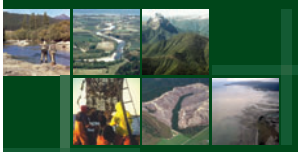
Performance of native riparian plants – how different are they?



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Introduction

The composition and extent of stream-side vegetation influences how well a riparian area functions and hence has a major impact on the state of a waterway. Though the role of exotic woody species such as willow is well recognised for improving bank stability, the information on the performance of native woody species is limited. Thus, there is a need to quantify their effectiveness particularly as stream restoration enhancement projects involving native species increase in popularity.

Methods

Trial established in 1999 to assess growth performance of 12 natural riparian plant colonisers. Ten plants extracted each year and growth parameters measured.

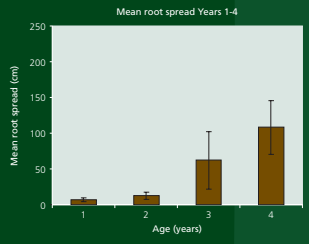
Compressed air lance to remove soil around roots

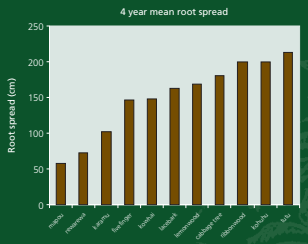
Plants

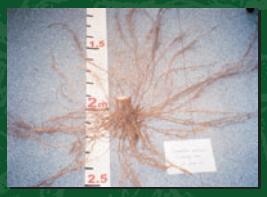
Common Name	Botanical Name
Karamu	*Coprosma robusta*
Ribbonwood	*Plagianthus regius*
Kowhai	*Sophora tetraptera*
Lemonwood	*Pittosporum eugenoides*
Kohuhu	*Pittosporum tenuifolium*
Lacebark	*Hoheria populnea*
Mapou	*Myrsine australis*
Fivefinger	*Pseudopanax arboreus*
Cabbage tree	*Cordyline australis*
Rewarewa	*Knightia excelsa*
Manuka	*Leptospermum scoparium*
Tutu	*Coriaria arborea*

Results

Root Spread

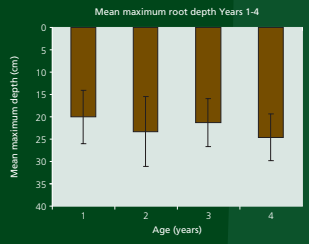


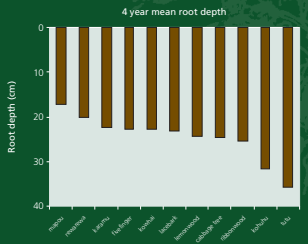




Top performers: ribbonwood, tutu, kohukohu, & lemonwood

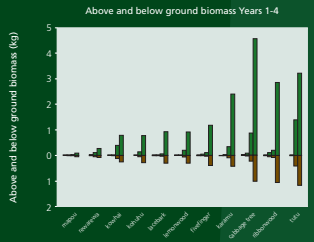
Root Depth

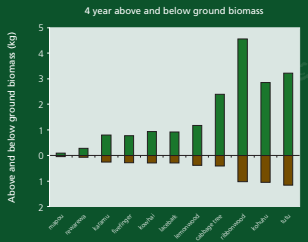




Top performers: ribbonwood, cabbage tree, tutu, & karamu

Plant Biomass





Top performers: tutu, ribbonwood, & cabbage tree

Conclusions

Not surprisingly, there are differences in growth performance of our native plants. The trial has one more year to run, and we expect to see some clear and significant differences emerge. However, in terms of bank stability, it looks at this stage like ribbonwood, tutu, cabbage tree, and pittosporum are the top performers.

Acknowledgement

This research was funded from Foundation for Research Science & Technology Contract C09X0214 "Integrated water resource management in complex catchments".