



newsletter

SUMMER 2009 # 29

Editorial

Greetings to our many readers. Sadly, we missed our 2008 newsletter due to our focus on mouse plagues and new R&D projects with the Invasive Animals CRC. We humbly apologise to those suffering withdrawal symptoms!

A major new change for the ABT/ACTA group is our decision to modernise the company logo and corporate structure. We commenced trading Applied Biotechnologies (ABT) as a product registration and R&D consultancy in 1986. ABT conducted research into rumen bypass technology for essential amino acids, "Smartamine", for French Agvet giant Rhone Poulenc. ABT also developed the world's first use of melatonin to control seasonality ("Regulin" see later article). It was a result of the recognition of lamb losses, while testing Regulin®, that the need for improved fox control became apparent. Land holders needed to move from *reactive & local* fox control, towards *proactive & area-wide* programs. This required a shelf stable product such as FOXOFF®. ABT also developed DENCOFUME® carbon monoxide den fumigation cartridges, in conjunction with the Dept of Conservation as an extension of some USDA technology for coyote control.

The fox work soon led us to develop improved methods for rabbit management. At that time it was thought that pindone, though more suitable for semi-urban areas, was "*not as strong as 1080*". However, our view was that if the chemical was a poison and was used correctly, it should be 100% effective. The old recommendation, using two doses of powder on carrots given two days apart, gave only 80% effect. But 80% control is simply not good enough to prevent a resurgence of rabbits in the following year. We discovered that pindone worked better if doses were spread 3-5 days apart. This enabled better results with less poison. When combined with a three-dose strategy that ensured dose compliance by all rabbits we now achieve nearly 100% control.

ABT also prepared the regulatory submissions for rabbit haemorrhagic disease (RHD) in both Australia and NZ.

In 1995 we formed Animal Control Technologies Australia (ACTA) to service the product trading part of our business. Products such as MOUSEOFF® Zinc Phosphide bait, MOUSEOFF® Bromadiolone bait, DOGGONE® and RATTOFF® were released under the ACTA banner and we commenced work with the Invasive Animals CRC with FACP, BRS, AWI and MLA support to tackle feral pigs (PIGOUT®) and develop new ways to tackle wild dogs and foxes using PAPP.

Recently we determined that our product trading and R&D would be better merged into a single entity to reduce overheads and to provide a single interface between us and our research collaborators, industry and our customers.

Thus we can now announce the creation of a new company to bring all of our work under a single entity.

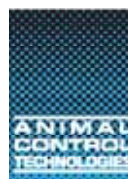
The name will remain the same **ACTA** but we have a new logo. Our new logo is very similar to the old ACTA logo because we are still the same people, in the same location with the same contact details. Our customers will see very little practical change except for the ACN. This newsletter is the first under the new corporate banner.

Other significant changes are the registration and launch of the world's best slug and snail bait (Delicia® SLUGGOFF® Lentil Bait), the commencement of a new pig bait development (HOGGONE®) to improve the options for feral pig control, a new toxin for fox and wild dog control (PAPP) and the start of perishable bait manufacture in Victoria.

The ACTA motto remains
"Excellence in Pest Animal Management"



1986
R&D



1995 - 2009
R&D + product sales & distribution



2009...
All functions combined

ACTA product range grows..



FOXOFF®
Fox Bait



RABBAIT®
Pindone Oat Bait



MOUSEOFF®
Bromadiolone



RATTOFF®
Rat Bait



DENCOFUME®
Fumigation Cartridges



RABBAIT®
1080 Oat Bait



PIGOUT®
Feral Pig Bait



MOUSEOFF®
Zinc Phosphide Bait

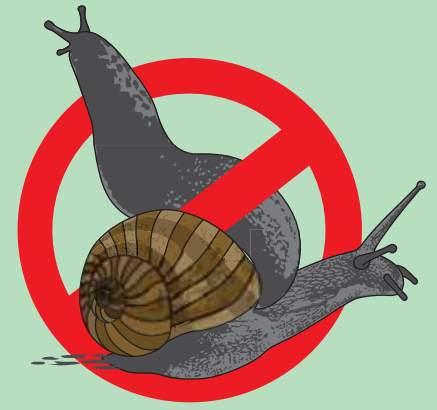


DOGGONE®
Wild Dog Bait



SLUGGOFF®
Slug & Snail Bait

ACTA tackles slugs and snails



SLUGGOFF®

Since our work with mouse control in crops we have learned more about the other pests that threaten our domestic and export cereals markets. Chief amongst these are slugs and snails. In partnership with Frunol Delicia® in Germany we can now announce the availability of the world's best slug and snail bait for Australia.

Apart from the common garden snail (*Helix aspersa*) that damages home gardens and intensive horticultural crops, Australia is also an unwilling host to a range of other slugs and snails that have evaded quarantine since the 1920's. Now large parts of the cereal zones of SE and Western Australia are infested with snails and slugs. Chief amongst the problem invaders are the common white snail (*Ceruella virgata*), white Italian snail (*Theba pisana*), the conical snail (*Cochlicella acuta*) and the small pointed snail (*Cochlicella Barbara*). These snails eat crops and cause grain contamination at harvest which lowers grain value.

Controlling snail populations is critical for profitable grain production. Each snail can lay about 400 eggs after autumn rains, so densities can reach thousands of snails per square meter of crop. In the hot conditions of summer the snails can seal off to conserve moisture ("aestivate"). They can climb up fence posts to avoid desiccation on hot soil. Up to 4000 snails can cover a single fence post and these could produce over a million offspring in one season! Eggs laid in Autumn hatch in Winter and the young snails feed voraciously in Spring.

The Grains industry in conjunction with the SA Research & Development

Institute (SARDI) have published good extension materials for snail control with a variety of techniques. Bashing snail shells, burning snails with stubble and baiting with metaldehyde baits are the chief methods of control. There are also techniques to minimize contamination of harvested grain and to minimise the further spread of snails. Nevertheless, in wetter years, baiting is one of the best options available once large scale hatchings have developed.



The unique patented shape of the **Delicia® SLUGGOFF® lentil bait** facilitates the bait being taken into the mouth parts of even small slugs and snails. This maximises effectiveness.

ACTA has registered Europe's most successful slug and snail bait. This bait, developed by Frunol Delicia in Germany is the most widely used bait throughout Europe, where slug and snail problems represent one of

the most serious pest issues faced by many farmers. The product is now registered for use in Australia under our trade name "**Delicia® SLUGGOFF® Lentil Bait**". The new product controls all types of slugs and snails in all crops, horticulture and the home garden and can be spread by hand, mechanical spreaders and by air.

Scientists at Frunol have devised a patented thin disc (lentil shaped) preparation that enables even small snails to nibble the bait pellet. The active ingredient metaldehyde works on the mucous secretion to cause desiccation but also immobilises snails and slugs through effects on the nervous system.

The SLUGGOFF® lentil bait has a higher concentration of metaldehyde (3%) than most other baits (typically 1.5% w/w) but can be used effectively at much lower applications rates. The bait is so effective that a lower total chemical usage is achieved without loss of effectiveness. **Delicia® SLUGGOFF® Lentil Bait** only needs to be applied at 3 kg per hectare, which is much lower than the recommended and legally permitted rates for most other products. **Thus, the cost of control and cost of spreading per hectare is reduced.**





Features

- SLUGGOFF® is approved for aerial, ground and hand application.
 - SLUGGOFF® is approved in all crops and gardens including vineyards and horticultural crops, cereals and herbs.
 - SLUGGOFF® has been shown in our own studies, and in independent studies by SARDI to be highly effective. The data from German, Italian, Spanish, French and UK trials is equally outstanding with demonstrated efficacy against ALL significant pest species of SLUGS and SNAILS and proven reductions in crop damage from just single applications.
 - SLUGGOFF® is highly effective at application rates of just 3kg/ha for broad acre cereals and at 6kg/ha in gardens and horticulture. This is a much lower usage rate than most other products due to its high-tech formulation.
 - SLUGGOFF® is rain fast to overcome one of the big limitations of most pellet baits.
 - SLUGGOFF® has no dust and an even particle size to allow perfect spreading.
 - SLUGGOFF® does not need to be placed in heaps and works even when spread thinly which minimises the risk to pets from snail bait.
 - SLUGGOFF® also contains the bittering agent "Bitrex" to minimise non-target uptake.
- Though a departure from our normal role in vertebrate pests, we believe that SLUGGOFF® will be a major new option for slug and snail management by Australian farmers.
- The bait is now available from selected retail merchants and horticultural product providers in time for the 2009 Spring snail and slug season. Packaging includes a variety of sizes for all applications but most will appreciate the convenience and safety of the resealable pails with tamper-evident lids.
- The Delicia® SLUGGOFF® Bait is so good that we provide free samples to any potential user who would like to try it. The results are simply outstanding under any conditions.

SLUGGOFF® is a major new control option for Australia's emerging slug and snail threat!

We have a wide range of pack sizes to suit broad-acre agriculture and the home and garden market.



Regulin® Relaunched

During his time as a sheep industry research officer in the then Vic Dept of Agriculture and subsequently in ABT, our Director, Prof. Linton Staples, played a key role in the exploration of ways to obtain practical control over seasonality of animals.

Seasonal breeding is important since our climate, pasture availability and the need to finish stock to market cause us to join some sheep and goat flocks earlier in the season than the animals have evolved to do. About half of Australia's sheep flock is joined in Spring/summer, so that lambs can be born in Autumn, then grown up to be sold in Spring. However, sheep have evolved to perform optimally if joined in Autumn to lamb in Springtime. The need to join sheep early has been a problem leading to reduced lambing for many decades in the sheep industry.

Following leads from the University of Adelaide and SA Ag Department, who showed that putting sheep into dark sheds in the afternoon could trick them into thinking autumn had arrived early, the ABT team was able to mimic this reduced daylength by using the time-keeping hormone melatonin. Initially the team fed melatonin each afternoon to animals in Spring. This worked to trick sheep into thinking days were getting shorter (ie time to breed) but was expensive and totally impractical. Who in their right mind would feed expensive melatonin-laced supplements each day at a time when feed was in abundance?

A breakthrough was achieved with the development of a tiny subcutaneous implant called Regulin® that released melatonin at normal levels for many weeks.

It was found that sheep experiencing continuous melatonin (from the tiny

implants) in summer behaved as though Autumn had come early and so switched to peak breeding performance.

One of the largest systematic research programs seen in the industry, involving trials in over 20,000 sheep over three years, showed that lambing was increased by approximately 20% if the ewes were pre-treated with melatonin implants. The trials showed that the optimum time for treatment was at 40 days before Spring or Summer joining.



REGULIN®

***Brings nature's timetable
into line with yours***

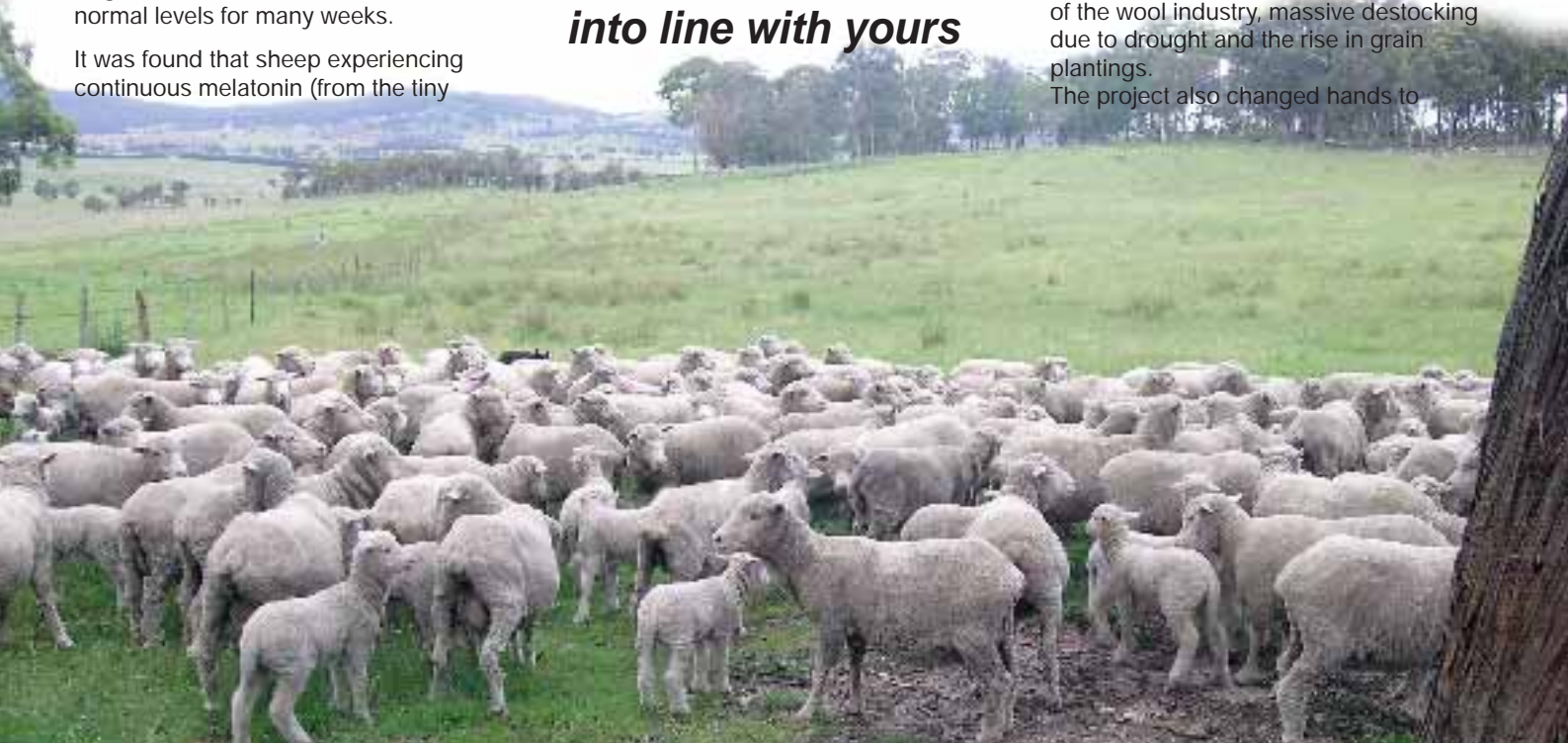
"Regulin®" is now used widely to boost lambing in flocks throughout Europe. Regulin® was also registered for advancing seasonal breeding in goats and also for advancing fawning and antler growth in red and fallow deer.

While Regulin® increased lamb drop by decreasing the numbers of dry ewes and increasing twinning but did not increase triplets, a great many lambs in utero (by ultrasound) were not appearing as weaned at marking. The losses post lambing were horrendous with as many as 30% of lambs in some flocks simply vanishing. Despite pregnancy rates of 110 lambs per 100 ewes joined in control flocks and around 130 lambs/100 ewes in Regulin-treated flocks, the weaning percentages of most experimental test properties was seldom above 80%. **It was this revelation, made possible by the adoption of ultrasounding in sheep in the 1980's, that led Prof Staples to attack the fox problem with the FOXOFF® Project.** Until this time, the thinking was that foxes were simply 'cleaning up' lambs that had died from mistothering or difficult births.

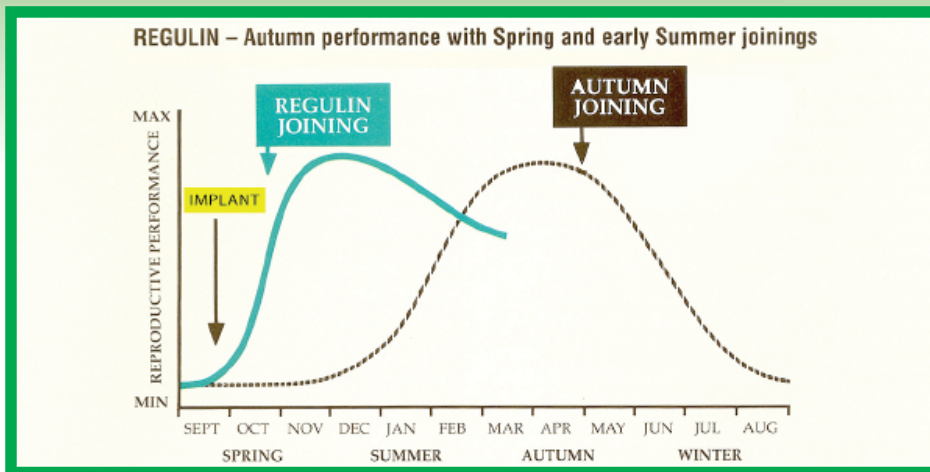
It was not long before improved fox control, using FOXOFF®, on a district scale, gave increased yardings at lamb sales with benefits now exceeding 100s of millions of dollars over the last 15 years

Apart from the under-recognised fox problem, Regulin® was launched in Australia in 1987 at a time of the collapse of the wool industry, massive destocking due to drought and the rise in grain plantings.

The project also changed hands to



in Australia



Schering UK and then to Sanofi in France and was effectively unsupported in the Australian markets for many years. Now Sanofi Animal Health spinoff CEVA has brought Regulin back to Australia commencing on a pilot scale in 2009.

This time around however, the role of foxes is better understood so ACTA is now working with CEVA in Australia to attempt to increase lamb weaning by at least 20% in Spring joined flocks by combining Regulin treatment with effective fox control.

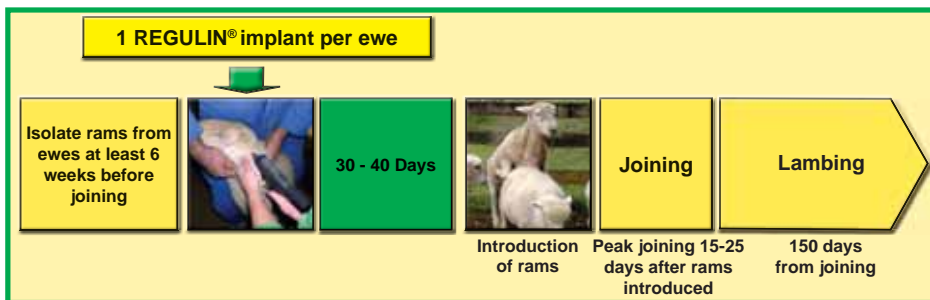
With the national sheep flock now at an

all time low (down about 100 million from the peak of the wool boom!), with lamb prices soaring above \$130 and with huge demand for export sheep, there has never been a greater focus on improving lamb production efficiency.

Remarkably there is now a shortage of breeding sheep and lambs in Australia so breeding performance and fox control has never been more important.

Regulin® and FOXOFF® therefore have an important role in the years to come as the sheep industry rebuilds.

Regulin is being marketed in Australia by CEVA-Delvet and will be available through selected rural merchants. Because of the importance of effective fox control to maximise the survival of the extra lambs generated CEVA and ACTA have agreed to promote Regulin® in conjunction with FOXOFF® to maximise economic returns to farmers.



CEVA DELVET Pty Ltd
 Phone: 02 9624 8844
 Fax: 02 9624 1544
 Email: info@delvetgroup.com.au

For REGULIN® Sales and Technical Information

Contact: Kylie Roberts
 Phone: 0429 381 534 Fax: 03 5436 9259
 Email: kylie.roberts@bigpond.com

Regulin treatment halves the number of dry ewes & gives more twins so that about 20 additional lambs will be born per 100 ewes treated. Regulin® simply shifts forward in time what the sheep do naturally in Autumn.



Trust the proven performer



FOXOFF®

Protecting Australia's lambs and wildlife



RABBAIT®
Pindone Carrot Bait

RABBAIT®



RABBAIT®
1080 Carrot Bait

1080 & Pindone Carrots

Now available in Victoria!

Recent studies are showing that rabbits are acquiring an antibody response to RHD virus due to development of immunity in young rabbits and possibly also due to a benign form of the virus conferring protective immunity. Myxomatosis is also killing fewer rabbits than when first released.

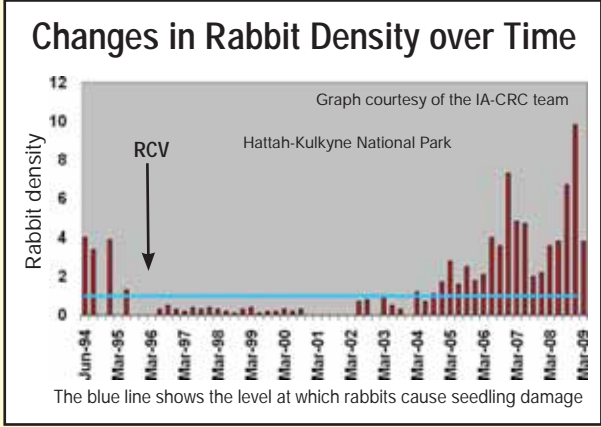
Recent studies show that, after a respite of nearly a decade, rabbits are again damaging landscapes, crops and seedlings.

Rabbits can be controlled by a variety of means including destruction and fumigation of warrens, poisoning with pindone or 1080 baits, shooting and by exclusion fencing. Often a variety of techniques are needed to achieve the desired goal of local eradication. Controlling only 90% of rabbits in one year will result in having the same numbers again in the following season. It is known that even one rabbit/ha can reduce seedling regeneration.

Rural merchants in Victoria can provide RABBAIT® Pindone Oat Bait to any landholder without any special permits.

All Agsafe accredited merchants in Victoria only can now also provide RABBAIT® 1080 Oat Bait to holders of a 1080-endorsed ACUP permit. Full bait user declarations apply for 1080 dosed baits.

Changes in regulations now allow ACTA to supply fresh carrot baits in Victoria.



1080



Free Feed



Pindone

Rabbits are on their way back!

New weapons in the fight against rabbits!

Unlike the oat products which are stable if stored, the carrot baits must be used immediately. Thus pre-ordering is essential and product cannot be returned, once made to order. We have good freight logistics to most parts of Victoria and work with users to minimize delivery costs. We also allow pick up direct from our production facility. ACTA carrot baits are made using a specialist high speed cutter to achieve

near perfect bait cubes with no juice or unwanted fragments. ACTA Carrot Baits can be safely transported long distances without refrigeration. We can supply any quantity to suit any program.

RABBAIT® 1080 Carrot Baits and RABBAIT® Pindone Carrot Baits are available in fully labelled 10kg pails and 100kg drums. The drums can be recycled if triple rinsed clean and returned, to further reduce costs.

Where possible we prefer to supply the bait via qualified contractors who are members of the Vertebrate Pest Managers Association (VPMA). These experienced pest controllers can conduct full programs on any sized property. However, we can supply direct if no local contractor is available.

Prices are seasonal. Please call ACTA for the current price for RABBAIT® 1080 Carrot Bait and RABBAIT® Pindone Carrot Bait.



*For orders and planning phone
Sandra, Kym or Ben on 03 9308 9688
or
fax requirements to 03 9308 9622.*

Perfect carrots every time!

Rodent Research Update.

The rodent research team at ACTA has been busy in the last 12 months investigating rodent control in poultry facilities, coffee crops and macadamia plantations. The predominant pest species investigated has been *Rattus rattus*, commonly called the black, ship or roof rat. Black rats are commensal rodents (usually found in close proximity to humans), however due to favourable weather conditions populations have started to cause significant damage to crops and equipment in agricultural and industrial situations.

Currently ACTA has several rodenticides registered for rodent control; MOUSEOFF® Bromadiolone which can be used against mice and rats within farm sheds and other domestic or industrial situations, MOUSEOFF® Zinc Phosphide Bait which can be used against mice in broad-acre cropping situations, and RATTOFF®

Zinc Phosphide Bait sachets, which are registered for use in cane and under permit for a range of other crops. Farmers often don't realise they have a problem with rats in their crops until too late. ACTA, with support from the IA-CRC has been conducting efficacy trials to test RATTOFF® against *R rattus* in a variety of crops in order to provide a registered solution for rodent control without the secondary poisoning risks associated with the illegal use of second-generation anticoagulant baits within crops.

For further advice on control of rats or mice in crops, industrial or intensive livestock facilities please contact the ACTA Rodent Research Team.

Rattus rattus is a particularly difficult rat to bait. They are a gregarious species, living in extended communities. They are 'bait shy' and don't like to try new

food sources (natural neophobia). They sample new food and learn to avoid it if it causes malaise. Anticoagulant poisons take days or weeks to have effect so the rats are unaware of the danger. However, they will continue to cause crop damage for some time. Concerns over non-target uptake, secondary poisoning effects of anticoagulants and the potential for them to persist in the environment have led to a ban on their use within cropping situations.

Trials using RATTOFF® Zinc Phosphide have had varying levels of success but the method and timing of deployment still need better investigation in each situation. Rats will interact with each environment differently and thus the timing and method of deploying baits needs to be adapted to each situation to get the maximum uptake of bait possible.



Damage to coffee plantations can be extreme



The culprit *Rattus rattus* is very difficult to control



Damage to macadamia nuts can cost hundreds of thousands of dollars

Rodents decrease biodiversity on islands

In March 09, DEWHA issued a draft threat abatement plan and a background document concerning the impact of exotic rodents on biodiversity of Australian islands.

Currently there are four main exotic species of rodent inhabiting Australian islands. These are the Norway rat (*Rattus norvegicus*), the ship rat (*R. rattus*), the Pacific rat (*R. exulans*), and the house mouse (*Mus domesticus*). Of these species the house mouse and the ship rat are the most commonly found. Rodents can move between islands by catching a ride on ships moving between ports. Some rats may also swim short distances. Rats and mice can quickly colonise islands to cause significant changes in fauna and flora. Rats and mice have been implicated in the decline of nesting sea bird colonies throughout the Pacific.

The Government's new threat abatement plan acknowledges the threat that rodents pose to biodiversity. The plan aims at eradicating rodents from islands of high conservation value or, where eradication is not possible, to mitigate the impacts of rodents on biodiversity. The plan also seeks to prevent the invasion of islands currently free of alien invasive rodents.

NZ is currently leading the world in successful island eradication of invasive rodents, so Australia has a long way to catch up.

The ACTA rodent team with UQ has been planning eradication programs on several islands as part of a joint project with the

IA-CRC, and hopes to add MOUSEOFF® ZP and RATTOFF® as tools in the eradication of invasive rodents. However while these products minimise the risks to non-target animals and birds, they have not proven ideal for the black rats that pose many problems. In contrast, the long-lasting anticoagulants used by others are effective on black rats but may pose a higher risk of secondary poisoning for wildlife.



ACTA helps to promote local products

75L 12 volt SlugMaster

Now available from ACTA on direct order.

This unit is ideal for application of SLUGGOFF® and MOUSEOFF® baits in arable cropping situations. SlugMaster will fit in with the "tram-lining" practice often used in spraying and fertilising programs, will spread up to 24 metres and achieve application rates down to one kg/ha depending on ground speed. SlugMaster is ideal for use with most slug, snail, cricket and mouse baits.

The C-Dax SlugMaster is a heavy-duty 12-volt broadcast spreader that has been specifically developed for spreading bait in arable cropping situations. Reliable and ready to go when you need it—no waiting for the contractor.

Features

- 75 litre hopper capacity (Treats 25Ha)
- Corrosion resistant hopper with hinged lid
- SlugMaster attaches to the ATV via C-Dax's unique Quick Smart attachment system which allows you to fit and remove it in seconds—no nuts, bolts, or spanners!

- Heavy-duty powder coated steel frame with extra bracing for optimum strength and rigidity
- Remote control for spinner disc and shutter
- Up to 24m spread width
- Five application rate settings
- Comes with wiring loom and remote on/off switch

Specifications

- Applies from 1 to 20kg/ha
- Weight: 30kg



C-Dax Spreaders offer an optional quick release system to allow easy mounting to all terrain 4WD ag bikes



Rabbit Traps

VPMVA Member Nino Caminiti is keen to promote his rabbit catching cages. These come in a pack of six burrow cages that can be carried inside a larger holding cage. They are available direct from Nino (Call M 0408 060 489) who manufactures these to a high standard.



Hodgson Bait Spread

Hodgson are a well known agricultural engineering company based in Keith, SA who have been making mouse bait spreaders for many years.

Gavin Hodgson

HODGSON PRODUCTS, PO Box 22, Pirie Road
CRYSTAL BROOK SA 5523

Ph/Fax: 08 8636 2282 Mobile: 0408 220 911



Jensan Oat Bait Layer

This precision Oatbait Layer delivers oats on a kg/km basis regardless of speed or terrain. A two year evaluation culminated in a 50 km trial at Hattah Kulkynne NP in Victoria with outstanding results using ACTA 1080 Oatbait. The stainless steel calibration barrel and HD Poly hopper are maintenance-free.

Ballarat based Jensan Farm Services (VPMVA Member) also manufacture stainless steel carrot bait layers and large Snail and Slug Bait spreaders. They recently released a "Smoker Unit" for use with Fumigation and the new Concussive Force Oxy/LPG "Rodenator".



Jensan Farm Services specialise in Rabbit Control machinery and conduct a substantial Feral and Pest Animal control contracting operation across Victoria . Contact Details Phil Sansom 0418532808, jensan@netconnect.com.au

Ravensbourne

Feral pig demonstration and workshop

Alan Scott's property



PIGOUT®
Feral Pig Bait



A recent mailout alerted landowners in pig affected shires to the availability of the new **PIGOUT® Feral Pig bait** that we have developed jointly with the IA- CRC with support from the FACP and MLA. The response and enquiry was significant but it was soon found that landowners were having difficulty obtaining baits. Clearly ACTA needs to increase the service to 1080 approved Land protection/biosecurity officers so that access to baits can be streamlined.



Council), Mark Weaver (Toowoomba QPWS), Mick Gleeson, Peter MacLaren (Dalby Regional Council), a representative from MLA and a number of adjoining neighbours who told of the various pig problems being experienced (see map). Overall the problem was complex with not all properties affected in the same way.

A spring-fed creek, densely vegetated with Lantana, runs along the western boundary then ends up joining the wattle lined creek on the northern side. Landowners considered that this creek system was the main corridor for feral pig movement between neighbouring properties.

Pig damage and signs of activity (including damage to parsley crops) were observed throughout the property to the western side. Damage to trees was seen on a second neighbour to the east of the primary problem site.

Seven other neighboring properties to the south and east had little or no evidence of pig activity, but on an eighth to the north, the owners noticed environmental damage along the permanent creekline running through the property. Pigs were destroying bracken and Cunjevoi's (an *Alocasia* species, native plant genera with thick, fleshy rootstock and stems). This owner was seeing pig damage within 100m of his house but also had pet dogs and was therefore uncomfortable with the use of 1080 baits on his land. The final neighbour was a Toowoomba Regional

Council – Reserve for Environmental Purposes. This was considered by all neighbours to be the "sink" from where the feral pigs dispersed. Evidence of pig activity was common in the Council Reserve. No feral pig control was conducted prior to the meeting but the Council agreed to take action following the requests from the affected neighbours.

The IA-CRC team with ACTA set up some monitoring cameras and free feed PIGOUT® baits but there was neither activity nor bait uptake in the time the cameras were being monitored.

This feral pig problem was in rural fringe land fairly closely settled just a few kilometres from Toowoomba and illustrates the intrusiveness of the feral pigs. It also illustrated the human land tenure complexity and the difficulty of effectively dealing with them by any means. In this case, the poison PIGOUT® baits were not deployed as recruitment onto free feed by cluster baiting could not be achieved. These landowners must continue to trap and shoot in an attempt to reduce the transient and mobile local pig population.

In this situation the IA-CRC "Boar Buffet" bait dispenser may offer advantages.

One enquiry came from a farmer who produced macadamias and avocados on a 50 Ha property at Ravensborne in SE Queensland. The damage to the property and crops from pigs was serious and he had already trapped and destroyed more than 50 feral pigs before seeking access to the baits. As is common for pest animal problems, his pigs were coming from an adjoining reserve and the owners of the harbourage were not aware of the problem. A community program was needed so ACTA and the IA-CRC worked with the landowner to set up a demonstration project. We thank Steve Lapidge and Michelle Smith for responding very quickly to make time available to set up the demonstration.

A community meeting was attended by Ray Weis, Christian Love, Peter Collins and other rangers (Toowoomba Regional



Local land holders participating in workshop on the affected macadamia nut property being addressed by Dr Steve Lapidge

HOGGONE®



A new feral pig bait currently under development has achieved a 90% knockdown rate in a pastoral trial under controlled conditions.

Development is underway on HOGGONE®, which uses the active ingredient sodium nitrite (Patent pending). This chemical produces methaemoglobin in pigs and thus kills humanely by reducing the oxygen supply to the brain and other tissues. Feral pigs have a heightened sensitivity to this compound due to their relative lack of protective *methaemoglobin reductase* enzyme. It is hoped that this new chemical will provide a good option for pig management with lower risks than 1080, though there is still much to be done. One surprise finding was that the chemical was unstable in the existing PIGOUT® bait (that has 1080 as the active ingredient) so a different bait matrix (HOGGONE®) and methods to encapsulate the nitrite had to be developed before the trials could commence.

As part of the development process, a baiting trial was arranged by the New England Livestock Health and Pest Authority (LHPA) and recently held on northern NSW pastoral property, Glenrock.

Glenrock runs 6,500 cattle on 75,000 acres about 100km north east of Scone, NSW, and manager Brett Shipman said feral pigs have been a constant problem.

"The biggest thing the pig does is carry the leptospirosis virus which can cause abortions and fertility problems in cattle," Mr Shipman said.

Mr Shipman has had to rely on aerial and ground shooting of pigs so was keen to take part in a trial of alternative options.

Twenty-four bait stations were set as part of the trial and non-toxic bait was used at each station to attract pigs. Numbers were monitored with remote cameras. Then toxic baits were introduced to the eastern half of the sites, leading to a 90% decline in the population.

Smaller pigs were found 25 metres away from the bait station while 80 kilogram

boars were found 100 metres away, showing the effectiveness of the new chemical.

"It would be a really good thing to have access to baits like these," Mr Shipman said.

"From the tests, they seem effective, they're humane and there could be an antidote for working dogs which is the best thing about it. It's hard to find too many negatives" he said.

"Pigs are hard to combat in the hilly country especially and to be able to put something out to stem the flow would be a great help."

Dr Steven Lapidge of the Invasive Animals Cooperative Research Centre said a recently completed independent humaneness trial showed that sodium nitrite satisfies a general understanding of what a humane poison would be.

The 2003 Feral Pig Action Agenda identified the need for greater feral pig control as well as improved tools.

Between 2004 and 2008, PIGOUT® was developed with support from MLA to deliver sodium fluoroacetate (1080). The product was registered in December 2007 and launched in March 2008. However, the aim was always to find a new chemical more suitable for feral pig management. The key ingredient in the next generation bait, HOGGONE®, is sodium nitrite and early testing indicates it is a stable bait that is palatable to pigs. Development of the product is once again being supported by MLA.

"It has taken 18 months of testing different formulations and we have spent nearly two years getting the project to the stage where we can trial it out in the field," Dr Lapidge said.

"There was a year of exploration before that so it has been three years all up so far."

Dr Lapidge said six successful trials like Glenrock are needed in different pig habitats and using different delivery techniques (aerial and ground) before the bait can be registered.

"We're hoping to submit for registration by the end of next year and as long as results like Glenrock continue, that's achievable. It will take 1-2 years after that to become available."

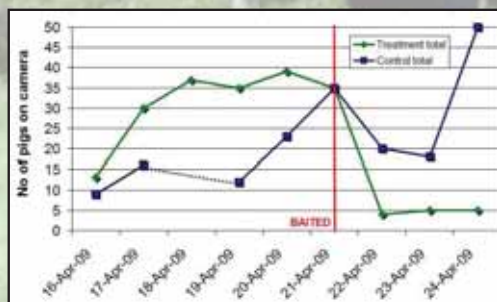
Dr Lapidge is hoping the bait will be a similar price to PIGOUT®, and will again be manufactured and available from Animal Control Technologies Australia P/L.

It will be up to the producer whether they want to use PIGOUT®, containing 1080, or HOGGONE®, containing sodium nitrite. However, the research team is also investigating a possible antidote to HOGGONE® should working dogs eat a bait. These trials should start shortly.

"HOGGONE® has a similar effectiveness to PIGOUT®, but will avoid the need to use large amounts of 1080 in many situations" Dr Lapidge said.

"We know that pigs have a variable response to 1080 whereas a rapid death is more certain with sodium nitrite."

The team behind HOGGONE® is also actively sourcing overseas markets with New Zealand, the USA and Israel already interested.





Mouse Infestations -

MOUSEOFF®
Zinc Phosphide Bait

Monitoring mouse activity in crops remains essential. There have been reports of mouse infestations in board-acre crops in southeast Qld, northern NSW and especially in the Geraldton and Esperance areas of WA in recent months.

These regions have plenty of feed left over from the previous harvest and some experienced summer rains that allowed mouse numbers to rise. Some mouse damage on newly sown seed was seen in early winter. Later, the mice damaged crops by removing pods on canola and lupins, taking flowering heads and damaging tillering nodes in cereals.

Because mouse infestations can be localised, we recommend that farmers monitor mouse activity in their crops if there is any sign of mouse activity in the district. A little bit of proactive control now can save a farmer thousands in potential crop loss due to these hungry rodents.

Mouse monitoring kits are available from ACTA and include snappy traps, canola census cards and talc as well as technical information on how to monitor mice. If

farmers identify just 5 active mouse holes for every 100m they walk through their crop and we conservatively assume that each burrow has just 2 mice in it, then it is possible that there are 1000 mice/ha in that crop. Anywhere over 200 mice/ha and farmers could suffer significant crop damage, so no one should wait for a full blown plague.

Some recent estimates of mouse density in WA 'hot spots' have indicated >10,000 mice/ha and on a recent visit to Geraldton crops Linton Staples saw very serious damage to wheat and lupin crops that required emergency intervention. Aerial baiting programs with MOUSEOFF® were commenced promptly and it is estimated that over \$200 million worth of crops was saved.

Baiting with MOUSEOFF® ZP is a fast, efficient, economic and environmentally

safe option for rodent control in crops. It leaves no residues in the crop, soil or in the environment. At about 40 mice killed per cent, there is nothing else that controls mice so cheaply!

"We have never had a complaint from a mouse about the quality of MOUSEOFF ZP bait!"

MOUSEOFF® works extremely quickly, killing the mice within hours of consumption to halt crop damage.

The key to preventing crop damage is to recognise and treat rodent infestations early.



Large areas of wheat crop were threatened by mice around Geraldton. The photo above shows yellowing wheat heads as a result of damage to stem nodes. See arrow



Vegetative damage to lupin crops was severe with branches and flowering heads totally removed.



Even if lupins were able to flower the mice removed the pods. See left

In the Geraldton area alone potential crop loss was estimated at over \$200 million if crops had not been treated with MOUSEOFF®.

an eruptive threat to crops



Agronomists, landholders, rural merchant staff and government officials inspected a badly damaged lupin crop near Northhampton (100 kms north of Geraldton, WA) after attending a workshop led by Prof Linton Staples from ACTA. The area had been baited about a week before and all mouse holes inspected were inactive. When the holes were excavated they contained dead mice from the earlier baiting.



Within the nest (left), agronomists found a total of six dead mice infested with maggots at a week after MOUSEOFF® treatment. The mice had died on the first night of baiting.

In the sandy soil the mouse nests were about 50cms underground. Each nest was grapefruit sized with plenty of straw bedding and usually accessed by one to three tunnels.



A quick response to a mouse infestation is essential to save crops. In the Geraldton area during Aug/Sept this was achieved with the help of Perth Freightlines, local couriers, all aerial operators and the local landholders who assisted in bait distribution

ACTA Award winners: The Goonoo fox control program

At the 2008 14th Australasian Vertebrate Pest Conference in Darwin, the ACTA Award was presented to the Dubbo Rural Lands Protection Board (now Central West LHPA) with NSW Forests and NSW National Parks for their Goonoo fox control program. The ACTA award is given in recognition of outstanding and significant achievement in the area of practical application of technology to control pest animals at the field level.

The Goonoo project was initiated in the 1980s in an attempt to protect the endemic Malleefowl in the Coolbaggie Nature Reserve. Since that time, the program has grown to encompass the nearby Goonoo Community Conservation Area and stake holders in the area.

The idea was to create a "fox free" buffer around the state forest and give the vulnerable Malleefowl a fox free refuge. Since the inception of the program many local stake holders, from a diverse spectrum of the community and many different government agencies have joined the program. This year 170 landholders participated in the fox baiting. The results have been fantastic with an 88% reduction in fox numbers in the agricultural area. While the program was initiated to protect a vulnerable

species, the benefits to the land holders are very real as there has also been a 20% improvement in lambing rates in the area as a result of this fox control. This program has now also incorporated a number of research and monitoring initiatives to monitor the nesting success of the Malleefowl and to gather more detailed data on fox movement and habitat use in order to design more effective baiting programs. This program is now acting as a model program for fox control so that similar programs can be initiated in other

areas. The success of the program can not be attributed solely to killing foxes, but its success lies in the networking of the local community with the purpose of reducing the fox population over as wide an area as possible.

There is no doubt that this successful program is providing many benefits to the local community and to the environment at large including the protection of one of Australia's unique birds, the Malleefowl.



The 2009 ACTA Award was presented by Linton Staples (left), to Matt De Jongh (Operations Manager NSW Forestry), Cameron Chaffey (Area Manager National Parks Dubbo) Rhet Robinson and Lisa Thomas (Dubbo RLPB) on behalf of the project at the Vertebrate Pest Conference Dinner in Darwin.

Professional pest controllers are now playing an increasing role in the provision of services for all types of vertebrate pest control in Victoria. This situation is more common in Victoria than other states, as the DPI and DSE departments have increasingly transformed operational activity in the private sector.

This has been an increasing trend for some time but has accelerated with increasing numbers of people completing the training to obtain a Pest Contollers License (many with 1080 endorsement). Changes in DPI Vic enable contractors to make perishable baits and allow many landholders to use 1080 baits via upgraded "1080 endorsed" ACUP permits. Despite some teething troubles and confusion while the new arrangements were established, the process is gradually allowing a greater team of dedicated people to offer services to the field. Importantly, the changes allow merchants and contractors to provide baits to approved users.



Unfortunately, the DPI training courses were focused on compliance issues and therefore missed the chance to get a better understanding of the pests and the best options for effective control. This will be overcome in time.

A group of controllers led by Martin Ellingworth (FOXABBIT) met at Woori Yallock in June 09 to form an association of pest controller's. The new group hopes to provide some training and to increase links between pest managers. The new group is only in its formative stages but has

already started to investigate a system approach to getting liability insurance and to provide a venue for concerns or opportunities to be discussed between members, and will provide opportunities for training. The Association will voice contractor concerns to government on matters relating to permits, regulations etc. in pest management, and enable better communication between pest controllers.

Individual or companies offering pest management services are invited to join the association whether they perform chemical control under a PCO license, or offer shooting, trapping or fencing under other licenses. Membership is a low \$50 pa. An initial committee is Martin Ellingworth (President), Leigh Swann (Vice President), Wayne Few (Treasurer), Linton Staples (Secretary), and general committee members Ciro Villanova, Nino Camaniti and Phil Sansom. The new logo shown has been adopted. We encourage all contractors to join up so that the strongest possible collegiate voice is achieved.

ACTA PERISHABLE MEAT BAITS

FOXOFF® Cooked liver baits now available in Victoria



The sun was hot already - it was only 8 o'clock
The cocky took off in his Ute, to go and check his stock.
He drove around the paddocks checking wethers, ewes and lambs,
The float valves in the water troughs, the windmills on the dams.

He stopped and turned a windmill on to fill a water tank
And saw a ewe down in the dam, a few yards from the bank.
"Typical bloody sheep," he thought, "they've got no common sense,
"They won't go through a gateway but they'll jump a bloody fence."

The ewe was stuck down in the mud, he knew without a doubt
She'd stay there 'til she carked it if he didn't get her out.
But when he reached the water's edge, the startled ewe broke free
And in her haste to get away, began a swimming spree.

He reckoned once her fleece was wet, the weight would drag her down
If he didn't rescue her, the stupid sod would drown.
Her style was unimpressive, her survival chances slim
He saw no other option, he would have to take a swim.

He peeled his shirt and singlet off, his trousers, boots and socks
And as he couldn't stand wet clothes, he also shed his jocks.
He jumped into the water and away that cocky swam
He caught up with her, somewhere near the middle of the dam

The ewe was quite evasive, she kept giving him the slip
He tried to grab her sodden fleece but couldn't get a grip.
At last he got her to the bank and stopped to catch his breath
She showed him little gratitude for saving her from death.

She took off like a Bondi tram around the other side
He swore next time he caught that ewe he'd hang her bloody hide.
Then round and round the dam they ran, although he felt quite puffed
He still thought he could run her down, she must be nearly stuffed.

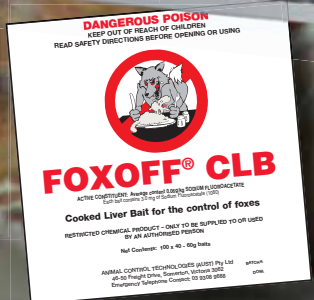
The local stock rep came along, to pay a call that day.
He knew this bloke was on his own, his wife had gone away
He didn't really think he'd get fresh scones for morning tea
But nor was he prepared for what he was about to see.

He rubbed his eyes in disbelief at what came into view
For running down the catchment came this frantic-looking ewe.
And on her heels in hot pursuit and wearing not a stitch
The farmer yelling wildly "Come back here, you lousy bitch!"

The stock rep didn't hang around, he took off in his car
The cocky's reputation has been damaged near and far
So bear in mind the Work Safe rule when next you check your flocks
Spot the hazard, assess the risk, and always wear your jocks!

Author unknown

To supplement the FOXOFF® line in Victoria ACTA is now producing Cooked Liver Baits. These 1080 dosed baits are cooked fresh, to order, and must be used within three days of manufacture. The addition of cooked liver baits gives farmers and pest control operators more options and variety in the kinds of baits that they can use in fox control programs. In the past cooked liver baits were only manufactured by Victoria's DPI. Preparing cooked liver baits is a messy task, but with ACTA now providing the product fresh to order farmers can be assured of a quality product.



New Staff

ACTA is pleased to announce the appointment of Phil Morrow as Sales & Marketing Manager, based at the company's Somerton, Victoria office.

Phil has more than thirty-five years experience in the agrichemical industry and brings to ACTA a wealth of world-wide expertise in leadership within the research-based pesticide manufacturing industry. He was previously with Bayer CropScience in Australia and Global Business Portfolio Manager (stored products and termiticides) with Bayer Environmental Science in Lyon, France. In earlier roles, Phil has worked with a diversity of manufacturers both in the main stream markets of broad-acre agriculture and horticulture as well as the Pest Management and Timber Preservation markets.

In discussing the new role with Rural Business Magazine, Phil said "I'm very



excited about bringing a global industry perspective into an emerging Australian company with such a unique position in the agrichemical market. ACTA punch well above their weight in contributing to the protection of on-farm income through addressing the diversity of vertebrate pests faced. This is especially so in vital situations such as mouse plague control and management of fox, rabbit and feral pig problems. It is a wonderful opportunity to be able to drive leadership and growth of ACTA's business. Working with rural distributors, the farm community and

the many government stakeholders concerned at the impacts of vertebrate pests on both agricultural production and the Australian landscape will be most rewarding."

Phil's blend of marketing, rural business and research management will enable him to contribute over a range of ACTA activities and he has settled in to the new role immediately.

On The Road

ACTA staff have been busy over the past months demonstrating and researching new products for the Australian markets.



SA NRM boards visit ACTA as part of DPI-hosted Vic study tour

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