

## 5.9. PEST MANAGEMENT STRATEGY FOR NASSELLA TUSSOCK



### Description of the Pest

Nassella tussock (*Stipa trichotoma*) is a perennial grass with fine-bladed wiry leaves. It grows up to a metre high and one metre across. It will grow almost anywhere but is commonly found in dry sunny areas. Small plants are very similar in appearance to some native grasses, which makes identification difficult.

Special status was accorded to nassella tussock under the Noxious Plants Act 1978. It was declared a target plant in Northland despite widespread distribution in the South Island. There were special enforcement provisions in the Act. Intensive control has continued under the Biosecurity Act, by way of the Regional Pest Management Strategy for Nassella Tussock, adopted in 1998.

### Distribution of the Pest

Nassella tussock is found on dry farmland along the Region's east coast. The main infestations are at Taupo Bay, Whananaki, Matapouri, Urquharts Bay, Topuni, Tahere and Mangapai (See Map E).

### Problems Caused

The plant invades pasture areas reducing productivity. Its general unpalatability to stock, prolific seeding and relatively long seed life make it difficult to eradicate. The plant has a biological success rating of 14 (out of 21) and a weediness index of 14 (out of 24).

Each mature plant can produce up to 100,000 seeds per year. The seed straw is readily carried by wind and can travel several kilometres. Distribution also occurs by machinery, stock, water and on the bark of harvested trees. Grubbing to prevent seeding and site management to reduce seed germination are the most effective control methods.

### Parties Affected

The main parties affected are the landowners, particularly farmers, forest managers.

### Impact Evaluation

Impact	Current	Potential
Cultural	-	-
Ecological	-	Low
Human Health	-	-
Soil & Water	-	-
Production	Low	High
Public Infrastructure	-	-
Public Safety	-	-
Recreation	-	-
Trade (International)	-	-
Overall Regional	Low	High

### **Regional Effects**

Nassella tussock does not currently have a major effect on the Region because of its limited distribution and current very low plant numbers. However production was significantly affected on infestation sites in the past when plant numbers were high. Nassella also invades sensitive indigenous habitats reducing their ecological values.

### **Need to Intervene**

Nassella tussock is a pest of Regional significance in spite of its current low level of infestation. The ability of the plant to thrive in drought prone soils and its prolific seeding habit make it a real threat to the Region. If unchecked nassella would rapidly colonise large areas of Northland and impose high control costs or make farming uneconomic on infested sites. Its invasive nature, as evident from its presence in large areas of the South Island, mean an effective Regional Strategy is required.

Skilled and experienced personnel are required to locate the occasional plants now growing. Regional intervention is necessary to maintain the control expertise and to encourage landowners to manage the infested land in a manner that will allow nassella to be controlled. Continued control pressure by expert staff should achieve eradication from most sites within a 15 year time frame provided sites are managed in a manner that allows effective ranging and/or for seed germination to be totally suppressed.

### **Goal (Long Term)**

- To eradicate Nassella Tussock from the Region.

### **Objectives (Five Year)**

- To prevent the plant spreading outside the current infested areas.
- To reduce by 50% the density of infestations.

### **Tactics and Technical Methods to be Used**

Education	Advice to landowners and other interested parties. Media releases and publicity brochures.
Regulation	Rule 6.4.2.9 Prohibition on Distribution and Sale of Pest Plants Rule 6.4.2.10 Recovery of Costs of Nassella Tussock Control  Failure to comply with these rules creates an offence under section 154(r) of the Biosecurity Act 1993.
Services	Regional Council inspection and eradication service.

### **Tactics and Technical Methods Rejected**

Economic	Subsidies on herbicides (not applicable).
Services	Full landowner responsibility for eradication (plant unlikely to be eradicated). Biological control (no known agents).

### **Effects of the Strategy**

Beneficial	Maintained or enhanced primary production. Maintained or enhanced ecological values of coastal vegetation.
------------	---

Detrimental None. The proposed control method (grubbing) is environmentally benign.

### **Cost of Strategy**

The Strategy is estimated to cost the Regional Council and owners of infested properties approximately \$35,000 each year.

### **Funding**

The cost of the Strategy is funded from a Land Management Rate and charges to owners of infested properties of a proportion of the actual and reasonable costs of the inspection and control service provided (see rule 6.4.2.10). The Regional Council will recover the proportion of the costs, at its discretion, by a direct charge to the occupier(s) concerned, as is provided for in section 135 of the Act.

### **Management Agency**

The Northland Regional Council is responsible for managing the Strategy.

### **Relationship of Strategy to Other Pest Management Strategies**

The Auckland Regional Council has a similar Nassella Tussock management Strategy.

### **Monitoring and Reporting**

The Regional Council will maintain a database recording all infestations, and area affected. All sites will be inspected at least once between October and December each year and the information updated. Progress towards objectives set in the Strategy will be reported in the Regional Council's Annual Plan or LTCCP as appropriate.

### **Term of Strategy**

**5 years**

### **Rules**

#### **6.4.2.9 Prohibition on Distribution and Sale of Pest Plants**

- (i) No person shall distribute to other persons or offer for sale, or hold in a premises where plants are offered for sale, any pest plant which is subject to a Northland Regional Council Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.
- (ii) No person shall distribute or offer for sale to other persons any agricultural lime, roading aggregate, sand or fill material which contains the seeds or any other vegetative material capable of propagation from a pest plant subject of a Northland Regional Council Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.
- (iii) No person shall transport or use any equipment, machinery or product which contains the seeds or any other vegetative material capable of propagation from a pest plant subject of a Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.

- (iv) No person shall plant, transplant or re-distribute any pest plant subject of a Pest Management Strategy or included in the National Accord List of Plants Banned from Sale & Distribution.

#### 6.4.2.10 Recovery of Costs of Nassella Tussock Control

The Council may recover the extra costs by direct charge to the occupier concerned as provided for in section 135 of the Biosecurity Act 1993.

The proportion of the cost recovered will be determined by the degree of difficulty in finding nassella seedlings, as affected by the vegetative cover on the land and in accordance with the Northland Regional Council charging policy. The RPMS rule ranks nassella-infested areas into five categories with the following levels of cost recovery:

- Category I - Surveillance sites, that is sites found free of nassella for the preceding three or more years. No cost recovery.
- Category II – Sites where nassella is still being found but which have been permanently retired from grazing and on which there is a full canopy cover of indigenous scrub or forest, or such a cover is being actively encouraged. No cost recovery. A plan to retire the land must be in accordance with a management plan and a Memorandum of Understanding agreed to by the land occupier and the Land Operations Manager of the Northland Regional Council. Any such agreement must be entered into prior to the annual ranging programme.
- Category III – Sites where nassella is still being found but which are being managed to encourage a dense, well grazed pasture with easy access and no obstructions which prevent plants being seen. 20% cost recovery.
- Category IV – Active sites with major obstructions to access and visibility. Typically non or lightly grazed pasture with less than 10% scrub or scrubby weeds. 40% cost recovery.
- Category V – Active sites with major access problems and obstructions to visibility. Typically reverted pasture with greater than 10% cover of gorse or scrub, unpruned pine forest with long grass or scrub understorey or pine forest with heavy pruning and/or thinning slash. 60% cost recovery.