

PLANTING NATIVE PLANTS IN HAWKE'S BAY



Includes seven planting zones, bird food and plant management.



Coastal Zone (p6)



Lowland Open Sites (p8)



Inland/Upland Open Sites (p10)

Cover Photo: Chris Siuloa and Chris Pritchard planting at Clark's Farm, Esk Valley, as part of the Hawke's Bay Regional Council's Environmental Education Programme. (Courtesy HB Today)



Forest (p12)

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Introduction

This guide to **Planting Native Plants in Hawke's Bay** will help you successfully grow native plants on your land and encourage greater diversity in planting, wildlife and landscapes. The planting guides are set out in tables to make it easy to match plants to your particular planting zone.

This guide is useful for -

- Gardeners wanting to be more confident about growing native species in Hawke's Bay
- Groups establishing conservation plantings
- Farmers establishing plantings to control soil erosion
- Anyone wanting to plant to attract birdlife
- Anyone interested in growing native plants in Hawke's Bay.

Planting Zones

Plants grow best in certain conditions and what suits one may not suit another, even within the same species. The tables in this booklet list plants according to their natural occurrence and tolerance of the conditions in each of seven predominant zones within the region. Not every suitable plant is included – just a good range that should be available from local nurseries and which will add diversity to the landscape.

- **Coastal zone - p6**

Places that are influenced by proximity to the sea (frost free; subject to wind, drought and salt spray; perhaps on sand or gravel)

- **Lowland open sites – p8**

Hillsides and flats in the lowlands (usually prone to wind, drought and some frost; plants may need shelter and water during establishment)

- **Inland/upland open sites – p10**

Hillsides and flats further inland and at higher altitude (usually less prone to drought but subject to wind and low winter temperatures).

- **Forest situations - p12**

Forest clearings or margins (within forest or treeland that lacks undergrowth; plants need to be shade-tolerant and compatible with the forest).

- **Wetlands - p14**

Swamps, ponds, lakes and lagoons (plants need to be able to tolerate wet soil; at estuaries or coastal lagoons they need to be tolerant of saline soil).

- **Riparian situations - p16**

Alongside creeks, streams and rivers (not completely in water; subject to wind, cold air, drainage, occasional flooding and drying out).

- **Urban and Semi-urban sites - p18**

Sites within or adjacent to towns and cities. Shape, size and texture of plants are often the prime considerations.

Why native plants?

All of the plants listed in this booklet occur naturally in Hawke's Bay - so Northern Rata is selected instead of Pohutukawa, and Tawa is included, but not Puriri. Cabbage trees, flaxes and kakabeak are all natural to Hawke's Bay, but much of what is cultivated and grown is from stock from other regions.

With the loss of so much of the original native bush cover in Hawke's Bay, and the damage to existing remnants by pests, stock and climate change, much of

our botanical heritage has been diminished. We have every chance though of regenerating and replanting areas so that we can enjoy native bush in reserves, stream sides, on farms and in our own gardens.

So that Hawke's Bay will continue to retain its special character, it's preferable to obtain seeds, cuttings or nursery-raised plants from local stock from as near to the planting site as possible (a practice known as *ecosourcing*). In this way the local cabbage trees and flaxes, with their subtle differences from those in other parts of the country, will persist, and the vivid red of the wild Maungaharuru kakabeak will become better known within its home region.

Good information is available on New Zealand's ecological districts (based on landforms, local climate, geology, soil types and vegetation) from the Department of Conservation.

Planning for diversity

Diverse ecosystems are generally more stable and viable than simplistic ones. They are also more interesting and more attractive to native birds, lizards and insects. Plan for a range of species rather than a few. Avoid using the same types of plants - for instance don't use just conifers like Rimu and Kahikatea, or just canopy trees. Bear in mind the plants on a site need to be comparable in growth rates and compatible in size, otherwise the smaller and slower-growing ones may be smothered by the others. Planting each species in small groups will ensure that at least one will survive and flourish.

Planting for the future

Not all revegetation needs to be planted. As long as there is a seed source handy, ecosystems will restore themselves. Pasture kept free of fires, persistent weeds and browsing animals may turn into bracken or manuka, which in turn will probably be overtaken by native trees. Wetlands will usually revert rapidly to native sedges, rushes, shrubs and trees. Even a hillside of gorse or broom may become native forest over time.

Some encouragement may be required, such as control of invasive weeds, possums, rabbits or hares, and keeping the stock out of farm areas. Planting appropriate natives may speed the process by providing instant vegetation and seed sources, and attracting birds which bring yet more native seeds.

A classic example is The Hanger at Tutira - a rectangle of pasture fenced off by Herbert Guthrie-Smith in 1897 which is now a native forest.

Work in Progress The Haliburtons

Ross and Margaret Haliburton took over the family property at Kotemaori in 1972. A 39 hectare area of bush on the property, situated in a steep gully with the farm water source at the bottom, was slowly being degraded. On return from overseas the Haliburtons appreciated even more the special character of their bush and set about protecting it.

The bush was covenanted by the QEII National Trust in 1997. The area is now fully fenced and approximately 1000 plants per year are planted between April/May to allow good root establishment. All the seedlings are grown in their nursery and the seeds are sourced from their own bush area. Excess seedlings are offered commercially to farmers and gardeners.



Propagation of native seedlings.

To help the seedlings establish, a 45cm square weed mat is placed around the base of each plant to stop weeds and help moisture retention. Because of the steepness of their property the Haliburtons don't want to be carrying spray. Wind breaks and shade cloth are used on plants that need it, but the aim is to plant the faster growing nurse crop species first and interplant later with other less tolerant species.

The aim of the planting project is to enhance the remnant bush, give the soil more cover and encourage wildlife to flourish.

A tip from Margaret is to look at what is growing around you, i.e. road verges and stream margins. Start with these plants and build from there.



Native plants on farm hill country.

Work in Progress

Karituwhenua Stream Landcare Group

This Havelock North group of residents was formed in 1992 and was the first *urban* Landcare Group in New Zealand. Their initial aim was to reduce the erosion and its effects caused by the spillway behind the Kingsgate Reserve, which affected neighbouring properties during flood peaks (the stream-bed is normally dry). After the Regional Council completed erosion control work, the group started in 1996 planting mainly native trees and shrubs and creating tracks from Te Mata Road for 1 km to the Hastings City boundary.



New plantings in the Karituwhenua Stream gully

The emphasis has been on native trees and flax planting (the latter for erosion control), although a more open area at the top end of the track is devoted to exotic, largely deciduous, specimen trees with lovely autumn colours.

About 55 families have donated money or time to buy trees, clear rubbish, and control blackberry, old man's beard, general rank growth and inappropriate robinias and macrocarpas. Possums have been a minor problem. Seventeen residences have adopted areas to maintain or develop, and given these catchy labels based on family names - such as 'Coombe's Cutting', 'Dougal's Dip', 'The Free Way'. The group has achieved the goal of erosion control and the result, within its urban setting, is a green, pleasant, tranquil place which is increasingly used as a walking trail.



Established planting

Their advice for planning something similar is: 1. Have a committed leader and a few planning meetings with interested people to sustain the activity; 2. Choose appropriate plants for the various micro-climates and locations; 3. Plant in autumn; 4. Use a slow release fertiliser or blood and bone; 5. Water in summer for the first two years; 6. Identify trees with a labelled stake to help people learn about natives and other plants.

Coastal Zone

What can the plant tolerate

Coastal Zone		Soil: Dry Mod Wet				Shade: Light Med Heavy		Wind	Frost	When to collect Seed	Nursery plant	Growth Rate	Max. Height Metres	Form
Botanical Name	Common Name													
TREES														
Cordyline australis	Cabbage tree, ti	DMW		L		•		•		Autumn	•	Fast	17	Erect
Corynocarpus laevigatus	Karaka	M		M		•				All year		Med	20	Bushy
Dodonaea viscosa	Akeake	DM		L		•				Autumn	•	Fast	10	Bushy
Melicope ternata	Wharangi	DM		L		•				Autumn		Med	8	Bushy
Metrosideros robusta	Northern Rata	M		L		•				Autumn		Med	25	Bushy
Myoporum laetum	Ngaio	DM		L		•				Autumn	•	Fast	12	Bushy
Cassinia tetophylla	Tauhinu	DM				•		•		Autumn	•	Fast	2	Bushy
Clianthus puniceus	Kakabeak	DM		L		•		•		Winter		Fast	2.5	Bushy
Coprosma acerosa	Sand Coprosma	D				•		•		Autumn		Med	1	Low
SHRUBS														
Coprosma repens	Taupata	DM		L		•				Autumn	•	Fast	6	Bushy
Griselinia lucida	Puka	DM		L		•				Autumn		Med	5	Bushy
Hebe stricta	Koromiko	DM				•			•	Autumn		Fast	2	Bushy
Olearia paniculata	Akiraho	DM				•			•	Autumn	•	Fast	5	Bushy
Olearia solandri	Coastal tree daisy	DM				•			•	Autumn	•	Fast	2	Bushy
Solanum aviculare	Poroporo	DM		L		•			•	Autumn	•	Fast	4	Bushy
OTHER														
Cortaderia fulvida	Toetoe	DMW				•			•	Autumn	•	Fast	4	Clump
Desmoschoenus spiralis	Pingao	D				•			•	Autumn		Med	1	Low
Poa cita	Silver tussock	DM				•			•	Autumn		Med	1	Clump
Arthropodium cirratum	Rengarenga	DM		M		•				Autumn		Med	1	Clump
Calystegia soldanella	Shore bindweed	D				•				Autumn		Med	0.3	Ground
Muehlenbeckia complexa	Pohuehue	DM				•			•	All year		Med	1	Low
Phormium cookianum	Mountain flax	DMW		L		•			•	Autumn	•	Fast	4	Clump



Pingao, *Desmoschoenus spiralis*.



Ngaio, *Myoporum laetum*.



Karaka, *Corynocarpus laevigatus*.

Lowland Open Sites

What can the plant tolerate

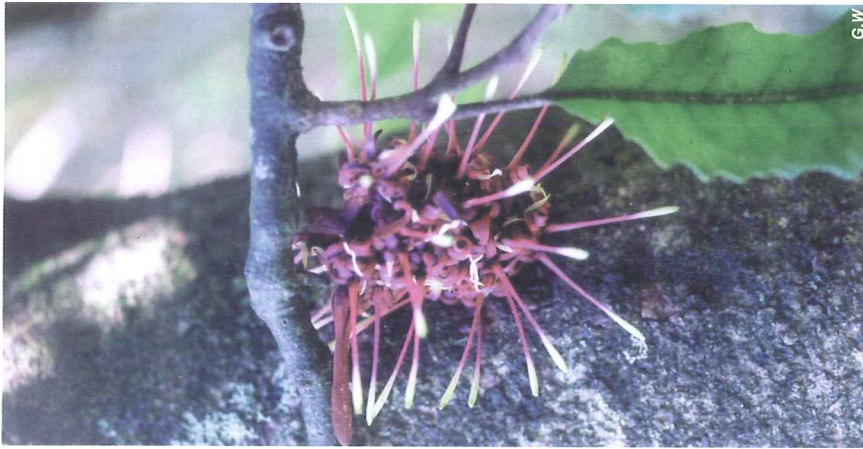
Lowland Open Sites											
Soil:						Shade:					
Dry						Light					
Mod						Med					
Wet						Heavy					
Wind						Frost					
When to collect						Nursery plant					
Seed						Rate					
Max. Height						Metres					
Form											
TREES											
Alectryon excelsus	Titoki	M	M	•	•	Autumn	•	Med	15	Erect	Erect
Carpodetus serratus	Putaputaweta	DM	M	•	•	All year	•	Med	10	Bushy	Bushy
Cordyline australis	Cabbage tree, ti	DMW	L	•	•	Autumn	•	Fast	17	Erect	Erect
Hedycarya arborea	Pigeonwood	M	M	•	•	Autumn	•	Med	12	Bushy	Bushy
Hoheria populnea	Lacebark	DM	L	•	•	Autumn	•	Fast	12	Erect	Erect
Knightsia excelsa	Rewarewa	DM	L	•	•	Autumn	•	Fast	20	Erect	Erect
Kunzea ericoides	Kanuka	DM	L	•	•	Autumn	•	Fast	18	Erect	Erect
Myrsine australis	Mapou, Red matipou	DM	M	•	•	Autumn	•	Med	8	Bushy	Bushy
Pennantia corymbosa	Kaikomako	DM	M	•	•	Autumn	•	Med	12	Bushy	Bushy
Pittosporum eugeniioides	Lemonwood, tarata	M	L	•	•	Autumn	•	Fast	13	Bushy	Bushy
Pittosporum tenuifolium	Kohuhu	DM	L	•	•	Autumn	•	Fast	8	Bushy	Bushy
Plagianthus regius	Ribbonwood	M	M	•	•	Autumn	•	Fast	17	Erect	Erect
Podocarpus totara	Totara	DM	L	•	•	Autumn	•	Fast	30	Erect	Erect
Pseudopanax crassifolius	Lancewood, Horoeka	DM	M	•	•	Autumn	•	Fast	13	Erect	Erect
Rhopalostylis sapida	Nikau	DM	H	•	•	All year	•	Slow	12	Palm	Palm
Sophora spp.	Kowhai	DM	L	•	•	All year	•	Fast	10	Bushy	Bushy
SHRUBS											
Coprosma robusta	Karamu	DM	L	•	•	Autumn	•	Fast	6	Bushy	Bushy
Hebe stricta	Koromiko	DM		•	•	Autumn		Fast	2	Bushy	Bushy
Leptospermum scoparium	Manuka	DMW		•	•	All year		Fast	6	Bushy	Bushy
Olearia paniculata	Akiraho	DM		•	•	Autumn	•	Fast	5	Bushy	Bushy
Pittosporum ralphii	Ralph's kohuhu	M		•	•	Autumn		Fast	8	Bushy	Bushy
OTHER											
Cortaderia fulvida	Toetoe	DM		•	•	Autumn	•	Fast	4	Clump	Clump
Poa cita	Silver tussock	DM		•	•	Autumn		Med	1	Clump	Clump
Phormium tenax	Lowland flax, harakeke	DMW		•	•	Autumn	•	Fast	4	Clump	Clump



Titoki, *Alectryon excelsus*.



Pigeonwood, *Hedycarya arborea*.



Rewarewa, *Knightia excelsa*.

Inland/Upland Open Sites

What can the plant tolerate

Inland/Upland Open Sites											
Soil:				Shade:				Growth:			
Dry Mod Wet				Light Med Heavy				Nursery plant Seed Rate Max. Height Metres Form			
Botanical Name		Common Name		Wind		Frost		When to collect		Growth	
TREES											
Aristotelia serrata	Wineberry, Makomako	M	M	•	•	•	•	Summer	•	Fast	8
Carpodetus serratus	Putaputaweta	DM	M	•	•	•	•	All year		Med	10
Cordyline australis	Cabbage tree, ti	DMW	L	•	•	•	•	Autumn	•	Fast	17
Elaeocarpus hookerianus	Pokaka	M	M	•	•	•	•	Autumn		Med	14
Fuchsia excorticata	Tree fuchsia, Kotukutuku	MW	M	•	•	•	•	Autumn	•	Fast	12
Griselinia littoralis	Broadleaf	DM	M	•	•	•	•	Autumn		Med	12
Hoheria angustifolia	Narrow-leaved lacebark	MW	L	•	•	•	•	Autumn	•	Fast	10
Kunzea ericoides	Kanuka	DM	L	•	•	•	•	Autumn	•	Fast	18
Nothofagus fusca	Red beech	M	L	•	•	•	•	Autumn	•	Fast	30
Olearia rani	Hekelara	M	L	•	•	•	•	Autumn		Med	8
Podocarpus hallii	Hall's totara	M	M	•	•	•	•	Autumn	•	Med	20
Pseudopanax arboreus	Five finger	DM	M	•	•	•	•	Autumn		Fast	8
Pseudopanax crassifolius	Lancewood, Horeoka	DM	M	•	•	•	•	Autumn	•	Fast	13
SHRUBS											
Carmichaelia odorata	Scented broom	DM		•	•	•	•	Autumn		Med	2
Coprosma areolata	Coprosma	DMW	M	•	•	•	•	Autumn		Med	5
Coprosma rotundifolia	Coprosma	MW	M	•	•	•	•	Autumn		Med	5
Coprosma virescens	Coprosma	MW	M	•	•	•	•	Autumn		Med	6
Corokia cotoneaster	Korokio	DMW	L	•	•	•	•	Autumn		Med	3
Leptospermum scoparium	Manuka	DMW		•	•	•	•	All year	•	Fast	6
Olearia arborescens	Common tree daisy	M	L	•	•	•	•	Autumn		Med	5
Olearia virgata	Twiggy tree daisy	DMW		•	•	•	•	Autumn	•	Fast	3
Pseudowintera colorata	Horopito	MW	M	•	•	•	•	Autumn		Med	6
OTHER											
Chionochloa conspicua	Hunangamoho	MW		•	•	•	•	Autumn		Fast	2
Chionochloa rubra	Red tussock	MW		•	•	•	•	Autumn		Med	1



Native Fuchsia, Kotukutuku,
Fuchsia excorticata.



Wineberry, Makomako,
Aristotelia serrata.



Lancewood, *Pseudopanax crassifolius*.

Forest Situations

What can the plant tolerate

Growth

Forest Situations												
		Plant Characteristics				Growth						
Botanical Name	Common Name	Soil:			Wind	Frost	When to collect Seed	Nursery plant	Growth Rate	Max. Height Metres	Form	
		Dry	Mod	Wet								Shade: Light Med Heavy
TREES												
Beilschmiedia tawa	Tawa	M			•	•	Autumn		Med	25	Erect	
Dacrycarpus dacrydioides	Kahikatea	MW			•	•	Autumn		Med	50	Erect	
Dacrydium cupressinum	Rimu	M			•	•	Autumn		Slow	40	Erect	
Elaeocarpus dentatus	Hinau	M			•	•	Autumn		Med	20	Erect	
Fuchsia excorticata	Tree fuchsia, kotukutuku	MW			•	•	Autumn	•	Fast	12	Bushy	
Melictyus ramiflorus	Mahoe, whiteywood	M			•	•	Autumn	•	Fast	10	Bushy	
Nestegis cunninghamii	Black maire	M			•	•	Autumn		Med	20	Erect	
Nothofagus fusca	Red beech	M			•	•	Autumn	•	Fast	30	Erect	
Nothofagus solandri	Black beech	DM			•	•	Autumn	•	Fast	25	Erect	
Prumnopitys taxifolia	Matai	M			•	•	Autumn		Med	30	Erect	
Rhopalostylis sapida	Nikau palm	DM			H	•	All year		Slow	12	Palm	
SHRUBS												
Brachyglottis repanda	Rangiora	M			•	•	Autumn		Fast	7	Bushy	
Coprosma grandifolia	Kanono	M			M		Autumn		Fast	7	Bushy	
Cordyline banksii	Cabbage tree, ti ngahere	M			L	•	Autumn		Fast	3	Bushy	
Macropiper excelsum	Kawakawa	M			M		Autumn		Fast	7	Bushy	
OTHER												
Asplenium bulbiferum	Hen-and-chickens	MW			H				Med	1	Fern	
Asplenium oblongifolium	Shining spleenwort	MW			M				Med	1	Fern	
Cyathea dealbata	Ponga, silver fern	DM			M	•			Med	10	T/fern	
Cyathea medullaris	Manaku	MW			M	•			Fast	16	T/fern	
Dicksonia squarrosa	Whēki	MW			H	•			Med	7	T/fern	
Astelia nervosa	Bush lily, kakaha	MW			M	•	Autumn		Med	1	Clump	
Clematis paniculata	Puawhananga	MW			H	•	Autumn		Fast		Vine	
Dianella nigra	Turutu, blueberry	DM			M	•	Autumn		Slow	<1	Clump	



Kawakawa, *Macropiper excelsum*



Black Beech, *Nothofagus solandri*



Hen and Chicken Fern, *Asplenium bulbiferum*



Puawhananga, *Clematis paniculata*

Wetlands

		What can the plant tolerate				Growth		
		Soil:	Shade:	When to collect	Nursery plant	Growth Rate	Max. Height Metres	Form
		Dry	Light	Seed				
		Mod	Med					
		Wet	Heavy	Frost				
Botanical Name	Common Name							
TREES								
<i>Cordyline australis</i>	Cabbage tree, ti	DMW	L	•	•	Fast	17	Erect
<i>Dacrydium dacrydioides</i>	Kahikatea	MW	H	•	•	Med	50	Erect
<i>Laurelia novae-zelandiae</i>	Pukatea	MW	M		•	Med	30	Erect
SHRUBS								
<i>Leptospermum scoparium</i>	Manuka	DMW		•	•	Fast	6	Bushy
<i>Coprosma propinqua</i>	Mingimingi	DMW		•	•	Med	5	Bushy
<i>Myrsine divaricata</i>	Weeping matipo	MW	M	•	•	Med	6	Bushy
<i>Plagianthus divaricatus</i>	Saltmarsh ribbonwood	WSalt		•	•	Med	3	Bushy
OTHER								
<i>Carex comans</i>	Tussock sedge	MW		•	•	Slow	<1	Clump
<i>Carex secta</i>	Purei	W	L	•	•	Slow	2	Clump
<i>Carex virgata</i>	Tussock sedge	W	L	•	•	Slow	1	Clump
<i>Chionochloa rubra</i>	Red tussock	MW		•	•	Med	1	Clump
<i>Cortaderia fulvida</i>	Toetoe	DMW		•	•	Fast	4	Clump
<i>Cortaderia toetoe</i>	Toetoe	DMW		•	•	Fast	4	Clump
<i>Cyperus ustulatus</i>	Umbrella sedge	MW		•	•	Fast	1	Clump
<i>Deschampsia caespitosa</i>	Wavy hair grass	MW		•	•	Med	1	Clump
<i>Hierochloa redolens</i>	Karetu, holy grass	MW		•	•	Fast	1	Clump
<i>Juncus gregiflorus</i>	Common rush	W		•	•	Med	1.5	Clump
<i>Juncus kraussii</i>	Sea rush	WSalt				Med	1.5	Clump
<i>Leptocarpus similis</i>	Jointed rush, oioi	WSalt				Med	1.5	Clump
<i>Phormium tenax</i>	Lowland flax, harakeke	DMW		•	•	Med	4	Clump
<i>Typha orientalis</i>	Raupo	W		•	•	Fast	3	Clump



Kahikatea, *Dacrycarpus dacrydioides*



Red Tussock, *Chionochloa rubra*



Purei, *Carex secta*

Riparian Situations

What can the plant tolerate

Riparian Situations												
Soil: Shade: Frost												
Dry Mod Wet Light Med Heavy Wind												
Common Name												
Botanical Name												
TREES	Cordyline australis	Cabbage tree, ti	DMW	L	•	•	Autumn	•	Fast	17	Erect	
	Hoheria angustifolia	Narrow-leaved lacebark	MW	L	•	•	Autumn	•	Fast	10	Erect	
	Hoheria populnea	Lacebark	DM	L	•	•	Autumn	•	Fast	12	Erect	
	Kunzea ericoides	Kanuka	DM	L	•	•	Autumn	•	Fast	18	Erect	
	Pseudopanax crassifolius	Lancewood	DM	M	•	•	Autumn	•	Fast	13	Erect	
	Sophora spp.	Kowhai	DM	L	•	•	All year	•	Fast	10	Bushy	
	Carmichaelia odorata	Scented broom	DM		•	•	Autumn		Med	2	Bushy	
	Coprosma crassifolia		DM	L	•	•	Autumn	•	Med	4	Bushy	
SHRUBS	Coprosma propinqua	Mingimingi	DMW		•	•	Autumn	•	Med	5	Bushy	
	Coprosma virescens		MW	M	•	•	Autumn		Med	6	Bushy	
	Corokia cotoneaster	Korokio	DMW	L	•	•	Autumn		Med	3	Bushy	
	Cordyline banksii	Cabbage tree, ti ngahere,	M	L	•	•	Autumn		Fast	3	Bushy	
	Leucopogon fasciculatus	Mingimingi	DM	L	•	•	Autumn		Med	5	Bushy	
	Hebe stricta	Koromiko	DM		•	•	Autumn		Fast	2	Bushy	
	Leptospermum scoparium	Manuka	DMW		•	•	All year	•	Fast	6	Bushy	
	Olearia arborescens	Common tree daisy	M	L	•	•	Autumn	•	Med	5	Bushy	
	Olearia furfuracea	Akepiro	M	L	•	•	Autumn		Med	5	Bushy	
	Olearia virgata	Twiggy tree daisy	DMW		•	•	Autumn	•	Fast	3	Bushy	
	Pittosporum ralphii	Ralph's kohuhu	M		•	•	Autumn		Fast	8	Bushy	
	OTHER	Cortaderia fulvida	Toetoe	DMW		•	•	Autumn	•	Fast	4	Clump
Machaerina sinclairii		Broadleaved sedge	MW	L	•	•	Autumn		Med	1	Clump	
Phormium cookianum		Coastal flax	DMW	L	•	•	Autumn	•	Fast	4	Clump	
Phormium tenax		Lowland flax/harakeke	DMW		•	•	Autumn	•	Fast	4	Clump	
Libertia grandiflora		NZ iris, tukauki	DM	L	•	•	Autumn		Med	<1	Clump	



Toetoe, *Cortaderia fulvida*



Koromiko, *Hebe stricta*



Kowhai, *Sophora* spp

Urban/Semi-Urban Sites

What can the plant tolerate

Urban/Semi-Urban Sites															
		Soil:			Shade:										
		Dry	Mod	Wet	Light	Med	Heavy	Wind	Frost	When to collect	Nursery plant	Growth Rate	Max. Height Metres	Form	
Botanical Name		Common Name													
TREES	Cordyline australis	Cabbage tree, ti													
	Hoheria populnea	DMW		L			L	•		•	Autumn	•	Fast	17	Erect
	Kunzea ericoides	DM		L			L	•		•	Autumn	•	Fast	12	Erect
	Metrosideros robusta	M		L			L	•		•	Autumn		Fast	18	Erect
	Pittosporum eugeniooides	M		L			L	•		•	Autumn	•	Med	25	Bushy
	Pseudopanax crassifolius	DM		M			L	•		•	Autumn	•	Fast	13	Bushy
	Lancewood	DM		M			M	•		•	Autumn	•	Fast	13	Erect
	Sophora spp.	DM		L			L	•		•	All year	•	Fast	10	Bushy
SHRUBS	Clianthus puniceus	DM		L			L	•		•	All year		Fast	2	Bushy
	Cordyline banksii	M		L			L	•		•	Autumn		Fast	3	Bushy
	Corokia cotoneaster	DMW		L			L	•		•	Autumn		Med	3	Bushy
	Gaultheria antipoda	M		L			L	•		•	Autumn		Slow	1.5	Bushy
	Griselinia lucida	DM		L			L	•		•	Autumn		Med	5	Bushy
	Hebe spp.	DM						•		•	Autumn		Fast	2	Bushy
	Leptospermum scoparium	DMW						•		•	All year	•	Fast	6	Bushy
	Macropiper excelsum	M		M			M	•		•	Autumn		Fast	7	Bushy
Olearia nummulariifolia	DM						•		•	Autumn		Slow	2	Bushy	
OTHER	Asplenium spp.	MW		M			M					Med	1	Ferns	
	Cyathea spp.	DMW		M			M	•		•		Fast	16	T/fern	
	Dicksonia spp.	MW		MH			MH	•		•		Med	7	T/fern	
	Astelia nervosa	MW		M			M	•		•	Autumn		Med	1	Clump
	Phormium spp.	DMW						•		•	Autumn	•	Fast	4	Clump
	Arthropodium cirratum	DM		M			M	•		•	Autumn		Med	1	Clump



Cabbage Tree, *Cordyline australis*



Kakabeak, *Clianthus puniceus*



Northern Rata, *Metrostideros robusta*

Native Plants for Bellbird - Tui - Silvereve Food

Botanical name	Common name	Food provided ¹	Quality	Availability
TREES				
<i>Alectryon excelsus</i>	Titoki	Fruit	Okay	Nov-Feb
<i>Aristolelia serrata</i>	Wineberry, makomako	Flowers, Fruit	Best	Sep-Jan
<i>Carpodetus serratus</i>	Putaputaweta	Flowers, Fruit	Okay	Much of year
<i>Cordyline australis</i>	Cabbage tree, ti	Flowers, Fruit	Best	Oct-Apr
<i>Dacrycarpus dacrydioides</i>	Kahikatea	Fruit	Best	Feb-Jun
<i>Fuchsia excorticata</i>	Tree fuchsia	Nectar, Fruit	Best	Aug-Feb
<i>Griselinia littoralis</i>	Broadleaf	Fruit	Good	Jan-Aug
<i>Hoheria populnea</i>	Lacebark	Flowers	Okay	Feb-Apr
<i>Knightia excelsa</i>	Rewarewa	Nectar	Best	Oct-Dec
<i>Kunzea ericoides</i>	Kanuka	Flowers	Good	Sep-Feb
<i>Melicorytus ramiflorus</i>	Mahoe, whiteywood	Fruit	Good	Nov-Mar
<i>Metrosideros robusta</i>	Northern rata	Nectar	Best	Nov-Jan
<i>Nothofagus solandri</i>	Black beech	Honeydew	Good	All year
<i>Pennantia corymbosa</i>	Kaikomako	Fruit	Good	Jan-May
<i>Podocarpus hallii</i>	Hall's totara	Fruit	Good	Feb-Apr
<i>Podocarpus totara</i>	Totara	Fruit	Good	Feb-Apr
<i>Pseudopanax crassifolius</i>	Lancewood	Fruit	Good	Mar-Jul
<i>Sophora</i> spp.	Kowhai	Nectar	Best	Aug-Nov
SHRUBS				
<i>Coprosma repens</i>	Taupata	Fruit	Good	Jan-Apr
<i>Coprosma robusta</i>	Karamu	Fruit	Good	Jan-Apr
<i>Coprosma rotundifolia</i>	Coprosma	Fruit	Good	Jan-Mar
<i>Leptospermum scoparium</i>	manuka	Flowers, Insects, Honeydew	Good	Much of year
<i>Pseudowintera colorata</i>	Horopito	Fruit	Good	Dec-Mar
<i>Phormium</i> spp.	Flax, harakeke, wharariki	Nectar, Insects	Best	Nov-Feb

¹ Flowers attract insect food for these birds.



Native Plants for Kereru (NZ pigeon) Food

Botanical name	Common name	Food provided	Quality	Availability
TREES				
<i>Alseodaphne excelsus</i>	Titoki	Fruit	Good	Nov-Feb
<i>Aristotelia serrata</i>	Wineberry	Leaves, Fruit	Okay	Sep-Jan
<i>Bellschmidia tawa</i>	Tawa	Fruit	Best	Dec-Jun
<i>Cordyline australis</i>	Cabbage tree/ti	Fruit	Best	Jan-Apr
<i>Corynocarpus laevigatus</i>	Karaka	Fruit	Best	Jan-Apr
<i>Dacrydium dactyloides</i>	Kahikatea	Fruit	Good	Feb-Jun
<i>Fuchsia excorticata</i>	Tree fuchsia	Fruit	Good	Oct-Feb
<i>Griselinia littoralis</i>	Broadleaf	Fruit	Good	Jan-Aug
<i>Hedycarya arborea</i>	Pigeonwood	Fruit	Good	Oct-Feb
<i>Hoheria populnea</i>	Lacebark	Fruit	Good	Much of year
<i>Melicope ramiflora</i>	Mahoe/whiteywood	Leaves, Flowers	Okay	Aug-Mar
<i>Nestegis cunninghamii</i>	Black maire	Leaves, Fruit	Okay	Dec-Apr
<i>Rhopalostylis sapida</i>	Nikau palm	Fruit	Good	All year
<i>Podocarpus hallii</i>	Hall's totara	Fruit	Best	Feb-Apr
<i>Podocarpus totara</i>	Totara	Fruit	Good	Feb-Apr
<i>Pseudopanax arboreus</i>	Five finger	Fruit	Good	Much of year
<i>Pseudopanax crassifolius</i>	Lancewood	Fruit	Best	Mar-Jul
<i>Sophora</i> spp.	Kowhai	Leaves, Flowers	Best	Aug-Nov
SHRUBS				
<i>Coprosma rotundifolia</i>	Coprosma	Leaves, Fruit	Good	Much of year
<i>Pseudowintera colorata</i>	Horopito	Fruit	Good	Dec-Mar



PLANTING AND PLANT CARE

Key factors for successful planting

- Timing – the best time to plant is from late May until September.
- Fertiliser/manure – the use of a slow release fertiliser when planting will provide the necessary nutrients.
- Staking and windbreaks – in an exposed site it may be necessary to protect the seedlings.
- Weed and pest control – this is needed to ensure long term survival of the plants.
- Irrigation - water your plants into the roots (not the leaves) either early or late in the day if required.

When to Plant

Plant from May until September for a more successful result. In drier sites, plant as early as possible to allow the plant to develop adequate roots to sustain it through the summer months. Irrigation is critical to ensure your plants survive in drier soils or through the summer. In dry winters, planting should not take place until enough rain has fallen to make the ground easy to dig.

Once you have planned what you are to plant and when, order your plant supplies well in advance. Many nurseries have a peak demand period and you might miss out on the plants you want or the right delivery time.

Choosing a site

Careful site selection and good site preparation are the main ingredients for successful plant growth. Select plants to suit the conditions. Look at what is growing nearby, as this may give you some indication of what to grow. Look at your site and list the limitations it may have -

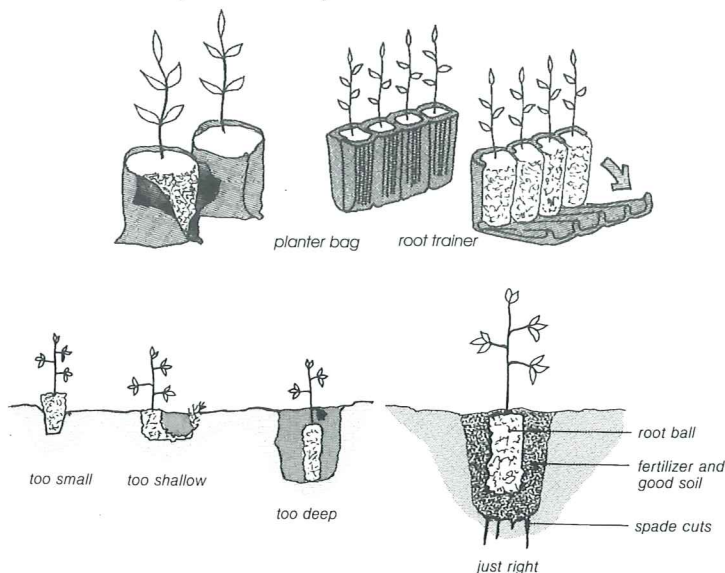
- frost-prone?
- poor soil, swampy ground, sandy soil, dry, steep sloping?
- exposed to wind, especially salt wind if it is near the coast?
- north or south facing?
- sunny or shady?

Site preparation

- Fencing out stock is absolutely essential when planting on farm land.
- Control pests. If you don't reduce or eliminate rabbits, hares and possums then many plants may be damaged or destroyed. Possums can be found in city gardens and you need to get rid of them.
- Eliminate weeds and grass for about a metre around the planting area either physically or by spraying a spot where you wish to put each plant approximately six weeks beforehand.
- Mulch each plant, especially if you have not sprayed, about a metre around the planting position.
- Dig a hole that is larger than needed and loosen the edges to give your plant a good start.
- You may like to add soil conditioner (e.g. compost) if ground is poor.

Getting plants in the ground

- Dense planting is advised (i.e. 1m apart) when planting a large area. The dense planting helps provide cool cover for tender roots and also keeps weeds down. When plants become established you can thin them out so that larger plants have enough space to grow and flourish.
- When planting from root trainers and planter bags, dig the holes deep enough so that the base of the plant will be buried. Loosen the roots, add some manure or slow release fertiliser. Crystal rain may also be used in drier areas.



After planting

- Keep up the pest control. Don't waste all that early work only to have young trees eaten away.
- Clear any competing weeds and grass from around your trees. This may be either by chemical or mechanical means and generally needs to be done regularly in the first and second year.
- Keep soil well irrigated/damp during the first few months, and again during dry seasons.
- Maintain mulching to retain soil moisture and reduced weed growth.

Animal Pests

- Foraging animals - rabbits, possums, deer and stock – will eat new growth or break off branches which stunts or kills your plants.
- Carry out pest control for possums, hares and rabbits well before you start planting and continue to maintain animal pests at low levels.
- Fence out stock from any restoration or planting – either permanently, or temporarily if you are able to use individual stock guards once the plants are better established.

Plant Pests

Help your existing or newly planted natives flourish by not letting plant pests (weeds or noxious plants) take over. When introduced species take over or displace native plants, native wildlife can be deprived of its food source and habitat. Clear plant pests before you plant and grub out or spot spray regrowth as it occurs.

In New Zealand over 2000 introduced species have gone wild, with another 17,000 growing nicely in our gardens. Compare this with approximately 2100 formally named and described native plant species.

If you live near bush margins, you can prevent exotic plants from “escaping” by not dumping garden refuse illegally near the bush. Seaside daisy, Morning glory, Japanese honeysuckle, Banana passionfruit, Wild ginger, and Tuber ladder fern have been attractive garden plants that have aggressively adapted to life in the bush, and smother or otherwise compete with native species.

Useful information on plant pests and their control is available from Hawke's Bay Regional Council - contact Biosecurity (Plant Pest) Officers.



Sir Rodney Gallen and Peter Lattey's QEII National Trust block at Te Pohue

Where to find out more

The following reference books should be available through libraries and bookshops. To contact the organisations refer to The Telephone Book or a Council register of community organisations.

Plant identification

Flowering plants of New Zealand. Webb, C., Johnson, P and Sykes, B. 1990. DSIR Botany.
Native New Zealand flowering plants. Salmon, J.T. 1991. Reed.
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Wetland plants in New Zealand. Johnson, P. and Brooke, P. 1998. Manaaki Whenua Press.
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Propagation and planting

Ferns for New Zealand gardens. Van der Mast, S. and Hobbs, J. 1998. Godwit.
Native forest restoration: a practical guide for landowners. Porteous, T. 1993. QEII National Trust.
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The native garden: design themes from wild New Zealand. Gabites, I. and Lucas, R. 1998. Godwit.
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The QuickFind guide to growing native plants. Crowe, A. 1979. Viking.
The gardner's encyclopedia of New Zealand native plants. Cave, Y. and Paddison, V. 1999. Godwit.

Organisations

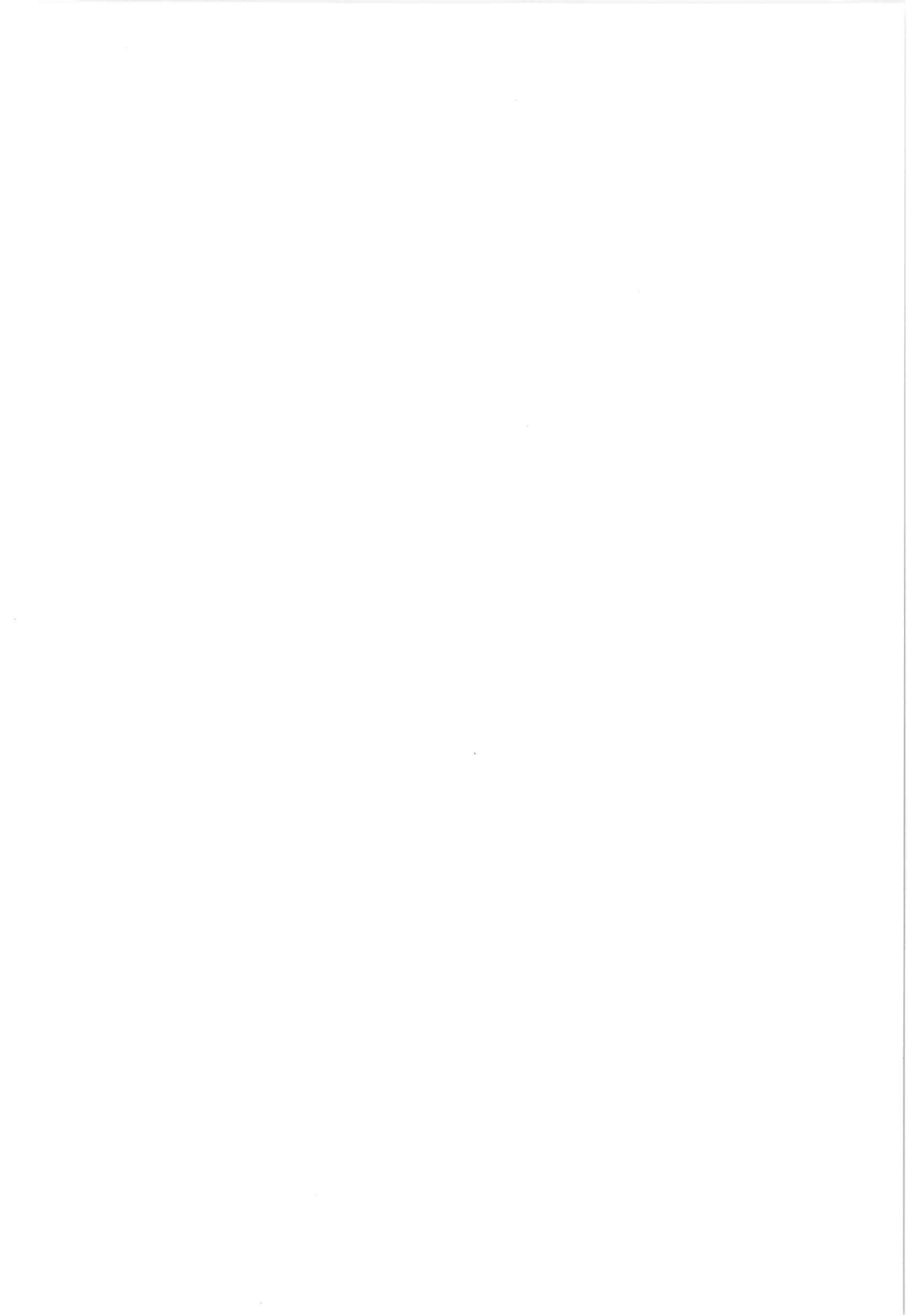
Department of Conservation - Napier, Wairoa & Ongaonga, Hawke's Bay Regional Council – Napier, Taradale, Wairoa & Waipukurau, Genesis Reforestation Trust
Forest and Bird branches – CHB, Hastings-Havelock North, Napier, Wairoa, NZ Landcare Trust, Hawke's Bay Landcare Foundation, Territorial Authorities - parks and reserves departments, garden centres and specialist nurseries, local garden clubs.

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Wetlands (p14)



Riparian (p16)



Urban/Semi Urban (p18)



A.L.



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