Monitoring mice in Australia – November 2020

Summary

- **Mouse numbers are moderate in isolated patches across South Australia, Victoria, Central West and Liverpool Plains NSW and Darling Downs Qld** (Figure 1) – Mouse numbers are patchy. Moderate or high numbers of mice at this time of year are of concern because breeding commenced in spring and populations will increase through until autumn to relatively high densities. Some damage could occur to maturing crops (crops can't compensate when maturing).
- **Mouse numbers are low in all other areas** (Figure 1) and are not likely to cause damage to growing/maturing crops.
- Breeding has commenced and conditions are very favourable across much of southern and eastern Australia (good crops and abundant high-quality food). **Harvest as cleanly as possible** to reduce food supply for mice.
- Growers should actively monitor mouse activity (mouse chew cards are useful at this time of year). There is always a chance of isolated patches of higher mouse activity.
- 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*.

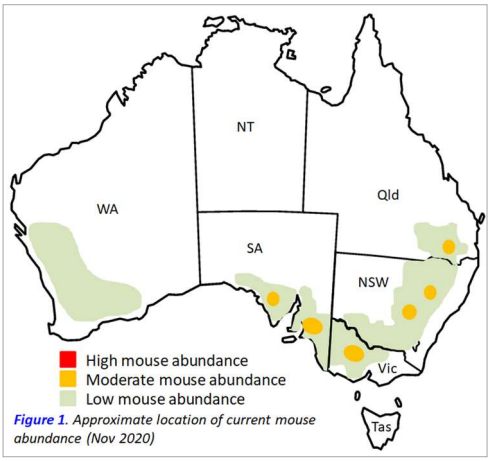


Figure 1. *Approximate location of current mouse abundance (Nov 2020)*

Management Recommendations

Mouse numbers are highly variable between different paddocks and locations. Breeding has commenced in early spring and so mouse numbers will increase through spring into summer to peak in abundance in autumn. If numbers are high in maturing crops, they will cause some damage to crops (crops cannot compensate for damage immediately prior to harvest). It may not be possible to bait in crops because of restrictions with label conditions (14 day withholding period). See GRDC Mouse Control website for more details about control options.

1. **Harvest as cleanly as possible to reduce mouse food availability.** Food resources left in the paddock could sustain mouse breeding and lead to higher mouse numbers at sowing next year.
2. If mouse damage is evident to maturing crops **aerially apply zinc phosphide mouse bait** (adhere to label conditions and be aware of the 14-day withholding period before harvest). Once seeds have developed on heads, mice are reluctant to go for zinc phosphide baits, so if need be, bait well before seed set.

Current situation

Mouse numbers are patchy in parts of SA, Victoria, NSW and Darling Downs (Qld) (Figure 1). Breeding commenced in early spring. Given the wet conditions over much of southern and eastern Australia, it is likely that these populations can form the basis of moderate of high numbers in autumn 2021 (coinciding with seeding in many locations). Growers should remain vigilant and act accordingly if mouse abundance is of concern. Because of patchy activity between paddocks, growers are advised to monitor across multiple paddocks to gauge mouse numbers to inform management decisions. Focus on paddocks that are sustaining grain loss this year (please report on *MouseAlert* www.mousealert.org.au).

- **Western Australia: Mouse activity is low around Geraldton and Ravensthorpe.** Mouse activity has dropped off around Ravensthorpe, and there was no report of mouse activity around Geraldton.
- **South Australia: Mouse numbers are patchy with mouse numbers low to moderate in North Adelaide Plains and western Eyre Peninsula with some reports of mouse activity southern YP, but low elsewhere** (Figure 2). There are signs of mouse activity on some sites (dependent on paddock history). Trap success at Mallala (north of Adelaide) was 3% at two different sites in September (very low). Mouse densities were 10-40 mice/ha (low-moderate). There were reports of some mouse activity in western Eyre Peninsula.

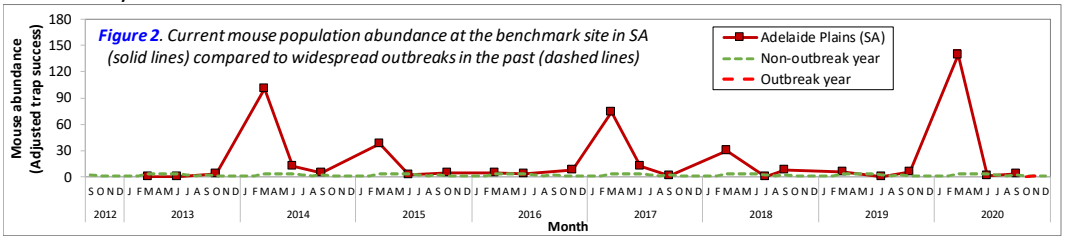


Figure 2. *Current mouse population abundance at the benchmark site in SA (solid lines) compared to widespread outbreaks in the past (dashed lines)*

- **Victoria: Mouse abundance is low to moderate (but patchy)**. Mouse activity is highly variable with some areas moderate in the Wimmera and southern Mallee, but low elsewhere (Figure 3). Trap success was very low (<1%) at Walpeup.

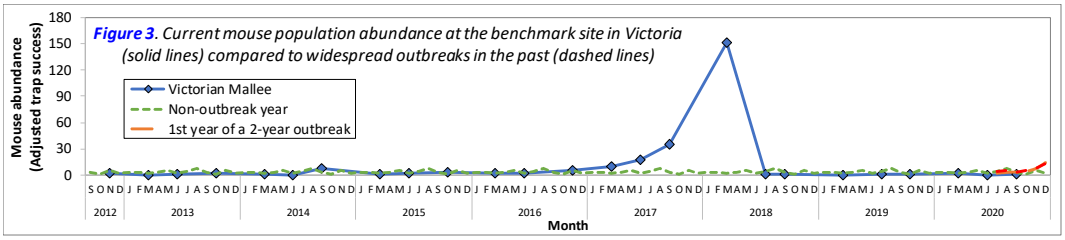


***Figure 3**. Current mouse population abundance at the benchmark site in Victoria (solid lines) compared to widespread outbreaks in the past (dashed lines)*

- **New South Wales (Northern, Central & Southern): Mice are moderate in parts of the Central West and on the Liverpool Plains (damage to maturing canola pods), but moderately patchy elsewhere.** Mice chewed a few cards at 5/9 sites near Moree. Trap success was moderate at Parkes (20% in wheat, 15% in canola), with densities 30-60 mice/ha, and mice chewed moderate amounts of cards at 6/9 sites. In the Central West, there was low activity (chewing of cards from 2/7 sites). We thank Central West Farming Systems and NSW DPI for mouse monitoring.
- **Queensland: The next round of monitoring will be conducted in early December.** Mice are still present in winter crop stubbles; while not in high numbers ongoing vigilance is important.

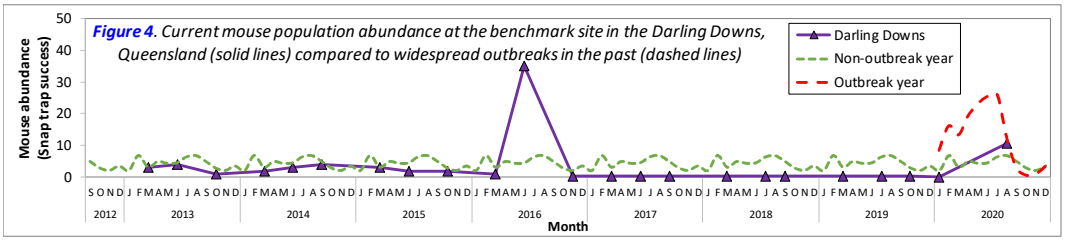


***Figure 4**. Current mouse population abundance at the benchmark site in the Darling Downs, Queensland (solid lines) compared to widespread outbreaks in the past (dashed lines)*

The 'Mouse Forecast'

Northwest Victoria: There is a **low to moderate** likelihood of an outbreak for autumn 2021 (probability up to 0.45, depending on Nov rainfall). Peak abundance in autumn 2021 (sowing time) will be low-moderate (up to 60 mice/ha).

Central Darling Downs: The density index for the mouse population was moderate in August, and the model was "inconclusive" (neither "high" nor "low") about the potential for high mouse numbers in May 2021. The model will be run in December after the next round of monitoring on the Downs.

Future activities

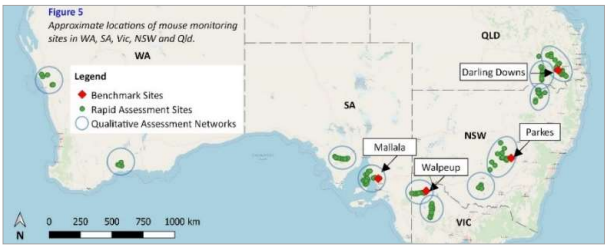
The next scheduled monitoring is set for December 2020 in northern NSW (Moree) and Queensland (Goondiwindi and Darling Downs), then in March 2021 for all other sites. Please continue to report mouse abundance on your farm (presence and absence!) using ***MouseAlert*** (*www.mousealert.org.au*) on your smart phone, tablet or computer and to check what other mouse activity is being reported locally and regionally. A simplified ***MouseAlert*** has just been released. We welcome any information at any time. You can also follow progress on **Twitter** (*@MouseAlert*). Download the ***MouseAlert*** App from iTunes app store or Google play (click on hyperlink to download).

MouseAlert Smartphone app →
www.mousealert.org.au

Background

This is an update on mouse abundance and activity for October 2020 for all regions. Mouse populations were monitored in typical grains farming systems in WA, SA, Vic, and NSW during spring 2020 (October) (Figure 5). The monitoring provides data on the size (abundance) of mouse populations, breeding status and overall activity. This information is used in models that have been developed over the last 20-30 years to predict mouse outbreaks. This project is funded by the GRDC (until Dec 2021) to monitor mouse populations and forecast the likelihood of mouse outbreaks.

- **Benchmark sites**: live trapping data collected for use in models in Mallala (SA), Walpeup (Vic), Darling Downs (Qld), and Parkes (NSW).
- **Quantitative rapid-assessment sites**: mouse chew cards & active mouse burrows (130 transects, 11 areas).
- **Qualitative monitoring networks**: from farmers and agronomists in 11 local areas.



Further information and Handy resources

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❶ GRDC Mouse Control website: https://grdc.com.au/resources-and-publications/resources/mouse-control
❷ MouseAlert (hosted by FeralScan): https://www.feralscan.org.au/mousealert/