

# Pests and biosecurity

*Environment Canterbury's role is as the lead agency for managing pests under the regional pest management strategy and as a supporting agency for pests under national pest management strategies.*



## What we achieved this year

Within the pests and biosecurity portfolio we contribute towards achievement of four main community outcomes:

### Our contribution

- Good progress has been made towards eradication of “total control” pests – animals or plant pests that require complete eradication as specified in the Regional Pest Management Strategy. No plants set seed at any known sites and rooks are on target to be eradicated by 2015.
- The progressive control pest programme which includes nassella tussock has again achieved a reduction in the number of plants per hectare, and in a progressive trend towards eradication.
- Rabbit numbers were maintained at low levels in most areas, although rabbit population trend monitoring shows that rabbit numbers are increasing in 9 of the 11 pest districts. With rising immunity to rabbit haemorrhagic disease in some areas, an increase in the use of traditional control work has been required.
- Wallaby control programmes maintained numbers within specified levels in the South Canterbury containment area (Hunter Hills). Control operations are also planned for two new wallaby populations outside this area.
- We continued to reduce vectors (carriers) of bovine Tb to safeguard the health of our cattle herds. This year, the number of infected herds of cattle was reduced to 16, well below the target of 24.
- We undertook control operations for biodiversity pests affecting high value environmental areas in the Port Hills, Kakahu Forest, Ashburton Riverbed, Burke's Pass, Puhi Peaks and Hanging Rock (Opuha) areas. The pests controlled included feral cats, mustelids, possums and rodents. The numbers of feral goats were controlled on Banks Peninsula.

### Community outcome

**A strong economy**  
Business and farming activities do not harm the environment  
The environment, in general, is to be looked after

**Native plants and animals can thrive**

In this portfolio we report on eight levels of service to illustrate our achievements this year.

## Effect on the four well-beings



Controlling animal and plant pests is essential for rural Canterbury's economic well-being. There are also benefits to indigenous biodiversity and restoration of mauri resulting in enhanced environmental and cultural well-being.

For some landowners, the cost of controlling pests can adversely affect short-term economic well-being. However, there is also benefit as a result of increased production from land as a result of pests being controlled.

There is potential for the use of some pesticides to negatively affect indigenous biodiversity and restrict some recreational opportunities, thereby affecting environmental and cultural well-being. This is mitigated through our use of best practice in pest control and strict observance of resource consent conditions.

## Other key achievements this year

- This year's surveillance programme was successful in identifying an infestation of Chilean Needle Grass – a weed that reduces biodiversity in native grasslands and that is also unpalatable to livestock. A small-scale management programme was approved and implemented for the eradication of Chilean Needle Grass from the region. We also embarked upon a public awareness campaign asking people to be vigilant for this species.
- We successfully undertook control of the common reed phragmites on all five known sites in Canterbury and eradicated it from the region.
- We carried out enforcement action where landowners/occupiers failed to voluntarily control rabbit and wallaby densities. Notices of Direction were served on 64 properties to undertake rabbit control (47 last year) and five wallaby operations. Generally, rabbit haemorrhagic disease continued to be effective, except in eastern Mackenzie, Kurow, Hakataramea, and parts of Waikari and Amuri, where increased immunity was noted.
- We monitored infestations of gorse, broom, and variegated and nodding thistle. We also monitored total control plants, including African feather grass, African love grass, baccharis, bur daisy, coltsfoot, entire marshwort, saffron thistle, white-edged nightshade and nassella tussock.
- We undertook operations at 55 sites to remove African feather grass, African love grass, baccharis, bur daisy, coltsfoot, entire marshwort, saffron thistle and white-edged nightshade prior to seeding.
- We successfully released the following natural biocontrol agents to control broom and boneseed: broom leaf beetle, broom gall mite, broom shoot moth and boneseed leaf roller.
- We investigated new biocontrol agents for old man's beard, woolly nightshade, tradescantia, broom, banana passionfruit, Japanese honeysuckle and barberry.
- Surveillance and control operations were undertaken to protect indigenous biodiversity, including programmes to control boneseed, thyme, phragmites, egeria, lagarosiphon, Darwin's barberry, banana passionfruit, bell heather, and old man's beard.
- Wilding conifers were controlled on Glen Lyon Station in the Ohau catchments, in the Upper Rakaia, Waitaki, Waimakariri and Hurunui catchments, as well as at Burke's Pass.
- We undertook inspections at 117 sites to control an incursion of purple loosestrife, a purple flowering wetland plant that crowds out native species.
- We undertook surveillance for potential pests, including Chilean Needle Grass, mat grass, puna grass, Argentine ants, sulphur crested cockatoos and beggar's tick.
- We inspected 108 (61.5%) commercial nurseries in Canterbury to check for any pest plants in their stock, as well as inspecting a sample of fairs and other outlets and events where pest plants might be sold.
- We carried out enforcement action where landowners/occupiers failed to control pest plants. Notices of Direction were served on 331 properties.
- The Bovine Tb vector control contract management was handed over from Environment Canterbury for 2008/09 to the Animal Health Board for 2009/10.
- We carried out possum control on behalf of the Banks Peninsula community. Canterbury's first Community Initiative Pest Programme is well into its third year.
- We continued with the wilding conifer survey, looking at infestation levels and spread.
- Landholders and nine pest management liaison committees helped to implement the Regional Pest Management Strategy.



Environment Canterbury acknowledges and thanks the volunteers on pest advisory groups and pest rating district liaison committees providing invaluable local input and feedback to guide the planning for animal and plant pest management. Also, the contribution made by hard-working volunteer groups in controlling the spread of wilding conifers is greatly appreciated.

# Levels of service

This section reports on performance for 2008/09 against Annual Plan targets.

## 1. Eradicating total control pest plants to reduce their impact on production from land and on biodiversity

### Measure

The number of sites infested with total control plants where seed is set.

Target 2008/09

None.

*Achieved.*

The number of known sites has decreased by two to a total of 227. All known sites were inspected and 55 of these required control measures. All plants were prevented from seeding.

Number of sites	
2004/2005	None
2005/2006	None
2006/2007	None
2007/2008	None
2008/2009	None

Note: Total control plant pests are African feather grass, African love grass, baccharis, bur daisy, coltsfoot, entire marshwort, saffron thistle, taurian thistle and white-edged nightshade.

Source: Environment Canterbury.

## 2. Regulating the spread of gorse and broom to limit the impact on production from land

### Measure

The change in the area of farm land affected by gorse and broom.

Target 2008/09

No change.

*Unable to be measured.*

We are in the process of developing a technique using satellite imagery to measure change in areas of gorse and broom regionally.

### 3. Eradicating boneseed from outside the Port Hills zone to protect indigenous biodiversity

#### Measure

The area outside the Port Hills zone infested with boneseed is controlled to prevent seed setting.

Target 2008/09  
See table below.

*Achieved.*

Note: This programme now covers the total known area of boneseed outside the Port Hills zone – 373 ha.

Total area under control	
2004/2005	250 ha
2005/2006	373 ha
2006/2007	373 ha
2007/2008	373 ha
2008/2009	373 ha

Source: Environment Canterbury.

### 4. Regulating the spread of nassella tussock to reduce the impact on production from land

#### Measure

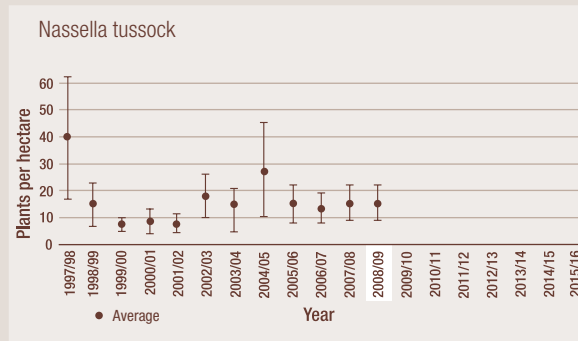
The number of nassella tussock plants per hectare (based on randomly located transects).

Target 2008/09

A decline in the number of nassella tussock plants per hectare.

*Achieved.*

The number of plants per hectare has averaged around 17 plants per hectare over the past seven years. In 2008/09 it was 14.8 plants per hectare.



Notes: Error bars show the range within which 95% of measurements lie. The dot shows the average of all measurements.

Seasonal trends can affect results, with higher seed germination in a dry season.

The graph in the 2006-16 LTCCP showed results plotted one year later than they should have been. This has been corrected in the above graph.

Source: Environment Canterbury.

### 5. Eradicating rooks to reduce their impact on production

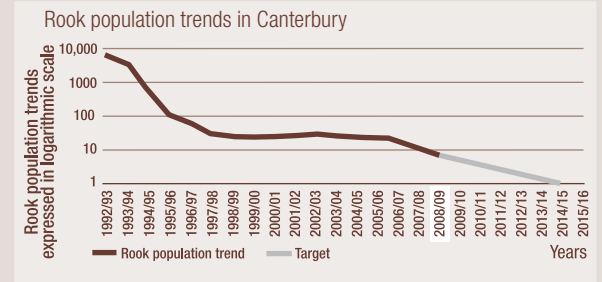
#### Measure

The number of rooks in Canterbury is progressively reducing.

Target 2008/09

All rooks eradicated by 2011.

*Achieved.* Rook numbers have reduced from 10 to 9.



Source: Environment Canterbury.

## 6. Regulating the density of rabbits to limit their impact on production and on the environment

### Measure

The effectiveness of rabbit control programmes or rabbit haemorrhagic disease, on properties where rabbit densities have exceeded level 3 on the modified McLean scale, in reducing the density to below level 3.

Target 2008/09

100% effective on all properties.

*Achieved.*

Notices of Direction were served on 64 properties. When Notices of Direction are not complied with, action on default is implemented and the required work is undertaken by Environment Canterbury within 12 months on 100% of the affected properties.

Effectiveness	
2004/2005	100%
2005/2006	100%
2006/2007	100%
2007/2008	100%
2008/2009	100%

Note: The modified McLean scale has eight levels, ranging from 1, no rabbits present, to 8 where rabbits are likely to be seen in extremely large numbers. At level 3, odd rabbits are seen; signs and some buck heaps show up, with pellet heaps spaced 10 m or more apart on average (refer to the Regional Pest Management Strategy 2005 for further information). Where rabbit levels exceed level 3 and rabbit haemorrhagic disease is likely to be effective, no formal control programme is required.

Source: Environment Canterbury.

## 7. Regulating the spread and density of wallabies to limit their impact on biodiversity and production from land

### Measure 1

The effectiveness of wallaby control programmes, on properties in the wallaby containment area where wallaby densities have exceeded level 3 on the Guilford wallaby infestation scale, in reducing the density to below level 3.

Target 2008/09

100% effective on all properties.

*Achieved.*

Enforcement action is currently in progress on five properties.

Effectiveness	
2004/2005	100%
2005/2006	100%
2006/2007	100%
2007/2008	100%
2008/2009	100%

Note: The Guilford wallaby infestation scale has levels, ranging from 1, no sign seen, to 5, high probability of seeing wallabies. At level 3, frequent faecal and track signs are seen, but only in isolated pockets, with likelihood of seeing some wallabies (refer to the Regional Pest Management Strategy 2005 for further information).

Source: Environment Canterbury.

### Measure 2

The number of wallaby populations outside the wallaby containment area.

Target 2008/09

None.

*Not achieved.*

Two wallaby populations have been sighted and will be destroyed in 2009/10.

Number of populations	
2004/2005	None
2005/2006	None
2006/2007	None
2007/2008	None
2008/2009	Two

## 8. Managing bovine Tb vector control to protect exports of beef and deer products

### Measure

The percentage of contracts where vector control has been completed to the specifications of the Animal Health Board.

Target 2008/09  
100%.

*Not achieved.* 97.8% (132 out of 135 operations).

Bovine Tb infected herds



Note: Achievement of these targets is dependent on others involved in the beef and deer industry complying with the Animal Health Board's bovine Tb management requirements.

Source: Animal Health Board disease testing information.

## Financial summary

\$000	Actual 2008/09	Budget 2008/09	Actual 2007/08
<b>Total Expenditure</b>	4,550	5,319	9,320
<i>Funded by:</i>			
<b>General rates</b>	2,138	2,138	2,201
<b>Targeted rates</b>	1,492	1,493	1,780
<b>Grants</b>	674	543	5,506
<b>User pays and other</b>	209	777	408
<b>Total Funding</b>	4,513	4,951	9,895
<b>Reserves Increase/(Decrease)</b>	(37)	(368)	575

Rabbit populations are still lower than expected and less work has been required this year than was planned. During the year Environment Canterbury filled new managerial positions, restructured the section and put in place a new programme structure. A number of other projects were completed with small cost savings across the board.

### Capital expenditure

Capital expenditure associated with this group of activities was funded from general funds and included as depreciation expense.