

Regional Pest Management Strategy for Marlborough

Operational Plan Report
2008/2009



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REGIONAL PEST MANAGEMENT STRATEGY OPERATIONAL PLAN REPORT 2008/2009

1. Introduction

The Regional Pest Management Strategy is known as the “Regional Pest Management Strategy for Marlborough” (the Strategy). It was made operative on 2 July 2007 following the review and amendment of the existing Strategy which expired on 3 September 2006.

The purpose of the Strategy is to provide a framework for the efficient and effective management or eradication of pests and unwanted organisms so as to:

- Minimise actual and potential adverse and unintended effects associated with the targeted pests; and
- Maximise the effectiveness of individual pest management through a regionally co-ordinated approach.

The Strategy classifies a number of plants and animals in the region as pests and specifies the management regime for each pest. For each pest, the management programme sets out the effects of the pest to be addressed, the objective to be achieved, the main methods to achieve the objective and the rules relating to each pest.

1.1. Purpose of Operational Plan Report

This Operational Plan Report has been prepared in accordance with section 85 of the Biosecurity Act 1993, and identifies and outlines the nature and scope of activities the Marlborough District Council has undertaken in the implementation of its Strategy for 2008/2009.

Reports on performance targets are included in this Operational Plan Report. This will enable key stakeholders to judge the performance of Marlborough District Council as the management agency for the Strategy.

1.2. Linkages

The Operational Plan is integrated, as far as possible, with Marlborough District Council’s Regional Policy Statement, Resource Management Plans and the Long Term Council Community Plan (LTCCP). The LTCCP provides an overview of all Marlborough District Council functions, including pest management and biosecurity activities for 2008/2009.

This Operational Plan Report should also be read in conjunction with the Regional Pest Management Strategy for Marlborough 2007.

2. Pest Plant Management Programmes

2.1. Introduction

The Regional Pest Management Strategy for Marlborough classifies 33 plant and four animal species as pests because they cause or are capable of causing, a significant negative impact on Marlborough's economy and/or environment. The Strategy separates individual pests into classifications⁽¹⁾, which require various levels of intervention.

The management regime for each pest applies to all or a specified part of the land within the district. In most situations the obligation lies with the land occupier to actually carry out the control of these pests. The only exception is for pests classified as 'Total Control' where either the Marlborough District Council or the Department of Conservation will implement control programmes directly.

Marlborough District Council is primarily responsible for the co-ordination of pest control programmes, ensuring occupiers comply with their obligations, carrying out surveillance to determine new infestations of pests and educating and advising land occupiers as to the most appropriate form of control for each pest.

2.2. Pest Plant Status

The table below summarises the district's pest plants and their designated status as classified in the Strategy.

Plant Pest Species	Status ⁽¹⁾	Comments
African Feather Grass	TC	Marlborough District Council initiative. These pest plants are limited in their distribution, but have the potential to severely affect either pastoral farming or cereal harvesting and/or environmental values in the district. Implementation of these programmes is delivered by Marlborough District Council. The cost of control for these pest plants is shared between the Marlborough District Council (75%) and the land occupier (25%) where the infestation occurs.
Bathurst Bur	TC	
Bur Daisy	TC	
Saffron Thistle	TC	
Giant Needlegrass	TC	
Chinese Pennisetum	TC	
Parrots Feather	TC	
Boneseed	TC	Marlborough District Council/Department of Conservation joint initiative. These pest plants are limited in their distribution, but have the potential to invade large areas of the district's indigenous forest, scrub or waterways. Implementation of these programmes is delivered by Marlborough District Council/Department of Conservation. The cost of control for these pest plants is shared between the Department of Conservation and the Marlborough District Council.
Climbing Spindleberry	TC	
Eel Grass	TC	
Madeira Vine	TC	
Moth Plant	TC	
Spartina	TC	
Evergreen Buckthorn	TC	
Senegal Tea	TC	
Cathedral Bells	TC	

⁽¹⁾ Refer to the Regional Pest Management Strategy for Marlborough definitions of Total Control (TC), Containment Control (CC) and Surveillance (S)

Plant Pest Species	Status ⁽¹⁾	Comments
Nassella Tussock	CC	Land occupiers are required to annually destroy all plants on their properties before they produce seed.
Chilean Needlegrass	CC	Land occupiers are required to annually destroy plants on their properties before they produce seed. The degree of intervention required by land occupiers to manage these pest plants depends on the classification of each property. The control requirements range from the destruction of all plants on fringe properties to a boundary control regime on core properties.
White-Edged Nightshade	CC	
Kangaroo Grass	CC	
Broom and Gorse	CC	Land occupiers are required to progressively control broom in the Upper Awatere River and broom and gorse in the Upper Wairau River catchments. All land occupiers are required to destroy all broom and gorse plants within 10 metres of their property boundary if the adjacent property is free of this pest plant
Ragwort	CC	Land occupiers are required to destroy Ragwort plants within 50 metres of their property boundary if the adjacent property is free of this plant pest.
Nodding Thistle	CC	Land occupiers are required to destroy Nodding Thistle plants within 100 metres of their property boundary if the adjacent property is free of this pest plant.
Contorta Pine	CC	Land occupiers are required to destroy all plants, with the exception of properties located directly adjacent to the Wye Reserve.
Reed Sweet Grass	CC	Marlborough District Council is responsible for managing this pest plant.
Blue Morning Glory	S	The key objective for management of these pest plants is to monitor distribution, the impacts and the spread of these organisms.
Climbing Asparagus	S	
Egeria	S	
Cotton Thistle	S	
Kahili Ginger and Yellow Ginger	S	
Lagarosiphon	S	
Purple Loosestrife	S	

⁽¹⁾ Refer to the Regional Pest Management Strategy for Marlborough definitions of Total Control (TC), Containment Control (CC) and Surveillance (S)

2.3. Pest Animal Status

The table below summarises the district's pest animals and their designated status as classified in the Regional Pest Management Strategy for Marlborough.

Animal Pest	Status ⁽¹⁾	Comments
Rooks	TC	A small number of rooks reside in Marlborough and, if allowed to build up in numbers, they are capable of causing significant damage to cereal crops and pasture. Marlborough District Council will carry out rook control with the aim of eradication.
Rabbits	CC	High rabbit populations affect soil and water quality and have a detrimental impact on economic production and increase the risk of soil erosion. It is Marlborough District Council's responsibility to ensure land occupiers comply with their obligation to control rabbits, co-ordinate and facilitate control activities, carry out rabbit population trend monitoring and offer advice on control.
Possums	CC	Possums cause extensive defoliation of native forest and predate on ground and tree nesting native birds and their eggs. At present in Marlborough there are no possums on our offshore islands. A rule in the Strategy prohibits the release of possums onto any offshore island in the Marlborough Sounds.
Darwin Ants	S	The key objective for management of these pests is to monitor their distribution, their impacts and the spread of these organisms.

⁽¹⁾ Refer to the Regional Pest Management Strategy for Marlborough definitions of Total Control (TC), Containment Control (CC) and Surveillance (S)

3. Total Control Pest Objectives and Performance Targets

Objective		
To eradicate Total Control pest plants from Marlborough		
Performance Targets	Action taken to meet Target	Achievements
<p>3.1. Complete control operations at all known sites by 30 June 2009.</p> <p>3.2. Complete surveillance programmes for Total Control Pest Plants by 30 June 2009.</p> <p>3.3. No new infestations resulting from known sites of these pest plants established in Marlborough.</p> <p>3.4. A measured decline in the population of these pest plant sites by 2012.</p> <p>3.5. Recover all costs for those Total Control Pest Plants identified in the Marlborough District Council initiative to a level of 25%, recovered by 30 June 2009.</p>	<ul style="list-style-type: none"> • Plan, implement and manage services required to carry out control operations. • Determine the level of surveillance for each pest annually and as determined by risk. • Record and maintain plant pest abundance and distribution data to enable trend monitoring over the duration of the Strategy. • Plan to recover 25% of the control costs for those Total Control Plant Pests identified in the Marlborough District Council initiative where appropriate. 	<p>All total control pest plant sites were actively controlled and where necessary, sites were visited more than once to ensure any plants germinating were destroyed before they produced seed.</p> <p>(Note Section 12, detail of pest numbers destroyed and population trend analysis.)</p> <p>A total of 47 new sites of total control pest plants were found during routine surveillance and all plants destroyed. These were all new sites of Moth Plant.</p> <p>Marlborough District Council has recovered, where appropriate, 25% of the costs incurred when controlling these plant pests from landowners where infestations occur.</p>

Objective		
To eradicate rooks in Marlborough.		
Performance Targets	Action taken to meet Target	Achievements
<p>3.6. Monitor all historical rookeries in Marlborough by 30 November 2008.</p> <p>3.7. Implement a control programme if technically feasible by 30 June 2009.</p>	<ul style="list-style-type: none"> • Actively seek public and land occupier reports of sightings of rooks. • Carry out an annual rook survey and report on population trends. • Plan and implement a control programme if technically feasible and conditions are suitable. 	<p>Several sightings of lone rooks have been made by the general public and reported to Council. The historical rookeries were surveyed and no rooks were seen.</p> <p>No control work has been required.</p>

4. Containment Control Pests

Objective														
To prevent any increase in the distribution and density of these pest plants and reduce infestation levels where possible.														
Performance Targets	Action taken to meet Target	Achievements												
<p>4.1. Prepare and distribute pest plant control programmes for land occupiers where active infestations of pest plants occur by 30 June 2009.</p> <p>4.2. Complete compliance inspections of properties issued with a control programme for each pest plant by 30 June 2009.</p> <p>4.3. Achieve 100% land occupier compliance with the requirements of the Strategy rules by 30 June 2009.</p> <p>4.4. Complete control operations for Reed Sweet Grass and Contorta Pine by 30 June 2009.</p> <p>4.5. Respond to all complaints with regard to plant pests within five working days.</p>	<ul style="list-style-type: none"> • Review annually and prepare control programmes for all land occupiers where an active infestation of a plant pest occurs. • Plan, implement and manage services required to carry out control operations. • Carry out inspections or verify compliance for each plant pest. • Carry out enforcement action where required to ensure that occupiers meet their obligations to control plant pests. • Implement Chilean Needlegrass management plans for properties classified as fringe north of the Awatere River. 	<p>Control programmes were issued for 427 properties with infestations of Containment Control pest plants.</p> <p>The following number of pest programmes by species were issued:</p> <table style="margin-left: 20px;"> <tr><td>Broom</td><td style="text-align: right;">- 19</td></tr> <tr><td>Gorse</td><td style="text-align: right;">- 2</td></tr> <tr><td>White Edged Nightshade</td><td style="text-align: right;">- 4</td></tr> <tr><td>Kangaroo Grass</td><td style="text-align: right;">- 21</td></tr> <tr><td>Nassella Tussock</td><td style="text-align: right;">- 305</td></tr> <tr><td>Chilean Needlegrass</td><td style="text-align: right;">- 76</td></tr> </table> <p>Of the 427 properties issued with a control programme, 397 (93%) were inspected to ensure compliance with the Strategy. Twenty eight occupiers were issued with a Notice of Direction under the RPMS. Of these 28 occupiers, 7 failed to comply with this Notice of Direction and were issued with a Notice of Intention to do Work on Default. Default work was carried out on 4 of these 7 properties.</p> <p>All of the properties issued with a control programme for Chilean Needlegrass control were inspected for compliance again this season.</p> <p>Forty nine inspections of earthmoving machinery following the removal of soil potentially contaminated with Chilean Needlegrass seed were carried out. This is down 50% on last season due to less development work being carried out as a result of the economic slowdown.</p>	Broom	- 19	Gorse	- 2	White Edged Nightshade	- 4	Kangaroo Grass	- 21	Nassella Tussock	- 305	Chilean Needlegrass	- 76
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Nassella Tussock	- 305													
Chilean Needlegrass	- 76													

		<p>Containment Control Plant Pests were found on two new properties in Marlborough this season. Two new infestations of Nassella Tussock were found and control programmes were issued where required.</p> <p>All Reed Sweet Grass operations were completed with the exception of the Reed Sweet Grass infestation at D'Urville Island which was surveyed and a control operation is planned for November 2009.</p> <p>All complaints were actioned within five working days.</p>
<p>Objective</p> <p>To minimise the impacts that feral rabbits have on pasture production, crops, forestry plantations and soil conservation values in Marlborough by maintaining feral rabbit populations at levels at or below the maximum allowable level identified for the two sub-regions, the 'Upper Awatere/Clarence' and the 'Remainder of area within the District'.</p>		
<p>Performance Targets</p>	<p>Action taken to meet Target</p>	<p>Achievements</p>
<p>4.6. Complete initial inspections of properties identified for inspections by 30 June 2009.</p> <p>4.7. Complete compliance inspections of previous year's control programmes by 30 October 2008.</p> <p>4.8. Trend monitor not less than six of the 11 established night count transects by 30 June 2009.</p>	<ul style="list-style-type: none"> • Identify a geographical representative sample of properties deemed 'at risk' of rabbit population increases by end February. • When rabbit infestations exist above the maximum allowable level, issue a control programme to the land occupier. • Re-inspect all properties issued with a control programme to ensure compliance. • Carry out the planned population trend monitors. • Carry out serological blood sampling of rabbits, in predetermined areas, to determine RHD immunity levels. 	<p>Forty properties were inspected to determine if rabbit populations exceeded the maximum allowable threshold level identified in the Strategy.</p> <p>Twenty four properties were issued with a rabbit control programme as a result of these inspections.</p> <p>Trend monitoring was carried out on six of the 11 night count transects.</p> <p>Serological sampling for Rabbit Haemorrhagic Disease (RHD) was carried out in three different areas. A final report was presented by John Parkes of Landcare Research analysing the results of this work. It is part of a larger project looking at the RHD immunity levels in rabbit populations across the country.</p>

		<p>A workshop was convened in the Upper Awatere Valley discussing rabbit control techniques and RHD implications. Council continues to liaise with other regional authorities on rabbit management issues through the Rabbit Coordination Group.</p>
<p>Objective To prevent the establishment of possums on offshore islands in the Marlborough Sounds.</p>		
<p>Performance Targets</p>	<p>Action taken to meet Target</p>	<p>Achievements</p>
<p>4.9. Respond to reported sighting of possums on offshore islands within five working days.</p>	<ul style="list-style-type: none"> • Investigations will be undertaken by either Marlborough District Council or Department of Conservation staff. 	<p>No reports have been received by either Council or Department of Conservation during the report period.</p>

5. Surveillance - Pests

Objective		
To monitor the distribution, the impacts and the spread of surveillance pests, fund appropriate research projects regarding surveillance pests and educate the public as to their identification and most appropriate method of control		
Performance Targets	Action taken to meet Target	Achievements
<p>5.1. Undertake surveillance and evaluate pest distribution and impacts for two species and report finding by 30 June 2009.</p> <p>5.2. Update records within five working days of finding or being informed of any plant or animal pest while carrying out surveillance.</p>	<ul style="list-style-type: none"> • Inspect properties and/or collect information to determine pest status and identify the extent of any new incursions. • Act on feedback from the public in relation to new pest infestations or instances of any unwanted organism or potential incursion of a harmful organism. • Record pest finding on maps and database records. • Manage the recorded pest as dictated by the Strategy requirements. 	<p>Surveillance work has been carried out by Council, Department of Conservation and Council's contractor, Te Ngahere during the past season. Council's GIS analysts are currently working on a project to utilise all the distribution data stored on Bioweb, a database utilised by DOC, and present it with information collected by Council to allow Council's Environment Committee to make well informed decisions on surveillance pest plants in the future.</p> <p>Specific surveillance was commenced for determining the overall distribution of Darwin Ants and Argentine Ants.</p>

6. Ecological Threat Programme

Objective		
<ul style="list-style-type: none"> • Encourage community initiatives and site led management programmes. • Identify sites with significant ecological value where the reduction of a range of ecological pest threats would be effective in protecting those values. • Provide information material and advice on impacts, threats and control options. 		
Performance Targets	Action taken to meet Target	Achievements
<p>6.1. To develop a restoration strategy as part of the significant natural areas project by 30 June 2008.</p> <p>6.2. To continue to support land occupiers with pest/weed work on a minimum of five identified significant natural area sites.</p> <p>6.3. To develop ecological pest threat information for the public in the form of fact sheets.</p>	<ul style="list-style-type: none"> • A restoration strategy is intended to be developed by Marlborough District Council in conjunction with the Significant Natural Areas Working Group. Pests and weed management is a component of this Strategy. • Marlborough District Council has an existing voluntary land assistance programme applying to significant natural area sites, which includes pests/weed threat works. 	<p>A draft strategy has been developed which includes some broad guidelines on animal and plant pests. The strategy requires management input from the Significant Natural Areas Working Group and ratification by Council.</p> <p>Draft Restoration strategy not completed but is in progress and planned for completion 2009/2010.</p> <p>Support to carry out weed and animal pest control on six private properties has been carried out. Four of the sites are existing QEII covenants. Four projects involve weed removal and two projects involve boosting existing possum trapping programmes.</p> <p>Weed and animal pest programmes have been carried out on several properties including:</p> <ul style="list-style-type: none"> - A rat control feasibility study and programme on a Sounds property. - Continued support for old mans beard programmes on two south Marlborough properties. - Wilding pine control feasibility study been carried out on D"Urville Island. - Plant weed control carried out in three wetland sites in south Marlborough.

		<p>No new fact sheets for ecological pest threat species have been developed but existing information has continued to be distributed (OMB brochure, wilding pine control papers, Plant me Instead book).</p>
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7. Educational Programme

Introduction

The Marlborough District Council recognises the advantages of a strong advisory and educational role in pest management and therefore takes a very active role in providing information and advice on the various impacts caused by pests and the best methods for controlling animal and plant pests.

Objective		
To educate the public in the identification of regional plant and animal pests and promote and encourage the most appropriate management and control options.		
Performance Targets	Action taken to meet Target	Achievements
<p>7.1. Prepare pest fact sheets for pests identified in the Strategy.</p> <p>7.2. Organise and attend a public display by 30 June 2008.</p>	<ul style="list-style-type: none"> • Promote a strong advisory and educational role to create a greater understanding of land occupier pest management roles and responsibilities. • Identify and arrange a venue for a public display. 	<p>Fact sheets have been prepared for all the new pest plant species classified as a pest in the reviewed Strategy. New format fact sheets are being prepared for all other pest plants species in the Regional Pest Management Strategy.</p> <p>A display, with a theme directed towards aquatic pest fish and environmental weeds, was made by Marlborough District Council and Department of Conservation staff at Garden Marlborough in November 2008.</p> <p>Two public workshops on wilding pine control were undertaken, one in South Marlborough and one in North Marlborough.</p>

8. Biological Control Programme

Objective		
To enhance the establishment of biological control agents for a range of plant pests with the aim of achieving an environmentally acceptable and cost effective method of control.		
Performance Targets	Action taken to meet Target	Achievements
<p>8.1. Agree on annual biological control programme outcomes in conjunction with the Biological Control Collective Group by 30 March 2009.</p> <p>8.2. Release biological control agents which have established in the region for the purpose of further distribution by 30 June 2009.</p> <p>8.3. Release, during the optimum period, any new biological control agent that becomes available by 30 June 2009.</p>	<ul style="list-style-type: none"> • Contribute to the collective biological control programme managed by Landcare Research. • Support research initiatives for the selection and introduction of biological control agents. • Analysis and plan for the release and/or redistribution of biological agents. • Monitor the distribution status of biological control agents. 	<p>Marlborough District Council continues to be part of the collective biological control programme managed by Landcare Research. A release of the Broom Shoot Moth and a release of the Broom Leaf Beetle were purchased from Landcare Research. The Broom Shoot Moth was released at Bankhouse and the Broom Leaf Beetle was released at the White Bluffs in the Awatere Valley.</p> <p>Harvesting of Nodding Thistle Crown Weevil and the Ragwort Flea Beetle proved successful this season. A release of Ragwort Flea Beetle was made at Peggioh and releases of Nodding Thistle Crown Weevil were made at the Wairau Bar, in the Wairau Valley and at Fabians Valley.</p>

9. National Pest Plant Accord

Objective		
To prevent the sale, distribution or propagation within New Zealand of any plant pest listed in the National Plant Pest Accord.		
Performance Targets	Action taken to meet Target	Achievements
9.1. Inspect nursery outlets in Marlborough by 30 June 2009.	<ul style="list-style-type: none"> • Inspect nursery outlets for any plants identified on the National Pest Plant Accord (NPPA). • Ensure compliance of obligations. • Promote a strong advisory and educational role in association with the NPPA. • Record and report inspection results to Biosecurity New Zealand. 	<p>All nursery outlets in the region were inspected to ensure no plants identified in the NPPA were being sold. No plants identified in the NPPA were found. A report was made to Biosecurity New Zealand.</p> <p>Publicity information has been provided to the key nursery outlets.</p>

10. Research

Introduction

The Marlborough District Council understands the need for research in the field of pest management and provides funding for a number of research projects.

Objective		
To support research programmes which benefit pest programmes in the Marlborough district.		
Performance Targets	Action taken to meet Target	Achievements
10.1. Provide resource to undertake research as approved by the Marlborough District Council by 30 June 2008.	<ul style="list-style-type: none"> • Provide a contribution to the Wilding Conifer Research Collaboration Group. • To investigate the feasibility of registering Flupropanate as a potential tool to control Chilean Needlegrass and Nassella Tussock. • Evaluate proposals and gain approval for any expenditure. • Verify appropriate use of budget and ensure outcomes are documented and reported. 	<p>An \$8,000 contribution has been provided to the Wilding Conifer Research Collaboration Group. The group is represented by South Island regional councils, Department of Conservation, Landcorp and managed by Ensis. The key objective of the research is to develop a prioritisation management tool, and refine control technologies to manage wilding pines and information exchange. Based on the results of this work, a pamphlet, jointly produced between the Marlborough District Council and Department of Conservation, has been prepared, which describes the recommended best practice for wilding control using chemical. Two workshops were also undertaken during the year.</p> <p>The Marlborough District Council, with the support of other regional councils, Biosecurity New Zealand and PGG Wrightsons are still working through issues relating to registration for a new herbicide to control Chilean Needlegrass and Nassella Tussock.</p> <p>Research advice was provided by Agresearch via an Envirolink grant to enable the Council and community to gain better understanding of biology and habits of Nassella Tussock.</p>

11. Biosecurity Programmes - Other

Objective		
To facilitate partnerships with industry and the Crown in the management and coordination of national pest and unwanted organism programmes.		
Performance Targets	Action taken to meet Target	Achievements
<p>11.1. Implement the Didymo Long Term Management Plan objectives by 30 June 2008.</p> <p>11.2. Support the marine farm industry and stakeholder initiative to manage the threat caused by Didennum Vexillum.</p>	<ul style="list-style-type: none"> Prepare and implement a Didymo Long Term Management Strategy in conjunction with Biosecurity New Zealand, Department of Conservation, Fish and Game and Tasman District Council. 	<p>The Long Term Management Programme for Didymo is coordinated by the Ministry of Agriculture and Forestry/Biosecurity New Zealand as from 1 July 2008 and took over from the South Island incursion response activities. The plan focus is on changing behaviour and increasing the personal responsibility of users through a strong marketing programme.</p> <p>In implementing the national Long Term Management Programme for Didymo, within the district, Marlborough District Council received funding, during 2008/09 of \$20,000 from Biosecurity New Zealand, of which \$17,000 was paid to the Department of Conservation to assist with the employment of two advocates to talk to river users throughout Marlborough promoting the CHECK, CLEAN, DRY message. The advocates targeted river users (fishermen, canoeists, white-baiters etc) or potential river users (mainly tourists, backpackers) who were at risk of spreading Didymo.</p> <p>The Council along with the Top of the South Councils, Biosecurity New Zealand, marine farm industry and Iwi have agreed on implementing a Top of the South Marine Biosecurity Strategic Plan. The plan is operational and funded jointly by the Group. The plan sets out strategic objectives to reduce the impacts of marine organisms by a variety of voluntary measures.</p>

12. Monitoring and Review of the Strategy

The Strategy specifies how the effects of the strategies are to be monitored throughout their duration. The term 'effect' covers two main areas:

- The effectiveness of the Strategy in terms of achieving its stated objectives.
- The environmental effects of the Strategy's implementation.

This report will satisfy stakeholders that the majority of stated operational plan objectives have been achieved during 2008/2009, while the term environmental effects is much more difficult to quantify.

Where appropriate monitoring methodologies are available to measure a stated objective, data has been collected to measure these outcomes. Pest population trend data will assist Marlborough District Council and stakeholders to monitor the effectiveness of the Strategy.

12.1. Total Control Plant Pest Trend Monitoring

The overall aim for Total Control Plant Pests, as stated in the Strategy, is the eradication of them from the region. The Strategy's objective is to contribute to the eradication of these plant species by destroying them at known sites annually before they produce seed and preventing their establishment in new areas. To measure this objective, the number of plants destroyed annually at each known site is recorded.

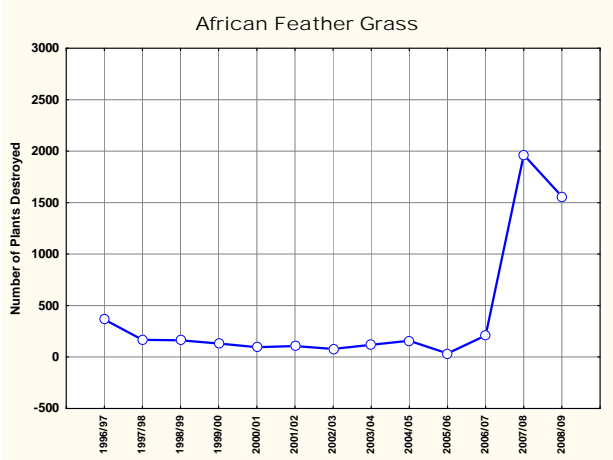
12.1.1. Total Control Plant Pests 'Core Data' (MDC Initiative)

Total Control Plant Pest	Number of Known Infestations	Plants Destroyed												
		1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Bur Daisy	1	23,500 approx	2,150 approx	31,000 approx	20,500 approx	6,000 approx	500	130	55	110	50	32	52	100
African Feather Grass	16	365	167	162 (Including 1 new site)	131	96	106	79	119 (Including 2 new sites)	158	35 (Including 1 new site)	210 (Including 1 new site)	1965	1560
Saffron Thistle	16	147	26	2,000 approx	77 (Including 1 new site)	6,035 (Including 6 new sites)	4823	116	1325	1049	341	219 (Including 1 new site)	1084	534
Bathurst Bur	12	-	-	69	669	301	294	12	119	81 (Including 1 new site)	159	2	12	9
Giant Needlegrass	12	-	-	-	-	3,000 approx	273	325	451	329	225	327	34	148
Chinese Pennisetum	11												84	71
Parrots Feather N.B Figure shown is litres of Glyphosate Herbicide concentrate used for Parrots Feather control in Gibsons Creek – Infestations are still too extensive in this waterway to count individual plants.	17								(5 new sites)	(4 new sites)	(2 new sites)	(1 new site)	4.3L Glyphosphate (5 new sites)	3L Garlon 360 1L Glyphosphate

12.1.2. Total Control Pest Plants ‘Analysis’ (MDC Initiative)

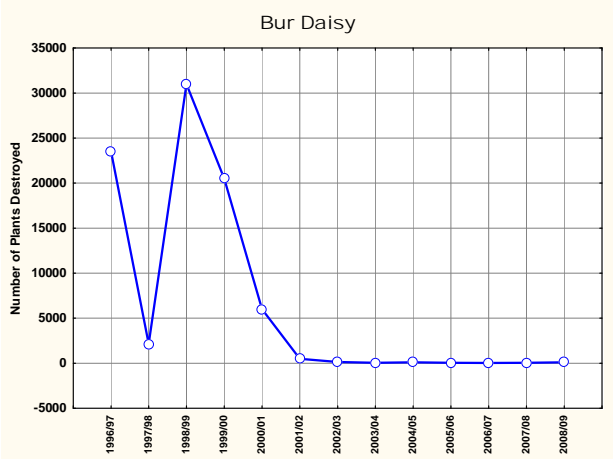
African Feather Grass

The infestation of African Feather Grass at Ngakuta Bay continues to be a problem. The peak shown is due to an explosion of seedlings as a result of the mowing regime on the property not being continued.



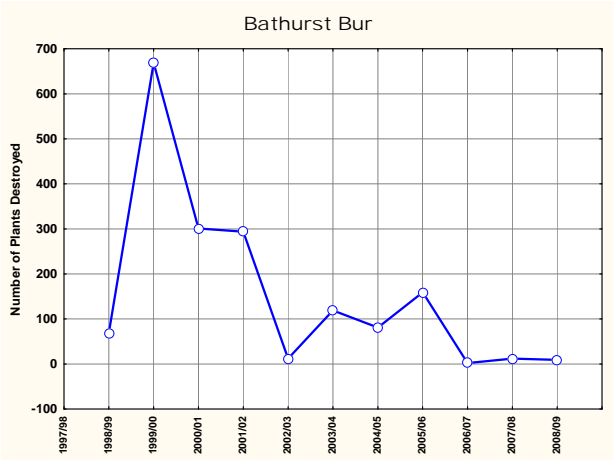
Bur Daisy

Bur Daisy control continues at the known site. Low plant abundance numbers continue.



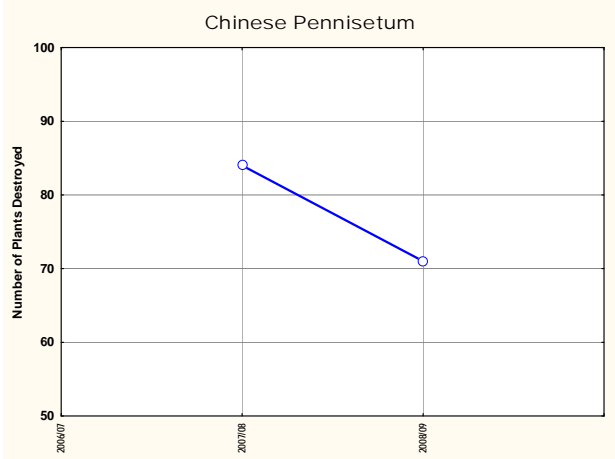
Bathurst Bur

Bathurst Bur control continues at all known sites.



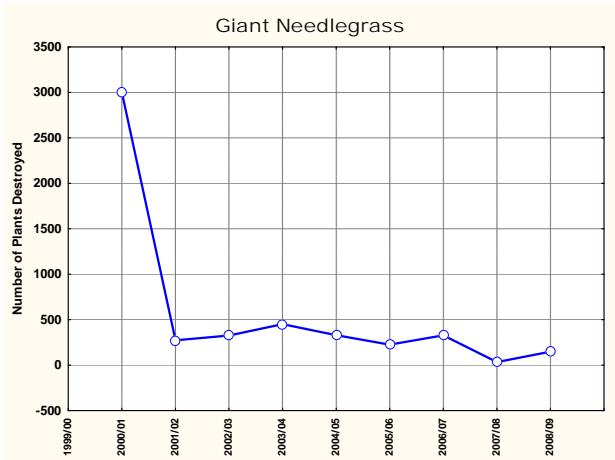
Chinese Pennisetum

Chinese Pennisetum control continues at all known sites.



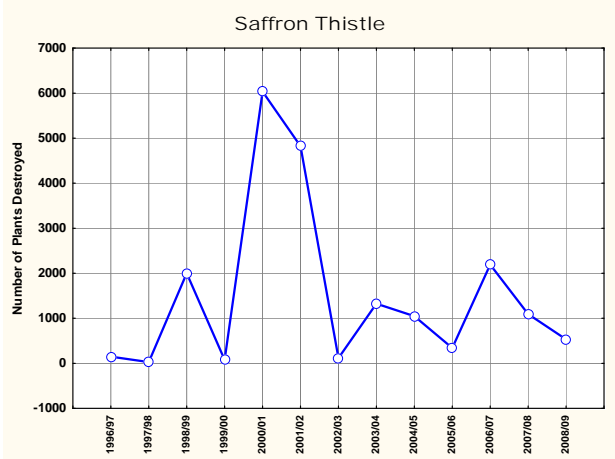
Giant Needlegrass

Giant Needlegrass control continues at all known sites.



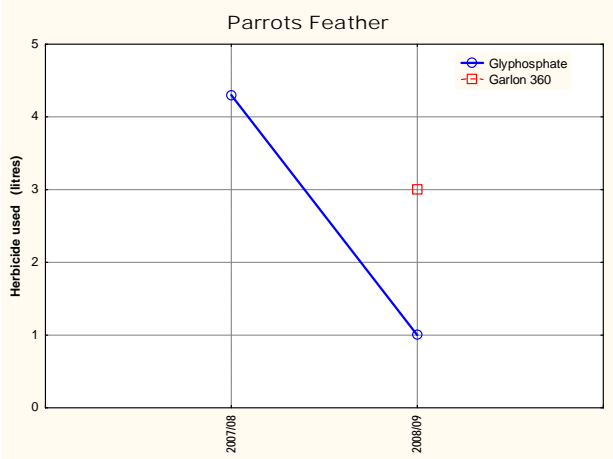
Saffron Thistle

One known site of Saffron Thistle continues to yield the majority of the plants destroyed each season.



Parrots Feather

This is the first season that Parrots Feather control has been undertaken using Garlon 360. The first of two control operations carried out was made using Glyphosate 360 and the second was made using Garlon 360.



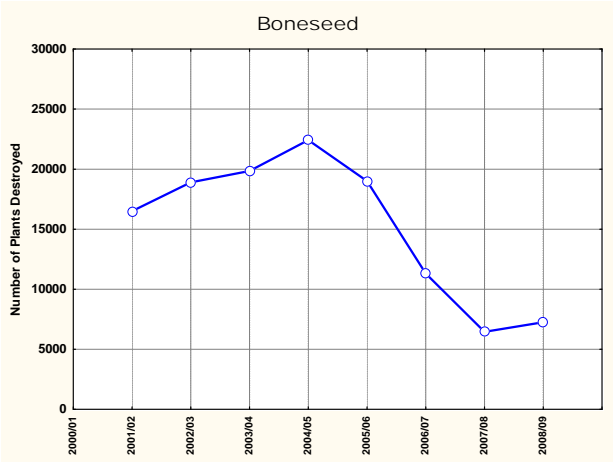
12.1.3. Total Control Pest Plants 'Core Data'– (MDC/DOC Combined Initiative)

Total Control Pest Plant	Number of Known Infestations	Plants Destroyed									
		1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Boneseed	17	-	-	16,500 approx	18,904 (Including 3 new sites)	19,843 (Including 5 new sites)	22,421 (Including 5 new sites)	19,011 (Including 1 new site)	11,300	6,455	7,252
Climbing Spindleberry	5	2,580 approx	2,530 approx	1,020 approx	279	79	85	139 (Including 1 new site)	133	333 (Including 1 new site)	644
Moth Plant	140	-	-	25	139 (Including 3 new sites)	135 (Including 5 new sites)	127 (Including 7 new sites)	86 (Including 1 new site)	603 (Including 58 new sites)	677 (Including 9 new sites)	1479 (including 47 new sites)
Madeira Vine	3	500	250	450 (Including 1 new site)	23	63	7	14	20	706 (Including 1 new site)	103
Eel Grass NB: Infestations are pulled by hand	8	-	21 tonne	3 tonne (Including 1 new site)	2.75 tonne (Including 1 new site - Waterlea Creek)	1.25 tonne (Opawa Loop) 60 plants (Waterlea Creek)	60 kg (Opawa Loop)	100 kg (Opawa Loop)	1,500 kg (Including 2 new sites)	150 kg (Opawa Loop) 40 kg (Waterlea Creek)	10 kg
Cathedral Bells	7	-	-	-	-	-	-	-	-	364 (NB Control work was carried out at 4 of the 7 sites - All 7 will be inspected and controlled 08/09)	1,329
Evergreen Buckthorn	3	-	-	-	-	-	-	-	-	1,613	1,154
Senegal Tea	2	-	-	-	-	47 (2 new sites)	1	9	--	Both known sites have been eradicated	Both known sites have been eradicated
Spartina Grass NB: Figure shown is litres of Gallant Herbicide concentrate used for Spartina Grass control each spraying season - Infestations are still too extensive to count individual plants.	5					580 L	415 L	19.7 L	1.97L	1.25L	1.2L

12.1.4. Total Control Pest Plants ‘Analysis’– (MDC/DOC Combined Initiative)

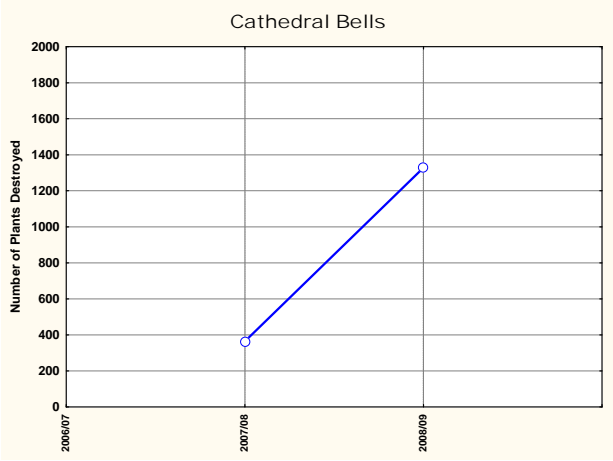
Boneseed

Boneseed control continues at all known sites. A reduction in plant pest abundance continues.



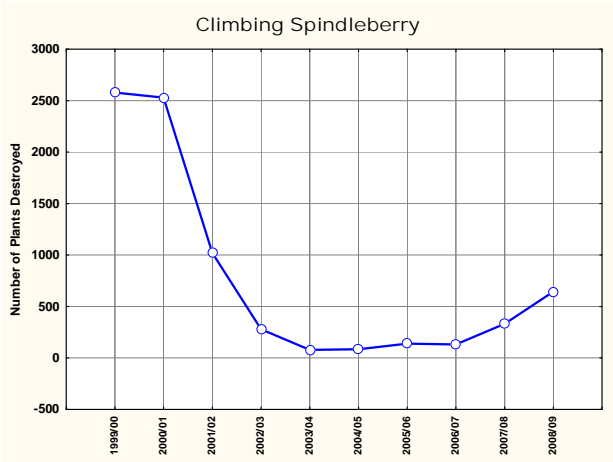
Cathedral Bells

All 7 known sites were controlled this season. The resulting graph shows the increase in plants requiring destruction.



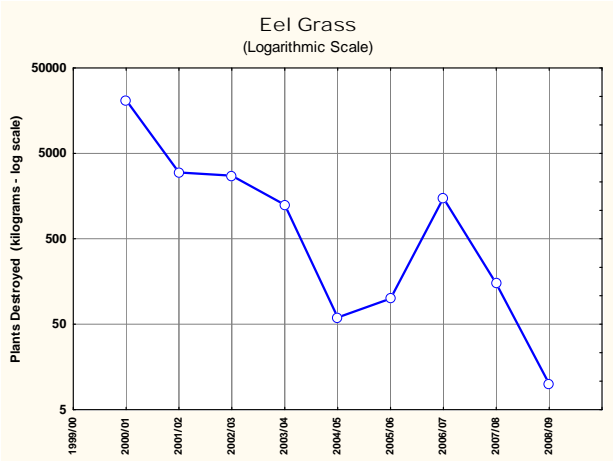
Climbing Spindleberry

Climbing Spindleberry control continues at all known sites.



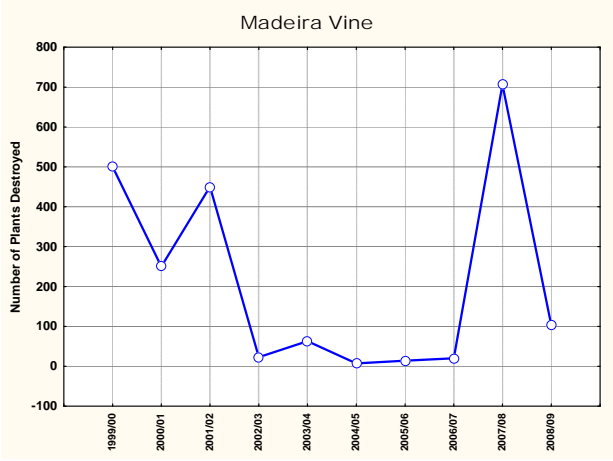
Eel Grass

Eel Grass control continues at all known sites. These are still the only known sites in the South Island. At this stage, the objective of eradication continues to be achievable.



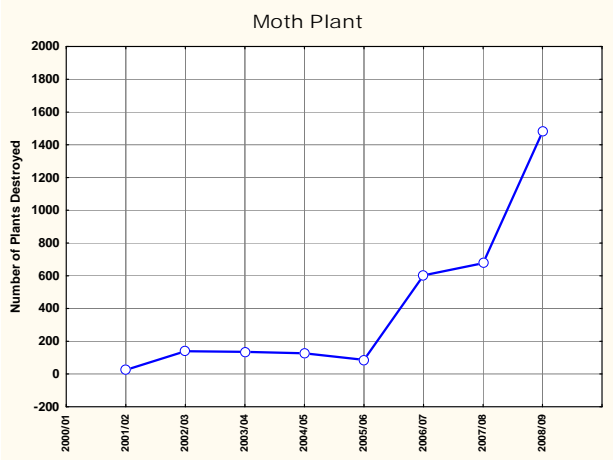
Madeira Vine

Maderia Vine control continues at all known sites.



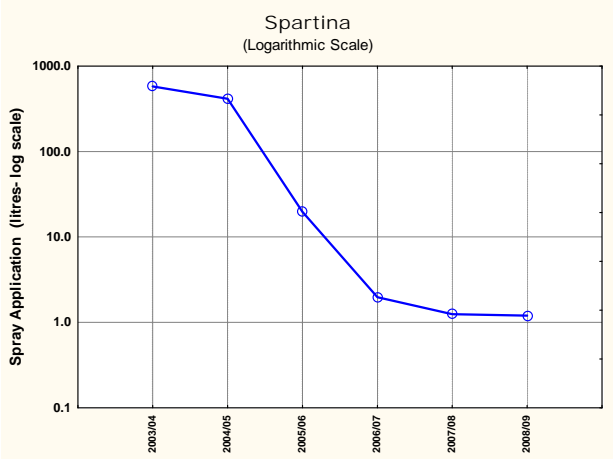
Moth Plant

Due to further media coverage, more Moth Plant infestations have been discovered after reports from the general public. All plants found have been destroyed.



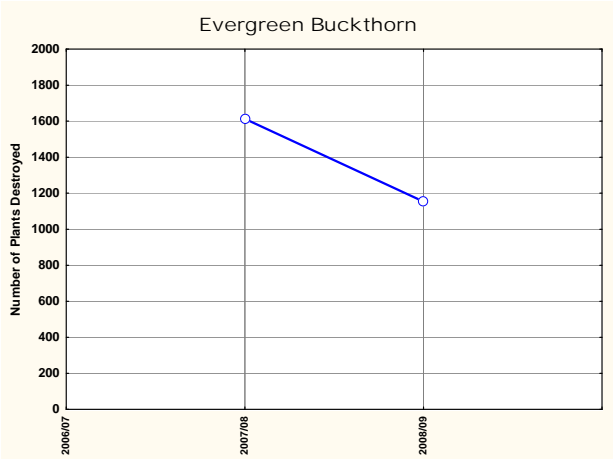
Spartina

Spartina control continues at all known sites. DOC was successful in their application for further funding for the control of Spartina in the Pelorus Sound. As a result, all known areas have been ranged and all plants destroyed.



Evergreen Buckthorn

Evergreen Buckthorn control continues at a known site.

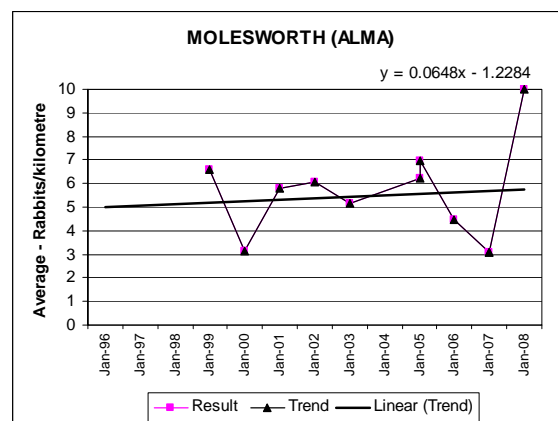
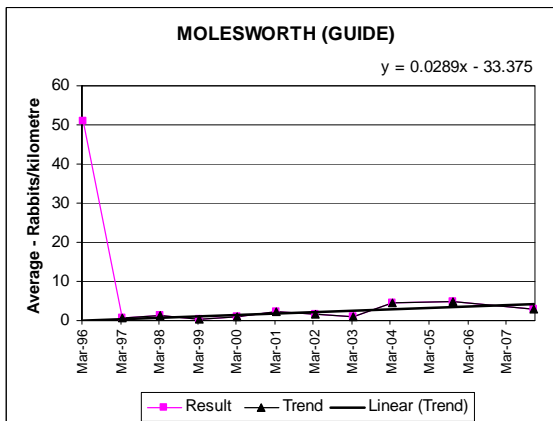
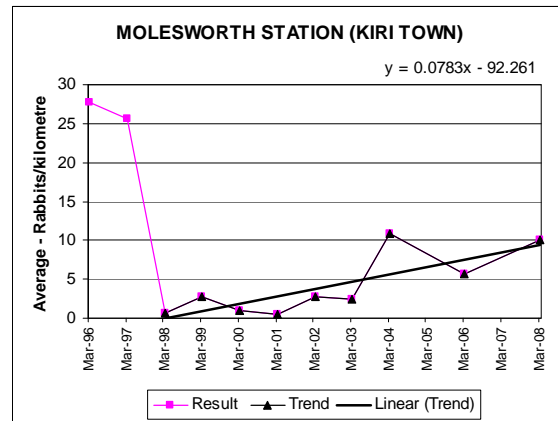
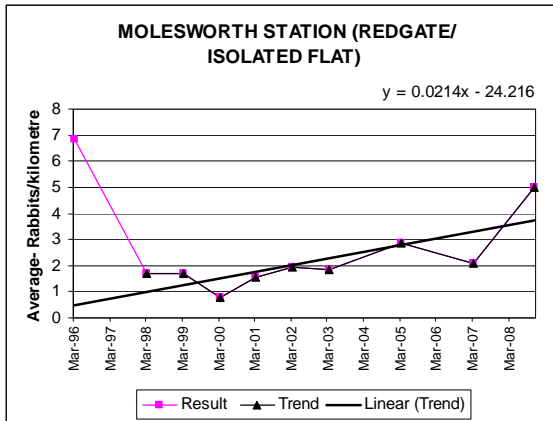


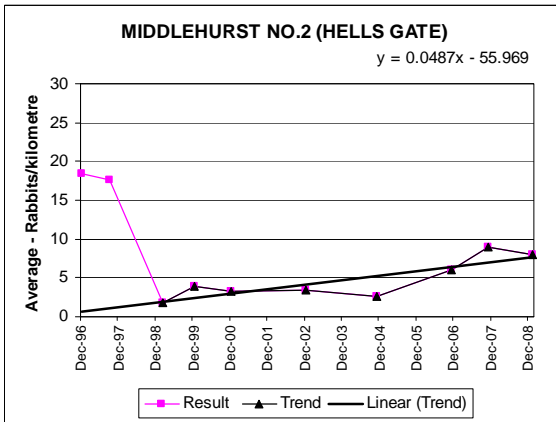
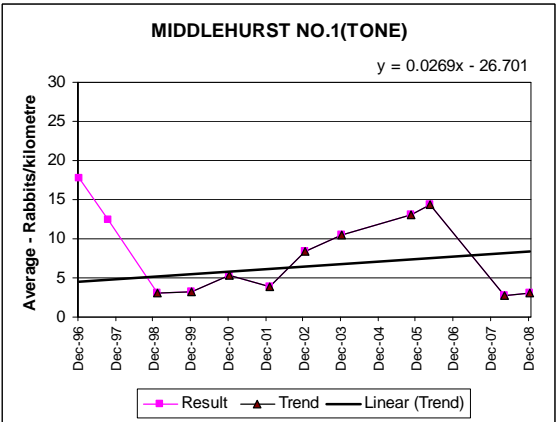
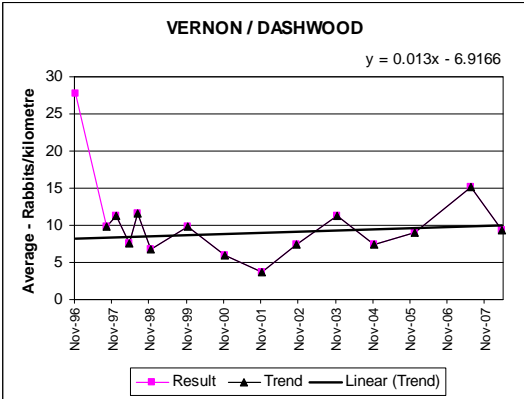
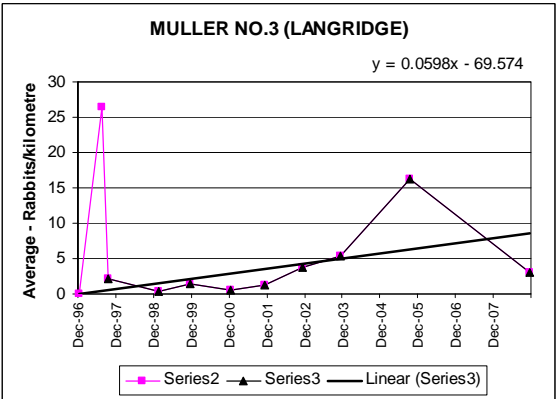
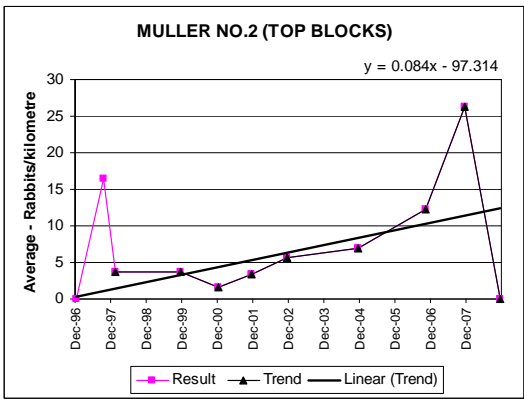
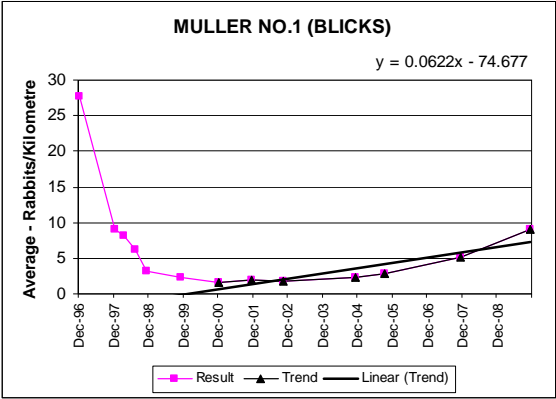
As a result of extensive surveillance work being carried out for Total Control plant pest species, new sites continue to be discovered. These new sites and existing infestations are all being destroyed following their discovery.

12.2. Rabbit Pest Trend Monitoring - Night Count Data

The desired end result of the Rabbit Pest Management Strategy is to ensure rabbit populations are controlled so that they do not adversely affect the economic viability of our primary industry or soil and water quality. It is difficult to quantify the economic or environmental effects of changing rabbit populations.

The graphs below show rabbit levels pre RHD (pre 1997) and the subsequent trends since that time. In general, rabbit numbers throughout the representative sites below have shown significant increases in population densities. These density increases can be correlated to the increase of RHD immunity in the rabbit populations. The reduction in the rabbit population in the Middlehurst - Tone and Muller Langridge night count route is due to conventional rabbit control in the area. The Molesworth/Alma, Kiri Town, Guide and the Coastal Vernon night counts were not carried out this season.





13. Summary

- (a) The majority of performance measures have been achieved through the year. Land use changes continue to increase the risk of Chilean Needlegrass seed being spread from infested areas to clear areas. The Marlborough District Council is working with the community to minimise any possible risk.
- (b) The majority of occupiers have complied with written obligations through the issuing of pest control programmes. Legal directions are only issued once all other compliance alternatives are exhausted. Twenty eight Notices of Direction were issued as a result of occupiers failing to meet their obligations under the Strategy. Seven Notices of Intention to do Work on Default were issued as a result of further non-compliance. Default work was carried out on three properties that failed to comply and default work had to commence.
- (c) The cost of rabbit pest monitoring and land owner conventional control activities continues to increase substantially due to the decline in the impact of the RHD virus in Marlborough.
- (d) A major emphasis on education relating to the control and identification of pests identified in the Strategy continues to be an important activity.
- (e) Extensive surveillance work for Total Control and Containment Control Plant Pests continues. New plant pest sites for some plant pests continue to be discovered. These sites are recorded and Marlborough District Council takes appropriate action to ensure the plants at these sites are destroyed where required, either by Marlborough District Council or by land occupiers.
- (f) The Marlborough District Council and the Department of Conservation continue with success in eradicating Spartina Grass..
- (g) The biological control of weeds programme with Landcare Research continues to be of huge benefit to the region.
- (h) Marlborough District Council continues to be active with assisting industry and other stakeholders with pest programmes and incursions of new organisms. In particular, Didymo and marine biosecurity measures.