



Adam Marshall
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MEDIA RELEASE

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STAMPING OUT MICE PLAGUES WITH BREAKTHROUGH BIOCONTROL

Breakthrough genetic biocontrol research under the NSW Government's \$50 million mouse control package could transform pest management Australia wide.

Minister for Agriculture Adam Marshall said the NSW Government would provide \$1.8 million towards the project to fast-track the delivery of next generation 'gene drive' technology to control the plagues of the future.

"I know the impact the mouse plague is having on communities right across regional and rural NSW, I've seen it first-hand and I've sat down to speak with the families affected," Mr Marshall said.

"That's why the Government has invested \$50 million in a range of support measures, not only to mitigate the impacts of the mice currently crawling across so much of NSW, but also to create options to ensure we reduce the impact of future population spikes.

"Mice arrived in Australia with the first fleet and from then until now the best control methods we have been able to come up with have been baiting and trapping.

"With this \$50 million investment we are not only giving farmers more baiting options and providing rebates for people to control mice in and around their homes, but we are fast-tracking critical research to bring mouse control into the 21st Century."

The three-year program of genetic biocontrol research will identify fast acting gene drives which are designed to spread an inherited characteristic through a population at higher-than-normal rates.

Mr Marshall said it would also investigate the transferability of the technology to other pest species such as black rats, rabbits and feral cats using advanced computer modeling.

"Using targeted gene drives, scientists aim to interrupt the breeding cycle of mice and keep populations at manageable levels," Mr Marshall said.

"There has to be a better way. That's why we're backing science to deliver a solution."

The research will test two strategies for population control and recommend at least one for future suppression of invasive mice.

The strategies include:

- the 'X-shredder' approach which eliminates sperm carrying the X

- chromosome, producing more male than female offspring; and
- The ‘female infertility’ approach which initially spreads through the population. Once the population is saturated with the genetic modification, all the females that are generated will be infertile.

Lead researcher Professor Paul Thomas from the University of Adelaide says both approaches have been shown to effectively suppress mice using sophisticated computer simulations.

“The genetic biocontrol technologies that we are developing offer a humane approach to control invasive rodents,” Prof Thomas said.

“We are also developing technology to limit their spread so we can specifically target the pest population.”

“Cutting edge solutions like these mean future mouse plagues can be extinguished before they begin,” Mr Marshall said.

“The potential to transfer those solutions to other species such as rats, rabbits and feral cats means pest management in NSW and across Australia could be changed forever.”

The research is to be led by the University of Adelaide, CSIRO and The Centre for Invasive Species Solutions.

The NSW Government is currently awaiting approval from the Australian Pesticides and Veterinary Medicines Authority (APVMA) for the use of bromadiolone as a perimeter bait to combat mice. If approved, it will be offered free of charge to farmers across 20 Local Land Services bait treatment stations within days of approval.

Bromadiolone is designed to be used in conjunction with in-crop baiting using zinc phosphide bait products.

For more information, visit www.nsw.gov.au/mice.

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