Waterway Technote

Pest animals

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Benefits of animal pest control

Animal pests can cause havoc on your farm, ruin your planting and cause major problems in and around waterways. When it comes to good waterway management, keeping on top of animals is important.

Benefits of pest animal control around waterways

Well-executed animal pest control is beneficial as it will:

- Reduce the likelihood of disease transmission (e.g TB)
- Improve the chance of a successful riparian management project
- Reduce the likelihood of pests entering other farm areas from fenced off waterways
- Reduce maintenance time and costs in planted areas and reduce replacement planting costs
- Speed up the time it takes to achieve an established riparian planting project
- Improve native biodiversity and habitat.

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Common pest animal species found in riparian areas and control methods

When it comes to native planting, here are some common animals that will give your plants a hard time:

Animal	Control / Management Options
Hare  *Picture and info source: http://www.es.govt.nz/media/43113/pest_animals_-web.pdf* Hares are particularly destructive as they bite off new plants to mark their territory (rather than to feed). They can kill large numbers of plants in a few nights.	**Shooting** Shooting is regarded as the only form of control available. Night shooting is recommended as the most successful method when dealing with hares. It is important to carry out this control thoroughly as the animal can become light-shy making them difficult to eradicate in the future[1]. If shooting is to be done, .22 rifles and shotguns are the preferred firearms. Hares can be identified by the pinky/red colour of their eyes at night. **Tree guards** There are a range of different types of protective devices/tree guards on the market to keep hares away from young trees. See *Waterway Technote: Planting*. **Repellents** The most effective of these being egg-based products which are high in protein and lipids and when mixed with an adhesive (acrylic resin) will provide some protection from hares. Other ready mixed repellents include Thiroprotect and Treepel.
Rabbit  *Picture and info source: http://www.es.govt.nz/media/43113/pest_animals_-web.pdf* Rabbits will eat tree seedlings as well as neighbouring pasture.	There are a range of ways to control rabbits including shooting, poisoning, fumigation and biological control. **Tree guards** There are a range of different types of protective devices/tree guards on the market to keep rabbits away from young trees. See *Waterway Technote: Planting*. **Repellents** The most effective of these being egg-based products which are high in protein and lipids and when mixed with an adhesive (acrylic resin) will provide some protection from rabbits. Other ready mixed repellents include Thiroprotect and Treepel. For further information we recommend searching rabbit control on your regional council's website or give them a call.

[1] Taranaki Regional Council, Brown Hare factsheet.

Animal	Control / Management Options
Possum  *Source: http://www.es.govt.nz/media/43113/pest_animals_-web.pdf* Possums will not only eat palatable tree species, but also cause breakages and damage to plants they don't like to eat. They are a predator of native wildlife and a carrier of TB.	The main methods for controlling possums are shooting, trapping and poisoning. Use of repellents or barriers can also be used to protect small areas or individual trees. Contact your local regional council animal pest control officer or farm supply store for advice and information on effective methods of control in your area.
Pukeko  *Picture and Info Source: Copyright Sabine Bernert. Source: http://www.doc.govt.nz/conservation/native-animals/birds/birds-a-z/pukeko/* Pukekos, although not classified as a pest, can pull out new plants and leave them lying on the ground.	To deter pukekos from pulling out your plantings, use larger and heavier potted plants, place tree guards around young plants or try placing squares of carpet around each plant (they are heavier than regular weedmat).

Protecting plants from animal pests

Protect your farm and waterways from animal pests by:[2]

- Reducing pest levels before and keeping levels low after planting
- Taking the time to work out what you're dealing with:
  - Rabbits and hares nip at the growing tips of seedlings. Rabbits will stop when plants exceed their height, but hares only stop browsing when plant stems are fairly large.
  - Tree guards will protect plantings from both. Tree guards cost about $1.20 each and can be re-used for later plantings.

[2] Otago Regional Council. (2005). *Environmental Considerations for Clean Streams – A Guide to Managing Waterways in Otago*. Retrieved from http://www.orc.govt.nz/Documents/Publications/Farming%20and%20Land%20Management/env_consid_cleanstreams.pdf

- Long grass will also deter rabbits and hares. Keeping long grass barriers within your planting area can help reduce the damage to entire planting areas.
- As your planting matures, it will attract birds and insects – a good thing! Controlling rats, mice, stoats, ferrets, and feral cats will help keep your planted area as a healthy habitat. Most of these pests can be targeted together with certain poisons, but each requires a different trapping method if poisons aren't used. Traps are available from regional councils. Contact the biosecurity or pest animal division of your regional council for further detailed information on pest animal control.

Regional pest specific information – pest animals

To find out more about identifying animal pests and methods for their control click on your region below or visit http://pestdss.landcareresearch.co.nz/[3]

Northland:
http://www.nrc.govt.nz/Environment/Weed-and-pest-control/Pest-animals/

Auckland:
http://www.arc.govt.nz/albany/fms/main/Documents/Environment/Plants%20and%20animals/animal%20pests.pdf

Waikato:
http://www.waikatoregion.govt.nz/PageFiles/3401/Environment%20Waikato%20pest%20guide%20section%205%20-%20pest%20animals.pdf

Bay of Plenty:
http://www.boprc.govt.nz/environment/pest-management/pest-animal-help/

Hawkes Bay
http://www.hbrc.govt.nz/Services/Environment/Pest%20Control/Animal%20Pests/Pages/default.aspx

Gisborne:
http://www.gdc.govt.nz/animal-pests/

Horizons:
http://www.horizons.govt.nz/about-us/publications/managing-our-environment/publications-pest-plants-and-animals-2/

Greater Wellington:
http://www.gw.govt.nz/pest-animals-2/

Nelson:
http://nelson.govt.nz/environment/biodiversity-2/pest-management-2/online-directory-pests/

Marlborough:
http://www.marlborough.govt.nz/Environment/Biosecurity/Declared-Pest-Species.aspx
http://www.marlborough.govt.nz/Environment/Biosecurity/Other-Pests.aspx

[3] Landcare Research, *Vertebrate Pest Control Decision Support System.* Retrieved from http://pestdss.landcareresearch.co.nz/

Tasman
http://www.tasman.govt.nz/environment/pests-weeds/pest-animals/

Canterbury:
http://ecan.govt.nz/advice/your-land/plant-animal-pests/managing-animal-pests/Pages/Default.aspx

Southland:
http://www.es.govt.nz/environment/pests/animals/

Otago:
http://www.orc.govt.nz/Information-and-Services/Pest-Control/Animal-pests/

Pest animal control methods

The most up-to-date information on controlling vertebrate pests in New Zealand belongs to the National Pest Control Agency (NPCA). This website has all you need to know about vertebrate pest control, including the best types of control for each pest, licencing, where to purchase materials, monitored pest numbers and where to go for advice. See: http://www.npca.org.nz/index.php/publications/a-best-practice/157-a-series

Glossary of terms

Riparian margin: A strip of land along the edges of waterways including streams, lakes and wetlands.

Sedimentation: The amount of suspended material (solids) in a waterbody. Sediment in a stream is natural, but if sediment levels get too high, it can disrupt ecosystems and kill aquatic life. Excess sediments can cause damage by blocking light that allows algae – an important food source – to grow, harming fish gills, filling up important habitats, and stopping fish from seeing well enough to move around or feed.[4]

References*

Department of Conservation, 2014: *Stop the spread of freshwater pests.* Retrieved from http://www.doc.govt.nz/stopthespread

Environment Southland, 2014: *Weeds in Riparian Zones* factsheet. Environment Southland. Invercargill.

Landcare Research, *Vertebrate Pest Control Decision Support System*. Retrieved from http://pestdss.landcareresearch.co.nz/

National Pest Control Agency http://www.npca.org.nz/index.php/publications/a-best-practice/157-a-series

NIWA, 2014: Sediment. Retrieved from https://www.niwa.co.nz/our-science/freshwater/tools/kaitiaki_tools/impacts/sediment

Otago Regional Council, 2005: *Environmental Considerations for Clean Streams – A Guide to Managing Waterways in Otago.* Otago Regional Council. Dunedin.

Taranaki Regional Council: Brown Hare factsheet.

Waikato Regional Council, 2011: *Biosecurity series – pest plant factsheet* BIOSECURITY FACTSHEET Alligator weed. Retrieved from http://www.waikatoregion.govt.nz/PageFiles/3606/Biosecurityfactsheet10-Alligatorweed.pdf

Waikato Regional Council, 2012. *Controlling weeds in riparian margins - A guide to restoration projects and other plantings.* Waikato Regional Council. Hamilton.

Weedbusters, 2014: *Weedbusting A guide to recognising and controlling invasive weeds.* Weedbusters. New Zealand.

Weedbusters, 2014: *7 top tips for control.* Retrieved from http://www.weedbusters.org.nz/resource_centre/control.asp

*For photos taken directly from websites the website address has been provided next to the photo.

[4] NIWA. (2014). *Sediment.* Retrieved from https://www.niwa.co.nz/our-science/freshwater/tools/kaitiaki_tools/impacts/sediment