OSPRI | TBfree

Possum sterilisation research

This factsheet acknowledges the research (reported June 2025) into pest sterilisation by the University of Canterbury, and OSPRI's interest, as it controls wild possum populations in the fight against TB in New Zealand

A researcher at the University of Canterbury has recently gained public attention for a novel approach to pest control: chemical sterilisation.

The article highlights a compound that is suggested could be used for the humane and effective sterilisation of female rats and possums. It notes that the compound is safe for other species such as humans, birds, and ruminants (cattle and deer).

This development has the potential to significantly enhance OSPRI's pest control programme. There are several considerations and hurdles that must be addressed before a product based on the compound could be incorporated into our toolbox for eradicating TB.

Registration

Registering a toxin for specific use in New Zealand, even a non-lethal one, requires approval from regulatory bodies (EPA and ACVM). This process can be time-consuming, as applicants must provide evidence of impacts on non-target species, particularly humans and native species (including native birds, bats and lizards).

Use for OSPRI

For practical use in disease and pest control programmes, the active ingredient must be integrated into a palatable bait that can be applied by ground and air. While sterilisation alone would be beneficial, possums can naturally live for over a decade, especially with less competition and no other forms of effective control, which means disease transmission could still occur. The potential benefit lies in using the product alongside lethal control methods, which could significantly impact possum population recovery after control operations and reduce the need for further control.

OSPRI representatives have met with the researcher, Rudi Marquez-Mazlin, and although significant progress has been made, there is still a way to go.

The compound appears to cause permanent sterilisation of possum ovaries at high doses and reduces offspring survivability at lower doses. He has indicated that there is evidence of safety for humans and some non-native ground birds. Rudi is working with a consultant to assist with EPA approvals for field trials and registration requirements.

OSPRI will remain in contact with the University of Canterbury, and if field trial approvals are obtained, will seek opportunities for future collaboration.