



CONNOVATION QUARTERLY RESEARCH REPORT- OCTOBER-DECEMBER 2008

HIGHLIGHTS AND ACHIEVEMENTS: -

1. Following submission of new grant applications in September we learnt in mid-December that our FRST bid, entitled "Pest control for the 21st Century" had been given a green light to proceed to the full application stage in the Ecosystems Portfolio 2008/09 funding round. We are part of a Lincoln University Consortium for this innovative programme which brings together exciting new research ideas. A second FRST bid which is collaboration between Landcare Research and the Lincoln University Consortium has also successfully navigated its way through the first screening phase. Our focus is on "thinking beyond 1080-more and better tools for humane pest control now".
2. This result came on the back of an "Excellent grading" in an Audit of our current FRST pest control programme with Lincoln University entitled "Smart Pest Control". We completed a resume of progress programme, termed an "Evidence Portfolio". On 9th September an audit interview with an international expert panel focused on progress and achievements. The result was an "Excellent" grade. The score of excellent reflects good progress in the development and registration of multi-species baits and alternatives to 1080. Only 3 programmes out of 15 were ranked excellent and 2 of these were from Lincoln University. The

remainder were ranked satisfactory or unsatisfactory.

3. The 2nd major field trial of para-aminopropiophenone (PAPP) our new poison for stoat control was a resounding success. Department of Conservation field staff achieved a kill of 90% of stoats in an area of approximately 1,500 hectares in Waitutu adjacent to the site of the first successful trial. In parallel registration dossiers were submitted to NZFSA for Predastop® for stoat control.
4. Good progress was made in December with our microencapsulated zinc phosphide (MZP) as well as Predastop®, with responses being provided to ERMA/NZFSA following questions from assessors. ZP registration with the NZFSA was successfully completed in September
5. Our research and development was discussed with government agencies, NGOs and with iwi. e.g. MAF Biosecurity, DoC, and new staff at ERMA, the RSPCA and Tuhoe. Meetings were held and presentations given to Dr John Hellstrom Chair of the Possum Biocontrol Group, Dr John Sanson MAF Biosecurity, Carol West DoC, Bill Dyck Envirolink, Lynne Waterson a new Senior Toxicologist and manager at ERMA, also with Peter Mason and colleagues at the RSPCA, and with James Waiwai and Jim Doherty and other Tuhoe colleagues. Feedback was positive and encouraging. In addition there were presentations in Whangarei, Akaroa and Invercargill to council staff, DoC

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- and community groups. A briefing on new alternatives to 1080 was given to Paul Jensen, conservation advisor to Nick Smith. Meetings were held with MAF welfare scientists, Veterinary Association's welfare experts and the Regional Councils Biosecurity Managers in Auckland, Wellington and the South Island.
- We continue to progress the registration of Feratox® in Australia as an alternative to 1080 for the more humane control of overabundant native species in plantation forestry. Prior to new field research in Tasmania pen trials have been undertaken to improve delivery of bait and safety. Preliminary results indicate that prefeeding with Feratox® placebo pellets will improve bait uptake and reduce spillage of toxin and non-target species exposure to the toxin.
 - The first stage of a field trial of Feratox® for the control of dama wallabies in NZ was completed with colleagues from DoC. Approximately 50% of a population of radio collared wallabies was killed. Follow-up is planned in 2009.
 - ERMA approval was obtained for the first studies in NZ of sodium nitrite as a vertebrate pesticide. Our first scheduled studies were successfully completed. An encapsulated form of the toxicant was developed and tested and shown to overcome taste aversion.
 - Contract reports for Feratox® for control of ferrets and pigs were completed and submitted to AHB. Provisional agreement from AHB to help support additional field work has been obtained pending improved efficacy in pen and cage trials.
 - A FRST grant for a summer student to work on MtHB inducers and an Envirolink grant application to produce a report on new product initiatives were both successful.
 - Field trials on a possum specific bait called 215 which is not liked by rats were successfully completed as part of a research project undertaken with co funding from the AHB.

Two research papers were submitted

- Charles T. Eason, Kathleen A. Fagerstone, John D. Eisemann, Simon Humphrys, Jeanette R. O'Hare and Steven J. Lapidge "**A review of terrestrial vertebrate pesticides with a rationale for linking use patterns to registration requirements**". *International Journal of Pest Management*
- Eason, C.T.; Murphy, E.C. Hix, S.; Henderson, R.J. and MacMorran, D. "**Susceptibility of four bird species to para-aminopropiophenone**". *Science for Conservation*.

An article entitled "**The Tool Available: Poisons and Trends**". Charles T. Eason and Shaun Ogilvie was drafted for inclusion in an Ornithological Society publication "the State of New Zealand's birds".

Three reports were completed:-

Steve Hix, Lee Shapiro, Duncan MacMorran, Paul Aylett, Don Arthur, Charles Eason. (2008) Cyanide pen trials in pigs **Connovation Report pp 15**

Lee Shapiro, Steve Hix, Duncan MacMorran, Paul Aylett, Charles Eason (2008) Feratox® cage trials on ferrets. **Connovation Report pp 14**

Charles Eason (2008) Sodium nitrite synergists. Connovation Report pp 15

NPCA Conference presentations 26-27th November, Wellington

Our team and the Lincoln University Research Consortium had a high profile for their research and product development during the last month. A total of 9 oral and 6 poster presentations were presented at the

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annual NPCA conference in Wellington in November. Their focus was predominantly on “thinking beyond 1080-more and better tools now”.

Watercress and puha field trial-fate of 1080 (Dr Aroha Miller).

Inducing a conditioned food aversion to make dogs “possum shy” (Ray Henderson)

Field control of stoats and feral cats and registration status of para-aminopropiophenone/“PAPP” (Steve Hix).
Feratox for wallabies, pigs and ferrets (Steve Hix)

Smart Pest Control Programme – Multi-species baits for ground and aerial control (Charles Eason)

Registration of Zinc Phosphide (Ray Henderson)

Thinking beyond 1080 (Charles Eason)

Sustained control of possums along forest/pasture margins using a new bait delivery system (Ray Henderson)

Prof Eason chaired a session at the conference called “ Taking it to the market”.

A media item in the Christchurch Press profiled our research. “ *NZ scientists help develop new poison to target pests*” and a follow-up article is expected in January.