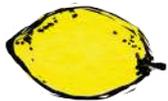


Fruit and Nut Trees for Every Microclimate



A Guide to Planting in Nelson & Marlborough



1. Environment

Make a sketch map with buildings, power-lines, roads, pipes and trees.

Identify micro-climates:

Hot, sunny slopes
Cold, frost hollows
Windy ridges/wind tunnels
Sheltered or shaded sites

Identify your soil type

Note any dry, wet and irrigated areas.



New Zealand Tree Crops Association

- Fruit, nuts, berries, fodder, trees for bees, timber, shelter, firewood, health, heritage and recreation.
- Field trips and workshops
- Tree and produce sales
- Quarterly magazine
- Join for \$50 a year
- Branches nationwide



www.treecrops.org.nz
secretary@treecrops.org.nz
<https://www.facebook.com/groups/treecrops/>

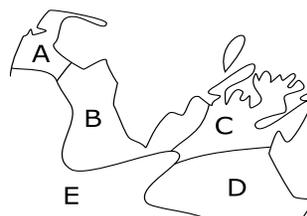
Nelson Branch:
treecropsnelson@gmail.com

Why grow fruit & nut trees?

- Pick your own fresh fruit and nuts
- Taste old fashioned varieties you cannot buy
- Grow fruit without spraying
- Be self sufficient in fruit, nuts and firewood
- Provide shade and shelter
- Create habitats for birds and insects
- Supply livestock fodder
- Explore new varieties
- Help conserve heritage varieties



Climate



- A.** Mild temperatures, rainy
- B.** Warm summer, wet & mild/cool winter, high sunshine hours
- C.** Similar to B, but windier
- D.** Very warm summer with dry NW winds, cool winter, low rainfall
- E.** Wetter, colder, winter snow

Variations occur inside these broad zones. "Micro-climates" are influenced by slope, aspect, wind, shade, cold air ponding and the presence of the sea.

A valley, farm or garden will have several micro-climates, e.g. a sunny hillside, windy ridge or frosty gully.

Soils

Different trees prefer different soils. Get to know your soil. Consider having a pH and soil nutrient test done before you start planting.

Sandy: Dry and gritty, water drains away, nutrient poor.

Clay: Sticky, can roll it into a ball when wet, dries hard. Fertile, holds water well, but drains poorly.

Peat: Spongy, dark. Holds water, rich in organic matter, acidic.

Loam: Dark, sticky and gritty. It forms a ball that crumbles easily. Loam has good nutrients, drains well and is easy to dig.



This resource was funded by the Dick Roberts Community Trust.

G. R. (Dick) Roberts moved to Nelson in 1968 to develop 300 acres of gorse covered hillside in Todds Valley, as he could see its potential for a variety of tree crops. Dick was a professional natural history photographer, teacher, founding member of the New Zealand Tree Crops Association and a keen advocate for "tree crops for every micro-climate", based on his own experiences and observations as a land owner.

Written by Peter Syms and Katrina Richards.
 Illustrations by Katrina Richards.
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 Nelson Branch. ©NZTCA, 2019

Six Steps to Success

3. Buy or Create Trees

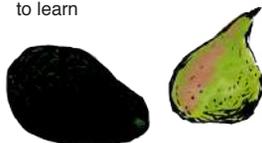
Look at both local and on-line nurseries

Order well in advance

Consider buying bare-rooted trees in winter

Some trees grow easily from seeds, cuttings or rods

Grafting is a good skill and easy to learn



4. Planting

Do large earthworks and remove weeds well ahead of time.

Plant in autumn/ winter/ spring when soil moisture levels are optimum.

Dig the hole twice as wide as the roots, with the aim of breaking up as much ground as possible around the hole to allow the roots to run. Trim broken or tangled roots, and fit into prepared hole ensuring ground level is the same as the container soil level. Firm the soil around the roots by lightly pressing.

Mulch around the tree, but not right up against the trunk
 Water immediately and make a record of what is where



5. Protecting

Look after your trees, especially when young or newly planted

Do they need:

- Protection from sheep and hares
- Stakes/plant guards for a year or two for stability
- A shade cloth during the first summer
- Frost cloth or application of a frost spray
- A bird net or cage
- A permanent label



6. Maintenance & Harvest

- Prune trees for shape and air-flow
- Monitor for pests and diseases
- Keep grass and weeds away from the trunk. You can use mulch.
- Feed as appropriate at the drip-line
- Many trees like irrigation
- Harvest when ripe
- Learn how to best store your crop and use it



How to use this guide

What is the most important environmental factor at your site?
Use the key below to navigate the plant list chart.

- Tolerates or Needs
- Tolerant of some
- Intolerant of
- Tolerates or Needs
- Tolerant of some
- Intolerant of
- ✓ Soil types
- ⊕ Helpful
- ⊕ Necessary

Find the most relevant column, follow it down the chart to make a plant list.

Are you planting in a limited space or planning a food forest?

Use the diagrams on the right and match the numbers on the drawings to the numbers and names in the chart to make a plant list.

This is a generalised guide. Check with your tree nursery or online for more detailed information about tolerances and pollinators.

More Information:

New Zealand Tree Crops Association:

www.treecrops.org.nz

New Zealand Farm Forestry Association:

www.nzffa.org.nz

Regional Pest Plants: www.bionet.nz

Trees for Bees: www.treesforbeesnz.org

Native plant restoration: www.doc.govt.nz

Trees on farms: www.waikatoregion.govt.nz

Tasman Resource Management Plan:

www.tasman.govt.nz [search TRMP for Chapter 17, 17.5.4.1 (set-backs and restrictions)]

Marlborough Resource Management Plan:

www.marlborough.govt.nz [search WARMP and MSRMP for Chapters 30 & 36, resp. (rural)]

Trees under powerlines:

www.networktasman.co.nz/trees-power-lines

Toxic trees: www.sciquest.org.nz/elibrary/ [search for Plant poisoning in New Zealand (Hutton, 1996) and view full text (pdf)]

Other Useful Trees:

Trees for Bees: Apple, Bottlebrush, Grevillea, Kanuka, Manuka, Pear, Red flowering gum, Tagasaste/Tree lucerne, Weeping willow, White ironbark gum

Firewood, Timber and Erosion Control: Alder, Eucalyptus, Kanuka, Macrocarpa, Manuka, Native Beech, Oak, Pine, Poplar, Redwood, Tasmanian blackwood, Totara, Wattle, Willow

Spices, Beverages and Health Products: Bay, Chinese quince (Pseudocydonia sinensis), Coffee, Horopito, Kawakawa, Koromiko, Linden, Manuka, Rose Apple (Syzygium), Szechuan pepper, Tea (Camellia sinensis), Totara

Animal Fodder: Acacia, Acorns (only some oak varieties), Apple, Honey locust, Mulberry, Poplar, Tagasaste/Tree lucerne, Willow

Shade and Shelter: Alder, Cypress, European beech, Feijoa, Hazel, Hornbeam, Liquidamber, Macrocarpa, New Zealand natives, Oak, Olives, Pines, Poplar, Silverbirch, Totara

Toxic to Stock:

Leaves and/or fruit toxic to stock or toxic in some circumstances:

Many Acorns, wilted Apricot leaves, Avocado, fermented fruit pulp, Karaka, Kowhai, Laurel cherry, Macrocarpa, Ngaio, Oleander, wilted Plum leaves, Poroporo, Rhododendron, Tutu, Yew

	Plant Tolerances							Soil Types						Pollinator
	Sun	Shade	Wind	Frost	Wet Feet	Dry	Loam	Free draining	Most types	Clay	Sandy	Acidic		
Fruit and Berries														
1	Apple (Malus spp)	■			■	●	✓		✓	✓			⊕	
2	Apricot (Prunus armeniaca)	■			■	●	✓						⊕	
3	Avocado (Persea americana)	■	■	■	■	●	✓	✓			✓		⊕	
4	Babaco (Carica sp)	■	■	■	■	●	✓		✓				⊕	
5	Banana (Musa sp)	■		■	■	●	✓						⊕	
6	Blueberry (Vaccinium spp)	■	■		■	●	✓					✓	⊕	
7	Casimiroa (Casimiroa edulis)	■		■	■	●	✓				✓		⊕	
8	Cherimoya (Annona Cherimola)	■		■	■	●	✓		✓				⊕	
9	Cherry: sweet, sour (Prunus spp)	■			■	●	✓						⊕	
10	Chilean guava (Myrtus ugni)	■	■		■	●	✓						⊕	
11	Citrus, grapefruit (Citrus spp)	■	■	■	■	●	✓	✓					⊕	
12	Citrus, kumquat (Citrus japonica)	■	■	■	■	●	✓	✓					⊕	
13	Citrus, lemon (Citrus spp)	■	■	■	■	●	✓	✓					⊕	
14	Citrus, lime (Citrus spp)	■	■	■	■	●	✓	✓					⊕	
15	Citrus, orange (Citrus spp)	■	■	■	■	●	✓	✓					⊕	
16	Currant: black, red, white (Ribes sp)	■	■	■	■	●	✓		✓				⊕	
17	Elder (Sambucus nigra)	■	■	■	■	●	✓			✓			⊕	
18	Feijoa (Feijoa sellowiana)	■	■	■	■	●	✓			✓			⊕	
19	Fig (Ficus carica)	■	■	■	■	●	✓		✓				⊕	
20	Guava (Psidium spp)	■	■	■	■	●	✓		✓				⊕	
21	Jaboticaba (Myrciaria cauliflora)	■	■	■	■	●	✓		✓				⊕	
22	Jujube (Zizyphus jujube & etc)	■	■	■	■	●	✓		✓				⊕	
23	Loquat (Eriobotrya japonica)	■	■	■	■	●	✓		✓				⊕	
24	Lychee (Litchi chinensis)	■	■	■	■	●	✓		✓				⊕	
25	Medlar (Mespilus germanica)	■	■	■	■	●	✓		✓				⊕	
26	Mulberry (Morus alba, M. nigra)	■	■	■	■	●	✓		✓				⊕	
27	Nashi (Pyrus sp)	■	■	■	■	●	✓		✓				⊕	
28	Nectarine (Prunus persica)	■	■	■	■	●	✓		✓				⊕	
29	Olive (Olea europaea)	■	■	■	■	●	✓		✓				⊕	
30	Papaya (Carica papaya)	■	■	■	■	●	✓		✓				⊕	
31	Papaya mountain (C. pubescens)	■	■	■	■	●	✓		✓				⊕	
32	Pawpaw (Asimina triloba)	■	■	■	■	●	✓		✓				⊕	
33	Peach (Prunus persica)	■	■	■	■	●	✓		✓				⊕	
34	Pear (Pyrus communis & etc)	■	■	■	■	●	✓		✓				⊕	
35	Persimmon (Diospyros kaki)	■	■	■	■	●	✓		✓				⊕	
36	Plum, European & prunes (Prunus spp)	■	■	■	■	●	✓		✓				⊕	
37	Plum, greengage (Prunus spp)	■	■	■	■	●	✓		✓				⊕	
38	Plum, Japanese (Prunus spp)	■	■	■	■	●	✓		✓				⊕	
39	Pomegranate (Punica granatum)	■	■	■	■	●	✓		✓				⊕	
40	Quince (Cydonia oblonga)	■	■	■	■	●	✓		✓				⊕	
41	Raisin tree (Hovenia dulcis)	■	■	■	■	●	✓		✓				⊕	
42	Tamarillo (Cyphomandra sp)	■	■	■	■	●	✓		✓				⊕	
Nuts and Pods														
43	Almond (Prunus dulcis)	■	■	■	■	●	✓		✓				⊕	
44	Carob (Ceratonia siliqua)	■	■	■	■	●	✓		✓				⊕	
45	Chestnut (Castanea sp)	■	■	■	■	●	✓		✓				⊕	
46	Gevuina (Gevuina avellana)	■	■	■	■	●	✓		✓				⊕	
47	Ginkgo (Ginkgo biloba)	■	■	■	■	●	✓		✓				⊕	
48	Hazel (Corylus avellana)	■	■	■	■	●	✓		✓				⊕	
49	Honey locust (Gleditsia sp)	■	■	■	■	●	✓		✓				⊕	
50	Macadamia (Macadamia sp)	■	■	■	■	●	✓		✓				⊕	
51	Oak: acorns, cork (Quercus spp)	■	■	■	■	●	✓		✓				⊕	
52	Pecan (Carya illinoensis)	■	■	■	■	●	✓		✓				⊕	
53	Pine nut (P. pinea, P. torreyana & etc)	■	■	■	■	●	✓		✓				⊕	
54	Pistachio (Pistacia vera)	■	■	■	■	●	✓		✓				⊕	
55	Walnut (Juglans spp)	■	■	■	■	●	✓		✓				⊕	

