



Industry Update Summer 2012/13

Pestoff is the Registered Trade Mark of Animal Control Products Ltd, 408 Heads Road, Whanganui, New Zealand



VOLUNTEERS AND 50D WORK FOR KOKAKO

The Mangatutu Valley in Pureora Forest Park, between lake Taupo and the King Country town of Te Kuiti, has become a stronghold for the threatened blue wattle crow "kokako", thanks to a long-term predator control programme being carried out mainly by volunteers.

In 1997, the Howick Tramping Club immersed itself in the predator programme which had started several years earlier with aerial 1080 baiting. From 1993, various volunteers took on the maintenance control using anticoagulant baits applied in bait stations. By 1999 the area held a productive and growing population of kokako which numbered less than 10 pairs initially. An estimated 110 pairs are now present and in fact the predator control work in the Mangatutu has been so successful in eliciting recovery in a number of bird species, that 11 kokako and 90 robins have been relocated to other managed sites including the Mt. Bruce National Wildlife Centre. Although many sponsors and volun-

teers can take credit for the success of this programme, the Howick Tramping Club in particular has made a huge contribution over the last decade.



The club provides volunteers on the ground to install, check and fill bait stations during the critical spring/summer nesting and fledging period when juveniles are most at risk.

The maintenance of access tracks and monitoring of pest numbers are also an important part of the work. Howick Tramping Club members were putting in around 600 volunteer hours each year when the programme covered 500

hectares and they now contribute up to 1600 volunteer hours each year with the operational area having reached 1600 hectares.

Further expansion of the programme southwards into the adjoining Tunawaea Ecological area has occurred with significant corporate sponsorship having been secured for three years.

Pestoff Rat Bait 50D with 0.005% diphacinone has been a key component of the programme over the last 3 years. This predator control programme has raised a few questions over the conventional theory that a rat tracking index (RTI) of 5% or less is necessary for many bird populations to recover. The kokako population appears to have grown steadily between 2008 and 2012, despite a minimum annual RTI of less than 5% having been achieved in only one year during the August to February control period.

Congratulations to all of those who have contributed to the programme, especially the Howick Tramping Club and its corporate sponsors.

Animal Control Products Ltd Important Contact Information

PRICE RISE

Office Phone (Whanganui)	06 344 5302
Office free phone	0800 22 44 23
Office Fax	06 344 2260
Bill Simmons Mobile	0274 798 318
Web Site :	http://www.pestoff.co.nz
E-mail: info@pestoff.co.nz	Orders: orders@pestoff.co.nz
Safety Data Sheets:	http://www.pestoff.co.nz

ACP will be increasing its prices for most products by approximately 2% from 1 January 2013. The price increases reflect ongoing increases in the cost of overheads, inwards freight and raw materials. For a copy of the new price list commencing 1 January 2013, please email Raewyn at: orders@pestoff.co.nz

POSSUM WEIGHTS & BAITS

Between January 2011 and February 2012, Landcare Research undertook trials using ACP's No.7 and RS5 1080 baits to determine their efficacy and palatability to possums over 13 months in storage. The trial involved presenting pre-feed and toxic baits alongside fresh food to 120 wild caught adult possums over the 6 phases of the trial.

The trials showed unequivocally that aerial baits kept in suitable storage for up to 12 months can achieve the required outcomes for possum control operations. A full copy of the Landcare report and an ACP summary of results, are available from the publications and brochures section of the ACP web site.

Other aspects of the data collected by Landcare staff will be of interest:

Possum live weights

The mean live weight for the 120 possums was 2.92 kilograms with weights ranging from 1.89kg to 4.72kg. Mean weight for males was 3.13 kg, 450 grams heavier than for females which had a mean weight of 2.68 kg. The numbers of possums in the various weight ranges are shown in the table below.

POSSUM WEIGHT RANGE	NUMBER OF POSSUMS	PERCENTAGE OF WHOLE GROUP	LD ₉₉ as mg of 1080 based on LD ₉₉ = 4mg/kg	Grams of 0.15% 1080 bait required for lethal dose
Less than 2.5kg	24	20	Up to 10mg of 1080	Up to 7.0 grams
2.5kg – 3.0kg	52	43	10mg-12mg of 1080	Up to 8.0 grams
3.0kg – 3.5kg	30	25	12mg-14mg of 1080	Up to 9.3 grams
3.5kg – 4.0kg	12	10	14mg-16mg of 1080	Up to 10.7 grams
Over 4.0kg	3	2	16mg or more 1080	Over 10.7 grams

Implications for choice of 1080 toxic bait size

The far right column of the table shows that based on a LD₉₉ of 4mg/kg, up to 80% of the possums used in the trial (all of those heavier than 2.5 kg) potentially could have survived an encounter with a single 7gram bait containing 0.15% 1080, whereas only the heaviest individual might have survived eating one entire 12 gram pellet containing 0.15% 1080. This reinforces the need to use larger 12 gram pellets where possums are the target - for both efficacy and animal welfare reasons. The importance of this increases where bait sowing rates are low and possums may be unable to find and eat 2 whole baits before the onset of sickness behaviour caused by poisoning.

Mortality data

No possum eating more than 3mg of 1080 per kg of body weight survived. 93% of the fatalities occurred on the first night that toxic bait was presented alongside normal food, 5% on the second night and 1% occurred on each of the 3rd and 4th nights. Nine of eighteen possums which survived the trial, refused to eat any toxic bait but took apples and feed pellets. There was no difference in survival for different sex or weight classes.

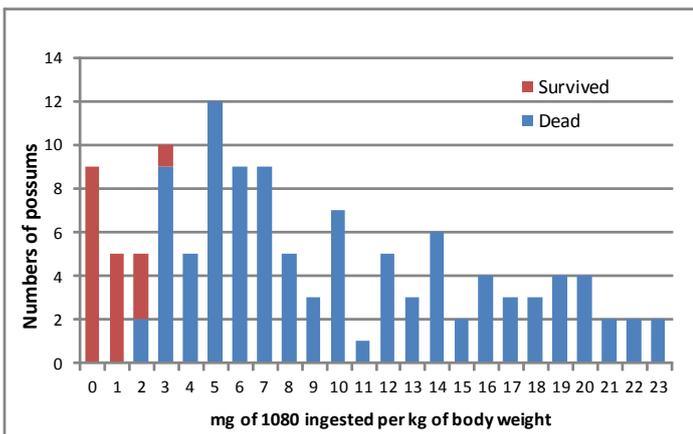
Daily food consumption

Possums ate an average 60 grams of food (including non-toxic bait, feed pellets and apples) per kilogram of body weight per day during the pre-feeding phase or around 6% of their body weight in food each day. During the winter phases, food intake decreased by about 20% compared with food intake during other seasons. This may be a physiological adaptation induced by a lower availability of natural foods to wild possums during winter; a phenomenon which is often accompanied by a reduction in activity, which conserves energy and in turn, reduces winter food intake requirements.

Optimum 1080 concentration

Based on the weights of possums used in the trial, had every possum been presented with and eaten a single 12 gram bait, only one possum would have received less than a lethal dose (LD₉₉) of 4mg of 1080 per kg of body weight, 109 possums (91%) would have received between one and two lethal doses and 10 would have received more than 2 lethal doses. This shows that the 12 gram pellets and the concentration of 1080 in the bait (0.15%) is close to the optimum size and concentration in terms of providing each possum with a lethal dose from a single bait - without creating undue risks for target animal welfare, non-targets, operators or the environment.

The ad lib feeding method during the trial however allowed individual possums to consume



far more bait than necessary for a lethal dose and far more bait than they would be able to find and consume during a 1-2kg/ha aerial application. A few of the possums in the trial ate more than 5 lethal doses.



1080 HELPS KAGU IN NEW CALEDONIA

ACP's specially formulated 0.1% 1080 Feral Cat Bait used by DOC on Stewart Island to protect dotterel from predation by feral cats during the breeding season, are also used by the staff of the Rivière Bleue provincial park in southern New Caledonia to protect their flightless Kagu which have suffered predation by introduced predators including feral cats and wild dogs as well as facing competition for food resources from wild pigs.

The baiting work is allowing kagu as a species to grow in numbers from critically endangered to locally abundant.



Kagu displaying during mating

Kagu (*Rhinoceros jubatus*) belong to the order Gruiformes, to which takahe and weka also belong. Kagu are the officially adopted emblem of New Caledonia; an iconic species like the kiwi. It is thought that kagu lost the ability to fly by adopting a ground dwelling lifestyle in absence of the predators which arrived much more recently - humans followed by rats, cats, dogs and pigs.

In 1977, a program aimed at kagu conservation was set up by New Caledonia's government agencies in collaboration with local and international partners.

A breeding unit was created in Nouméa's Michel Corbasson park (zoological and botanical garden) and between 1977 and 1993, 109 chicks hatched with a 63% survival rate.

Some of the adult chicks were re-acclimated in enclosures before being released in the Rivière Bleue park in order to restock the remnant population which had declined to only 60 individuals recorded in 1984. This core population strengthening phase has occurred between 1984 and 1991 saw 43 individuals released. A program of introduced predator control was undertaken simultaneously so kagu did not face any threats during the breeding period (Kagu lay only one egg per year). This program has continued for 3 decades with positive results.

The kagu population in the park reached around 700 by 2009. In addition to the captive breeding programme and predator control work, the creation of forest corridors has been important in allowing otherwise isolated populations to interact.

This success has been a catalyst for expansion of the kagu recovery programme over the whole mainland of New Caledonia.



PESTOFF

...Simply Smarter

ACP 2012 CHRISTMAS CLOSURE

ACP will close for business at 11.30am on Thursday 20 December 2012 and will re-open at 8.00am on Monday 7 January 2013. Customers requiring orders for production during January would be well advised to submit these very soon to ensure that deadlines for delivery can be met.

SURVEY LUCKY DRAW WINNERS

The lucky draw winner of the 2012 ACP customer survey was **Bruce Waddell of Tasman Pest Control Ltd**, operating from Brightwater near Nelson. He won \$250 cash from ACP. Thanks to all of those customers who returned completed questionnaires.

PESTOFF HI-STRENGTH

Increasing numbers of contractors and regional council pest control units have converted to using **Pestoff Hi-Strength Possum Bait** (0.005% brodifacoum) in bait stations as their primary maintenance and re-treatment tool. Operators are using significantly less bait and making significant savings on labour and travel costs to achieve the required levels of control. Pestoff Hi-Strength is available only to professional pest control organisations.

THE GREAT CAMEL CULL

The removal of feral camels from the Australian outback, is a first major step towards controlling these troublesome animals that have destroyed infrastructure, contaminated water holes and damaged natural and cultural values in the arid lands.

Camels were first introduced to Australia during the 1800's and were used as transport for exploration and to assist construction of rail and telegraph lines. In the 1930s when vehicular transport became more common, thousands of camels were released and the wild population soared to an estimated half a million by 2004.

Over 100,000 feral camels have been removed from the outback over the past 18 months in a project aimed at reducing the overall population and lowering their density es-



The north end of a southbound Aussie camel

pecially around priority environmental sites.

The camels are capable of covering 70 km in a day so an individual control zones may need to cover 40,000 square kilometres (four million hectares) in order to be effective. The damage caused by camels and the cost of controlling them was estimated at over NZ\$13 million a year.

The project does not intend to eradicate feral camels completely from outback Australia, but will manage their population to acceptable levels. Project leader Jan Ferguson says they are well on track towards achieving this goal.

Camel meat is considered a delicacy by inhabitants of the outback and often features in local cuisine.

Since May 2012, a South Australian meat works company has been processing up to 150 feral camels per day in response to the rising demand for camel meat in the Middle East.



Australian Camel Range

WALLABY SPREAD CAUSES CONCERN

Bay of Plenty and Waikato Regional Councils and DOC are concerned at the continuing spread of wallabies across the region.

Environment BOP Land Management Officer Dale Williams says that the expansion of wallaby range since they were liberated in 1912 has been slow; however recent reports of wallabies west of Rotorua are a major concern.

"While rivers and lakes are effective barriers to dispersal, no such barriers exist to the west of Rotorua, as all the streams point towards the Waikato", Dale said.

"When it comes to dealing with these animals we have limited tools. We know that aerial baiting with 1080 works really well, with kills in excess of 95% in areas where wallabies have been established for a long time. Potassium cyanide has also proven to be effective in some situations. But when wallabies establish new populations they invariably have access to an abundance of highly palatable



grasses and native tree seedlings, so getting them to take bait is a big ask. Throw into that mix, competition with possums, and the problem gets worse", he said.

Environment BOP is currently planning to eradicate a couple of small wallaby populations, North West of Rotorua and is using trail cameras as a surveillance tool and a wallaby indicating dog which is literally coming on "leaps and bounds!"

Meanwhile, on Kawau Island the Pohutukawa Trust of New Zealand continues to take a lead role in eradicating wallabies in a bid to rehabilitate the island's native flora and fauna.

In 2010 The Trust obtained approval from the NZ Food Safety Authority to use **Pestoff Brodifacoum Possum Bait** in bait stations in combination with shooting on Kawau. This

strategy has proven very effective in reducing wallaby numbers as the trust continues with its eradication objective.

The Department of Conservation successfully eradicated wallabies from nearby Rangitoto and Motutapu Islands 2 decades ago using cyanide, 1080, trapping and shooting. On Kawau Island, the department has built a wallaby exclusion fence across a peninsula in the south west of the island to keep wallabies off the grounds around Mansion House.



DOC's wallaby fence under construction

NEW BLOCK

ACP will soon be launching a new rodenticide block for use in bait stations, particularly in situations where there are concerns over the use of second generation anticoagulants such as brodifacoum, flocoumafen or bromadiolone.

The new product will be based on the highly successful **Pestoff Rodent Blocks** in terms of composition and shape, except that the active ingredient will be 50ppm of diphacinone and the blocks will be green rather than blue.



Efficacy trials against rats, carried out by an independent testing agency, compared the new diphacinone blocks with blocks containing both 50ppm and 20ppm of brodifacoum.

The diphacinone blocks performed almost as well as the brodifacoum products.

The new product should be available early in the new year in 2kg and 5kg eco-friendly cartons and will be marketed under the trade name **Pestoff Rat Blocks 50D**.

It is anticipated that the largest users of the product will be conservation NGOs, DOC and commercial operators.

NAIT & AHB MERGE

NAIT is a new industry-owned, limited liability company responsible for managing the **National Animal Identification Tracing** scheme.

The scheme provides lifetime traceability for cattle and deer, enhances New Zealand's biosecurity response and protects the New Zealand brand. The scheme became mandatory from July 2012 for cattle, with deer to follow in March 2013.

NAIT Ltd and the Animal Health Board are merging. The new combined organisation (yet to be named) will have on-going responsibility for the NAIT scheme and for managing the national pest management strategy for bovine tuberculosis.

The NAIT scheme using electronic tags, will provide New Zealand livestock owners, livestock and meat companies and government with accurate information on the current location and movement history of cattle and deer.

NAIT Limited and the Animal Health Board are currently governed by independent boards of Directors but a new single board will govern the new structure. Shareholders are Beef & Lamb New Zealand, DairyNZ, and Deer Industry New Zealand.

AHB CEO William McCook has recently been appointed CEO of the new merged agency.



ROOK BAIT PROGRESS

A syndicate of regional councils has sponsored an application to the Ministry for Primary Industries aimed at having alternative baits approved for rook control with **DRC1339**.

The alternatives sought are walnuts and macaroni which were successfully used in the past in regions where rooks are now scarce or absent.



While rook populations have been decimated by effective control measures over most of the South Island, the spread of rooks towards the north and west from Hawkes Bay and Manawatu have seen councils launch intensified control measures over recent years.

It is anticipated that approval for the new baits will be given early in the new year.

Although the bread/dripping baits are highly effective in many situations, it is important to have alternatives available to prevent rooks, which are naturally very wary, from becoming too familiar with one bait type. The application of 5% **DRC1339** gel into nests will remain an important control tool.



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