



Weed regrowth can suppress riparian plantings



Pre-plant spraying

## INTRODUCTION

Good weed control in the establishment phase is essential for the success of riparian planting. Weeds must be eliminated to remove competition with the plants for light, nutrients and moisture. Not only does weed control increase survival; it also promotes early growth.

Options for weed control are hand-weeding, mulching, grubbing, slashing and spraying. Alternatives to spraying are outlined in the Council's information sheet **Maintaining riparian vegetation**. They are generally labour-intensive, so many landowners prefer to spray.

A wide variety of sprays are available, therefore it is essential to apply the right herbicide. This depends on the weeds present, what trees are being established, and the degree of risk to other organisms from the spray. This information sheet advises how riparian margins can be sprayed so as to minimise damage to plantings and the environment, while maximising weed control.

## GROUND PREPARATION

(pre-plant spraying)

Clear away all grass and weed competition before planting. Rank vegetation can be spot-sprayed with a knock-down herbicide containing the active ingredient glyphosate eg. Roundup G2. Glyphosate has low toxicity to wildlife and soil organisms, and breaks down fast. Spray three or preferably four weeks before plants go in. Use Roundup at a rate of 10 ml per litre of water (for knapsack spraying). Add a marker dye. Spray a minimum 1 metre per planting site.

## RELEASING

(post-plant spraying)

Releasing should be carried out for at least the first year after planting but depends largely on the growth rate of the plant ie: slower growing species may require releasing for several years. Post-plant releasing is usually required at least once within 12 months after planting, with timing dependent on the pattern of weed

growth. As a guide, weeds are easier to control before reaching 10 cm in height.

A pre-emergent residual herbicide should be applied. This will control broadleaf and grass seedlings as they germinate through the upper soil layer. A herbicide with the active ingredient oxadiazon eg. Foresite 380 will give effective control for a period of three months, when applied at the manufacturer's recommended rate. Oxadiazon, while more toxic than glyphosate, is herb-specific.

Oxadiazon in particular has a low solubility; will not leach into waterways and is not translocated or absorbed by the root system. It should be applied to bare soil in late winter or early spring and once again in early autumn because most weed-seed germination flushes are from spring onwards and during autumn. Application rate for Foresite is 6.5 ml per litre of water for knapsack spraying.

Of residual herbicides available, Foresite is preferred, but it has some limitations. The chemical must coat the soil to be effective, so it cannot be used if there is too much trash or regrowth, and soil must remain undisturbed:

- Use Foresite on its own only if the ground is bare.
- To kill light, open regrowth, mix Roundup with Foresite (if tank-mixing Foresite and Roundup, use each at the normal rate)
- If there is heavy trash or regrowth, use Roundup on its own.
- Foresite does not control perennial ryegrass, which may also limit its use.
- Direct contact with the foliage of woody species should still be avoided as much as practical, even though some natives are tolerant of Foresite when dormant.

For further advice or information about sustainable land management contact:

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## HINTS FOR SUCCESSFUL SPRAYING

- Avoid spraying on a windy day.
- Follow the manufacturer's instructions and application rates carefully
- Calibration of the spray equipment is essential to ensure correct application
- Aim for a minimum of 1 metre of killed vegetation around each seedling
- Spray in a s-shaped pattern to avoid overlap (spraying in a spiral pattern concentrates the spray)
- A guard on the spray wand allows for spraying closer to plants. Alternatively, drop an old plastic container or pipe over each tree, so that the spray can be applied up to a few centimetres from the tree while avoiding any contact.

## PLANT PESTS

The Taranaki Regional Council's pest plant management responsibilities primarily lie in the Biosecurity Act 1993. Under the Biosecurity Act, the Council has prepared the *Pest Management Strategy for Taranaki: Plants* ('the Strategy').

The Strategy incorporates 27 pest plant species which cause, or are capable of causing significant damage to the environment and primary industry.

There are three categories of plant pests outlined in the Strategy:

- **Eradication pest plants** – harmful plants of limited distribution in the region for which the long term goal is eradication eg: Climbing Spindleberry, Giant Reed, Darwin's Barberry.
- **Containment pest plants** – harmful plants generally widespread, for which land occupier obligations apply to control the plant eg: Ragwort, Gorse, Old Man's Beard and Wild Ginger.
- **Surveillance pest plants** – pest plant species for which there is no Strategy rule requiring the land occupier to control the species eg: Brush Wattle and Japanese Walnut.

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