Australian Government

Tasmania
Explore the possibilities

TASMANIAN COMMUNITY FOREST AGREEMENT

RESEARCH INTO ALTERNATIVES TO 1080

NEWSLETTER 8 **March - May 2007**

Overview

There has been a bit of a gap since the last newsletter, largely explained by the Project Manager taking a months holiday in Vietnam.

This newsletter is slightly longer than previous versions, partly to catch up on news, but also due to several requests to provide more information on successful grants.

We hope you find the information interesting and useful.

Grants Program Update

Of the twelve successful grant applications announced in February, five have now been signed, another five have been finalised but are awaiting final sign off and two are still being negotiated.

A brief summary of the five grants which have been finalised are covered in this newsletter. The June edition should include overviews of the other seven after they have been finalised.

Of those grants that have been finalised, several grants are already well underway.

Dr Ivo Edwards, who is looking at more effective trapping strategies has provided the photo shown of his new trap designs under development. He is also developing a prototype "automatic feeder" which will hopefully help to greatly reduce the cost of free feeding prior to trapping by reducing the need to visit a site multiple times to distribute feed.

Dr Edwards plans to be trialing these new ideas as soon as Animal Ethics Committee (AEC) approval is granted and we are looking at getting some of these designs to the Project Officers so they can be tested.

Figure 1 Edwards Trap Prototypes and Automatic Feeder. Source: Dr Ivo Edwards.

Meanwhile, Drs. Mick and Helen Statham, who are investigating Species Specific Delivery Mechanisms, have returned from a successful trip to New Zealand where they were looking at advances in monitoring, trapping and delivery mechanisms.

This trip to NZ was significant as there have been large investments and research into both wallaby and possum control and monitoring over the past decade.

Figure 2 Monitoring Tool. Source: Dr Mick Statham.

Any questions or comments about the program should be directed to John Dawson, Project Manager 1080 Alternatives on 03 6233 6728 or john.dawson@dpiw.tas.gov.au. Any media enquires about the 1080 Alternatives Program should initially be directed to Shaun Rigby on 03 6233 2451 or shaun.rigby@dpac.tas.gov.au

Drs. Mick and Helen Statham met with several companies to look at different delivery mechanisms, traps and monitoring tools.

Figure 2 shows one monitoring tool developed by Pest Control Research that is now being widely used for assessing possum population densities in New Zealand.

This simple tool - an orange tag plus a fluorescent marker and a wax block - has been developed to attract animals to the tag and the species visiting can be determined from the bite marks in the wax. This system has been correlated with trapping data and appears to be a relatively easy method of assessing animal densities.

For those wanting to know more about this technique, they can visit www.hortnet.co.nz and search for "waxtag".

Whilst in NZ, they also visited Connovation's factory where Feratox, a cyanide based possum control agent, is manufactured (Figure 3). They have provided a summary report on their visit, and anyone interested in learning more can contact the Project Manager.

Figure 3 Dr Mick and Helen Statham at Connovation's Factory. The small blue pellets are replica Feratox tablets. Source: Duncan MacMorran.

Project Officer Update

The two Project Officers have now settled into their positions and work is underway.

The initial focus for Brett and Greg will be looking at trapping as an alternative to 1080, particularly in the farming sector which has not received much focus to date with Mersey Box Traps.

These officers, under the tutelage of the Forestry Tasmania staff from Devonport (who developed the Mersey Box Trap), have undertaken a trapping operation at a property in the North-West of the State in order to learn the practicalities of running a large scale trapping operation from the experts.

Concurrently with this, we have been walking a proposal through the Animal Ethics Committee (AEC) process to allow us to commence with this trapping research. Although this process is taking some time, it is ensuring that the issue of the animal's welfare is in the forefront of the research.

The Project Officers have also been negotiating with landowners for access to their land, and undertaking before-impact monitoring of wildlife populations through spotlight surveys and scat counts.

Other Activities

As mentioned in the previous newsletter, the Implementation Committee is keen to fund research focused on the use of repellents, tree guards and commercial harvesting as effective alternatives to 1080 in Tasmania.

As a result, the Project Manager has been spending a considerable amount of time since February talking to parties who have expressed an interest in these areas about the best way to progress this research. The Project Manager is expecting to take his recommendations to the Implementation Committee this month.

Any parties who have an interest in these areas and has not had discussions with the Project Manager yet are encouraged to contact him to learn more details.

Program Finances

As the Alternatives to 1080 program has developed, it has been recognised that many research activities will require more time than originally envisaged.

Consequently, the program, including research grants, have been allowed to run out to the end of calender year 2009.

As of the end of April, approximately $330,000 of the programs funds had been spent. Approximately $60,000 of this is represented by the first tranche of grant payments made to date, $55,000 was for the set up and first three months of project officer work, $100,000 was for the initial consultation process, including the research review by Landcare Research and the remaining $115,000 covered overheads, mainly project management salaries and overheads.

Although overheads at this stage are a disproportionately large component of expenditure to date, this reflects that the first years activities have primarily revolved around expert and stakeholder consultations and program set up, which has largely involving only the Project Manager's time.

Under current budget estimates, total overheads will reduce to around 10% of the overall program expenditure by the end of the program.

Grant Deed Overviews

As mentioned, five grant deeds have now been signed, and this section gives a brief overview of these deeds.

More detailed methodology and research purpose information is contained in the deed and this can be made available to interested parties by contacting the Project Manager.

The overview of the other deeds should be in the next newsletter, on the assumption that they will be executed by that date.

Do all possums show the same aversions for genetically resistant seedling stock?

Dr Julianne O'Reilly Wapstra, CRC for Forestry, $33,187.

This research addresses the issue of whether browser aversion for genetically resistant seedling stock is consistent state-wide, or whether different populations of browsers show different preferences depending on whether they have coevolved with particular populations of eucalypts.

The use of naturally enhanced resistant stock is a promising strategy for reducing palatability of seedlings prior to planting, however, it is vital that tree growers are confident that this resistance holds up regardless of the geographic location of plantations.

This six month project will investigate seedling preferences of two populations of possums that have evolved with two eucalypt populations that are of genetic extremes in resistance.

The aim of the project is to give tree growers the knowledge they need to ensure that they are deploying resistant stock in the right areas, with the overall goal of providing a non-lethal alternative to 1080 for specific situations.

Manipulating seedling palatability for non-lethal browsing management

Dr Julianne O'Reilly Wapstra, CRC for Forestry, $263,975.

The past 11 years of research undertaken by the mammal browsing group at the University of Tasmania and CRC for Forestry has demonstrated that one of the most promising strategies for non-lethal alternatives to 1080 is the manipulation of seedling palatability prior to planting and in the field. Specifically, the use of naturally resistant seedling stock, chemical repellents, modification of nursery fertiliser regime and use of natural vegetation on coupes

have all proved successful in deterring feeding.

The ideal combination of these strategies to achieve maximal resistance of eucalypt seedlings to browsing is close to being implemented in operational plantings.

This project will fast-track this process with the aim of ensuring 'best practice' for operational plantings by the end of December 2008.

Targeted culling of browser species that most threaten eucalypt plantations.

Dr Tim Wardlaw, Forestry Tasmania, $46,888.

Significant improvements in the cost-effectiveness of culling may be achieved if it can be shown that particular browser species or sections of a browser population pose a relatively greater threat to young eucalypt plantations. This would be particularly so if culling could be refined to better target those browser species.

This project will determine whether or not brushtail possums pose a relatively greater browsing threat to young eucalypt plantations than Tasmanian pademelons.

This will be done by monitoring the development of browsing damage in selectively culled plantations.

Specifically, the experiment will use selective culling to remove particular segments of the browser population.

Culling would be done prior to planting in coupes that are predicted to have a high browsing risk. Three culling options will be evaluated:

(i) Brushtail possums only;

(ii) Brushtail possums and large (mature dominants) pademelons;

(iii) Brushtail possums and all pademelons;

If proven that brushtail possums pose a greater browsing threat, a second phase of the project will evaluate a range of free-feed options and trap placements to determine the potential for designing operations that are more selective in targeting brushtail possums.

Understanding landowner decision making for the use, and/or non-use, of 1080

Rural Development Services, $110,000.

Through combining a literature review of existing research and expertise with face to face on-site interviews with:

- 30 landowners who have a history of managing browsing damage without using 1080;
- 30 landowners who have a history of no longer using 1080 to manage browsing damage; and
- 30 landowners who have recently used 1080 to manage browsing damage,

this project aims to develop an in-depth understanding of landowner decision making relating to the use, and/or non-use of 1080, specifically:

- Identify drivers and triggers that cause landowners to use 1080;
- Identify drivers and triggers that cause landowners to not use 1080;
- Identify how different landowners monitor and react to high levels of browsing damage; and
- Communicate these findings to key project stakeholders.

This research will inform the rest of the program of strategies for maximising the effectiveness of investments in the development and extension of alternatives to 1080 for landowners.

Improving wallaby traps and developing optimum operational trapping strategies under farm and forest situations.

Dr Ivo Edwards, $100,000.

This project is an extension of work conducted by the applicant over the last four years. The aim is to quantify a number of practical parameters needed to make Tasmanian browser trapping a more efficient, economic, and humane alternative to 1080 poisoning.

While a Code of Practice and permit system for trapping was approved early in 2006, practical wallaby trapping experience is limited and wallaby trapping trials to date have predominantly extrapolated from possum trapping experience in regard to baits and time of trapping.

In addition knowledge of trapping success rates in seasons other than winter is limited. Knowledge of bait preferences is also relatively limited beyond general anecdotal acceptance that chopped carrots and cracked corn attract many animals. Knowledge of the rate at which removed animals are replaced by browsers emerging from adjacent forest and neighbouring areas is also poorly understood, and the effectiveness of traps left semi-permanently in position to maintain low browser populations as new animals emerge is largely unknown.

Additional unknown but potentially important practical issues include the most effective ways to integrate trapping and shooting, overall long term trapping effectiveness in a range of forest and farm situations and seasons, optimum trap densities and positioning within sites, quantification of trade offs between trap capital cost, trap density and trap set up time and optimum ways to entice possums, pademelons and Bennett's wallabies into traps at various times of the year.

This project will be addressing many of these issues over its life, with:

1. Trap design alternatives;
2. Bait alternatives (automatic feeders);
3. Trap time, density and placement trials;
4. Bennett's wallaby trapping;
5. Trapping /Shooting integration;

as the key research areas.

Fox Eradication

Recent media reports have focused on the use of 1080 for the eradication of foxes in Tasmania.

The Department of Primary Industries and Water maintains a web page on fox baiting and 1080 that may be of interest to readers of this newsletter, it can be found at:

http://www.dpiw.tas.gov.au/inter.nsf/WebPages/JBRN-6VR882?open

or you can just go to the main DPIW web page and search for "1080" or "fox" and you'll find the link.

The latest CSIRO *Wildlife Research Journal (Issue 34, p116-124)* also has an interesting article looking at the impacts of aerial baiting of 1080 for wild dogs on spotted-tailed quolls, which can be found at http://www.publish.csiro.au/nid/144/paper/WR06151.htm