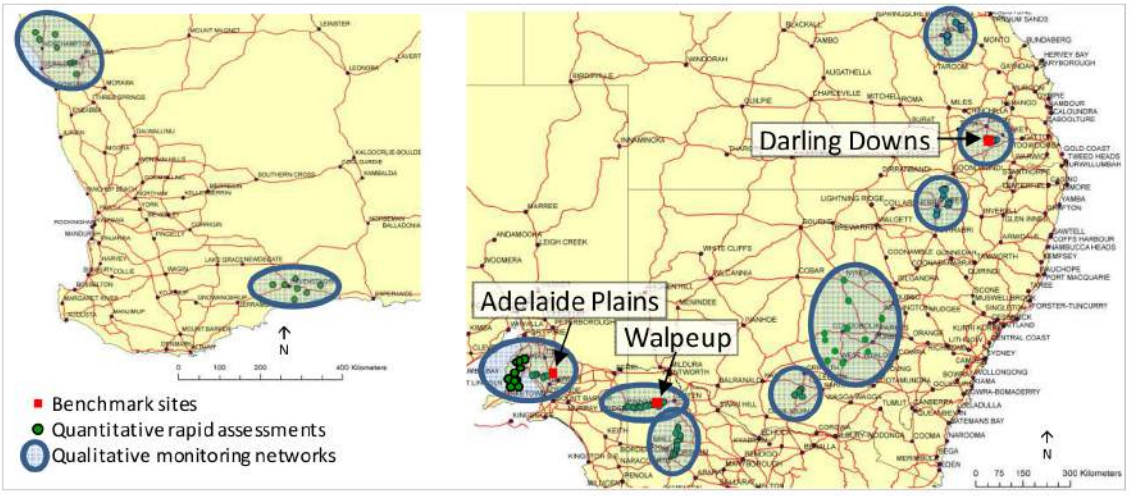


Figure 4*. Approximate locations of mouse monitoring occurring in WA, SA, Vic, NSW and Qld.*

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.

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.

Dr Peter Brown
CSIRO Agriculture Flagship, Canberra
Peter.Brown@csiro.au

Simon Humphrys
Invasive Animals CRC, Adelaide
Simon.Humphrys@invasiveanimals.com

Dr Roger Pech
Landcare Research, New Zealand
PechR@LandcareResearch.co.nz