

4.4. PEST MANAGEMENT STRATEGY FOR POSSUMS



Description of the Pest

The possum (*Trichosurus vulpecula*) is a marsupial animal of medium to stout build similar to a cat. It has a body length of 38-45 cm and an average weight of 2-3 kg. The head is small with oval ears. The muzzle is blunt and its nose is pinkish with a black band along it. There are two main colour types found - grey and black.

Possoms have large eyes and catlike whiskers which are characteristic of nocturnal animals. The average life span of a possum is 7 to 10 years.

Distribution of the Pest

Possoms are found throughout the Region, although their density varies from area to area. The population ranges from one possum per ha to 25 possums per ha in Northland.

Problems Caused

Possoms are pests from both an ecological, primary production and animal health perspective. Possoms are voracious eaters, being both herbivores and carnivores, and eat eggs and chicks of threatened species such as kukupa. They also eat rare plants including native mistletoe. Their browsing habit damages and destroys forests, affecting pasture, vegetable and horticultural crops.

The damage caused by possums to protection forests on steep erodible areas increases the risk of soil erosion, flooding, property damage, water quality problems and interruption to roading off-site. In combination with goats, deer and rats, possums are one of the most destructive animals in a forest environment.

Possoms can be a vector in the spread of a number of diseases affecting domestic animals and humans including bovine tuberculosis, leptospirosis, liver fluke, tapeworms, coccidia, giardia, cryptosporidium and nematodes. Northland possums are presently free of Tb but given the high possum population in some areas, and scattered trees and long bush boundaries on many farms, stock are in close contact with possums. Should Tb be introduced into the Region in cattle or deer, it would spread quickly from these animals to possums and spread rapidly through the possum population.

Parties Affected

All persons are affected or have the potential to be affected by the problems described above

Impact Evaluation

<u>Impact</u>	<u>Current</u>	<u>Potential</u>
Cultural	High	High
Ecological	High	High
Human Health	Low	Medium/High
Soil & Water	Medium	Medium/High
Production	High	High
Public Infrastructure	Medium	Medium
Public Safety	Medium	Medium

Recreation	Medium	High
Trade (International)	Low	High
Overall Regional	High	High

Regional Effects

Possums are causing major damage to Northland's indigenous forests, particularly protection forests and the sub-tropical and coastal broadleaf ecosystems. Some species, for example Northern rata and pohutukawa, are threatened with extinction in some areas due to possum browsing.

Fauna is threatened as possums feed on bird eggs and chicks of species such as kukupa. As kukupa are an essential part of the seed dispersal mechanism of several forest canopy tree species, loss of the kukupa will prevent forest regeneration.

Possums are also causing damage to pasture, fodder and vegetable crops, and to horticulture crops as well as exotic forests. Possums living on forest pasture margins have a diet which can comprise of up to 50% pasture species.

Need to Intervene

A community-wide Strategy is required to limit the damage caused to areas of both economic and environmental significance.

Council involvement is needed as it can

- Co-ordinate areas of control;
- Has legal powers at its disposal;
- Has better purchasing power for large volumes of materials;
- Has the expertise to do the work; and
- Has the funding to use.

Individual landowners may be able to control possums on their own land on a small scale, but do not have the other resources that the Council has at its disposal.

Goal (Long Term)

- To reduce and maintain possum populations in areas identified as being of ecological and economic significance to a population that is no longer posing a threat to the ecological or economic values.

Objectives (Five Year)

- To complete a once-over kill of possums throughout Northland, achieving at least an 80% reduction in possum population density. That is, complete the 1998 Northland Regional Pest Management Strategy for Possums programme of initial control.
- As with all of the Regional Pest Management Strategies, when formulating programmes to control possums, the Council will consider the implications of reducing the numbers of this pest on populations of other pest animal and pest populations. Where appropriate, the possums will be managed under integrated pest management programmes.
- Establish and manage community pest control areas according to Northland Regional Council's procedures and policies for establishing Community Pest Control Areas (CPCAs).
- To provide assistance to landholders who wish to undertake possum control on their land outside of community pest control areas to the extent and according

to the conditions set by the Council in its Annual Plan or LTCCP as appropriate, each year.

Tactics and Technical Methods to be Used

Education	Advice to land owners and other interested parties; Brochures and publicity campaigns; Community meetings; Field days; Training seminars to help to raise people's awareness and sense of responsibility about possum control, and to give a better understanding of possum control methods.
Research	Biological control methods; Trials of new toxins and techniques; Any control method that will benefit the possum programme.
Regulations	Rule 6.4.1.8 Prohibition on Transport of Possums into Northland; Rule 6.4.1.9 Prohibition on Keeping of Possums Except Where Licensed; Rule 6.4.1.10 Control of Possum Populations by Land Occupier; Rule 6.4.1.16 Prohibition on Distribution and Sale of Pest Animals; Rule 6.4.1.11 Control of Pest Animal Populations by Land Occupiers in Community Pest Control Areas Failure to comply with these creates an offence under section 154 (r) of the Biosecurity Act 1993.
Services	Northland Regional Council managed programme to complete the 1998 Northland Regional Pest Management Strategy for Possums initial control programme, reducing the possum population in areas of private land not already treated (as at 1 July 2001) to a 20% residual possum index (RPI) Northland Regional Council managed programme in Community Pest Control Areas using trapping, poisoning with approved and registered toxins, shooting and using humane methods. Biological control agents will be used if and when they are approved for use; Identify areas of significance within the Region for potential CPCAs; Develop management plans for CPCAs which include control and maintenance programmes that control possums and other pests within CPCAs to levels that the pests are no longer posing a threat to the areas economic or ecological values; Work in with and support the Department of Conservation possum programmes where possible.

Tactics and Technical Methods Rejected

Economic	Bounties and subsidies for skins and meat hunters (not effective as difficult to target control areas); Rate penalties on infested land (inequitable); Widespread subsidies (difficult to target);
Services	Land occupiers to be responsible for all control work (pests too widespread and has been shown to be of variable effectiveness);

Possum densities kept above 60% residual population so fur and meat trapping is viable (objective is farming possums, not seeking to reduce their numbers to a level at which they are no longer a problem);
Relying on fur and meat sales as a means of control (prices fluctuate too much and difficult areas will not be worked).

Effects of the Strategy

- Beneficial**
- Protection of Northland ecosystems;
 - Reduced severity of erosion;
 - Regeneration of bush and suppression of weeds;
 - Reduced risk of the possum becoming a vector in the spread of TB;
 - Reduced risk of possums spreading diseases to humans;
 - Increased land production;
 - Increased biodiversity and economic values by reducing damage within significant areas.
- Detrimental**
- Minor poisoning and trapping risk to non target species;
 - Loss of revenue to skin and meat hunters;
 - Temporary closure of public land;
 - Inconvenience to landowners.

Cost of Strategy

The total annual cost to the Regional Council of implementing the Strategy is estimated to be around \$1.3 million per year. Most of the cost lies with the control programme, which aims to reduce possum numbers to target levels, within significant areas

Land owners in areas of significance will be required to develop, in conjunction with the Council, a maintenance programme, site specific to the area, which may include subsidised materials.

In the 2000/2001 year the Council has spent \$1.3 million on control work and associated support, treating around 50,000 ha.

Funding

All landowners, both urban and rural, are expected to pay for possum control within the Region, as possums are widespread through the Region, cause serious environmental and economic damage, and are potential vectors in the spread of bovine TB. The Council will collect funds for possum control by way of a Land Management Rate struck on a Land Value basis on all rateable land within the Region and from a share of the Council's income from investments. Funds from these two sources will cover the initial control work, subsidies on maintenance, monitoring, advice and education. Occupiers will be required to fund the balance of the costs of poison and other pest management materials for maintenance work on all treated land. Council will continue to provide vector control services to the Animal Health Board on an agency basis, as and when required.

The Department of Conservation will fund both initial control and ongoing maintenance work on Crown Land within targeted areas.

Management Agency

The Regional Council is responsible for management of the Strategy. Other agents/groups will be consulted to ensure a co-ordinated approach, to overcome any restrictions on the use of poisons, and to share expertise.

Relationship of Strategy to Other Pest Management Strategies

The Auckland Regional Council is expected to have a possum Strategy which is based on protecting conservation values with areas ranked according to habitat value. The Northland Strategy does not conflict with the Auckland Regional Council or Animal Health Board Strategies or with other Northland Regional Pest Management Strategies.

Monitoring and Reporting

All selected areas will be monitored annually after treatment to ensure the landholder is achieving the required standard of maintenance. The Regional Council will maintain a database recording the results of all control activities and the results of annual monitoring of the treated areas. Reports on progress towards objectives set in the Strategy will be reported annually in the report on Operational Plans and in the Regional Council's Annual Plan or LTCCP as appropriate.

Term of Strategy **5 years**

Rules

6.4.1.8 Prohibition on Transport of Possums into Northland Regional Council

No person shall transport any possum, whether dead or alive, into Northland from any other part of New Zealand.

6.4.1.9. Prohibition on Keeping Possums in Captivity Except Where Licensed

No person shall keep a possum in captivity, including as a pet, unless the premises in which the possum is held are licensed by the Department of Conservation under the Wild Animal Control Act 1977. (Sec12, W.A.C Act 1977)

6.4.1.10 Control of Possum Populations by Land Occupiers

Where a management agency has undertaken initial control work on a property and reduced possum populations the occupier of the property shall maintain the possum population densities at a RPI of 40% or less.

6.4.1.11 Control of Pest Animal Populations by Land Occupiers in Community Pest Control Areas

Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest animal population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain the pest animals population densities to those agreed to in the management plan.

6.4.1.16

Prohibition on Distribution and Sale of Pest Animals

No person shall distribute to other persons or offer for sale or hold in a premises where animals are offered for sale any live pest animal, which is the subject of a Northland Regional Pest Management Strategy except to slaughter.