

CONNOVATION RESEARCH QUARTERLY REPORT- June 2009

HIGHLIGHTS AND ACHIEVEMENTS:

1. Microencapsulated zinc phosphide (MZP) now through pre-screen with ERMA and advancing into formal assessment. Feratox® also through pre-screen with NZFSA for dama wallabies. Zinc phosphide reached the “publicly notifiable stage” of the ERMA assessment process and as of the end of June 6 submissions had been received by ERMA.
2. PAPP HS1 registration dossiers completed and filed with ERMA. This is the most important milestone to date in the development of our technology platform linked to RBC toxins and more humane pest management. In parallel excellent progress has been made in advancing a substantial field trial with feral cats. The highlight for the last quarter was the successful completion of a major field trial with PAPP controlling over 80% of a population of carefully monitored feral cats on Ngamatea station in the central North Island. A report has been completed for conversion into a journal paper and a conference abstract and for inclusion in registration dossiers.
3. Meetings were completed in Melbourne, reviewing with IA-CRC colleagues Australian and NZ research and development on PAPP and sodium nitrite. Assessing new more effective formulations and finalising design specifications will be a priority for future sodium nitrite research. Two presentations were given at this workshop.
4. We have consolidated results from testing sodium nitrite (SN) for possum control, establishing an approximate LD50 of 120 mg/kg for SN administered in baits. New promising formulations are being sourced for testing in July and August.

5. In April a new grant application, which had been developed since 2007 with European research partners was submitted to DEFRA. This collaboration involves working with Prof Neville Gregory at the Royal Veterinary College near London. We have learnt this grant application has been successful.

6. Good progress has been made on monitoring the persistence of diphacinone versus coumatetralyl in cattle and deer.

7. Two version of an Envirolink report for Regional Councils on Trends for Alternatives to 1080 was completed.

8. A co-authored paper was submitted to Steve Lapidge (IA-CRC) on the species variation in toxicity and metabolism and excretion of sodium nitrite.

9. The first major field trial with new multispecies 1080 baits was completed as part of the Lincoln University-Connovation FRST programme "Smart Pest Control". Promising results were obtained with the cull of possums. Further work is planned to achieve a better kill of rodents.

10. Two presentations at a DPIW workshop in Launceston, Tasmania in May were well supported: - i) An update on Feratox with latest research and registration activities ii) plans for new repellent research. Both were well received by our client DPIW and their stakeholders.

REPORTS, PUBLICATIONS & PRESENTATIONS:

Lee Shapiro, Steve Hix, Duncan MacMorran, Charles Eason and Elaine Murphy (2009) PAPP field trials on feral cats. Connovation contract report pp 10

Eason C.T.; Ogilvie S (2009) A re-evaluation of potential rodenticides for aerial control of rodents. Science for Conservation "in press" 33 p

Charles Eason and Shaun Ogilvie (2009) Trends in vertebrate pesticide use and development: alternatives to 1080 - what and when? Envirolink Report. Pp 26 and a short version Pp 6.

Steven J. Lapidge, and Charles .T. Eason

Pharmacokinetics and methaemoglobin reductase activity as determinants of species susceptibility and non-target risks from sodium nitrite manufactured feral pig baits submitted to *Wildlife Research*

Two IA-CRC workshop presentations; Melbourne 23-25th June:- i) "SN research in NZ: context and progress"ii) Update on PAPP. R and D and registration.

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* (accepted subject to revisions).

Presentations at a DPIW workshop in Launceston, Tasmania 4 and 5th May.

i) Eason, Statham, MacMorran and Dawson. "Feratox as a humane alternative for browsing control".

ii) Eason and MacMorran "Smelly Stockings"

Presentation to Forestry workshop in Rotorua 30th April

Eason "1080 replacements what's new in the product development pipeline"

Conference abstract submitted for EVPC 09

i) Comparative pharmacokinetics of rodenticides and risk assessment.

Charles. T Eason, Elaine Murphy, Shaun Ogilvie, Steve Hix, Duncan MacMorran, Keith Broome and Alastair Fairweather

ii) Humane pest animal management tools: the next generation.

Simon T. Humphrys, Steven J. Lapidge, Linton Staples, Charles T. Eason

iii) Developing Humane Toxins for Predator Control. Charles .T Eason, Elaine Murphy, Steve Hix, Lee Shapiro, Duncan MacMorran, Simon Humphrys.

Conference abstract submitted for US VPC Eason et al "Trends in vertebrate pesticide use and new developments: NZ perspectives and international implications".

Abstracts were also submitted for the PestNet workshop in NZ in October 2009 covering new product development and registration.