



Kōanga

Fruit Tree Catalogue 2024

“Now is the Time to Rescue the Treasure, to Restore the Environment and Enchant the Earth” Kenny Ausubel



Our very special NZ Heritage Fruit Tree collection evolved and grew through generation after generation of families and communities taking care of their favourites and passing them on down...
This collection contains our history and our future!

“As we collect seeds, and we listen, we become aware of the part the ancestors play in getting them to us. Then we have to be aware that we are the ancestors of the next stage.

When we talk about the next 500 years hopefully being better on this planet, what we're setting up right now is our role as ancestors for our children and those children 500 years on down the line for whom we will be those distant voices in the seeds.”

Kenny Ausubel, *Seeds of Change*

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Our Mission

The vision of Kōanga was born out of 30 years of collecting heritage fruit trees, vegetables and flowers by Kay Baxter and others, in association with Kōanga. This nationally important collection is in turn built on the foundation of hundreds of generations of gardeners and farmers who have nurtured the biodiversity and cultural heritage upon which civilisation has developed (we have co-evolved with our food plants).

Much of Kōanga’s work was in response to the fact that in the last 100 years much of the genetic biodiversity in food plants, all over the world, has disappeared as a result of the industrialisation of our food production.

In the process of “saving the seeds”, all those involved have come to the wider realisation that not just the ecology of our “food evolution” has been compromised by industrialisation, but many other aspects of our “human ecology” have likewise been compromised, and we can’t address the one issue (e.g. seed saving) in isolation. Seed saving is one aspect of the broader need to address our “human ecology”. Thus, while an immediate priority for Kōanga

is seed protection and conservation, it is also committed to contributing practical holistic solutions in the wider field of sustainable living:

- Protection, conservation and development of NZ’s genetic and cultural heritage food plants.
- Understanding the connections between soil health, plant and animal health and human health.
- Research into the practical strategies and techniques required for communities and individuals to be self reliant, with a focus on regenerative land use, nutrient dense food production and processing, appropriate technology and community development.



Membership

Join us and help save New Zealand's Heritage Food Plants! Over the past 30 years Kōanga has been instrumental in collecting and saving over 700 heritage vegetable seed lines and over 300 Northern heritage fruit tree lines and we could not have done it without our members!

Our nationally important collections are built on the foundation of hundreds of generations of growers who have nurtured biodiversity and cultural heritage. We not only collected the plant material and the seeds, but also the stories and whakapapa of our food plants and the old people who carried them to today. Growing out these food plants makes them available to both our members and the general public. The beautiful diversity that we see in our heritage collection – in the flavours, shapes and colours, is a glimpse of the past varieties of all the vegetables.

HEIRLOOM COLLECTIONS

Keeping the whole collection of these incredibly important New Zealand heirlooms alive and available for the people of New Zealand is a complicated and expensive process and we receive no government funding. We are a Charitable Trust and one of the only organisations in New Zealand who grow out our seeds locally (mostly in the sunny Hawke's Bay), so they are adapted to NZ soils and climates. These seeds are then selected for the qualities home gardeners are looking for, like a long cropping season, great taste, nutrient density and many other qualities that commercial seeds are not selected for.

REGENERATIVE LAND USE

Along with protecting our collection of New Zealand heirloom plants we aim to inspire, educate and support people to develop the skills to manage their land in a regenerative way. We have a wealth of experience, knowledge and resources to share with the world and this work is more important now than ever before as urgent action is required to deal with the Climate Emergency. Help us to safeguard the future for coming generations by supporting our work.

www.koanga.org.nz/our-shop/membership/

MEMBERS BENEFITS

Being a member of Kōanga is an excellent way to support our important work but also brings a range of membership benefits:

- Receive two FREE seed packets of your choice from a specially selected range as a member of Kōanga.
- Gain exclusive access to sought-after plants, trees, and rare seeds and plants in short supply through membership.
- Enjoy members-only access to preservation packs, providing unique opportunities to conserve valuable plant varieties.
- Benefit from a FREE Online Workshop on *Growing Great Seedlings* for memberships purchased or renewed before 1st January 2025, enhancing your gardening skills and knowledge.

JOIN US TODAY!

If you agree with us that saving New Zealand's heritage food plants is an essential part of building a better, regenerative future and if you value the wealth of experience and knowledge that Kōanga holds and makes available through its website, publications and courses then the best way that you can support us is by becoming a member, by encouraging other people to join, and, if you can afford it, by supporting someone less financially secure to join.



Editorial by Kay Baxter

Welcome to the 2024 Kōanga Fruit Tree Catalogue.

Are you living with a deep, pervading sense of helplessness and depression about the things we are feeling and seeing happening in this world right now?

I believe the answer to full recovery is 'reconnection'. We must plug ourselves back in again...

- * To the voltage of the earth
- * To the sky and even the universe
- * To our rivers and lakes
- * To our oceans and mountains
- * To our food
- * To our ancestors and their stories, our stories
- * To our neighbors
- * To our families
- * But most of all, to ourselves

It rained last night here, 16th of January 2024, and this morning there had been so much growth in the forest garden that I had to get the hedge clippers out to recreate the tunnel through the forest that my path to home has become. Trimming my way from the house up the path to the garden through the jungle made me realise once again (this happens everyday!) that living right in a forest garden is an incredible life enhancing experience. Our forest garden is now a jungle in every sense of the word, albeit a temperate one for the Summer only (bare branches and tree skeletons in the Winter, also beautiful).

The feeling one gets looking at it, on it and through it is the same feeling one gets when looking at, on or through the NZ native bush. I believe the feeling of peace that comes is because of the huge diversity and beautiful integration of elements where they are now all in a dance together building something that is far greater than the sum of the individual elements, and together all these parts become a living system that takes on a life of its own, bringing in the insects, birds and myriads of other living things under our feet and in the air around us, and then we become the human element who tweaks things here and there and over hundreds of years and generations as we keep giving and taking,

as a dance partner in this organism around us, the whole 'shebang' molds us and who we are, and we mold the whole 'shebang' as well. Co-evolution towards health, peace and beauty.

We can all do this, start small, get confident, and become exuberant with it. Build peace, happiness, satisfaction, confidence and a sense of your own power to positively influence the future of life on earth.

You can all do this far faster than I did. These days you can begin with the books and charts and also by coming and looking at what these forest gardens look like, and follow the design processes that are being created.

I'm not sure if there will be spaces left on the *Forest Garden Masterclass* when this catalogue comes out, maybe it's next year for you or maybe you can begin with the books and use the Kōanga students page to get the support you need to take the steps.

I would just encourage you to begin taking steps under any of the above bullet points, every small step is a powerful one.

If a Forest Garden is your dream I recommend beginning with my book *Design Your Own Orchard*. That book will begin to help you understand the conditions different trees prefer, and with which other trees they like growing (understanding guilds), the book also lists the best heritage cultivars so you can get a good look at fruiting times etc. then go on to the *Design Your Own Forest Garden* booklet. This booklet is a design process that takes you through designing your own forest garden to suit your needs.

It is up to us! Love, Kay

Now is a good time to deal with infected trees or inoculating trees, see the *Forest Gardens* section of the *Knowledge Base* on our website. Freshly made *Trichodowels* are available now via our shop.



Children from Te Kura kaupapa Kahungunu o te Wairoa



Making bone char



Sebastopol geese in forest garden



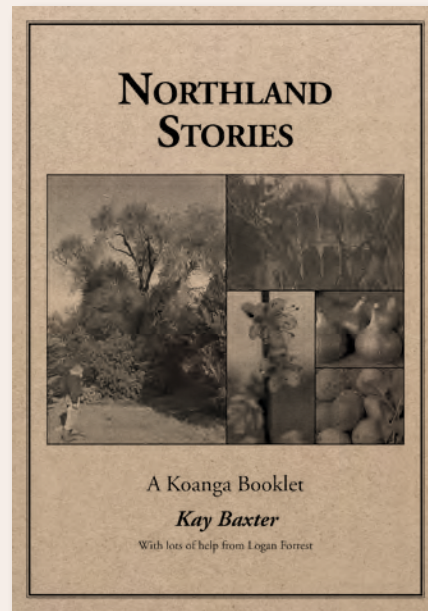
Wiltshire ewe and lamb



White nugtokaka in forest garden

Northland Stories

The more I become a part of the East Coast bioregion/community, the more I realise that the stories/histories/herstories of our ancestors in the various bioregions of this land are very similar. The waves of people that came to this land, the food plants they brought with them, were not dissimilar. Our stories are all similar. As part of my reconnection with the Northland bioregion when I went to live in Kaiwaka, I found a local historian who shared with myself and our group of homeschooling children his knowledge and showed his wonderful connection via the history and the stories he knew. The booklet I wrote called *Northland Stories* was based on my observations and the stories of special people I knew in Northland, and I believe because the patterns of connection between people arriving in this land the food plants they carried in various bioregions of NZ are similar. This booklet could be a step for many of you into your own story or the story of your own bioregion. It will certainly help you know what the questions might be that you ask your own local historians.



Education

Here at Kōanga we are learning to live simply and in a regenerative way. Our workshops and online workshops have regenerative practices at their core and are for anyone interested in gaining the skills and knowledge to redesign their lives to live in a regenerative way and to empower change in their community.

Our education program of cutting edge workshops is one of the ways that we share the essential skills and knowledge that we have accumulated over decades in order to support people on their path to regenerative living.

Empower yourself with the practical skills to turn your dreams of self-resilience into your reality. We use the Permaculture design process to design and teach solutions for all aspects of our lives and environment.

We're Committed To:

Inspiring and supporting regenerative living in New Zealand through education

Empowering home gardeners to develop efficient gardening skills, build top-soil and improve their health through enjoying their own quality, nutrient dense produce.

All food served on our courses is:

Prepared following Weston A. Price principles

- Locally sourced
- Organic
- Unrefined
- Nutrient dense
- Traditional

See our website for more detailed information on our workshops, www.koanga.org.nz/our-shop/education/



Workshop Program

Forest Garden Masterclass

Five Days

25th February to 1st March 2024 OR

13th to 18th October 2024

Tutor: Kay Baxter

This Masterclass has two parts:

1. Learning how to design your own forest garden, based on the principles of nature and the patterns of natural forests and how to apply this to your own specific context, conditions and goals.
2. Learning to manage your forest garden is essential to success! And to do this well we must learn to be more observant and work with the ebbs and flows within this environment. Super empowering and exciting stuff taking us on a path to reconnection.

Gardening Masterclass

Five Days

3rd to 8th March 2024 OR

20th to 25th October 2024

Tutors: Kay Baxter & the garden crew

This Masterclass is a combination of Kōanga Gardening Best Practice, covering all the basic skills required to be a great gardener, as well as our *How To Grow Nutrient Dense Food* workshop showing you how to understand what your soil needs in order to be growing nutrient dense food, and how to tailor your own fertilizer recipes to suit the needs of your situation. A great mix of theory and hands on.

Early Hunting Workshop

Two Days

5th to 7th April 2024

Tutor: Taiaimai Corker

Limited to 4 people.

On this workshop you will:

- Gain an understanding of wild game management, and an understanding of what and why specific animals would be killed.
- Hunt and gather wild deer and goats.
- Field dress the animals.
- Bring home and break down whole animal into cuts of meat for home use.
- Basic firearms use, if wish to bring a firearm then you must have a firearms license.

Herbal Health & Healing

One Day

6th April 2024 OR 28th September 2024

Tutor: Kay Baxter

In this exciting workshop Kay will:

- Encourage and support you to begin connecting and working with the herbs in your garden, and environment, for your health and the health of your family.
- Show you how to choose the local, easy to grow and harvest herbs that could work for you and the best ways to use them as medicine.
- Show you how to make your own herbal remedies including tinctures, teas, and salves and infusions.
- You will go home with lots of goodies.

Butchery – Sheep, Goats & Pigs

Two Days

11th to 12th April 2024 OR

17th to 18th October 2024

Tutor: Taiamai Corker

Limited to 4 people.

This is a hands-on workshop where you will have the experience of killing a sheep and a pig (if you wish), butchering and preparing all the meat ready to go into the freezer. You'll learn the various ways sheep and pigs can be cut up depending on the cuts you like to eat, with an emphasis on using the whole animal.

You will learn:

- How to choose which animals are ready to butcher.
- Which tools and or equipment are required to do this well on a home scale.
- How to manage the animals in stress free ways before killing.
- How to skin them, or scald the pigs, gut them and cut the entire animals up into cuts ready for the freezer, including the bones.
- How to choose which fat is best to use for lard, and which fat is best for which purpose.

Soil Testing & Fertiliser Making

Two Days

13th to 14th April 2024 OR

Tutor: Kay Baxter & Paul Rutledge

Two days with Kay and Paul 'doing it'. They will give you the understandings and techniques you can use to test your plants and soil, as well as processes and patterns to meet the needs of your soil and plants. As part of this process you will make several kinds of compost, make bone char and biochar and fish hydrolysate as well as Biofert and a Bioreactor, as well as working with ramial woodchip.

Propagation Workshop

One Day

22nd June 2024

Tutor: Taiamai Corker

This workshop is a combination of theory and practice, where you will learn all the necessary techniques to propagate your own fruit and nut trees, along with your forest garden support trees as well as save heritage fruit trees in your family or bioregional orchards. You will go home from this workshop with enough plant material to start a home orchard or propagation facility, or both.

Butchery – Poultry

Two Days

10th to 11th October 2024

Tutor: Taiamai Corker

Limited to 4 people.

This workshop is for those of you wanting to be able to develop your own regenerative poultry systems that are not dependent on industrial chicken food, to produce your own eggs and meat.

On this workshop you will learn how to:

- Choose the best breeds and birds to suit your egg and meat needs.
- Choose the best breeds to suit the food you actually have available.
- Choose the breeds that are the most efficient converters of food to eggs or meat.
- Raise birds for meat or for eggs, several different ways.
- Butcher chickens, ducks, muscovies, possibly geese.
- Choose birds that are ready for butchering.
- Catch them and butcher them in relatively stress free ways.
- Pluck by hand and using a plucking machine.
- Butcher them in several different ways, so you can choose the way that works for you.
- Keep and use all parts of the birds.

Butchery – Salami, Sausages & Bacon

Two Days

24th to 25th October 2024

Tutor: Taiamai Corker

Limited to 4 people.

This will be a hands on workshop where you will learn to make your own very special small goods, often a great way to store the valuable seasonal food in very delicious ways, on a home scale.

You will make sausages, salami, bacon, biltong, black pudding, ham, liverwurst and pate.



Butchery – Cattle

Two Days

31st October to 1st November 2024

Tutors: Taiamai Corker

Limited to 4 people.

This is a hands on workshop for those of you wanting to feel confident about putting your own beef on the table at home.

Taiamai will show you:

- How to choose the cattle that are ready to butcher.
- The best times of the year to do this.
- The facilities and tools required to do this on a home scale.
- Which breeds are easiest to butcher at home and why.
- How to kill and butcher a beef animal from beginning to having all your cuts ready to go into the freezer, using all parts of the animal.



Guided Tours & Working Bees

We cancelled all of our Guided Tours during Covid and then again after the many floods. Our commitment is to be recovering and building from all of that, and we do not expect to be opening again for Guided Tours until Spring 2025. In the meantime if you watch our newsletters there will be a few working bees where you can come and make a real difference for us and have a look around... watch the newsletters! We'd love to see you.

Kōanga Online Workshops

Kōanga now has an extensive range of online workshops which can be found on our website www.koanga.org.nz.

Our *Gardening Masterclass* Comprises the following workshops which can be bought singly or together as the Masterclass for great savings:

- Growing Great Seedlings
- Growing Great Compost
- Regenerative Garden Planning
- Garden Bed Preparation and Planting
- Growing Nutrient Dense Food (with or without industrial fertilizer)
- Building a Passive Solar Cloche
- Making Regenerative Fertiliser

The Health and Wellbeing Masterclass

The Health And Wellbeing Masterclass brings together our three health-specific workshops: *Designing Your Own Nutrient Dense Diet*, *Traditional Food Processing and Storage*, and *Herbal Health & Nutrition*.

Design Your Own Nutrient Dense Diet takes you through a process of designing your own ideal diet based on what you like to eat and your local climate and soil conditions and importantly the principles behind the diets of all indigenous peoples as discovered by Dr Weston A. Price.

The *Herbal Health & Nutrition* workshop enables you to step into taking care of your health, and the health of your family through engaging with the herbs already in your garden or herbs you can easily grow. It is a really exciting and empowering journey.

Traditional Food Processing and Storage, a really exciting workshop for all those of you wanting to be able to live totally out of your gardens. This workshop explores traditional methods for harvesting, processing and storing our regeneratively-grown produce. These techniques enable us to store the crops we have grown to feed us throughout the year, and take any excess in season food from your gardens, process them and store them in simple, traditional ways, creating abundance and food security year round! The methods involved require no expensive equipment, no previous experience and are a sure way for you to build your food security - preserving fruits, vegetables, nuts, herbs, medicine and seeds for the future. This workshop can be purchased alone or as part of the new *Health and Wellbeing Masterclass*.



Thorny Croft



Heritage breeds for regenerative farming

Ease of management in organic systems

High production in low input systems

Heritage breeds we co-evolved with

Check out the Thorny Croft page on our website

www.koanga.org.nz/knowledge-base/thorny-croft/



Black Walnuts & Iodine

Black walnuts have incredibly beautiful, close-grained, and strong wood for woodturning, for building, and for musical instruments.

- The leaves, hulls, and stems of black walnut **are rich in iodine and highly medicinal.**
- The nutmeats are high in edible oil, which is useful for cooking, woodworking, and cosmetics.
- The nutmeats are nutritious and considered a superfood.
- The hulls, leaves, and twigs produce a **dark brown natural dye** that is colour-fast.
- Walnut trees are long-lived and provide shade and habitat for wildlife.
- The roots of walnut trees draw up nutrients from deep in the subsoil, bringing these to the surface where other plants can benefit.
- **Black walnut sap can be boiled down into black walnut syrup** for a value-added product.

Black walnuts have a name for being allelopathic, and killing other trees that grow around them. We have heard that it is only in a high stress situation that the roots of Black walnuts send out the signals to kill trees around them, e.g. when there is not enough water or nutrients to support the black walnut they might kill other trees to ensure they have what they need! There are some trees it seems that really do not like Black walnuts so best to not plant them within 12m of a Black Walnut. These trees are:

- | | |
|------------------|------------------------|
| • Asparagus | • Apples & Crab Apples |
| • Cabbage | • Potato |
| • Columbine | • Peony |
| • Rhubarb | • Blueberry |
| • Red chokeberry | • Cotoneaster |

- | | |
|-----------------|----------------|
| • Hydrangea | • Lilac |
| • Viburnum spp. | • White birch |
| • Hackberry | • Larch |
| • Linden | • Silver Maple |
| • Pine spp. | • Spruce spp. |

There are however trees that apparently like growing with Black Walnuts, as follows:

- Most maples except silver maple (*Acer* spp)
- Eastern Red Cedar (*Juniperus virginiana*)
- Serviceberry, Saskatoon (*Amelanchier*)
- River Birch (*Betula nigra*)
- Black Cherry (*Prunus serotina*)
- Pear (*Pyrus* spp.)
- Oak species (*Quercus* spp)
- Dogwood (*Cornus alternifolia*)
- Staghorn Sumac (*Rhus typhina*)
- Hawthorne (*Crataegus* spp)
- Arborvitae (*Thuja occidentalis*)
- White Ash (*Fraxinus americana*)
- Honey locust (*Gleditsia triacanthos*)
- American Elm (*Ulmus americana*)
- Blackhaw Viburnum (*Viburnum prunifolium*)

We'll be checking this out at Kōanga, but don't hold your breath, this will be an intergenerational project!

The fruit of the black walnut tree has two parts – a fleshy hull that covers a hard nut in a shell. The green hull is the part that herbalists are most interested in. It's important when making a black walnut tincture to use the hulls before

they turn black or become bruised. So choose walnuts that are a little under-ripe for best results. The hulls should still be green. The hulls are about a ½ cm thick and quite fleshy, with a strong iodine smell. You'll recognize that smell when you cut into one. It smells just like the iodine that is sold for veterinary wound care.

Black walnut hulls are a strong natural source of iodine. They are nourishing to the thyroid, especially where seaweed is hard to source. Take note of where you can find black walnut trees growing near you. This may be helpful, should you ever find yourself in need of iodine to protect from nuclear radiation, especially radioactive iodine, which can be absorbed by your thyroid in a situation where you are iodine deficient.

During the Chernobyl nuclear disaster, the areas in the fallout zone ran out of potassium iodide and seaweed sources of iodine. They used black walnut tincture as an iodine supplement by painting people's knee skin with it. It was effective in preventing radiation poisoning of the thyroid in those treated with it. Walnut hulls are also antifungal and anti-parasitic, especially for intestinal parasites. They are also an antimicrobial, blood cleansing, detoxifying tonic.



However, they are not an herbal supplement that should be taken daily. Black walnut hulls can be used externally to help with warts and herpes. To use it as an iodine supplement paint the tincture on your skin, rather than taking it internally.

It can be used as an antiviral, antifungal or to expel parasites when taken internally. However, because it is such a powerful supplement its use should be limited to no more than 2 weeks at a time.

STANDARD HERBAL PREPARATION

The tincture is 1:2 in 50% alcohol. That means 1 part fresh hulls, to 2 parts liquid. The liquid should be 50% water (not chlorinated) and 50% alcohol. Vodka is good. Usual dosage is 15 drops, 3 to 4 times daily (20 drops is equal to 1 ml).

Contraindications: It shouldn't be used by those allergic to tree nuts, or by pregnant or nursing mothers.

If you look online there is lots of advice about how to get the nuts out so they can be eaten. I haven't tried that yet but I will be. It has clearly a nut that has been eaten for thousands of years.

Fruit Tree Catalogue 2024

STOP PRESS STOP PRESS... Here in the Hawkes Bay we are still recovering from the terrible floods of the past two Summers as well as several smaller floods in between.

In Hastings the national rootstock stool beds were totally taken out so fruit trees are likely to be very hard to find for a few years and get very expensive. It takes at least 5 years to build new stool beds and get them producing roostocks. I believe it will be 5 years before replanting of the affected hawkes bay orchards will happen!

We have our own stool beds, although we were still buying some in from Hastings. (Stool beds are where you grow your apple and pear roostocks as well as where we grow some of our stone fruit rootstocks.) The big effect we are still working with is that some of our seed gardens and our nursery site were flooded for several weeks, and it seems now as though that has had a serious effect on the soil fungi. We had got to the point (getting very close) where we had the soil fungi pulling in the nitrogen for our plants rather than applying some kind of nitrogen fertiliser.

We also had very little stone fruit last year, also because of the floods so we had very few stones to grow seedlings. That has meant that we have struggled this year with numbers of some tree lines as well as size of the trees.

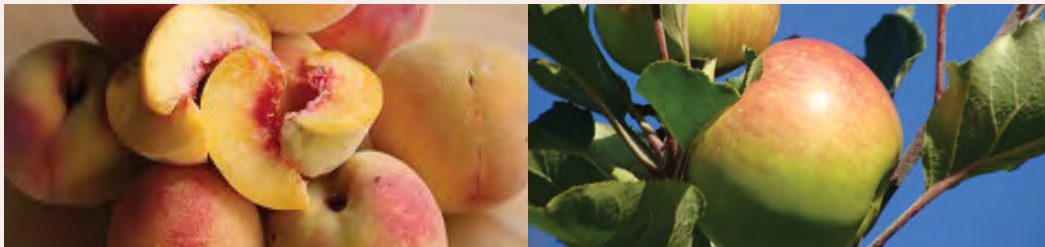
All of the trees we are selling are well grown and will grow well when planted out, but they

are smaller than we would like them to be or expect them to be. Coping with floods has been tricky.

We are selling some lines of apples and cherries, as growing-on lines. They are grafted trees that need growing for one more year either in a pot or the vege garden, before going out into the forest garden or orchard. There is nothing wrong with these trees they are potentially a cheaper way to get more trees, if you don't mind the wait.

We are in the process of draining the whole area better so do not expect this problem again, and we are well placed with roostocks etc for next season. We do have some very exciting new lines this year however, so enjoy the catalogue.

We have lots of cuttings and seeds of our forest garden support species, and if you are having trouble this year getting the fruit trees you wanted to plant I suggest you focus instead on creating the 'forest' all the trees you will be coppicing and chopping and dropping that are going to feed the fungi to feed your trees and maintain tree health. Any trees you plant will grow far better if the support trees are well established first.



Please place fruit tree orders online via the website www.koanga.org.nz. If you definitely cannot order via the website then email contact@koanga.org.nz or, if you can't email, phone 027-329-2850. Please note that both of these methods are slower than using the website (phoning is slowest) and you may miss out. Fruit tree orders are packed and sent separately so incur a separate freight charge from other categories so please order them separately and don't combine with other items (seeds, books, perennials etc).

This is a very special collection of NZ heritage plant material, gifted to us by the gardeners of this land. We believe every tree in this catalogue to be worthy of a special place in our lives today, for one reason or another. All trees in this catalogue have been organically grown by hand in a way that regenerates the land they were grown in. We'll send the planting instructions with your trees, so you can also plant them well, ensuring strong healthy growth and maximum nutrient dense fruit production.

These trees have been grown in Open Ground situation and marked with a white dot on the North side of the trunk, so that you too can plant these trees in the same alignment. Trees grow their main roots along the earth's magnetic field and they grow far better if they are planted in that same alignment as they were in the nursery. The white dots allow you to do that.

Many of the trees offered here are from our Northern Bioregional collection. These trees have naturalised in the North where the winters are warm, and they have been through a 150 year process of natural and human selection in that climate. The significance of this is that they fruit well in warm winters. Cultivars with the same name grown south of the Bombay Hills and taken north, do not. That is the reason Kay began saving these old trees.

One of the good things about having this collection is that you can now buy trees that will fruit well in Northland, but we also now know they do very well when taken south again. Martin Crawford of Forest Garden fame in England is recommending that we should all be planting our orchards these days with fruit trees that came from 2 climate zones north of where we are, so that they will fruit in the future in warmer winters!

In the Stone Fruit section of our catalogue you will notice we now offer more and more cultivars as seedlings. We are doing this because we believe them to be a superior way to grow our genetically stable heritage varieties.

Modern peaches do not grow true in the same way, and so we trial all cultivars before offering them to you. The trees are stronger and more disease resistant, but grow in size to be somewhere in between the smaller Marianna rootstock and the larger peach rootstock.

Varieties labeled 'UG' = suitable for a small urban garden

Stone Fruit

ROOTSTOCK	DIAMETER	CANOPY SIZE	PREFERENCES	DESCRIPTION
Colt	4-5m	12 sqm	Good for difficult soil.	Vigorous. Some good disease resistances.
Marianna Plum Root Stock	3-6m	12 sqm	Heavier, wet soils, essential.	Smaller than on peach rootstock.
Myrobalan	5-6m	25sqm	Tolerant of variable soil conditions including wet soils.	Vigorous.
Peach Root Stock	5-8m	15 sqm	Light, dry, boney soils.	Vigorous rootstocks.
Seedlings	5-8m	15 sqm	Drier, bony soils, exposed.	Seedling grown trees, not grafted, Form strong, healthy trees.

Cherries



CHERRIES

Compact Stella on Colt

Dark red, heart-shaped fruit with firm, light, red flesh. Self fertile. Produce heavy reliable crops around Christmas time. Forms a compact bush-like tree on Colt rootstock, approx 3m, on very free draining soil will grow taller. You will need to net them to keep the birds off. Cherries do best in areas with long cool winters and hot dry summers. Prefers free-draining, fertile soil and full sun. Benefits from wind protection.

Nectarines



NECTARINES

Kōkōwai on Plum

Red leaf, red skin, with a golden, buttery, very tasty flesh. Free stone, medium size fruit, excellent desert nectarine. Was selected from seedlings from a heritage peach that produced multiple nectarine variations. This one was selected because of the amazing dark leaf colour which makes it very ornamental. Ripe early February.



NECTARINES

Nuhaka on Peach

Goldmine type but larger, and more intense flavour. Super sweet fruit with excellent flavour, strong red blush and russetting on skin with a freestone, and is ripe February.



NECTARINES

Pouto Gold on Plum

This is a small nectarine with a beautiful gold skin with a deep red blush when ripe. The flesh is golden and the flavour is outstanding. A very rare NZ heritage nectarine. Allow 5-8m. From McLeod family homestead, Pouto, gifted by Logan Forrest, 2000. Ripe February.

Peaches



PEACHES

Arapohue Red Leaf Seedling

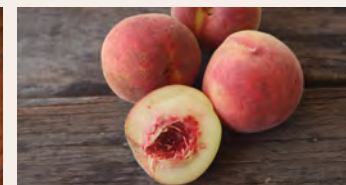
Red skin, golden flesh and freestone with red streaks around the stone. Outstanding flavour, excellent texture and is very juicy. Red leaves on the tree. Allow 5-8m. Given to Kōanga by a woman near Ruawai, originally from elderly Dalmatian gardener. Ripe late February.



PEACHES

Christina Seedling

White flesh, red around stone, green skin, red blush when ripe, similar to River Peach but firmer, sweeter, freestone. Outstanding dessert peach, great bottled. This is our most reliable, heavy cropper and the most disease resistant peach in the whole collection. It came into our collection from an avid fruit tree collector by the name of Mr Phil Hodges, a well known Paparoa character with a very special orchard himself. Ripe early to mid February.



PEACHES

Frasertown Creamy White Seedling

Honey coloured skin and flesh, red around stone. Creamy, firm flesh, sweet and juicy with excellent flavor. It is like the old Batley peaches which came from the Batley homestead on the Kaipara. Ripe mid-late February.



PEACHES
 Frasertown Orange Seedling
 A very very old peach cultivar, with a thinner skin than most heritage peaches, orange skin and orange flesh, good texture and flavour. Ripe mid-late February.



PEACHES
 Kauri Seedling
 This is another white fleshed peach, a variation on the River peach, ripe late January, freestone, green skin with a red blush. Outstanding, reliable heavy cropper, naturalised in the Kauri/Whangarei area.



PEACHES
 Mary's Christmas on Peach
 Medium-large, juicy, outstanding red skinned, white fleshed peach. A hardy, healthy tree. From the original orchard planted in the 1800s at Kaipara Harbour. The best Christmas peach! Ripe at Christmas.



PEACHES
 Mediterranean Seedling
 Medium size, white flesh, medium firm but very sweet flesh with outstanding flavor. Skin is honey coloured when ripe with red blush. This looks like a variation on the Batley peach as well. Reliable heavy cropper. Ripe Mid February.



PEACHES
 Pudge Seedling (very rare)
 Small, golden peach like an apricot to look at and taste, amazing intense flavour, ripe early February. Passed to Kōanga by a Northland member in the 1990s.



PEACHES
 River Seedling
 Small, white flesh, green skin with red blush, freestone, good flavour, sweet, reliable heavy crops, similar to ancient peaches of Nepal. These are the peaches that once grew wild around the Kaipara Harbour where, at the time, the early settlers cut down all the pohutukawa when the farms were broken in. Ripe late January to early February.



PEACHES
 Silver Queen Seedling (very rare)
 Large white flesh peach with green skin. Has an old fashioned, maroon-red blush (very unusual colouring), free stone, outstanding flavour. Came from the original French settlers orchard near Kohukohu, and was taken by Ken Vincent who owned that orchard to Kaitaia where it has been over the past 30 years.

Peacherines



PEACHERINE
 Matakoho on Peach
 An outstanding new addition to our collection. This tree came from an old orchard still being well maintained in the Matakoho area. It's a sweet, melting, buttery yellow fleshed fruit, with yellow skin, ripe February.



PEACHERINE
 Robertson's Seedling
 Outstanding peacherine from the original Roberston homestead on the Kaipara. Reliable heavy cropper of medium size, deep orange flesh and skin, with red blush when ripe, excellent flavour and texture. The best peach for drying. Clingstone, ripe late February to early March, great bottling.



PEACHERINE
 Kohukohu Seedling
 Average size fruit, honey coloured skin with old fashioned red blush, bright yellow/gold flesh, with red around stone. Outstanding flavour. Came from the original French settlers orchard near Kohukohu, and was taken by Ken Vincent who owned that orchard to Kaitaia where it has been over the past 30 years.

Plums & Prunes



PLUMS
 Burbank on Plum
 Large, red/yellow skin, yellow meaty flesh, excellent flavour, compact tree, clingstone. Crop so heavily that you have to either thin the fruit or prop up branches. Either way they need careful pruning. Burbank plums came into the Kaipara harbour, according to Logan Forrest, with the Dalmatian gumdiggers. Ripe February.



PLUMS
 Dan's Delight on Plum
 Small, round plum with dark red skin and flesh. Sweet and juicy with nice texture. Very special delicate flavour. Ripe January. From Wilderland in the Coromandel.



PLUMS
 Dan's Early on Plum
 Yellow flesh, red skin, medium size, best tasting early plum, large tree that has large crops. Makes a good tree in the pig paddock, you get them until the next thing is ripe and the pigs get the rest! From Dan Hansen, Wilderland, growing wild on roadside. Ripe late December, early January.



PLUMS
 McIntyre on Peach
 Medium sized plum with firm dark flesh and skin and a rich flavour. Ripe mid January. From the very old McIntyre family homestead near Kawakawa.



PLUMS
Prune, Kōanga on Plum

Elongated egg shape, excellent high flavour, sweet freestone, yellow flesh, reddish/yellowish/purplish skin, last fruit drying on tree mid march. Heavy croppers, excellent fruit for drying. We lost the whakapapa of this prune but it is a really good one and have called it Kōanga for now. Ripe February-March.



PLUMS
Scarletina Cutting

Red skin and flesh, outstanding flavour and colour. Great for dessert, jam and bottling. An ex commercial Australian plum it came to us from Matakōhe. Self fertile. Ripe mid January.



PLUMS
Simon Dew on Peach

Large round, heart shaped plum with a groove down one side with black skin, black flesh, and a deep, rich, intense flavour when fully ripe. Another outstanding heritage plum. Ripe late February, early March.

Pip Fruit

ROOTSTOCK	DIAMETER	CANOPY SIZE	PREFERENCES	DESCRIPTION
M9/M26 Dwarf	2m	3 sqm	Irrigation, mulch, staking, free draining soils.	Produces a dwarf tree. Can be espaliered, cordoned or grown as a staked tree.
MM106	4m	13 sqm	Free draining soils.	Developed for free draining lighter soils. A semi dwarfing tree, if well pruned can be kept to 2.5m high and 3m wide. An excellent choice for home gardens if you have the right soil
793	4-8m	30 sqm	Free draining soils.	Large tree. Has been bred from Northern Spy and does well on heavy soils.
Northern Spy	4-6m	30 sqm	This is the old rootstock that does best on heavy clays. It can handle heavy wet soils as well.	Tree Size: It is possible to keep trees on this rootstock to 3m if you are a very skilled pruner. They can grow to 6m, but not too difficult to keep them to 4-5.



Apples – Dessert



APPLES
Bert's on M9

Medium size, round apple with yellowish russet skin with a red blush. Dessert apple with excellent flavour and old fashioned firm flesh. From Bert Davies collection planted in 1917 in his old pear orchard, one of 2 apples in the pear orchard (the other was Northern Spy). Ripe March/April.



APPLES
Dawn O'Leary on 793

Large, round apple. Dark red skin. Crisp firm texture. Good flavour. Sweet but with slight sharpness. From Dawn O'Leary near Silverdale. Chance seedling. Her father had an apple nursery and orchard when she was a child and she realised this was a good one and not like others she knew. Great dessert apple, fantastic cooker and stores quite well. Ripe late March/April.



APPLES
Freyberg on M9, MM106 & N Spy

Large, pale green skin which turns pale honey yellow when ripe, crisp, juicy and very sweet flesh, excellent texture and flavour, heavy cropper. Ripe late February to late March. Bred by JH Kidd, Greytown, Golden Delicious/Cox's Orange cross, in collection since 1986.



APPLES
Giant Geniton on 793

Green skin, similar to Granny Smith, but reddish striping when ripe, sweet/tart crunchy dessert apple from April on and great cooking, reliable heavy cropper. This is an outstanding apple that came to this land with the Dalmatian Gumdiggers. From Phil Evans in Kohukohu, Hokianga, 1987. Also from Cloon Eavin, Pahi. One of the very best apples in the North.



APPLES
Golden Delicious on N Spy

Large apple with golden skin and golden flesh. Conical shape with sweet, crisp, rich aromatic flavour with great depth, far better than modern selections. Came to us from Kaiwaka.



APPLES
Granny Smith on MM106 & N Spy

Large, round, bright green skin, crisp, sweet tasty/acid tangy flavour. Great dessert apple when left on the trees to fully ripen, when the skin goes yellow with a red blush, and the flesh goes super sweet and juicy. Ripens April-May. Also great used for cooking, juicing drying and storing. Far better on Northern Spy rootstock than modern dwarfing stock



APPLES
Jonathan on MM106

Old fashioned dessert apple, crisp with very juicy flesh, mostly red skin with green patches when ripe, white flesh. Keeps very well, ripe March/April. Originally from the settlement and huge orchards planted at Port Albert (on the Kaipara Harbour) by the Albertlanders from Germany.



APPLES
Matakana Golden Russet on M9 (UG)
Golden russet skin with red blush on sunny side, round, flattish, yellow flesh, very rich aromatic flavour, sweet, soft, excellent with cheese. Ripe late February/March but store well and taste better with keeping. They are precocious bearers, reliable heavy croppers and are very special apples.



APPLES
Maxwell Quirk on 793
Golden Delicious parent, large, yellow skin, with pink blush on sunny side, excellent sweet Golden Delicious type flavour, crisp. From seedling tree in Northland, 1998. Dessert apple, ripe mid February to late March.



APPLES
Mayflower on 793
Medium-large, flat, green skin, turning yellow when ripe, gold russet on top with yellow flesh. Excellent old-fashioned full flavour, crisp, heavy reliable bearer, small tree. Ripe March/April. Selected from thousands of seedlings in the Hokianga by missionaries Knaggs/Fairburn 1840s, named after boat he arrived in. From Jim Cox, Tangiteroria, 1980s.



APPLES
Northern Spy on 793
Green skin turning pale yellow in the shade and red/purple in the sun when ripe, good on dwarfing stock, otherwise slow to bear, delicious, juicy, rich sub-acid aromatic white flesh, fine grained, tender. From old Bert Davies orchard, Wellsford, 1987. Ripe March/April.



APPLES
Red Delicious on 793 & M9 (UG)
Original cultivar, almost black skin when ripe, wonderful sweet flesh, excellent aromatic, rich flavour. From Kaitaia, 2000. Ripe March.



APPLES
Tinopai on M9
Beautiful, round, red, streaky dessert apple with excellent flavour. Came to us from Tinopai on the Kaipara. Ripe March/April.



APPLES
Vaile Early on M9 & MM106 (UG)
Small-medium, conical, yellow greasy skin with red streaks. Juicy, sweet, sub-acid, reliable cropper, medium vigour, takes some years to ripen early. From Lionel Quaife (well known orchardist in Paparoa), 1987. Ripe late December to early February.



APPLES
Winesap on MM106
Red skin, old fashion apple, very sweet tart dense flesh, with winey flavour. Ex Kaipara Harbour. Ripe May.



APPLES
Zimmerman on N Spy
Large, elongated, conical, square bottomed with bright red streaky skin. Excellent rich, juicy, sweet flesh, ripe late February/March. From the original Zimmerman family orchard on the Chathams.

Apples – Cooking



APPLES
Bramley on N Spy
Well known in England as the best cooking apples. Large, irregular, ugly even in shape, light green skin, outstanding flavour and texture for cooking apple, not a dessert apple. Ripe April/May.



APPLES
Worcester Pearmain on 793
Large, round, green skinned fruit, maroon blush on sunny side when fully ripe. Heavy, reliable cropper with outstanding disease resistance. Melts when cooked, with a great flavour. In the Kōanga Collection since 1987, origin unknown. Ripe March/April.



Other Fruit

Berries



BERRIES

Boysenberry Hammer Springs (UG)

Boysenberries are a cross between a blackberry and a raspberry and produce delicious berries that are high in antioxidants. They behave like blackberries and produce arching stems that can be tied to a frame. They do well in climates with mild winters and warm summers. Fruit mid December and ripe for Christmas.



BERRIES

Currant, Aniwikiwa Red (UG)

From the Wendy Evans Collection in the lower North Island. Needs coldish winters, does well here at Kōanga near Wairoa. 10 x 3 degree frosts should be enough cold for currants to fruit. Ripe December.



BERRIES

Currant Giant Red Ruby (UG)

From the Henry Harrington Southland collection. Henry collected most of his berries along the railway lines travelled by the early settlers and gold miners. This is the largest of our red currants ripening in mid December.



BERRIES

Currant, Palmer Black (UG)

This was sent in by a member years ago and is a reliable, heavy cropper, in fact our best cropper, and a strong grower. Ripe December.



BERRIES

Currant, Pauatahanui Red

From the Wendy Evans collection, and Pauatahanui, in the Lower North Island. It is a classic red currant. Ripe December.



BERRIES

Currant, Seddon Early (UG)

From the Henry Harrington Southland collection, named because it ripens earlier than others in December.



BERRIES

Currant, White (UG)

From the Henry Harrington Collection, white currants are the sweetest and the least likely to be found by the birds. Henry collected his currant collection mostly from plants found growing wild along the railway lines from the gold mining days. Ripe December.



BERRIES

Gooseberry, Aniwikiwa Green

A classic, heritage, green gooseberry from the Wendy Evans collection in the lower North Island. Strong, healthy cultivar.



BERRIES

Gooseberry, Henry's Large Black Red (UG)

These are a large black-red fruit, very sweet, sub acid with a strong aromatic aftertaste. Outstanding cultivar, ripe December. Allow 1m. From the Henry Harrington Southland collection, which Henry collated from plants growing wild along railway lines along the tracks near Ohai.



BERRIES

Raspberry, Black (UG)

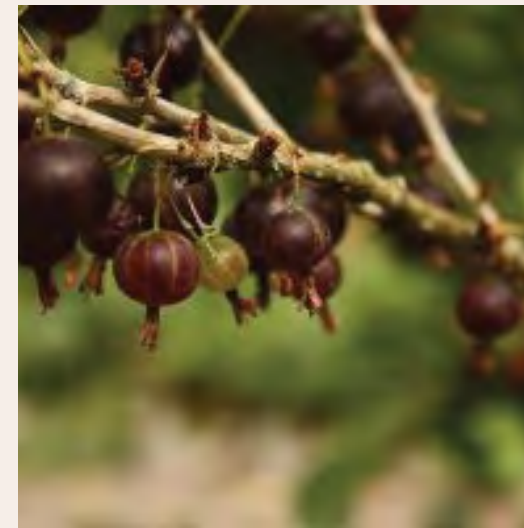
These raspberries are Kay's favourite fruit. Apart from being delicious and ripening at a really good time, the black raspberries are supposed to be the most nutritious. If you plant them in good soil, in a bed with hardish paths each side of the bed, as we have, there will be no suckering, making them easy to manage. Gifted to us from a member in the South Island.



BERRIES

Raspberry, Lake (Red) (UG)

Classic red raspberries that sucker strongly like the yellow one. Best in a largish Forest Garden situation where they can form a raspberry patch. Fragrant and tasty. From Louise Shaw 2006, originally from the central North Island lakes area. 1.5m, ripe December and again February.



BERRIES

Raspberry, Yellow (UG)

Outstanding raspberry, was well known all over New Zealand 100 years ago. Average size, pale yellow fruit, one of the best eating raspberries, with a strong Autumn crop following a Summer crop. 1.5m, ripe December. Widely found in South Island goldmining areas.

BERRIES

Worcesterberry, Henry's (UG)

It is a cross between a gooseberry and a black currant, and grows like a vine, so needs espaliering against a wall, a south wall is great. If you espalier them like an apple you can then hang bird netting over the vine when the black sweet berries are ripe, the berries sit for weeks once ripe if covered. Excellent flavour. Ripe February will hang on bush if shady until late March.

Feijoas



FEIJOA

Tony Firman

Large fruit, with a yellowish, very sweet flesh, and thin skin. An outstanding cultivar gifted to Kōanga by Tony Firman. Selected from a large field of seedling feijoas grown from White Goose and Golden Goose, which are outstanding cultivars in their own right and patented as export cultivars. Out of the field of seedlings this is his favorite. He chose it because of its very large size, excellent flavour like the old ones used to be, its ability to crop with no irrigation (i.e. it has strong deep roots) and its keeping qualities. Ripe May/June.



FEIJOA

Mammoth or Triumph

Mammoth is a popular Feijoa variety due to its large, tasty fruit and good yields in autumn. It produces large and oval fruit with a thick skin. The flesh is slightly gritty but very tasty. This is a very early cultivar and has stood the test of time for home gardeners. Easy and reliable. Ripe May. Triumph ripens after Mammoth and is an older cultivar that is excellent for home gardeners. It is large and has a rounder shape than Mammoth. Ripe late May.

Figs



FIGS

Black (UG)

Small, dark skinned, pink-fleshed fig, creamy texture, very sweet skin. An early fig, best for marginal areas that may experience cooler Summers. Reliable, early cropper. Ripe March to early April. Allow 4-8m (depends on pruning). From Auckland, NZ Heirloom.



FIGS

Hyndemans (UG)

Outstanding fig that ripens well if picked before the birds get them. One of the few super reliable heavy croppers even in a bad year. Small figs with a purply skin and silky pink centre. Ripe March/April. Very good for drying. Allow 4-8m (depends on pruning). From the Hyndeman family's farm in Kaiwaka on the Kaipara Harbour.



FIGS

Pouto Sugar (UG)

Very sweet fig, hence its name. Early, small, pear shaped, red-brown colour on one end with pale flesh. A reliable very sweet cropper, it is larger than the earlier ripening figs (Black and Hyndemans), and a particularly good one. Allow 4-8m (depends on pruning). This fig was used in the north as a sweetener, i.e. was dried or bottled and then added to other dishes. Was given to Kōanga by Logan Forrest of Pouto. Ripe March.

Grapes



GRAPES

Albany Surprise (UG)

Heavy cropper in mid season. Produces medium sized bunches of large, sweet, juicy, aromatic and spicy bluish-black berries with a jelly texture. Hardy and disease resistant. Suitable as a table grape or for wine production. Came to us from Mavis Smith of Totara House, Matakohē.



GRAPES

Bishop Pompallier (UG)

Large black grape, sweet with full flavour, excellent as dessert grape. Disease resistant, ripe in March. From Bishop Pompallier's original early orchard plantings, Kerikeri, Northland.



GRAPES

Black Dalmatian (UG)

Came to us from an old Dalmatian orchard in Kohukohu. Outstanding disease resistance and delicious strong flavour. Very dark skin, musky flavour and lots of tannin. Good as a dessert and wine grape. Ripe in late March. From a very old Dalmatian orchard in Kohukohu, NZ Heirloom.



GRAPES

Isabella (UG)

Lovely bunches of small grapes, juicy, sweet with a good flavour, thin skins, no seeds and very easy to eat. A very old Northland Grape that came in with the early settlers on the boats via America. This is one of the oldest grapes in New Zealand. Ripe February.



GRAPES

Wairarapa pink (UG)

Small, oval, pink skinned grape with outstanding flavour. Found in an old vineyard, when pruning grapes. Owner had kept these outstanding old dessert grapes because of their quality amongst modern wine grapes.



GRAPES

White Dalmatian (UG)

Came to us from an old Dalmatian orchard in Kohukohu. Very sweet, excellent flavour. Came from the same old orchard as Black Dalmatian.

GRAPES

Raoul Island (UG)

These grapes were sent to Kōanga from Raoul Island at the time DOC were cutting out everything that was not native. They have fruited here for us in Kaiwaka, but fruit better in warmer areas. the grapes are outstanding in flavour, huge and seedless.

Apologies, no
image available

Loquat



LOQUAT

Large, thick fleshed, very sweet and excellent flavoured loquat, in a whole new paradigm than the usual wild ones. Fully ripe late November to early December. It is a prolific cropper and one of the early season fruits that are so welcome. Super hardy and reliable. They also make a great tree for children to climb, or to hang hammocks from. Please note that from September 2022, planting loquat has not been permitted in the Auckland region.

Paw Paw



PAW PAW

American (Asimina triloba)
A native to America called the American pawpaw. these trees/shrubs and fruits are like tropical fruits in every way except that they handle hard frosts and prefer wet feet. They grow as multi stemmed shrubs or thickets. The fruit is large, looking like elongated cassimiroa, with a skin similar to cassimiroa, and flesh that is smooth and wet with a passionfruit feijoa banana type flavour. They have large seeds inside. You need need more than one for good pollination, however they do still fruit with only one flowering. Plant 2-3m apart.

Nuts



NUTS

Almond, Mona Vale Seedling

A hard shelled, excellent quality nut, large tree and heavy cropper. For most of us hard shelled almonds are far more reliable than thin shelled ones as insect pests can't get in there. Almond seedlings form quite large trees. They are usually the earliest to blossom and are very beautiful.



NUTS

Pecan Seedling

Pecan nuts have a rich, buttery flavour and can be eaten fresh or used in cooking (traditionally in sweet desserts). Pecans fruit from seed around 6-10 years but require several trees for pollination to be effective so best out in the paddock! Pecans need hot summers and a very sheltered spot as well because their wood is brittle. They grow to be very large trees like walnuts and require similar free draining soil. Like walnuts they also kill other plants growing under them.



NUTS

Walnut, Black Seedling

Walnut trees are long-lived and provide shade and habitat for wildlife, they have close-grained, and strong wood for woodturning, for building, and for musical instruments. The leaves, hulls, and stems of black walnut are rich in iodine and highly medicinal. The nutmeats are nutritious and considered a superfood, and the hulls, leaves, and twigs produce a dark brown natural dye that is colour-fast. Ripe March.

Persimmon



PERSIMMON

Fuyu on Persimmon

Seedlings from an old, astringent persimmon at Kōanga.



Forest Garden Support Species



SUPPORT SPECIES

Chinese Red Bud (*Cercis chinensis*), root trainer

Ornamental legume that can be coppiced but best chop and drop as it gets too high. Woody upright tree to 7m if not managed, multi-stemmed with free flowering, highly ornamental pink purple flowers in Spring for 2-3 weeks. Ideal for small spaces, and urban gardens. Very beautiful trees.



SUPPORT SPECIES

Maple Boxelder, AKA Rocket Tree (*Acer negundo*), root trainer

A super fast growing maple that has wonderful colours in Autumn and is great for coppicing.



SUPPORT SPECIES

Oven's Wattle (*Acacia pravissima*), root trainer

A woody shrub/tree that grows up to 4m in height, it does well on heavy clay soils and is great for a subtropical forest garden situation. It is light and airy and can easily grow anywhere around heavy feeders, fix nitrogen, be chopped and dropped and also have flowers that feed the native and other beneficial insects, in particular some of the psyllids that we need! They handle a light frost but do not like heavy frosts so not an option in cold climates.



PLUMS

Totara House Flowering Prune on Plum

Ornamental flowering prune from Mavis Smith of Matakahe. Tree has beautiful pale pink double flowers in early spring followed by dark red leaves.



Support Species – Cuttings



CUTTINGS

Basket Willow Collection, 3 cuttings each of 4 varieties

These are professional basket willows, and will grow to have different color, length, flexibility, and so on. willows like wet soils and the more water available will result in more growth, plant in 30-50cm spacing to create long upright growth, and harvest during winter.

- Common Osier x 3 (*salix viminalis*) — Gold
- Giganta x 3 — Yellow
- Purple Willow x 3 (*salix purpurea*) — Red/Purple
- Unknown x 3 — Yellow



CUTTINGS

Dogwood, Red Stemmed (*Cornus alba* 'Sibirica'), 3 cuttings

Great for coppicing and ramial wood chip. Stunning colour in forest garden all year round but most noticeable in Winter, grow in a thicket to 3m high, stunning red stems, great for basket weaving, and excellent in boggy wet places. They need annual coppicing or the stems tend to root and spread.



CUTTINGS

Dogwood, Yellow Stemmed (*Cornus stolonifera* 'Flaviramera'), 3 cuttings

Great for coppicing and ramial wood chip. Slightly weaker than the red stemmed dogwood, stunning yellow all year, best in Winter when things are bare, prefers wet places grows to 2m as a thicket.



CUTTINGS

Egyptian Willow, 3 cuttings

We have found that this willow is the most resistant to the large black aphid that is attacking our willows today, and it is the willow best suited to use as firewood, because it has very little branching, only good strong length of thick wood easily cut up, and as well as that an excellent bee forage because the catkins are among the first Spring pollen available for our bees.



CUTTINGS

Japanese Fodder Willow, 3 cuttings

A multi stemmed vigorous willow selected for it's long growing season with leaves retained into late autumn. Good for stock fodder and for firewood.



CUTTINGS

Poplar Kawa Bundle

Kawa has good form for timber production and is a vigorous variety well suited to Northland's subtropical climate, holding its foliage well into Winter and flushing fairly early in Spring with no risk of frost damage. Very healthy, not damaged by possum browsing.

Fruit Tree Planting Instructions

The aim of these instructions is to make sure you end up with a strong healthy tree that grows a main frame fast and is capable of producing high brix crops for many years.

Our heritage fruit trees have all been organically and regeneratively grown. We are growing soil in a measurable way, which means we are increasing the mineral levels, the microbe levels, and the humus levels in our soil and growing high brix super healthy trees at the same time. All of our open ground, bare rooted trees have white dots painted on the North side of the tree, to make it easy for you to plant your trees facing the same direction. The roots of trees align with the earth's magnetic poles and they grow better if replanted in the same direction they began in the nursery.

- Dig a hole 50cm x 50cm minimum for each tree. If you are on heavy clay try to make it 1m x 1m. If you can't do that then accept the best you can do, but do your best effort, you will be rewarded! If you are on heavy clay or soil that does not drain, you will have to put drainage out the bottom of your hole, and if you are unable to do that you may have to build your tree space partly up above the existing soil surface.
- As you dig out the soil, separate topsoil from subsoil.
- Mix your topsoil 50/50 with good compost or you could use well composted hay or well rotted bark, rotted wood chip, cow manure or other animal manure etc.
- Read the information on our website about Silverleaf. You can choose to build an environment that will protect your trees or wait to see if they get infected and then use

Tricho dowels. If you are using ramial wood chip and wish to create an environment that builds soil and tree health, I would recommend dipping tree roots in Tricho Flo before planting, then placing some Trichopellets in the tree hole before planting (near the surface where the feeder roots will be) and then watering in with TrichoFlo.

- Plant your tree into the hole so that it is sitting in the soil at the same level as it was in the nursery or pot previously, and make sure it is on a small mound, so that as the soil in the hole settles your tree will not be in a hollow!
- Your tree will also grow better and perform better if you plant it so that the strongest roots face into the South. Tree roots will have aligned already in the nursery with the magnetic field of the earth, which means the strongest roots will face south, so if you can also plant it facing this direction, your tree will perform better and be happier! All Kōanga fruit trees have a paint dot on the North side of the tree so you can also check how to plant it.
- Make a berm at a radius of 1m around the tree to hold all the nutrients, mulch and moisture inside it. You may have to breach this berm in the winter so that it does not hold water inside and drown the tree! After year 2 it won't be necessary to maintain the berm.

- Mulch heavily to suppress weeds and help maintain moisture over the Summer. If you use a ramial wood chip, this mulch will also serve as food for the fungi in the soil, and the fungi will make available to the tree roots the nutrients held in the ramial wood chip, they have balanced minerals for tree growth, especially when combined with appropriate support species and forest garden management.

- Tree roots are like water pumps, one of their jobs is to pump water up into the tree branches, after planting your trees you must prune them back so that the short roots can support the size of the tree, if the tree is not pruned back, the roots may not be able to support long branches and those will die back. Prune the trees so that when they regrow they develop branches and growth where you want it – thinking of the main frame you want your trees to have years from now.

- Feed your fruit trees each year in January as it is this time of the year that nutrition determines the size and quality and health of next year's crop. If you are using a ramial wood chip I would prune support species, chip, and mulch in Winter for some trees, and in Spring and Autumn for others (see our *Forest Garden Management* chart). This will ensure your heavy feeding fruit trees have nutrients available in January when they need them for next year's crop.

- We put our Winter wood ashes around the fruit trees and the whole forest garden, as heavy cropping fruit trees require a lot of potash, 2-5 litres per tree depending on the size of the tree.

- If your soil is naturally low in available calcium, adding garden lime will be useful.
- Our advice is to plant only as many fruit trees as you can take care of in this way. Your rewards will outweigh the effort required!
- It may help young growth to use Fish Hydrolysate as a microbe feed, or BioFert as a foliar feed... the online workshop is well worth doing if you plan on making your own fertiliser.

We make our own regenerative fertilisers, you can participate in our online course *Making Regenerative Fertiliser*.

There is further, in-depth information available in our publications, *Design Your Own Orchard* and our *Designing & Managing Forest Gardens* booklet. These are available in both printed and digital formats.

We offer an on-site *Forest Garden Masterclass* for individuals seeking an in-person, comprehensive and in-depth learning experience.

You can purchase our beautiful *Forest Garden Management* wall chart from our website – designed to support you at a glance with your forest garden management. Keep on track with all of those essential tasks to get the best from your Forest Garden.

Silverleaf is a common fungal disease of trees, we have information and products available to help you prevent and cure this disease.



Success with Tree Seeds

Seeds and cuttings are a great way to get your Forest Garden off to a great start. It is the support species that build the soil and especially the soil fungi. It is the soil fungi that feed the fruiting trees and support their immune systems. I would totally recommend getting these plants off and away before even beginning to plant your fruit trees. In the *Designing & Managing Forest Gardens* process in my booklet you design the forest garden, then mark out where the permanent fruiting trees go, then plant the support species around them and get them well established before the fruit trees go in. You will not ever regret that decision.

You don't necessarily need a chipper to be making ramial woodchip with the prunings each year, I do it by hand with loppers and secateurs in my home forest garden of 900 sq m. After a few years you have a deep litter breaking down at the interface with the soil creating an amazing highly fungal soil, that takes care of tree growth and health.

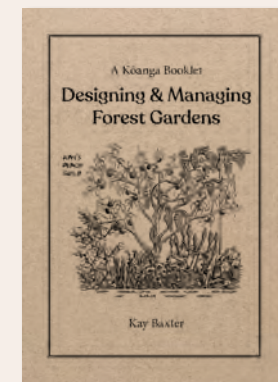
Cuttings are the easiest to begin with, see willows and poplars under support species in the tree catalogue, but seeds are also a great way to do this. It is just really really critical that you follow the instructions on the seed packets because planting the seeds of trees is very different (very often) to planting vegetable seeds.

Many of our legumes have come originally from places where there are forest fires or very hot climates and the seeds often require heat, or seed coat damage to germinate so they need scarification – rubbing with sandpaper and pouring boiling water over them. The other tree seeds most often come from climates far colder

than ours, and they require stratification before they will germinate. That means putting them in the fridge or freezer for a few months. Watch your seed packets for instructions, and you will find it is very satisfying to build the skills to grow your own forest garden support species.

An important part of growing these trees is learning to manage them to the best benefit of your fruit trees. There is a pattern language to the way trees grow and the cycles of growth above and below ground. Our *Kōanga Forest Garden Management Chart* shows you these patterns and helps you with management of the trees. Showing you when, and how to prune the various trees. Join us on this super exciting journey.

We are super excited to be able to tell you that we will have a lot of *Elaeagnus multiflora* seed available shortly, just have to process the seed, as well as seed for Black Chokeberries and *Cornus Kousa*. All really valuable support species with edible berries.



Support Species – Tree Seeds



SUPPORT SPECIES

Amur Maackia (*Maackia amurensis*)

Grows to 6-7m. A legume for temperate forest gardens, with high water tables. They are good in other areas so long as their roots get to moisture. Slow growing initially unless weeds suppressed. Timber ground durable, coppice well, feathery light canopy, excellent bee and insect forage in flowers and the seeds are poultry food. We like them because they add so much and take up so little space.



SUPPORT SPECIES

Black Alder (*Alnus glutinosa*)

Broadly conical, deciduous. Vigorous growth and good form. Habitat beside rivers and will grow in very wet places. Tolerates salt winds better than the other alders. Good firewood crop to utilise wet ground. Timber durable under water. Height 20-25m.



SUPPORT SPECIES

Black Locust (*Robinia pseudoacacia*)

A deciduous tree in the legume family, growing up to 20m. It is native to southern United States and is widely spread around the world. Robinia is a great forest gardens plant as we could harvest several crops – early flowers for bees, ground durable posts, it coppices so posts can be harvested every few years, and is nitrogen fixing. Poultry love the seeds. Seed drops in February/March/April.



SUPPORT SPECIES

Brush Wattle
(*Paraserienthes lophantha*)

Short-lived tree with densely hairy ribbed twigs and bronze, hairy young shoots. Tiny, numerous, green-yellow flowers in flowerheads (May-Aug) resembling a bottlebrush are followed by flat, green to brown seed pods containing foul-smelling seeds. These trees are excellent to use for building soil. Just chop and drop frequently and/or chip for ramial when quite young, two years is ideal, they grow so fast you get a lot of ramial very fast.



SUPPORT SPECIES

Chinese Red Bud (*Cercis chinensis*)

Ornamental legume that can be coppiced but best chop and drop as it gets too high. Woody upright tree to 7m if not managed, multi-stemmed with free flowering highly ornamental pink purple flowers in Spring for 2-3 weeks. Ideal for small spaces, and urban gardens. Very beautiful trees.



SUPPORT SPECIES

Chokeberry, Red (*Aronia arbutifolia*)

A thin-stemmed, shrubby tree to 3m. The wood is hard. They set huge crops of red 5-6mm berries, soft when ripe. The roots tend to throw up new stems if damaged and it naturally forms a thicket. We dry the berries and grind on breakfast or add to stewed apple etc. They have a great flavour but are astringent until dried.



SUPPORT SPECIES

Cranberry, American (*Viburnum trilobum*)

A beautiful native American shrub also known as crampbark, found in wooded, usually moist areas, competing with the rest of the underbrush. Excellent orange-red autumn colour and red fruits. It is a fantastic chop and drop tree growing vigorously each year, or used for ramial wood chip. Birds love the berries.



SUPPORT SPECIES

Golden Chain
(*Laburnum anagyroides*)

Legume with clover like leaves, and long racemes of yellow pea like flowers in late Spring. Tree grows to 7m in some soils. Can be chop and drop species, but is very beautiful left to grow full size. Please note all parts of the tree are poisonous.



SUPPORT SPECIES

Goumi (*Elaeagnus multiflora*)

Elaeagnus multiflora Nitrogen fixer. Deciduous shrub growing to about 3m. Bees love the flowers. Some plants produce berries which can be eaten. Great as a forest garden support tree or in a hedgerow. Can be pruned for chipping or chop and drop. Copes with a wide range of soils.



SUPPORT SPECIES

Hawthorn, Fireberry (*Crataegus crysocarpa*)

Edible fruit, raw or cooked. Used mainly as a famine food. A very pleasant flavour when ripe, with the added bonus of ripening in late summer before most other members of the genus. The fruit can be used in making pies, preserves, etc., and can also be dried for later use.



SUPPORT SPECIES

Japanese Raisin Tree (*Hovenia dulcis*)

Large, up to 10m, fast growing, attractive, hardy, deciduous tree. Can be used as emergent in forest garden situation. Excellent bee forage in December to January. Produces edible swollen stalks that are sweet like raisins. Can be eaten fresh or dried but are fiddly to use in any quantity. Good chicken forage.



SUPPORT SPECIES

Lupin, Russell (*Lupinus polyphyllus*), Perennial, (UG)

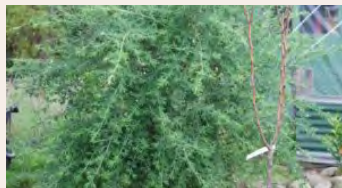
Grows to 1.5m, suited to temperate climate such with free draining poor soils. Stunning mixed colour display and excellent in forest garden for chop and drop material and self seeding nitrogen fixer.



SUPPORT SPECIES

Lupin, Tree, Blue flowered (*Lupinus perennis*), Perennial, (UG)

Wild Lupine. A showy nitrogen fixing perennial with narrow, elongated clusters of usually deep blue, pea-like flowers from mid spring to mid summer.



SUPPORT SPECIES

Oven's Wattle (*Acacia pravissima*)

A woody shrub/tree that grows up to 4m in height, it does well on heavy clay soils and is great for a subtropical forest garden situation. It is light and airy and can easily grow anywhere around heavy feeders, fix nitrogen, be chopped and dropped and also have flowers that feed the native and other beneficial insects, in particular some of the psyllids that we need! They handle a light frost but do not like heavy frosts so not an option in cold climates.

SUPPORT SPECIES

Snail Vine (*Vinga caracalla*)

Well known as a heritage flowering vine, this is a perennial legume, wonderful in any forest garden with a warm aspect. The vine is vigorous and the flowers are cream and mauve spiralling with a wonderful scent, like so many other legumes. Light frosts tolerated, can grow up anything.

SUPPORT SPECIES

Tagasaste/Tree Lucerne (*Cytisus proliferus*)

Small spreading evergreen tree to 3-4m. Indigenous to the dry volcanic slopes of the Canary Islands. Great nitrogen fixing pioneer plant for forest gardens, producing large quantities of foliage biomass for mulch and fodder, firewood and biochar, early season flowers for bees and seeds for birds. If you train your chickens when young it is a wonderful high protein chicken food. First to flower in winter early Spring until November, seeds drop in January/February.



SUPPORT SPECIES

Tree Lupin, Yellow Flowering (*Lupinus arboreus*)

Evergreen shrub to 1-1.5m. In spring bears many racemes of fragrant, soft, pea-like yellow flowers. Can tolerate temperatures to -12°C and lives for up to seven years. Great nitrogen pioneer species for forest garden. Great for chopping and dropping to use for mulch, and nitrogen release to surrounding heavy feeders, and their masses of seed can be a significant part of the diet of your poultry. Seed is mature from late December and drops over a very long period.



SUPPORT SPECIES

Tree Medick (*Medicago arborea*)

Small, slowish growing, evergreen tree to 3-4m. Indigenous to the Mediterranean basin. It is a great nitrogen fixing pioneer plant for forest gardens, producing large quantities of foliage biomass for mulch and fodder. Flowering after the Siberian pea tree these flowers release amazingly strong sweet fragrance around the area calling the bees and producing seeds for birds. Seed drops in January/February.

Perennials

Perennial vegetables are a great addition to a garden, bringing diversity and variety but also increasing resilience in the garden. Our perennials collection contains all kinds of treasures many of which were important elements of old food gardens that have now become rare. Some perennials such as potatoes, kumara, yams, shallots and garlic are usually grown as annuals, however naturally they remain in the ground and grow as perennials. Others such as strawberries, welsh bunching onions, multiplying leeks, sea kale, rhubarb and asparagus are left in the ground. We also sell some of our perennial vegetables in the form of seed, details here: <https://koanga.org.nz/product-category/all-vegetables/perennial-seeds/>

It is our aim to make these plants available in the form of starter packs. All of these will be sent to you as live plant material, not seeds, and are sent out at only one time of year according to their needs.

ORDERING SYSTEM FOR OUR PERENNIAL COLLECTION

Please order items from our perennial collection via our website. Details of all perennial plant material can be found here: <https://koanga.org.nz/our-shop/perennials/>



When we are sure of stocking levels each year the relevant items will be made available to order. Orders can be placed in advance once the item is listed as in stock but will only be sent out at the time indicated. They are dealt with by date received so earlier orders will be sent out first. To be informed when items become available please make use of the 'wait list' function on our website – you will then be sent an e-mail to inform you that the item has become available to order. Items will be sent out around the time indicated for that category although specific timing varies from season to season. If you have special requirements (for example will be away during part of the send out period) please let us know in advance as we are not able to contact customers to check before sending the items out. You will receive planting tips by email when you order and an order note with tracking number when your parcel is posted. If you have a back order query which does not relate to ordering or payment please e-mail gail@koanga.org.nz



Seed Collections

These seed collections have been developed to encourage children and gardeners of all ages to be inspired to garden. Presented in an envelope printed with artwork by Franzi Corker, these collections make wonderful gifts. They include written material to help you get the most from each collection, and offer a chance to grow some of New Zealand's most rare heritage seeds, from the Kōanga collection.



Beginner Gardener Seed Collection, 40sqm salads, stir fries, soups & stews
Take your family another step toward future food security! This seed collection is specifically designed to go with our *Kōanga Beginner Gardener* booklet (not included). Full instructions for every step of the way in words, diagrams and charts, are in the booklet.

Collection Contains:

- 48 packets of seed, including two Barley Carbon Crop packs.
- The Garden Action Plan.
- The Crop Rotation Planner.
- The Garden Map.

See more details on our website.



Children's Garden Collection

This collection contains the seeds a wide mix of all those plants that get children excited in the garden. We include hut building instructions using flowers and the vegetables included are exciting shapes and colours as well as easy and fun to grow – favourites for young gardeners.

Collection Contains:

Sunflower Giant Russian (for making children's huts), Morning Glory (for making children's huts), Zinnia Chromosia (to attract the butterflies), Cucumber Green Apple, Kiwano, Te Anu Salad Pea, Runner Bean White Scotch, Strawberry Popping Corn, Magenta Spreen Lamb's Quarters



Cottage Garden Faery Collection

A special collection of heritage Cottage Garden flowers that are perfect for creating a space that feels really special place to remember our grandmothers, and to tangibly feel the garden faeries there as well. From my travels around old gardens it is clear to me that the flower gardens of our ancestors who came to this land in the early days were largely about reminding them of family and place.

Collection contains: Poppy Fire Circle, Foxglove, Chinese Forget me not, Sweet William Mix, Nicotiana Woodlands, Aquelegia Grandmother's Garden, Hollyhock Muriwai, Sweetpea Heritage Mix.



Nourishing Greens

This is a special collection of seeds from the Kōanga Institute! A tasty collection of wild greens and highly nutritious garden greens to get the minerals and vitamins we all need each day, gotta love your greens!

Collection Contains: Puha, Purslane, Upland Cress, Endive Indivia Scarola, Corn Salad, Dalmation Cabbage, Watercress, Borecole Kale, Magenta Spreen Lamb's Quarters.



Winter Salad Collection

This collection is great for beginner gardeners - it will ensure that you have fresh nutritious produce for winter salads over many months, with a variety of colours, flavours and textures. Includes some tips for garden preparation.

Collection Contains: Nutty Celery, Endive Indivia Scarola, Welsh Bunching Onions, Corn Salad, Radish Tokinashi Daikon, Upland Cress, Rocket, Oxheart Carrot.



Wild Fermentation Collection

This collection of vegetables is designed to inspire you to preserve your excess from the garden with the technique of lactic fermentation. Recipes included.

Collection Contains: Red Rock Mammoth Cabbage, Radish Tokinashi Daikon, Deka Cucumber, Ohno Scarlet Turnip, Watermouth Tomato, Austrian Yellow Llobericher Carrot, Henry's Chinese Cabbage.



Kiwi Superfood Collection

Kiwis do not need to go to the Health Shop and spend money on imported products, to be able to eat 'super food'. We can all grow 'superfood' in our own back yards. There are two critical ingredients:

1. The right seeds.
2. The right growing conditions.

The vegetables and fruit you can grow with these seeds all have outstanding nutritional qualities and the details about each are in the Collection for you. We have included both Summer and Winter crops to create a year of fun and discovery and home grown superfood!

Collection Contains: Borecole Kale, Dalmatian Cabbage (Collards), Kiwano, Magenta Spreen Lamb's Quarters, Wild Crafted Golden Purslane, Dalmatian Parsley, Red Orach, Cape Gooseberries.



NZ Heritage Rare Seeds Collection

This is a very special collection of rare vegetables that you will not find in any other seed catalogue. They are some of the special vegetables that have come to this land with our own ancestors and were valued enough by the last few generations that they actually survived, to be available today for you through the Kōanga Institute and the generosity of our members, and our seed growers who are the life blood of our organization. This collection comes with the stories of each seed included.

Collection Contains: Bohermian Sugar Pea, Upland Cress, Dargaville Red Yellow Tomato, Dalmatian Cabbage (Collards), Dalmatian Bean, Alma Tomato, Burpees Thick Walled Pepper, Zimbabwe Squash, Port Albert Cucumber, Strawberry Popcorn.



Rainbow Summer Salad Collection

This collection of summer vegetables will ensure you have a load of colour, fun, flavour and nutrition in your salads this summer. We include some exciting recipes giving you some traditional ideas for using these veges in Summer Salads.

Collection Contains: Port Albert Cucumber, Magenta Spreen Lamb's Quarters, Red Orach, Finger Lettuce, Lighthead Lettuce, Genovese Basil, Carrot Touchon, Rainbow Cherry Tomato Mix.



Compost & Carbon Crops & 'No Dig' Gardens

So long as you have initially prepared your garden beds with a Roebuck fork or by double digging without mixing soil layers, you can switch to a 'no dig' garden. It is the fungi and the relationship between the aerated, moist soil, fungi, and plant roots that create a 'no dig' bed.

As our Summer crops come out, it is a great idea to immediately plant carbon and compost crops. The roots of these crops feed the soil microbes over Winter, and in turn carbon is sequestered (fungi are particularly active over Winter) and this is one of the ways these crops build soil health for us. On top of that we are able to harvest the crops in Spring before we plant our next food crops to make our compost with, the second way they help us build soil health.

Doing a great job of planting and growing these carbon and compost crops helps maintain air and structure in the soil and means a 'no dig' bed can actually function well.

If you get the timing right you will be pulling them out for compost after they have at least begun flowering, and their roots will be dying off, so they are really easy to pull out. Sometimes we are able to hit that sweet spot, other times not. When we pull them out in Spring we find that almost no weeds at all grow under them so preparing the bed for the next crop is very easy, often just applying compost and planting. If weeds do grow we cover the bed at this point with black plastic for as short a time as possible to kill the weeds, and then apply compost and plant.

Our Summer carbon crops are usually edible, we plant either sweet corn or flour corn, broad beans, or amaranth, millet, or sorghum. Our new Carbon and Compost Crop collection is

called Kōanga Soil Builder. It is based on the formula that biological agriculture research has shown to be most effective at building soil, a really diverse mix of plant families and seeds. See description on page 45 for more details.

Once you get to February you can choose any of the mixes depending on what you are looking for and what your soil conditions are like.

For these crops to be successful in colder areas they need to be planted by the end of the first week in March.

The most critical thing you need to have to get these crops germinated and away asap when you plant them is a piece of 60-70% shade cloth to cover them. It might take 2-3 weeks before you can safely remove that cover or the birds will get many of the seeds. It is critical.

Check out the following pages or our website for our range of carbon and compost crop mixes. The seed in all of our mixes is either

- Kōanga seed
- Certified organic seed, or
- Seed from regen ag seed growers in the South Island.

Alfalfa 500g

Enough to cover 200 sqm. We love to grow alfalfa in beds specifically for harvesting over the Summer to use as a mulch or in compost. It is a dynamic mineral accumulator, bringing potash phosphate and calcium in particular to the places we use it. It can be fed to cows or sheep in molassus etc and then it grows through the existing pasture if you allow long grass grass grazing. It is great mulch because of the high carbon content it lasts along time before breaking down. It comes up early in Spring and dies back later in Autumn than comfrey and is also great chicken food. Alfalfa, or lucerne as some call it, needs to go into a permanent bed, as it can grow there for many years. It needs free draining lighter soils to do well.

Common Vetch 500g

Vetch is a wonderful, very cold hardy, easy to grow legume that can be used in many ways. It is part of both of our compost crop collections but it is also very useful by itself as a leguminous groundcover under brassicas for example. You will have to cut it back during the season to ensure it doesn't grow over them but cutting it back just pulses the brassica growth. It is also a great crop to plant by itself before beds that are going into early Spring crops such as garlic or onions that might be wet or difficult to work at that time. All you have to do is cut the plants off at ground level with a garden shark and roll it back off the bed and replant the bed with no bed prep. The bed will be like chocolate cake full of nitrogen nodules to feed the next crop.

Kōanga Soil Builder 1kg **NEW**

Enough to cover 100 sqm. For years we have been looking for the best compost and carbon crop solutions. A lot of others are on this track now too and it seems clear that the mixes that grow soil the fastest, by pushing the most exudates into the soil to feed soil microbes, are the most diverse mixes. Mixes that are approx 60% legumes, 32% grains and grasses, 6% brassicas and 2% chenopods and amaranth, are achieving optimal results. Kōanga has

created a mix that meets this criteria, using a blend of our own heritage regeneratively grown seed and seed from NZ Regen Ag seed producers in the South Island and organic grain growers. This pack contains blue lupins, common vetch, crimson clover, black oats, ryecorn, wheat, Kōanga brassica mix, and a Kōanga chenopod mix, and amaranth. Best planted in late Summer Early Autumn in all soil types, anywhere in NZ.

Oats, Lupins & Crimson Clover 1kg

This is a classic combination. A grass with legumes create soil building synergy. In this case the oats are very special oats. These Black oats were developed in Germany to grow maximum biomass to feed horses over winter. They grow way way bigger tops than other oats, and love growing with legumes. Oats will usually be (always so far for me) the plants in our gardens with the highest Brix. They have a wonderful ability to sequester or bring in calcium and phosphate into their bodies which then goes into our compost and helps us build soil. We love oats. These are two minerals we need the most! We need as to be growing as much carbon as we possibly can in our carbon crops and lupins provide the highest levels of carbon with a good potash phosphate balance we always try to maximise lupins in these mixes. The Crimson clover hugs the ground until Spring and helps prevent weeds while the oats and lupins get themselves up high enough. Oats do not grow over cold winters so this mixture must be planted in Early Autumn or once the ground warms in Spring. When you grow this mix well and remove after at least 10% flowering the plants pull out easily and leave a weed free bed, easy to then replant! Our favourite bed mix over Winter.

This mix is stunning in Spring when the lupins, clover and oats are all flowering, a good one to put in after the heavy feeders, so that it can stay in long enough to flower, as it doesn't have to come out until the following October (if you are following the *Kōanga Garden Planner* you will see that the carbon crops that go in after, and before the heavy feeders get to stay in the longest). If you like the flowers and the insects this might be for you.

Perennial Patch 500g

A mix of colourful biennial, perennial, or self-seeding legumes and herbs that could make up a perennial border around your veg garden, with or without comfrey in it, to harvest throughout the Summer to mulch your veges, or to leave to flower to attract and feed the insects, or both. This range of species creates a prodigious amount of biomass for harvesting. This range of seeds could also be planted in your existing pasture where you graze your horse, cow etc, would improve the pasture a lot, and build resilience in dry or wet conditions, feed more bees and insects and be beautiful with the yellow crimson, purple and pink flowers. If I was starting from scratch I would prepare a bed, and plant my Russian comfrey root cuttings at 40cm diagonal spacings in a bed and chop this seed in at 1 tablespoon per 5 sqm and cover with weed mat until everything is well up.

This mix makes a permanent bed of colour, that can be harvested monthly throughout the growing season to use as mulch or compost material, or left to flower and bring in the insects and the birds, or a bit of both. It will do well anywhere in NZ so long as it is planted at the right time and taken care of for a few weeks.

Wild & Free 1kg

For the earth, the insects, our senses, all soils and all seasons. This collection covers approx 80-100 sqm of garden bed. A colourful mix of symbiotic annuals that grow easily and are easy to pull out for compost before your next crop goes in, or to cut off at ground level and lay down as mulch to plant through. Ideal as a compost/carbon crop that will build soil for the following crop, and support wider ecological health as well as bee and insect food.

This is another colourful mix best planted after and before the heavy feeders so it can be left until flowering. It will do well anywhere.



Garden Essentials

Kōanga BioBrew 500g **NEW**

Kōanga BioBrew is compost that has been made in a Johnson-Su Bioreactor, and tested to contain super high levels of microbes that are approximately 50% fungi and 50% bacteria. This product is best used as an inoculant at any scale. There is a lot of research showing that if you combine this product into your garden beds, then plant a biodiverse carbon crop, you will increase production every year, after only one application. At Kōanga we are forking into our beds in Autumn when planting our carbon crops and then mulching with Ramial woodchip, then planting in a food/seed crop in Spring with outstanding results. We saw BRIX's of 20-30 this past Summer in Kay's garden using this product.

Kōanga Pruning Paste 185ml

Anti-fungal, anti-bacterial, water-repellent coating for pruning cuts. Apply a thin layer to protect and heal exposed surfaces when pruning and grafting trees.

Kōanga Psyllid Solution 500g

This non-toxic organic spray is an absolute must for everybody wanting to grow potatoes, tomatoes, tamarillos or peppers in New Zealand. If you don't have the psyllids, you probably soon will. This product is a very finely ground, water soluble version of diatomaceous earth, and is applied as a foliar spray. Contains 85% silicon dioxide in the form of dispersible powder. Highly effective against a large range of insect pests. This will make enough spray to cover 100sqm eight times.

Diatomaceous earth is also used as an ingredient in Tree Paste and as a Poultry Miticide.

Refractometer

Refractometers are the hand held tools that we use to measure the Brix or sugar content of the sap of our plants. The sugar content is a reflection of the nutrient density of our plants. To be fully nourished and to know we are taking care of our soil (getting the right minerals in the right relationships) we must be growing High Brix crops or nutrient dense crops.

Seedling Widger

These are simple little tools that make a huge difference when you are pricking out seedlings, especially at the tiny stage when they have just got their first two leaves. Made from high quality stainless steel.

Tricho Dowels 20, 50 or 100

For inoculation of Silverleaf diseased trees. These are dowels that are impregnated with the living Trichoderma species and they can be used to inoculate and heal infected trees. The severity of the infection, and the size of the tree will determine how long this takes. A newly infected tree with one branch infected may only take 1 season to clear up. A large tree with several branches affected may take 3 years. and as many dowels each year as there are branches. Huge branches may need 2 dowels per branch.

Trichopel 200g

Trichopel is an insoluble granule designed for pre-planting use for all crops. It is formulated to provide a long-term food source for the Trichoderma. This ensures support to growing roots for up to 12 weeks. This is a product that encourages tree health to specifically guard against Silverleaf in the future.

Trichoflow 200g

Trichoflow is a wettable powder bio-fungicide registered for a range of root diseases and designed for easy application through any irrigation method from watering cans, fertigation and drippers to boom spray and flood jet. It is formulated with seaweeds and humates to improve the soil biology and support the colonisation of the Trichoderma around the roots. This is a product that encourages tree health to specifically guard against Silverleaf in the future.

Vine Vax Powder 200g

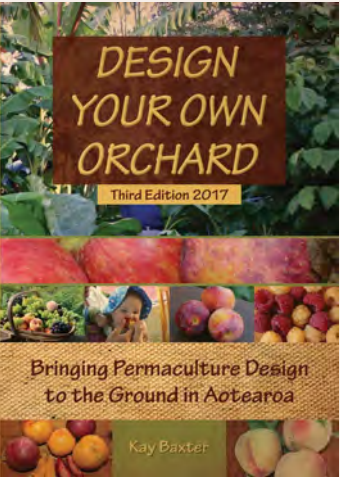
This is a wettable powder that can be mixed with water to make a tree paste for pruning, and wounds or damage to trees. This paste will prevent Silverleaf entering wound sites.

Zelp 500g

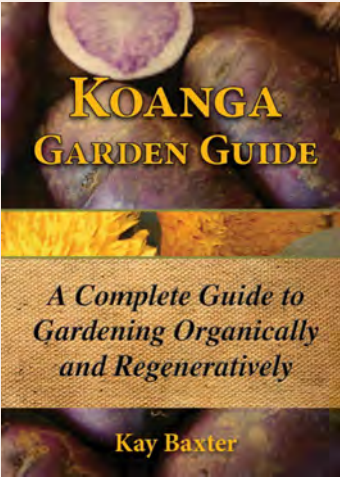
Certified organic sustainably hand harvested kelp from New Zealand. This is the best kelp available in NZ and it goes a long way. It can be used in a huge variety of ways as it is a growth promotant, a health promotant as well as supplying many of the required minor minerals including iodine.



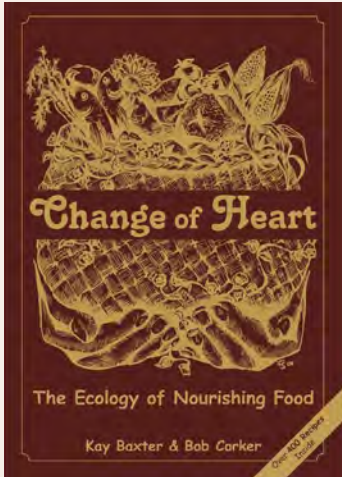
Kōanga Bookshop for Regenerative Living



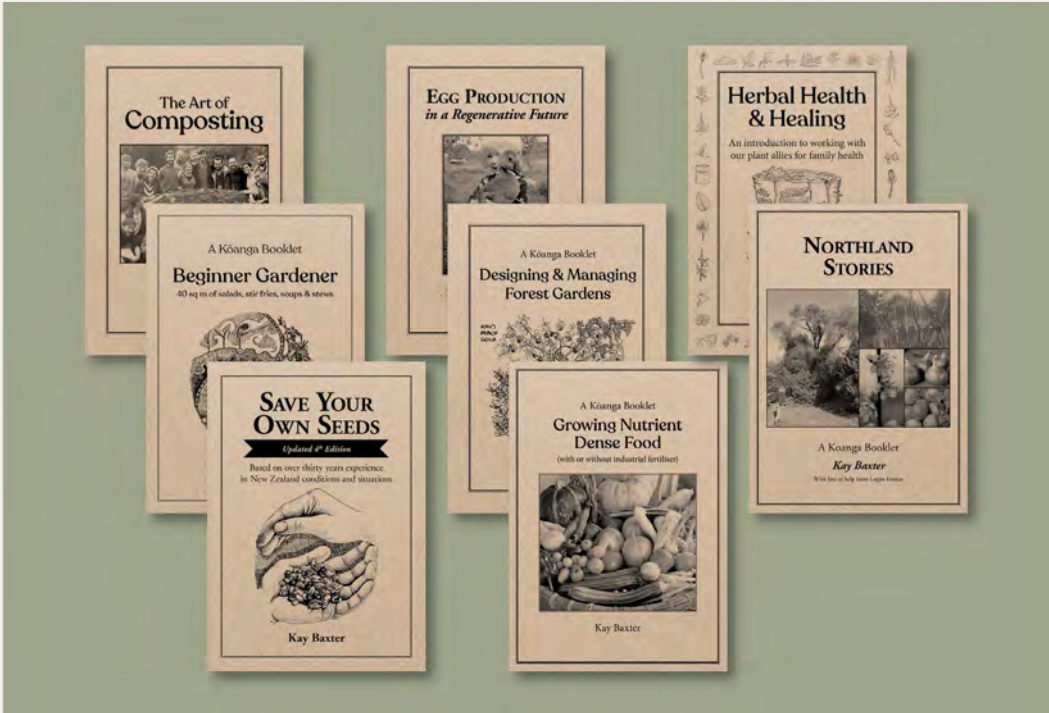
Design Your Own Orchard
Third Edition 2017
Kay Baxter



Kōanga Garden Guide
Third Edition 2015
Kay Baxter



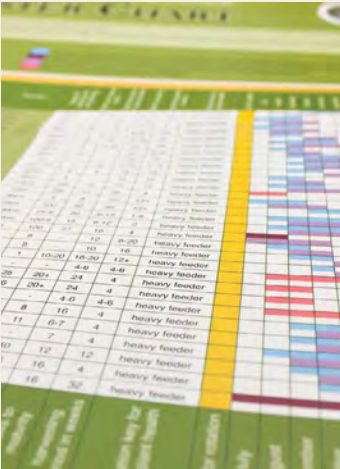
Change of Heart: The Ecology of Nourishing Food
Kay Baxter & Bob Corker
Includes over 400 recipes!



THE KŌANGA BOOKLET SERIES
Beginner Gardener • Designing & Managing Forest Gardens • Growing Nutrient Dense Food
Save Your Own Seeds • The Art of Composting • Egg Production in a Regenerative Future
Northland Stories • Herbal Health & Healing
(All booklets also available as PDFs)



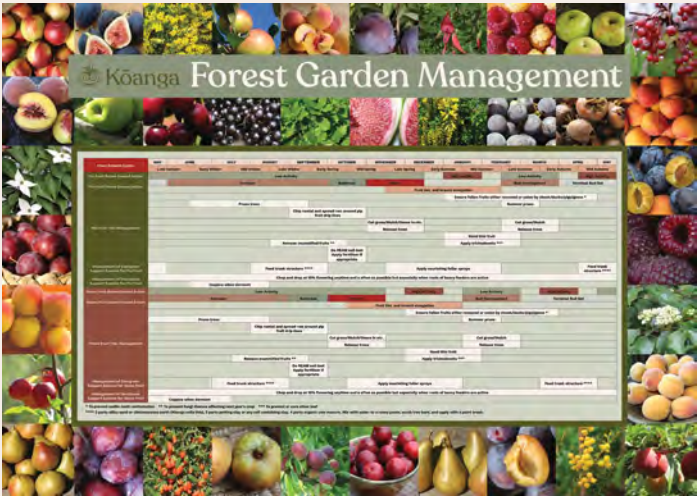
Kōanga Garden Planner
Kay Baxter
If you want to get serious about your home garden and take permaculture to the next level, this is for you!



Kōanga Master Chart
Kay Baxter
The Master Chart sits at the core of our Garden Planner and is now available as a stand alone item. It contains decades of accumulated crop knowledge in an easily accessible format.



Kōanga Seed Saving Master Chart
Kay Baxter
This is a beautiful wall chart, to support you at a glance, to develop your seed saving skills.



Forest Garden Management Chart
This is a beautiful wall chart designed to support you at a glance with your forest garden management. Keep on track with all of those essential tasks to get the best from your Forest Garden. A2 size.

Bequests

By making a bequest to Kōanga you will be supporting us to continue our important work. This gift is one that you may not be able to make during your lifetime, but will ensure that our heritage plants are available for future generations as a resource for cultivation and genetic diversity. The Institute relies on generous contributions, and our membership fees. In these changing times it feels very

important that we continue to flourish and grow. We are very good at making a little money go a long way. Please do not hesitate to contact us if you would like to know more. Our vision is to be able to save all of our NZ heritage seeds so that they can become the seeds our future food is grown from.

Email officemanager@koanga.org.nz



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Melanie Woollaston
Richard Worthington
Rachel Yeats

Kōanga

- saves our NZ heritage Food plants... hundreds and hundreds of them.
- makes regeneratively grown heritage seeds and fruit tree available to you.
- researches and trials regenerative ways of growing our food on a local scale as models for the future.
- is creating models of integrated land use that whilst rewilding our whole ecosystem, create economic opportunities that regenerate life around them as they grow and as they operate on a daily basis.

Come be inspired, join us for a Guided Tour, do an online workshop, or join us for a workshop here, we'd love to introduce you to Kōanga.

Join The Regeneration Revolution!!!



Kōanga

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