

New eco-friendly toxin for stoat control

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Abstract: The endemic fauna of New Zealand evolved in the absence of mammalian predators and their introduction has been responsible for many extinctions and declines. Predator control will have to be ongoing if some native species are to survive on the mainland. Currently, predator control relies largely on labour-intensive trapping, so the development of a humane predator-specific toxin would be a valuable additional control method. Para-aminopropiophenone (PAPP) is being investigated as a toxin for feral cats and stoats in New Zealand. The toxic effects of PAPP appear to be related to the rapid formation of methaemoglobin in some species, which leads to a rapid and lethal deficit of oxygen in cardiac muscle and the brain. Pen trials with feral cats and stoats have been undertaken using meat baits containing a proprietary formulation of PAPP at various doses. A PAPP dose of 20-34 mg/kg was lethal for feral cats, with death occurring 54-125 minutes after eating a bait. For stoats, doses of 37-95 mg/kg were lethal with death occurring 15-85 minutes later. Cage results confirm that PAPP is a humane and effective toxin for feral cat and stoat control and we have now completed some preliminary field studies which have provided very promising results. Further field work is continuing to refine control techniques using PAPP particularly for cats. Technical information dossiers including chemistry and manufacturing, toxicology, residues and welfare have been compiled and are in the "registration pipeline" for new active and new product approval with the NZ authorities, starting with NZFSA.