Beefy and the BEAST

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A co-operative project between producers and Department of Natural Resources and Mines evaluating the impact of dingoes on the Beef Industry

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Workshops and seminars

So far this year we have been involved in a number of training workshops and conferences. Those of note were:

Information workshop for QPWS rangers, Local Government and land protection officers:

Approximately 40 field officers attended the two-day practical training workshops on wild dog management at Mt Mee west of Brisbane.

The workshops were aimed at providing relevant training that field officers could use in their day-to-day activities and focused on methods of monitoring wild dog and wildlife numbers and managing problem wild dogs.

One of the objectives of this hands-on training was to equip QPWS staff to monitor wildlife numbers before and after 1080 baiting programs in forests under their control.

Local Law and Animal Control Officers Training Conference:

The conference was hosted by Pine Rivers Shire.

Parasitologist Dr David Jenkins highlighted the risk of hydatid infection to people trapping or handling wild dogs. It was a graphic and informative presentation.

Subsequently Dr Jenkins tested four wild dogs from the Sunshine Coast hinterland. Three of the four were infected with hydatids and hookworms. Testing wild dogs for hydatids will continue as additional wild dog samples become available.

North-east (NSW) Pest Animal Advisory Committee:

While attending a Pest Animal Advisory Committee meeting at Alstonville, New South Wales there was a claim made that QPWS had released dingoes from Fraser Island into Girraween National Park and these had due to the drought migrated into the North Coast of New South Wales.

It's amazing that this old wives' tale flourishes in NSW as well as Queensland.

New dingo project starts in Central West Queensland

A new project based in the Tambo-Barcaldine area will look at large-scale, community-based 1080 baiting programs.

The project is jointly funded by the Bureau of Resource Sciences, Department of Natural Resources and Mines and Tambo, Blackall and Barcaldine Shires and will run over the next three years.

Over recent years producers have voiced concerns about the effectiveness of baiting and this project hopes to answer some of their questions including:

How effective is 1080 baiting at reducing wild dog numbers?

- How quickly are baited areas re-infested by wild dogs?
- What effect do non-baited areas have on the overall effectiveness of baiting programs?
- How many baiting programs per year are required to maintain low wild dog numbers?
- What impact, if any, is baiting having on wildlife?
- How can wild dog control programs be improved?

To undertake this ambitious project we will have a researcher (new appointee) based in Blackall full-time. He/she will work with land protection officer Damian Byrne, wild dog control advisory groups, councils and graziers.

A group of QPWS staff are shown procedures for monitoring wild dog and fox populations developed by Natural Resources and Mines

Ejector research update

University of Queensland Gatton campus student Amber Hooke co-supervised by Natural Resources and Mines undertook her Honours project at our Inglewood research station investigating the persistence of cyanide in ejector-killed wild dog corpses.

Twenty-four of the 26 field-caught wild dogs exposed to ejectors in pens died immediately and two became unconscious, but recovered fully within hours.

They subsequently pulled fake ejectors (grub stakes) within 24 hours and pulled ejectors four weeks later when they were exposed to them again.

The manner in which wild dogs pull ejectors, vertically (from above) versus horizontally (from the side), affects the quantity of cyanide ingested and their subsequent time to unconsciousness and death.

Those pulling ejectors vertically (n =11) were unconscious in an average of 42 seconds and dead at 148 seconds. Those pulling from the side were dead in an average of 490 seconds.

Immediately after pulling ejectors some reacted by shaking their head, some trotted off or tried to spit the powder out. Within seconds they got wobbly in the legs and fell over, breathed heavily and became unconscious.

None reacted in a manner suggesting pain or stress. One of the reasons of investigating ejectors is the swiftness and expected humaneness of the device, so these results are excellent.

The number of animals pulling ejectors from the side correlated to the weight of the animal. Heavier dogs were more likely to pull the ejector from the side.

The way ejectors were presented in these pen trials, however, made side pulls more likely. In field conditions side pulls should not frequently occur if they are set correctly.

Wild dog pulling an ejector during the pen trials at Inglewood

The study on the persistence of cyanide was inconclusive. Because the direction of pull affected the quantity of cyanide initially ingested, tissue and blood samples taken at different times subsequent to death were very variable.

The highest cyanide concentration was found in the lungs and to a lesser extent in the heart and liver. Muscle and blood samples contained negligible levels of cyanide even up to three days after death.

Amber received (and deserved) a 1st Class Honours for this research.

Sadly, our proposed ejector research program 2003-2004 didn't get funded.

While disappointing, we plan to conduct limited research investigating ejectors as permanent bait stations – the same way ejectors are used in United States.

X-ray of dingo tooth showing the pulp cavity that gradually closes with age

Determining the age of wild dogs

Another Natural Resources and Mines co-supervised Honours student, Kristan Ellerton from the University of Southern Queensland, undertook a project evaluating methods to determine the age of wild dogs.

Being able to determine whether ejectors (for example) are destroying all age groups or just juveniles and yearlings is important for evaluating their effectiveness.

Kristan examined decreases in the pulp cavity and changes in tooth density in canine teeth from 68 known-age, adult dingo and dingo-hybrid wild dogs. The skulls came from CSIRO's museum in Canberra.

Kristan found that a method that has been used to determine age of coyotes was the most successful. Results found that location of where the skulls came from (Alice Springs versus Canberra) and the degree of dingo purity in the dog, did not affect the closure of the tooth pulp cavity.

She did find, however, was that the animals' gender and from which jaw the tooth was taken (upper versus lower) did affect pulp cavity closure.

From her results and those previously published by Western Australian researchers, we are now able to separate pups, juveniles, yearlings and adults 2-4 years, 4-8 years and >8 years. Kristan eventually received a level 2A Honours for her research.

New toxin may be investigated

We are currently discussing the possibility of testing a new potential toxin for wild dog and fox control with the Victorian Institute of Animal Sciences and the Pest Animal Control CRC at our Inglewood research station.

The symptoms of this compound in fox studies include progressive cyanosis, lethargy and collapse within minutes of ingesting the poison.

The symptoms of the conventionally used 1080 poison - long dormant period, convulsions, vomiting and spasms do not appear to occur with this compound.

Apart from delivering a quicker and an apparently peaceful death, the toxin should also reduce the (1080) hazard of secondary poisoning of domestic dogs from vomit matter.

If trials prove successful, we would like to investigate this toxin as a potential alternative to cyanide in ejectors and in trap tranquilliser devices (TTDs, Issue 10) in future years.

Hear from you

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