Monitoring mice in Australia – August 2020

Summary

- **Mouse numbers are moderate in isolated patches across South Australia, Victoria, 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 will commence soon, so populations will start at relatively high densities. Some damage could occur to growing crops (crops can't compensate with heavy damage or when maturing).
- **Mouse numbers are low in all other areas** (Figure 1) and are not likely to cause damage to growing crops.
- Breeding will not commence until the start of spring, but some regions have had good rains and mild winters, and breeding could start early.
- 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*.

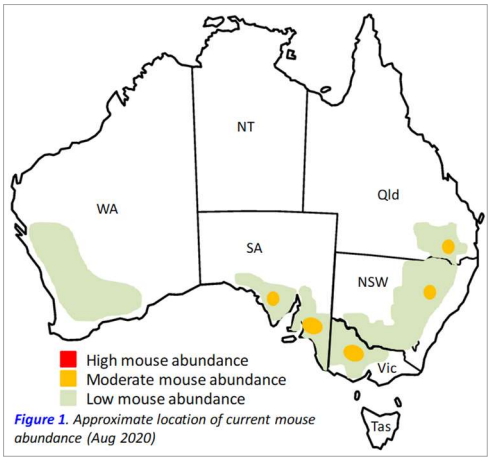


Figure 1. *Approximate location of current mouse abundance (Aug 2020)*

Management Recommendations

Mouse numbers normally decline through winter, but can still cause economic damage if numbers are high. Crops will compensate for minor damage, but cannot compensate for heavy damage or damage that occurs in late stages of crop maturity. If concerned, consider management before crop comes into head. See GRDC Mouse Control website for more details about control options.

1. **Control weeds and grasses** along fence lines and crop margins before seedset by spraying or slashing.
2. **Mouse-proof** houses and grain and stock feed storages.
3. **Apply bait around buildings** if necessary. Please comply with label conditions.
4. **Monitor** crops for signs of mouse activity.
5. 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). Mouse numbers will continue to decline through winter until the breeding season starts in early spring. Mice will appear in houses and sheds as temperatures drop. 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 sustained grain loss prior to harvest last year (please report on *MouseAlert* www.mousealert.org.au).

- **Western Australia: Mouse activity is low around Geraldton and Ravensthorpe areas, but some baiting activity near Esperance.** In Ravensthorpe, there was some mouse activity: low activity on duplex soils but some baiting on red ground. Minimal mouse activity in Hopetoun coastal areas. Nil in 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). Trap success at Mallala (north of Adelaide) was 1% in June (very low), but another nearby site was 13% (moderate). Mouse densities were 5-20 mice/ha (low). Mouse damage could occur on some sites but is patchy.

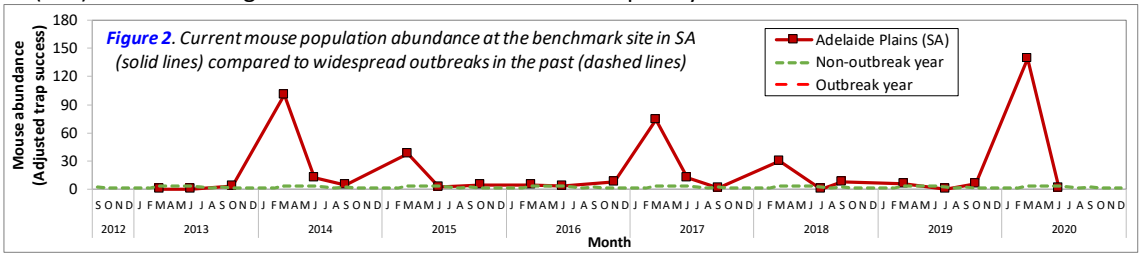
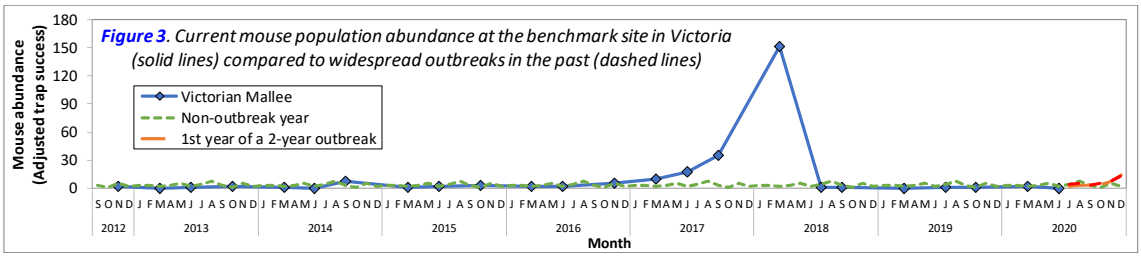
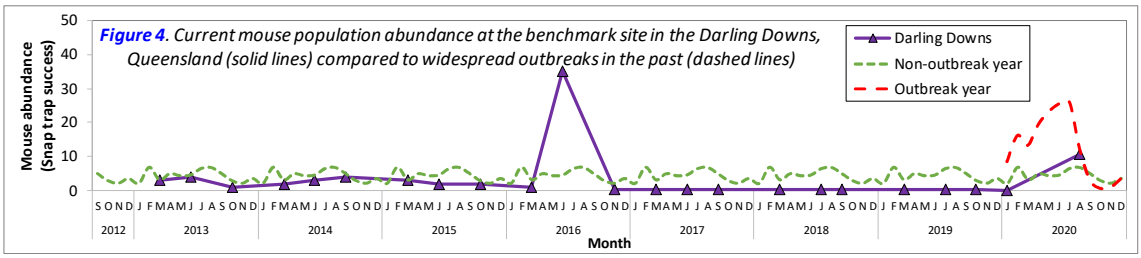


Figure 2. *Current mouse population abundance at the benchmark site in SA (solid lines) compared to widespread outbreaks in the past (dashed lines)*

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



- **<u>New South Wales (Northern, Central & Southern)</u>: Mice are moderate on the Liverpool Plains (damage to maturing canola pods), but low elsewhere.** Mice chewed two cards near Parkes and nil activity elsewhere. Moderate activity on one farm north of Moree. Nil mouse activity on sites in Central West. We thank Central West Farming Systems and NSW DPI for mouse monitoring.
- **<u>Queensland</u>: Mouse activity is highly variable (low-moderate) depending on paddock.** Trap success was moderate at the Darling Downs benchmark site (live-traps 21%) (Figure 4), but chew card activity was generally low on all rapid-assessment sites (Chinchilla to Warwick down to Goondiwindi).



The 'Mouse Forecast'

The Forecast Models will be run again in September/October after the spring monitoring to estimate the likelihood of an outbreak in autumn 2021 (our ability to undertake monitoring could be limited because of travel restrictions). The models require in-crop rainfall (Apr-Oct) and spring mouse abundance.

Future activities

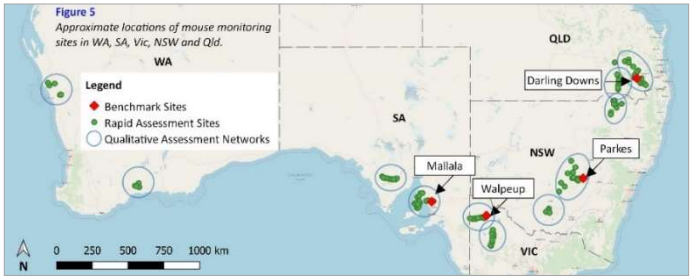
The next scheduled monitoring is set for September 2020 for all sites. Please continue to report mouse abundance on your farm (presence and absence!) using ***MouseAlert*** (*www.mousealert.org.au*) on your smart phone, tablet or computer and to check what other mouse activity is being reported locally 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 June/July 2020 for all regions. Mouse populations were monitored in typical grains farming systems in WA, SA, Vic, NSW and Qld during winter 2020 (June/July) (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/
❸ Twitter: *@MouseAlert*