



# Kōanga

Fruit Tree Catalogue 2023

## From the Past for the Future!



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!

*“We are linked in a co-evolutionary circle. The sweeter the peach, the more frequently we disperse its seeds, nurture its young, and protect them from harm. Food plants and people act as selective forces on each other’s evolution – the thriving of one in the best interest of the other. This, to me, sounds a bit like love”*

Robin Wall Kimmerer, *Braiding Sweetgrass*

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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/](http://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:

- Exclusive 'members only' newsletters, packed with top tips, practical advice and member-only offers.
- Two FREE seed packets of your choice from a specially selected range.
- Gardening questions answered with access to Kōanga's special knowledge.
- Grow sought-after plants with preferential access to rare seeds and plants in short supply. There will be one week member only access to fruit trees and to perennials in short supply. Members only have access to preservation packs.
- FREE online workshop *Kay's Garden Management Series* for memberships purchased or renewed before 1<sup>st</sup> January 2024.
- Know what to plant and when to plant it with exclusive members access to a high-resolution, print ready copy of the Kōanga Moon Calendar.

## 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 2023 Kōanga Fruit Tree Catalogue.

Thinking about the year gone – far out, what a year we had!!

- Huge floods last Summer, raw wounds still to be seen all along the rivers and also in the hills, slips everywhere and so much soil going out to sea.
- A very stressful time for the garden crew with no power to dry seeds, no sun to ripen seed, no road to get to work and no telephone. A super big thanks to all of you who supported our emergency fund raiser. We are planning on building a new seed drying and processing facility and will keep in touch on that, all off grid.
- Our stone fruit trees are bearing very little fruit this year, almost none of them apart from the very early ones. Maybe that has something to do with the floods last Summer which occurred at the same time that the feeder roots of those trees were supposed to be sequestering the nutrients required to set this year's crop.
- I stood in the Thorny Croft seed garden last week and looked up at the hill behind us, which has a lot of kanuka on it, and at this time of the year it is usually covered in white blossom and bees. This year there was no blossom or bees, and the pines on neighbouring properties are covered in not only slips and pine falling in all angles all over the place, but pine rust has taken over in the forests around us and all the pines are dying. It is quite a sight, one that makes me even more committed to forging ahead creating models for change.



On different notes it has been a very special year.

- We have begun the new garden on the River Block, the research garden. A model for small scale regenerative local food production, as well as a new space for all the Kōanga perennials, and a space for the nursery to expand to. The design for the whole thing will be featured in our new booklet coming out soon, *The Design Process Guide*. We'll also be featuring the research garden in other ways which you will see soon.
- We dug our first potatoes down there today and we got over 2kgs from each plant harvested and one of them was Yellow Fir. I have never had 2kgs from a Yellow Fir before!
- I edited three of my publications, updating them for you all. A lot of work is involved in doing that and I'm very happy with them all now, hope you are too. They are the *How to Grow Nutrient Dense Food* booklet, *Design Your Own Forest Garden* booklet and the *Garden Planner*. If you already have a copy of the old *Garden Planner* we can send you a link to print off the new parts. The other booklets are worth buying again, there's so much new and exciting information in there.

- I put together the *Forest Garden Management Chart* this year and I'm super proud of that. It took living in a serious forest garden for a few years to be able to do that, and I'm sure it will help you all a lot to get connected!
- We built two new cabins for staff, Tom (Garden Crew) is in one and Leigh (the new Office Manager) will be in the other shortly. They both are on solar power with composting toilets and will have rocket stoves for heating in Winter, and cooking.
- We almost finished the intern area, a super exciting space for our interns.
- Our builders and Ethan and Paul have been experimenting with a new style of rocket stove and they have that sussed now and are making them in moulds very fast, so we'll show you those over his next year as we install them around the place for cooking and heating.
- The nursery has expanded and as you'll all see shortly we have a lot more trees available this Winter and an incredible range of trees from all our heritage fruit trees and vines to a great range of support trees.
- We have more heritage seed lines available to you right now than ever before!
- We made a new online workshop, *Make Your Own Regenerative Fertiliser*, which turned out to be very timely with everything going on in the world right now around food prices and degeneration and fertilizer availability etc.
- Kaya, Vitor and I are still filming and editing a new *Seed Saving Masterclass*, a super comprehensive online masterclass following almost all of our seed lines from planting seed to having seed to plant again. This will be a first in the world amazing resource for anybody wanting to learn to do a great job of saving seeds for the long haul, due out in 2023.
- We are also still editing the *Forest Garden Masterclass*, also due out in 2023.

- We are expecting to release a very exciting new online workshop in the very first days of February 2023 as this goes to print. It's called *Traditional Food Processing and Storage*. We filmed every month for a whole year, showing how we harvested, processed and stored all of our veg and fruit harvest last year in a garden designed to grow all of our food year round. The workshop is beautiful and will be very useful.
- We have been very lucky to have had Rachel as our Nursery Forest Garden Intern over the past year and we are all excited that she has accepted a permanent job here now.
- Paul, our River Block Intern who has been managing our small herd of cows and milking them as well as establishing our research garden, has almost finished his year and we wish him well with his projects where he will be using what he learned here. Actually he is coming back for 4 months to join the garden crew as he can see how much skill is to be gained by doing that.

I'm sure I've missed lots of things but already as you can see, things are all on here. A lot is happening and I am very very proud of our team who have worked super hard this year and who have achieved a whole lot!!!

And the year to come. We have a long list of things we wish to achieve, some very exciting things – more on that next time! Hope you enjoy the catalogue.



## Creating Calcium for the Garden

We received this question from Monica, a Kōanga member, about sources and use of calcium in the garden. These detailed questions about practical applications are very important so here is Kay's detailed answer. The different parts of the question are in italics.

*Q. I have been doing research about calcium for the garden and have been told by a humate supplier that the best way to put useable calcium into the soil is by adding ground oyster shell (that have not been burnt) on the soil as they contain useable (not denatured) calcium and phosphorus. Apparently calcium, even for the soil, is denatured when heated past 60-70 degrees and this makes sense to me as that is why we should drink raw milk rather than pasteurized milk because the calcium and amino acids are not denatured like it is when milk is heated (pasteurized).*

A. My research has always been directed towards finding solutions that can be applicable to everybody, the more people the better, mostly small scale gardeners and home gardeners. People who have the possibility of creating regenerative solutions, real regeneration of whole ecologies and ecosystems.

This means that any ideas/solutions have to be practical and real for everybody, or for many of us. We will in the end have many solutions.

So while what your friend says about oyster shells may be true... I believe it, but how many of us have access to freshly crushed oyster shells? Not many I think and, if you do, it is expensive. It also has to be ground very very fine, which none of us can easily do, and even then, like agricultural lime it is regarded as a very slow release long term source of calcium. It is sold as chicken grit in many places, but expensive and far too coarse to be effective. So... as I don't have access to oyster grit either I looked elsewhere.

*Q. Also I read this on the Organic Growers School website:*

*'If calcium carbonate is heated, the carbon dioxide portion escapes and the result is called burnt-lime or quick-lime (CaO). If the burnt-lime is combined with water, hydrated-lime [Ca(OH)2] or slaked-lime is produced.*

*Limestone alters the pH of the soil and provides nutrients to plant life. Ground limestone, either calcitic or dolomitic, is the most used, most abundant, and generally least expensive form of lime.'*

A. Yes but also almost all of it is unavailable to plant roots. As gardeners who wish to grow high Brix food in a way that builds soil and ecological health, we need specific amounts of plant available calcium. If we had been applying agricultural lime every few years for the past 100 years we might be in a relatively healthy situation, as that lime that was applied 100 years ago would be being released by the microbes now. Most of us are not, so how do we get enough calcium available now, so we can eat well now and be building soil for the crop etc?

*Q. Certified Organic growers are not allowed by the USDA Organic Rules to use either burnt-lime or hydrated-lime. In your backyard garden, it's up to you. I figure most of the organic rules are based on reasonable environmental arguments. It is possible that burnt-lime can kill some of the beneficial microbial activity in your soil, and it can also burn plant roots during unfavorable conditions. Hydrated-lime is liable to leach beyond the reach of plant roots becoming*



unusable to the plant. If you do use either burnt or hydrated lime, extra protection for your skin and eyes is required. Maybe that's why your instructions stated, "Do not use slaked lime."

To me it seems as Organic growers in the USA are not allowed to use burnt lime (according to this article) or hydrated lime and if we burn the bones, shells etc as Kay writes in her Growing Nutrient Dense Food book then when applied to soil and the rain washes it in won't this lime turn to slaked lime which isn't meant to be good for the soil?

I'm not criticising Kay's book at all because it is wonderful and I am learning so much from it but now I am confused!

I also can't find any information online about the traditional "Bonefire" that Kay mentions?

If we do burn our bones and shells like Kay says, are we denaturing the calcium and making it less available to our plants and damaging some of the beneficial microbial activity in our soil and by applying it straight to the soil is the calcium and phosphorous more available to the plants and microbes as I was told by the humate supplier? Which way is correct is what I'm confused about. If you could address this question it would be wonderful as I am completely confused now and this is something very important that I need to know!

A. Firstly, I never ever recommended using burnt lime in the garden, I never would, it is alkaline and burns things, and yes, you do have to be careful handling it. It has never worried me with bare hands but I would recommend using gloves. I always put it into the compost heap, where there is a lot of carbon and it will become attached to carbon and be consumed by microbes far faster than the options you mention.

When I do the maths and consider Reams rules around soil science I see we need specific amounts of calcium in relation to magnesium. There are very few sources of available calcium

that do not increase the magnesium even more and that just makes the problem worse (that is why I don't use dolomite lime), so I've done my homework. I have worked out how much calcium I need, where does it come from... Check out our spreadsheet of potential calcium sources... keeping in mind that our plants require 7 times as much AVAILABLE Calcium than Magnesium.

The only way I can see that I could fairly easily get calcium levels up to where they need to be if I am to achieve my goals will be to use bones. How can we use bones? How can I process them to make the calcium available to our plant roots, now and potentially for the long haul? How can we do this in a way that most people can also do it? I agree burning bones on a fire will change the nature of the bones, the calcium and phosphate will still be there but they will be in a form not so easily able to be eaten by the microbes, and in a form that burns things it touches.

What if we never applied bone ash to our gardens or onto plants, what if we only ever added it to the compost heap, then as the plant material decomposes the carbon unlocked will electrically grab the calcium and then it is over time eaten by the microbes and made into plant available calcium again. **My understanding is that this is the easiest way for most of us to add calcium to our gardens, if we don't have access to or want to use agricultural lime.**

There are other ways to make the calcium and phosphate available that we can do at home and in fact I prefer them but I don't think most people will want to do it. One of these is to boil the bones hard for up to 8 hours when they become a lot softer then put them through a chipper or crush them some way by hand. They will have to be crushed very fine, same issue as with oyster shell, and then they will be amazing slow release fertilizer.

Another option is to make bone char with the bones. Bone char is tricalcium phosphate,

and if we make low temperature bone char in a pit in the ground that is what we end up with. Tricalcium phosphate still has the carbon attached to it and it is far more easily digested by the microbes than bone ash. Which is mostly calcium hydroxide. We are currently making bone char and putting around 20 kgs of that into every compost heap of around 1.6m x 1.6m by 1.4m high. We have created a compost calculator that we are developing and when we put in the ingredients we wish to make our compost heap with, it tells us what we need to add to get the mineral levels and balance correct. The only easy way I know of to get the phosphate, in particular, at the required level and balance required with potash in most of our soils, without industrial inputs, is to use bones. The only way most of us will do that is to burn them... Keeping in mind here that as well as

available Calcium: Magnesium in a 7:1 ratio , we must have available Phosphate: Potash in a 1:1 ratio for veg gardening.

The second and third ways above are my preferred options but once again how many of you will ever do it? This is a big journey that we have to make to understand how to work with the natural world and to build a new future. I love these hard questions, it is only this level of query and thought that will bring us to where we have to go.

Check out the spreadsheet below, and you will be able to see where the calcium is and where the magnesium is as well as the phosphate and potash and have a think about how you are going to get your minerals balanced.

Thanks for the question, Kay.

|   | Macronutrient (% of dry matter) |       |        |        |       |
|---|---------------------------------|-------|--------|--------|-------|
|   | N                               | P     | K      | Ca     | Mg    |
| Perennial Ryegrass                            | 3.77                            | 0.37  | 3.8    | 0.42   | 0.177 |
| White Clover                                  | 4.56                            | 0.347 | 2.83w  | 1.19   | 0.237 |
| Narrow-leaved Plantain                        | 3.370                           | 0.480 | 1.970  | 1.770  | 0.253 |
| Chicory                                       | 4.35                            | 0.663 | 3.8    | 1.18   | 0.393 |
| Broad-Leaved Dock                             | 4.5                             | 0.43  | 4.1    | 0.287  | 0.52  |
| Californian Thistle                           | 2.8                             | 0.357 | 2.93   | 1.87   | 0.307 |
| Dandelion                                     | 3.6                             | 0.57  | 3.43   | 0.96   | 0.353 |
| Hairy Buttercup                               | 2.93                            | 0.457 | 3.03   | 1.16   | 0.25  |
| Yorkshire Fog                                 | 2.7                             | 0.4   | 3.2    | 0.36   | 0.173 |
| Mixed Pasture (Taneatua)                      | 2.9                             | 0.32  | 2.7    | 0.69   | 0.17  |
| Zelp NZ                                       | 1.68                            | 0.25  | 10.45  | 1.16   | 0.67  |
| Molasses                                      | 1.1                             | 0.06  | 3.8    | 0.8    | 0.4   |
| Salt water                                    | 0.0015                          |       | 0.0392 | 0.0411 | 0.129 |
| Rye Straw                                     |                                 | 0.13  | 1.2    | 0.41   | 1.8   |
| Buckwheat                                     | 2.2                             | 0.24  | 2.93   | 2.56   | 0.47  |
| Jerusalem Artichoke                           | 1.35                            | 0.13  | 2.64   | 2.64   | 0.51  |
| Tithonia Diversifolia                         | 3.5                             | 0.37  | 4.1    | 2.1    | 0.2   |
| Sunflower forage, fresh                       | 2.08                            | 0.31  | 3.74   | 1.75   | 0.42  |
| Sorghum forage, fresh                         | 0                               | 0.2   | 1.93   | 0.41   | 0.22  |
| Pearl Millet (pennisetum glaucum) farge fresh | 0                               | 0.28  | 3.15   | 0.55   | 0.32  |
| Quinoa  | 3.008                           | 0.24  | 7.57   | 1.6    | 0.92  |
| Amaranth forage, average                      | 0                               | 0.5   | 4.43   | 1.47   | 3.16  |
| Broad Beans Aerial part, straw                | 1.184                           | 0.11  |        | 1.1    | 0.34  |
| Maize Stalks, dry                             | 0.62                            | 0.08  | 1.4    | 0.32   | 0.011 |

|   |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|
| Ramial Wood Chip average (fresh weight) | 0.805 | 0.335 | 0.8   | 0.35  | 0.068 |
| Vetch                                   |       | 0.45  |       | 1.33  |       |
| Sainfoin                                | 2.7   | 0.46  | 1.47  | 1.41  | 0.27  |
| Crimsom Clover                          |       | 0.33  |       | 1.46  |       |
| Lupins, fresh                           | 2.3   | 1.38  | 1.97  | 0.85  | 0.33  |
| Comfrey Leaf Russian                    | 2.76  | 0.3   | 7     | 1.87  | 0.43  |
| Average NZ weeds                        | 3.62  | 0.45  | 3.23  | 1.02  | 0.30  |
| Small Grains average                    | 1.57  | 0.24  | 1.66  | 0.71  | 0.99  |
| EA Fresh Legume average                 | 3.53  | 0.92  | 2.84  | 0.00  |       |
| EA Hay-Legume average                   | 3.81  | 0.53  | 3.17  | 2.21  |       |
| Comfrey, Bocking no.14                  |       | 1.08  | 10.64 | 4.22  |       |
| Horsetail                               |       | 1.4   | 1.8   | 2.4   |       |
| Stinging Nettle                         | 5.5   | 0.68  | 3.7   | 3.3   | 0.86  |
| Nettle, dry                             | 3.56  | 1.49  | 10.54 | 10.54 |       |
| Pea Straw                               | 1.44  | 0.11  | 1.5   | 2.37  | 0.27  |
| Alfalfa, fresh                          | 2.56  | 0.25  | 2.25  | 1.9   | 0.28  |
| Red Clover                              | 3.04  | 0.34  | 2.7   | 1.44  | 0.81  |
| Bone Meal                               |       | 14    | 0.04  | 20    | 0.4   |
| EA Bone Meal                            | 6.85  | 30    | 0.3   | 40.5  |       |
| Bone Ash - Ca5(OH)(PO4)3                |       | 16.85 |       | 42.8  | 0.71  |
| Bone Ash - 45% CaO 34% P2O5             |       | 7.5   |       | 18.3  | 0.3   |
| Eggshells                               |       | 0.16  | 0     | 36.6  | 0.4   |
| EA Blood and Bone Meal                  | 20.19 | 2.25  | 1.2   | 1.51  |       |
| EA Fish Scrap, Red Snapper              | 11.71 | 19.4  | 5.64  |       |       |
| Coffee Grounds, fresh/dried             | 3     | 0.54  | 1     | 0.96  |       |
| Kelp, dry (1)                           | 1.01  | 0.33  | 7.9   | 1.49  |       |
| Seaweed                                 | 2.54  | 1.18  | 7.44  |       |       |
| Wood Ashes                              | 0.15  | 0.53  | 2.6   | 15    | 0.41  |
| EA Wood Ashes, Spruce                   |       | 8.76  | 17.51 | 66.74 |       |
| EA Steer manure                         | 1.13  | 0.45  | 0.6   |       |       |
| EA Cow manure                           | 0.85  | 0.24  | 0.75  |       |       |
| EA Duck manure                          | 0.86  | 2.19  | 0.73  |       |       |
| EA Rabbit manure                        | 1.55  | 1.2   | 7.53  |       |       |
| EA Hen manure, no bedding               | 4     | 1.23  | 0.76  |       |       |
| EA Hen manure, dry                      | 5.26  | 5.26  | 3.76  | 15.79 |       |
| EA Horse manure                         | 0.98  | 0.39  | 0.91  |       |       |
| EA Goat, Sheep manure, dried            |       | 2.25  | 4.49  |       |       |
| EA Goat, Sheep manure, raw              | 2.7   | 0.9   | 0.45  |       |       |
| Fish Emulsion                           | 2.2   | 1.55  | 0.28  | 0.37  | 0.09  |
| BioChar                                 | 0.45  |       |       |       |       |
| Rock Dust EF BAS 50 (5100 CGS)          |       | 0.52  | 1.1   | 8.4   | 5.9   |
| Seashells                               |       | 0.08  | 0.06  | 34.7  | 1.02  |
| Feather Meal                            |       | 0.84  | 0.14  | 1.27  | 0.08  |
| Vermi Liquid                            | 0.05  | 0.01  | 0.45  |       |       |
| Raw Milk                                | 0.52  | 13.46 | 17.06 | 15.2  | 1.65  |
| Whey                                    | 0.14  | 0.044 | 0.146 | 0.043 |       |
| Foxtail Amaranth (Amaranthus caudatus)  |       | 0.42  | 7.74  | 1.36  | 7.74  |

## Getting ready for Autumn in the garden – Gail

Although we are still busy in the garden with summer crops continuing with liquid feeding, watering, harvesting and preserving, it's essential to get some crops in soon if you want them to be ready to harvest over autumn and winter.

If you haven't already got them in then sow carrots, parsnips, beetroot and turnip if you want them to get to an eatable size for the winter. It's important to sow brassicas too – fast growing ones such as Henry Harrington's Chinese Cabbage (my favourite) but also cauliflower, cabbage, broccoli, and kale. Keep sowing lettuces regularly to keep you in salads. In the north you can pretty much sow any varieties but for colder areas we have Winter Lettuce which does well. In hot areas you might need to use shade cloth until plants get established and the weather cools a bit. Don't forget other salad plants too such as rocket, land cress, mustard greens etc. With a bit of planning you can have interesting, varied salads all year round.

You can still sow leeks although they are unlikely to get as big as if they'd been sown earlier. Parsley is great to sow now and celery too – both so important to add to those winter dishes. Japanese radishes such as Aomaru Koshin and Tokinashi are great for over the autumn and winter, they grow very quickly and don't forget the greens are nutritious too.

Of course we are also approaching garlic and perennial onion planting time too so identify which beds you will be using and make sure you have time to prep them well. We recommend planting them into beds that have had ramial wood chip (RWC) added as they thrive in the fungally environment. We also mulch with RWC. The best time to plant garlic varies around the country from as early as March through to August. In the north we plant in April / May which works well for us and May/ June for shallots and tree onions.

As spring / summer crops finish then, if the beds are not going to be planted with autumn/ winter crops, it's good to keep building the soil using compost / carbon crops. We have a new range of carbon crop mixes which you can find on our website.

There really isn't a significant rest time in the garden as we need to constantly think a few months ahead so that we don't have gaps in our produce. This can be challenging but being in tune with those cycles is a joy and very fulfilling.

Happy Growing!





# Silverleaf, a common disease of our fruit trees

Silverleaf is a fungal disease of trees and in particular some fruit trees (pip and stone fruit) but also of other trees e.g., hawthorn. As with all disease it comes because our soils are often dead (lacking in minerals or the microbes we need for healthy plant growth) and demineralised (lacking in the minerals required for healthy plant growth). As a result our trees do not have high health and are not able to resist this fungal disease, because the microbes required to support high health trees are not present in high enough numbers to maintain tree health.

For us the focus has to be on soil health and ecological resilience, and in this case a really important focus is on feeding the fungi. Silverleaf is a disease that comes with out of balance fungi, not enough of the good ones or the ones we need, because the conditions are not right for them. There are three things we can do:

1. Begin building the right conditions.. We do that by planting loads of support species for our fruit trees (see the booklet *Designing and Managing Forest Gardens*) that can be regularly coppiced and chipped to spread around as RWC (ramial wood chip), or chopped and dropped. This provides the food for the fungi and the fungi unlock the nutrients in this ramial wood and then it becomes available to the fruit trees... as well as strengthening the immune systems of the trees and protecting them from disease amongst other functions. This will build soil health and fungal health very fast. We have found though that it takes several years to build the kind of resilience we require into our ecosystems (orchards and forest gardens) and if Silverleaf is an issue for you, as it has been for us, then inoculation is a great thing.
2. We can put the fungi we need to keep our trees safe into this environment... basically inoculate the ecosystem. Inoculating the system will help prevent our trees from becoming diseased by the Silverleaf fungi. But this will only work for the long term if these

fungi (Tricho spp) have food to live on (i.e. ramial wood chip, or carbonaceous mulch)

3. We can also inoculate the trees themselves.

Inoculation should eventually mean, so long as you are feeding your soil fungi, that after a few years you will have these *Trichoderma* spp in your own ecologies and you should no longer need to bring the inoculant in. We have found that it takes 3-4 years of inoculating diseased trees to obtain that level of natural inoculation.

## IDENTIFICATION

Leaves have a silvery sheen, usually more obvious in early Spring, on the first lush of leaves and in Autumn. This begins on damaged wood in the canopy, starting in one place and spreading down the tree. The fungus produces toxins that are taken up through the tree which causes the leaf tissue to separate, letting in air which causes the silvery sheen.

As it progresses, leaf margins and around the midrib may split and turn brown.

The wood of infected branches turns a dark colour which is one of the ways to determine if it is silver leaf. After this discolouration, the branches start to die back.

During the summer after branches have died, small bracket-shaped fruiting bodies form on the bark. The fruiting bodies of these form small round red balls that burst to release the spores which then infect other open wounds. The disease will often spread through the whole tree

and kill it if it goes untreated. It often takes 3 or more years to go from an infection high up in a tree to growing down that branch and into the rest of the tree.

Spores from the fruiting bodies infect trees through wounds in the wood; they do not infect the leaves. The spores are most active between March until November, making Summer pruning where possible a great option..

## PREVENTION

- Growing resistant cultivars... heritage trees that have co evolved, and been through a long process of co-evolution in living soil.
- Growing high health trees that have been grown in alive, mineralised soil not the dead soil of commercial nurseries.
- Good air movement and hygiene around plants e.g. always sterilize secateurs between trees, don't leave diseased wood lying around.
- Not over-fertilizing, especially with industrial fer or unbalanced fertiliser.
- Feeding your trees via the soil fungi soil with RWC (ramial wood chip) which is a balanced fertilizer for trees.
- Having good drainage.
- Pruning in late Spring-Summer rather than autumn or winter is recommended as this when the infectious spores are produced.

- Planting young trees onto 20 gms of *Trichopel* granules and watering a couple of times over the following 2 months with *Trichoflow*.

## PREVENTION AND CURE USING INOCULANTS

***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.

***Trichoflow*** is a WP 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.

***Vinevax Dowels*** are clearly there to treat disease.

***Vinevax Pruning Wound Dressing*** to protect annual cuts from Silverleaf.

Kōanga is using and stocking these products, and they are sent out at appropriate times for use See details on website shop.

Healthy peach foliage





# Urban Forest Gardens

Urban forest gardening is great fun. All those edges and walls, fences and little microclimates create wonderful opportunities to create a very productive space.

Here are a few notes that could help with your own choices. We fitted over 30 fruiting trees/vines into our 200 sq m Urban Garden here at Kōanga and we had space for one bigger tree so we chose a Christina peach because it is always

the most productive, the most reliable and a super good taster plus freestone so easily dried or bottled etc. All our favorite Urban Garden trees are marked in our catalog this year.

| Fruit trees that are good for fences or walls etc. | Like full sun heat | Need air movement | Happy in shady environment sun when fruiting | On specific rootstocks                  | Training method                                       |
|--|--------------------|-------------------|--|---|---|
| Apples   |                    |                   | Yes  | Dwarfing rootstocks essential           | Espalier or cordon                                    |
| Pears  |                    |                   | Yes  | Dwarfing rootstocks either BA 29 or 'C' | Espalier or cordon                                    |
| Passionfruit                                       | Yes                |                   |  |   | Provide netting                                       |
| Raspberries  |                    |                   | Yes  |   | Need wires to train                                   |
| All vining berries                                 |                    |                   | Yes  |   | Need wires to train                                   |
| Grapes   | Yes                | Yes               |  |   | Need to be able to attach to fence or wall            |
| Figs   | Yes                | Yes               |  |   | Need large area on wall                               |
| Worcester Berries                                  |                    |                   |  |   |   |
| Goji berries                                       | Yes                | Yes               |  |   | Can be tied to wall or fence to manage area of spread |
| Small bushes shrubs trees that are free standing   | Need staking       | Need full sun     | Happy in partial shade, sun when fruiting    | Rootstock required                      | Management possibilities                              |
| Apple  | Yes                |                   | Yes  | Dwarf                                   |   |
| Pear   | Yes                |                   | Yes  | Dwarf                                   |   |
| Currants   |                    |                   | Yes  |   | Possibly hedging                                      |
| Gooseberries                                       |                    |                   |  |   |   |
| Grapes   | Yes                | Yes               |  |   | Grow up a pole, the traditional way                   |
| Chilean Cranberry                                  |                    | Yes               |  |   |   |
| Cape Gooseberry                                    |                    | Yes               |  |   | Nothing   |

Support species we like that work well in small spaces under and around an urban area could be:

## LOW PLANTS

- Tree Lupins ( yellow flowered)
- Perennial Tree Lupins ( Blue flowered)
- Perennial Russell Lupins
- Comfrey
- Alfalfa
- Koanga Perennial Patch Seed Collection
- Spring Bulbs
- Chicory

## LEGUMES

- Perennial Runner beans
- Perennial Sweet peas
- Annual peas and beans
- Snail vine

## TALLER SHRUBS SMALL TREES

- Acacia retinodes, tall light and airy if not pruned to 5-6m but doesn't take up space.
- Egyptian or Basket willows, coppiced to ground every winter.
- Tree Medick, scent and biomass if keep pruned like a hedge.





# Education

Here at Kōanga we are learning to live simply and in a regenerative way. Our workshops, internships 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 along with internships and guided tours, 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. This year we are excited to be able to announce several new workshops that have been added to our range.

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/](http://www.koanga.org.nz/our-shop/education/)



## Forest Garden Masterclass

Five Days

26<sup>th</sup> February to 3<sup>rd</sup> March 2023 OR

25<sup>th</sup> February to 1<sup>st</sup> March 2024

*Tutor: Kay Baxter*

**\$970 (Early Bird \$885)**

Designing, implementing and managing Forest Gardens.

## Gardening Masterclass

Five Days

5<sup>th</sup> to 10<sup>th</sup> March 2023 OR

3<sup>rd</sup> to 8<sup>th</sup> March 2024

*Tutors: Kay Baxter & members of the garden crew*

**\$970 (Early Bird \$885)**

How to garden regeneratively to grow nutrient dense food using the bio intensive method.

## Poultry Butchery NEW

Two Days

27<sup>th</sup> to 28<sup>th</sup> April 2023 OR

5<sup>th</sup> to 6<sup>th</sup> October 2023

*Tutor: Taiamai Corker*

**\$476 (Early Bird \$434)**

## Sheep & Pig Butchery NEW

Two Days

4<sup>th</sup> to 5<sup>th</sup> May 2023

*Tutor: Taiamai Corker*

**\$476 (Early Bird \$434)**



## Butchery – Salami, Sausages, Bacon, Black Pudding & Corned Beef NEW

Two Days

11<sup>th</sup> to 12<sup>th</sup> May 2023 OR

26<sup>th</sup> to 27<sup>th</sup> October 2023

*Tutor: Taiamai Corker*

**\$476 (Early Bird \$434)**

## Herbal Health & Healing

One Day

19<sup>th</sup> August 2023

*Tutor: Kay Baxter*

**\$348 (Early Bird \$316)**

Learn about the herbs in your garden and environment and how to connect with them for your health and that of your family.

## Animal Management Masterclass NEW

Five Days

15<sup>th</sup> to 20<sup>th</sup> October 2023

*Tutors: Kay Baxter & Taiamai Corker*

**\$930 (Early Bird \$845)**

Covers animal selection, breeding and management for local scale regenerative agriculture.





# Kōanga Online Workshops

Kōanga now has an extensive range of online workshops which can be found at <https://regenerationproductions.org/>

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
- NEW! Making Regenerative Fertiliser

## **NEW! 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.

**NEW! 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*.



# Internships

If you have a serious passion for learning to live simply and regeneratively, rebuilding soil and ecologies, getting into the detail of growing nutrient dense food and seed saving or designing and managing forest gardens and propagating trees, learning about integrated land use or heritage animal breeding and management for regenerative agriculture, teaching others or starting your own business, Kōanga offers several 12 month internships, designed to help you on your journey, and to support our work in the process.

We are specifically looking for highly motivated Interns who want to take this learning back into their own communities. These internships are unique, in that you will be living in an intern area with other Interns. The intern area is set up with a common kitchen, cooking on biogas and rocket stove, and outdoor indoor dining area, an ablution block with a biogas toilet, a rocket stove water heater for the laundry and shower, a hand washing machine, and a passive solar cabin each with a small kitchen greenhouse on the front of each. All of our interns share in growing pretty much all of the veg they need year round, partly in work hours and partly in their own time, and this Intern area is situated in an established and highly productive forest garden... loads of fruit.

We are offering 3 different internships each year.

## **Gardening and Seed Saving Internships**

Designed to equip the intern with the skills to be able to grow their own high quality food, to develop skills needed to save their own seeds and to potentially develop a career in food production or seed saving. Position filled for 2023.

**Animals and Research Garden Internship** covering working with animals (cows, many types of poultry, pigs and potentially sheep) as well as managing our Local Regenerative Food Production model (our research garden). Position filled for 2023.

## **Forest Garden / Tree Nursery Internship**

Designed to teach forest garden and tree nursery related skills and knowledge including Forest Garden Design and Management, the role of forest garden support species, the importance of heritage fruit trees, fruit tree propagation including growing from seed, cuttings, grafting and budding. Position filled for 2023.

**Find out more on our website**  
[koanga.org.nz/internship/](https://koanga.org.nz/internship/)

Spaces are strictly limited and we ask that if you are interested you email [officemanager@koanga.org.nz](mailto:officemanager@koanga.org.nz) and request an internship application form or to be put on the mailing list for internships as they become available.

These positions are filled for 2023 but we are now also taking applications for 2024 intake. Applications will be held until November 2023 and considered then. If you are keen to apply for an internship at Kōanga come and visit us, check us out and get a clearer idea of what it is like here and if that fits with you. It's a great time to plan ahead and we'd love to hear from you!





# Guided Tours

We have several full day tours still to come this season which, we are sure, will leave you inspired, overwhelmed, excited, and full of many new ideas and information to take home. On each tour we will look at what Regenerative Food Production (home scale and small scale commercial) and Seed Production looks like at Kōanga plus take a walk through our Mediterranean and Temperate Forest Gardens and have lunch with our staff so you can get to know the team and ask questions.



**DATES** Saturday 25<sup>th</sup> March  
Saturday 15<sup>th</sup> April  
Saturday 13<sup>th</sup> May

Numbers are limited to 10 people so it is easy to ask questions and get to hear everything easily. We are looking forward to hosting these tours and meeting you.

**BOOK YOUR PLACE ON OUR WEBSITE**  
[koanga.org.nz/product-category/guided-tours/](https://koanga.org.nz/product-category/guided-tours/)

If you have a group that you would like to book in for a tour on another day contact us. You will need a minimum of 10 people. Contact [officemanager@koanga.org.nz](mailto:officemanager@koanga.org.nz)

# 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/](https://www.koanga.org.nz/knowledge-base/thorny-croft/)





# Fruit Tree Catalogue 2023

Please place fruit tree orders online via the website [www.koanga.org.nz](http://www.koanga.org.nz). If you definitely cannot order via the website then email [contact@koanga.org.nz](mailto: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.

**NEW FOR 2023 – Varieties labeled 'UG' = suitable for a small urban garden**





# Stone Fruit

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

## Cherries



### CHERRIES

Compact Stella on Colt \$45

Dark red, heart shaped fruit with firm light red flesh. Self-fertile. Produces heavy, reliable crops around Christmas time. Forms a compact tree of around 3m, taller on good soil. Crop needs netting from the birds.



### CHERRIES

Montmorency on Colt \$45

Early, self fertile cherry, producing well in mild climates. It produces large crops of firm, juicy fruits with great flavour and pinkish red skin.



### CHERRIES

Tangshe on Colt \$45

Large, bright red fruit, amber flesh with tangy flavour, self fertile, perfect for pie making.

## Nectarines

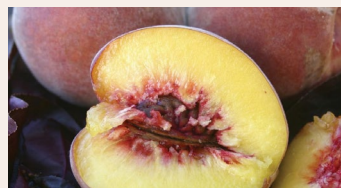


### NECTARINES

Kōkōwai on Peach \$45

Red leaf, red skin, 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.

## Peaches



### PEACHES

Arapohue Red Leaf Seedling \$36

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 Koanga by a woman near Ruawai, originally from elderly Dalmatian gardener. Ripe late February.



### PEACHES

Blood Peach Seedling \$36

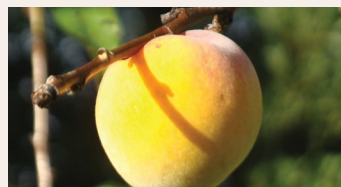
Small-medium, dark red grey skin, bright port red/white streaky skin, freestone, juicy, strong flavour. Allow 5-8m. Ex Kaiwaka, NZ Heirloom. Ripe late February.



### PEACHES

Christina Seedling \$36

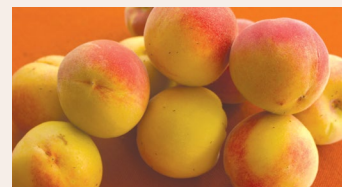
White flesh, red around stone, green skin, red blush when ripe, similar to River Peach but firmer, sweeter. Our Christina peach is really a local Northland variation of the River peach that is slightly sweeter and later fruiting. It came into our collection from an avid fruit tree collector by the name of Mr Phil Hodges, a well known Paparoa character with a very special orchard himself. Ripe early to mid February.



### PEACHES

Mason Elliot Seedling \$36

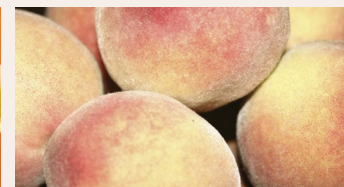
Yellow skin and flesh, clingstone very sweet and full of flavour, very firm flesh but still juicy. Outstanding desert and bottling. Ripe mid March. Gifted to Kōanga by Mason Elliot around 1995.



### PEACHES

Mediterranean Seedling \$36

Medium size, white flesh, medium firm but very sweet flesh with outstanding flavor, skin honey coloured when ripe with red blush. Ripe Mid February



### PEACHES

Pouto River Seedling \$36

River Peaches are the ones that set Kay off on this whole journey, they are Ex Kaipara Harbour and are NZ Heirloom. They are disease resistant, easy to grow and grow true to seed. They are prolific croppers of sweet medium sized, green skin with a red blush, white fleshed, free stone fruit. Ripen late January. Allow 5-8m.



### PEACHES

Silver Queen Seedling \$36

Large white flesh peach with green skin, free stone, outstanding flavour Came from the original French settlers orchard near Kohukohu, and was taken by Ken Vincent who owned that orchard to Kaitia where it has been over the past 30 years.

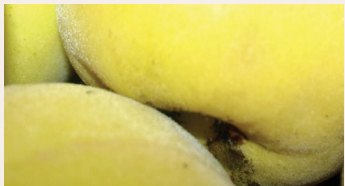


## PEACHES

Te Kooti Seedling \$36

Previously known by us as 'Jim Armstrong Black'. Small to medium sized peach, honey coloured skin with red blush. White slightly creamy flesh with red tinges around stone. Freestone. Firm, juicy & delicious. Heavy cropper. Dessert peach. Very similar to and possibly a version of the River peach. Very healthy, strong growing variety.

# Peacherines



## PEACHERINE

Matakohe Seedling \$36

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



## PEACHERINE

Robertson's Seedling \$36

Reliable cropper, medium size yellow peacherine with a furry skin, buttery texture and lots of flavour, very sweet, clingstone, ripe late Feb to early March, great bottling.



## PEACHERINE

Kohukohu Seedling \$36

Average size fruit with outstanding flavour. White flesh. 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

Damson on Peach \$45

Small dark skinned yellow fruit that is tart but full of flavour. Our Damsons originally came from Mary and Roy Corker's orchard in Kaiwaka.



## PLUMS

Duck Run on Peach \$45

Yellow skin, red flesh, very heavy cropper, medium to big fruit. Similar to Luisa plum. Came from the original French settlers orchard near Kohukohu, and was taken by Ken Vincent who owned that orchard in more recent times to Kaitaia where it has been over the past 30 years.



## PLUMS

Little John on Peach \$45

Large plums with dark red skin and flesh. They are juicy with a sweet full flavour and tend to fruit bi-annually with a heavy crop one year and a lighter crop the next. Ripe January February.

This plum is named after the Little John family around the Kaiwaka Otamatea branch of the Kaipara who passed it to us.



## PLUMS

Prune C Seedling \$36

A prune that has probably been selected as a drying prune. The flesh is very firm, (high dry matter content), and it is not as sweet as a desert plum as others. When dried it is amazing.



## PLUMS

Prune Italian Seedling \$36

Dark purple/black skin, egg shape, yellow flesh, freestone, fruits well in North. From DSIR collection, Havelock North, years ago. Well known cultivar. Fruits March.



## PLUMS

Simon Dew on Peach \$45

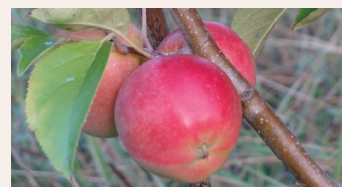
Large round, heart shaped plum with a groove down one side with black skin black flesh, and a deep rich intense flavour when fully ripe. Ripe late Feb / early March.

# Pip Fruit

| ROOTSTOCK           | DIAMETER | CANOPY SIZE | PREFERENCES   | DESCRIPTION   |
|---------------------|----------|-------------|---|---|
| <b>M9/M26 Dwarf</b> | 2m       | 3 sqm       | Irrigation, mulch, staking, free draining soils.  | Produces a dwarf tree. Can be espaliered, cordoned or grown as a staked tree.   |
| <b>MM106</b>        | 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 |
| <b>793</b>          | 4-8m     | 30 sqm      | Free draining soils.  | Large tree. Has been bred from Northern Spy and does well on heavy soils.   |
| <b>Northern Spy</b> | 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 are available in 3 grades this year: Grade 1 \$36, Grade 2 \$22, Grade 3 \$12

# Apples – Dessert



## APPLES

Bert's on MM106, N Spy

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

Captain Kidd on M9 (UG)

Bright red, streaky, white flesh, large, fine excellent flavour, sweet, juicy, medium vigour, reliable cropper, healthy, disease resistant. Bred in NZ, from Tom & Robyn Morrison Kenilworth Orchards, 1989, Warkworth. Ripe March/April.



#### APPLES

Dawn O'Leary on M9 (UG), MM106 & N Spy

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 MM106

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

Maxwell Quirk on MM106, 793 & N Spy

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, mid Feb. to late March.



#### APPLES

Mayflower on MM106

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



#### APPLES

Northern Spy on MM106

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

Giant Geniton on M9 (UG)

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

Granny Smith on M9 (UG) & 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 brown tinge, and the flesh goes super sweet and juicy. Ripens April-May. Also great used for cooking, juicing drying and storing.



#### APPLES

Jonathan on MM106, 793 & N Spy

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.

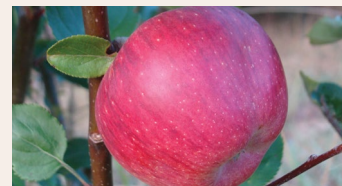


#### APPLES

Ohinemuri on MM106

Round, yellow skin, classic old fashioned cooking apple. Great dessert apple when fully ripe. Precocious prolific bearer, very healthy, full flavour.

Ripe late February through March. From Jim Cox, Tangiteroria, 1989, ex Te Puke, originally from Ohinemuri area, Hauraki.



#### APPLES

Red Delicious on M9 (UG)

Original cultivar, almost black skin when ripe, wonderful sweet flesh, excellent aromatic, rich flavour. Ex Kaitaia, 2000. Ripe March.



#### APPLES

Tinopai on N Spy

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



#### 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 February, March but store well and taste better with keeping. Golden Russets were very common in all of the old orchards. They are precocious bearers, reliable heavy croppers and are very special apples. From the Matakana area and very probably from the original Mathew Bros nursery in the area.



#### APPLES

Vaile Early on M9 (UG) & MM106

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**  
Zimmerman on 793  
Large, elongated, conical, square bottom, bright red streaky skin, excellent rich juicy sweet flesh, ripe late February March. Gifted to the Koanga Collection by the Zimmerman family of the Chatham Islands, from the original Zimmerman family orchard on the Chathams.



**APPLES**  
Winesap on M9 (UG) & N Spy  
Red skin, old fashion apple, very sweet tart dense flesh, with winery flavour. Ex Kaipara Harbour. Ripe May.



**APPLES**  
Kingston Black on MM106 & 793  
A cider apple from Somerset in England. Small, round, often dark fruit that can be used to make a single variety cider or blended with other cider varieties. Ripe late season.



**APPLES**  
Tom Putt on MM106 & 793  
Tom putt is an old cooking apple also good for making cider and juice. A large apple with bright red crimson streaky skin and white flesh tinged with green. Firm, crisp, juicy and sharp. A light flavour and melting-sweet texture when they're cooked and also make a sharp cider and rich apple juice. Grown by Rev. Tom Putt, from Somerset, England in late 1700s.



**APPLES**  
Yarlington Mill on MM106 & 793  
A traditional cider apple originating from the village of Yarlington in Somerset, England. A small to medium conical shaped red apple. High yielding but tends to fruit biennially.

# Apples – Cooking



**APPLES**  
Bramley on MM106  
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**  
Lord Nelson on 793  
Golden russet skin with red blush. A well known, old fashioned, early cooking apple. Excellent disease resistance, heavy cropper in the North, it has the classic cooking apple flavour and bite, ripe in January well before other cooking apples of any quality. Gifted to the Koanga Collection by Dave Webster of Wharehine.



**APPLES**  
Worcester Pearmain on M9 (UG)  
Large, round green skinned fruit, maroon blush on sunny side when fully ripe. Heavy reliable cropper with outstanding health. Fluffy when cooked, with a great flavour. In the Koanga Collection since 1987, origin unknown. Ripens mid/late season.

# Apples – Cider



**APPLES**  
Slack Ma Girdle on 793  
Slack ma Girdle are a medium sized, flat, yellow-green apple with bright red patches. Sweet fleshed and late ripening for cider making and also eating. This apple is rich and full bodied, cropping late.



**APPLES**  
Brown's on M9 (UG)  
Early 20<sup>th</sup> century traditional well known English cider apple. Good disease resistance and produces a sharp flavour. Flat shaped fruit, bright green with light red stripes. Ripe March/April.

| ROOTSTOCK                | DIAMETER | CANOPY SIZE | PREFERENCES                   |
|--------------------------|----------|-------------|-------------------------------|
| Quince BA29   Semi Dwarf | 2-4m     | 7 sqm       | Heavier, wet soils essential. |
| Quince C   Dwarf         | 2m       | 3.14 sqm    | Heavier, wet soils essential. |

Pears are available in 3 grades this year: Grade 1 \$36, Grade 2 \$22, Grade 3 \$12

# Pears



**PEARS**  
Bon Chretien on BA29  
An outstanding selection of William Bon Chretien. Superior flavour, good size, ripe early Feb. Good dessert and bottling. Bert had many Bon Chretiens, this one grew and tasted different. From Bert Davies, Wellsford.



**PEARS**  
Kirschensaller on BA29 & C (UG)  
These pears are small and stunningly beautiful with bright autumn colours and the most exquisite flavours. They are astringent however so are outstanding pears for making pear cider or perry.



**PEARS**  
Seckles on BA29 & C (UG)  
Pollinator of all other pears that need pollinators. Excellent small sweet fruit - the old 'honey' pear of Bohemia. Ripe end of Feb through March. Self-fertile, small tree, if you only have room for one pear, this is it! The bees love it too. From Bert Davies, Wellsford.





**PEARS**  
Triumph de Vienna on BA29 & C (UG)  
Excellent dessert pear. Outstanding flavour, large and juicy. Ripe March, after Bon Chretien. One of the very best pears for flavour and texture, large brown russet. From Bert Davies, Wellsford. This was Bert's favourite pear (he made pear sandwiches with this one).



**PEARS**  
Winter Nellis on C (UG)  
Small, round pear. Excellent flavour, disease resistant. Ripe May. Stores reasonably well.



**BERRIES**  
Currant, White \$22 (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.



**BERRIES**  
Goji Berry, root trainer \$13.50 (UG)  
Edible berries, superfood, thin branching habit, hedge forming bush precocious bearers. 3-4m, ripe January.



**BERRIES**  
Gooseberry, Henry's Large Black Red \$22 (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.

## Other Fruit

## Berries



**BERRIES**  
Currant, Aniwanika Red \$22 (UG)  
From the Wendy Evans Collection in the lower North Island. Needs coldish winters, does well here at Koanga near Wairoa. 10 X 3 degree frosts should be enough cold for currants to fruit.



**BERRIES**  
Currant, Black \$22 (UG)  
Classic black currants high in flavour and nutrition, fruiting in Hawkes Bay Allow 1m. From the Henry Harrington Southland collection, which Henry collated from plants growing wild along railway lines along the tracks near Ohai, an old coal mining area and a trail the old goldminers used. Ripe December.



**BERRIES**  
Currant, Giant Red Ruby \$22 (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**  
Raspberry, Black \$22 (UG)  
Non suckering well known ancient cultivar sent to Koanga by a member in the South Island, 10 years ago. The fruit is darker than Lake, and is ripe a little later and longer. The vines grow tall but can be tipped to keep down to 1m if tied to wires in loops. Must have old wood taken out each winter and all new vines tipped. Black raspberries are reputed to be the most nutritious.



**BERRIES**  
Raspberry, Lake (Red) \$22 (UG)  
Classic red raspberries that sucker strongly like the yellow one. Best in a largish Food Forest situation where they can form a raspberry patch. From Louise Shaw 2006, originally from the central north Island lakes area. 1.5m, ripe December and again February.  
**BERRIES**  
Raspberry, Yellow \$22 (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. Ex Canterbury/Lower Hutt, NZ Heirloom.



**BERRIES**  
Currant, Palmer Black \$22 (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.

**BERRIES**  
Currant, Seddon Early \$22 (UG)  
From the Henry Harrington Southland collection, named because it ripens earlier than others.



**BERRIES**  
Worcesterberry, Henry's \$22 (UG)  
This Worcesterberry came from Henry Harrington's grandparents (de Malmanche family), who were early French settlers near Akaroa. 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.



# Fig



**FIGS**  
Black \$28 (UG)

Small dark skinned, pink-fleshed fig, creamy texture, very sweet skin. An early fig, best for marginal areas that may experience cooler summer, ripens March. Allow 4-8m (depends on pruning). Ex Auckland, NZ Heirloom.



**FIGS**  
Hyndemans \$28 (UG)

Small figs with a purply skin and silky pink centre, two crops if you don't prune it the first around Xmas, the next in March/April. Very good for drying. Allow 4-8m (Depends on pruning). Ex Kaipara, Hyndmans original farm, Kaiwaka.



**FIGS**  
Pouto Sugar \$28 (UG)

Very sweet fig, hence its name. Early, small, pear shaped, red brown colour on one end with pale flesh. Allow 4-8m (depends on pruning). This fig was used in the north as a sweetener, i.e. was dried/ bottled and then added to other dishes. Was given to Koanga by Logan Forrest of Pouto.



**GRAPES**  
Niagra \$25 (UG)

Excellent choice for the organic home gardener. Very early white dessert grape, sweet with a lovely mild flavour. Ripens early March. Easy to grow with reliable heavy crops. NZ Heirloom, in our collection since 1985.



**GRAPES**  
Northland Early Black \$25 (UG)

Delicious large, juicy black dessert grape with a rich intense flavour. Also great for wine and juice. Ripe February.



**GRAPES**  
Wairarapa pink \$25 (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 \$25 (UG)

Came to us from an old Dalmatian orchard in Kohukohu. Very sweet, excellent flavour, slightly later than Niagra. Ex Kohukohu, came from the same old Dalmatian orchard as Black Dalmatian.

# Grapes



**GRAPES**  
Albany Surprise \$25 (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, Matakoho.



**GRAPES**  
Bishop Pompallier \$25 (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 \$25 (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. Ex Kohukohu, very old Dalmatian orchard, NZ Heirloom.



**GRAPES**  
Isabella \$25 (UG)

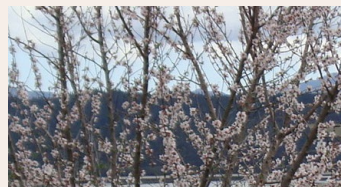
Small black grape. Dry (not really juicy) and sweet with a good flavour. A very old Northland Grape that came in with the early settlers on the boats via America. This is one of the oldest grapes in New Zealand.



**GRAPES**  
McIntyre Pink \$25 (UG)

Large, dark pinky red dessert grape. Black when fully ripe. Sweet and juicy with a good flavour. Ripe February. Came to us from the McIntyre Homestead near Kawakawa.

# Nuts



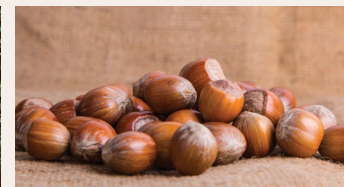
**NUTS**  
Almond Mona Vale Seedling \$28

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**  
Chestnut Tiniroto \$18

Seedlings from extensive research plantation of quality seedlings near Tiniroto, between Gisborne and Wairoa. Good size and quality nut. Chestnuts require deep free draining soil to thrive.



**NUTS**  
Hazelnut \$12

Mixed from Butler (a classic cultivar known as being reliable and easy to husk) and Alexandra (a very strong cultivar with mixed nut quality, great for a fruiting hedge). Excellent for hedgerows shelter and nut groves. Require moisture to grow well.



**NUTS**  
Walnut Wilson's Wonder \$35

Large nut, easy to crack and shell by hand, suitable for most climates around NZ. These are from an old tree outside Wairoa.



# Passionfruit



**PASSIONFRUIT**

Vanilla, root trainer \$8.50 (UG)

Beautiful red flowers followed by long yellow fruit with amazing flavour. Related to banana passion fruit but not invasive. Needs a support to grow on, best where the flowers can hang down below the plant.

# Cuttings



**CUTTINGS**

Basket Willow Collection, \$24 for 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**

Elderberry Adam, \$9 for 3 cuttings | Fast growing, large bunches of black berries, even in warmer areas of New Zealand. Highly medicinal fruit and flowers. Loves wet soils.

**CUTTINGS**

Egyptian Willow, \$9 for 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, \$9 for 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** Willow Fodder, Bee and Ramial Collection, \$30

Contains a mix of willows suitable for use as animal fodder, as bee fodder and to cut to make ramial wood chips. Mix includes:

- Egyptian Willow x 3
- Japanese Fodder Willow x 3
- Willow Moutere x 3
- Willow 2 x 3

# Forest Garden Support Species



**SUPPORT SPECIES**

Abelia, Glossy (Abelia grandiflora), root trainer 30cm \$8 (UG)

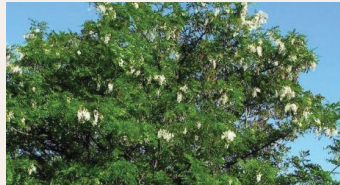
A fast growing bush with glossy green foliage. Has fragrant tubular flowers that are white tinged with pink. Wonderful bee plant in late summer. Excellent hedging plant. Soft stems that are easy to trim into a hedge.



**SUPPORT SPECIES**

Amur Maackia (Maackia amurensis), root trainer \$8

Nitrogen fixer, grows to 6-7m tall, multiple long branchless thin trunks that can be coppiced to provide ground durable posts, don't take up any canopy space in forest garden because their leaves are light and airy, particularly valuable in areas with very high water tables, loved by a myriad of insects including bees.



**SUPPORT SPECIES**

Black Locust (Robinia psuedoacacia), root trainer \$8

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



**SUPPORT SPECIES**

Butterfly Bush (Buddleja), root trainer \$8

A medium sized bush, up to around 3 metres. Numerous purple scented flowers which attract butterflies.



**SUPPORT SPECIES**

Chinese Red Bud (Cercis chinensis), 2 year old \$26

Nitrogen fixer. Dwarf large shrub or small upright growing tree. Large light green heart shaped leaves turn bright yellow in autumn. A profusion of deep cerise pink pea shaped flowers stud the bare branches for an extended period in early spring. Ideal for small spaces, and urban gardens. Very beautiful trees.



**SUPPORT SPECIES**

Genista Yellow Imp, root trainer \$7

Small, fast growing, evergreen, nitrogen fixing shrub that produces yellow pea shaped flowers in late winter and spring. Do well in poor or good soils, growing to around 3 metres in height and 2 metres wide.



**SUPPORT SPECIES**

Hawthorn, Mountain (Crataegus pinnatifida), root trainer \$9

Small to medium sized tree. White flowers followed by large red mealy dotted fruit.





#### SUPPORT SPECIES

Hydrangea, Oak-Leaved (*Hydrangea quercifolia*), root trainer \$9

Native to the Southeastern United States. White flowers. Grow well particularly in damp places and can produce biomass for chop and drop. Up to 2m high.



#### SUPPORT SPECIES

Japanese Raisin Tree (*Hovenia dulcis*), root trainer \$11.50

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

Kākābeak, Red or Ngutukākā (*Clianthus maximus*), root trainer \$8.50

Grown from seeds from a red version of this native plant which is endangered in the wild. The mother plant has red distinctive shaped flowers. Nitrogen fixer. Great in a forest garden once established. Is susceptible to slug damage, grazing and browsing. As they cross we cannot guarantee the colour of the flowers.



#### SUPPORT SPECIES

Oven's Wattle (*Acacia pravissima*), root trainer \$6.50

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

Tagasaste (*Cytisus proliferus*), root trainer 50cm \$7

Nitrogen fixer, fast growing tree to 4m (2-3m if coppiced) needing free draining soil, can be coppiced (chop and drop) twice a year in NZ, excellent bee forage in winter early Spring, chicken forage seeds and leaves, shade, firewood, mulch and biochar.



#### SUPPORT SPECIES

Kākābeak, White or Ngutukākā (*Clianthus maximus*), root trainer \$8.50

Grown from seeds from a white version of this native plant which is endangered in the wild. The mother plant has white distinctive shaped flowers. Nitrogen fixer. Great in a forest garden once established. Is susceptible to slug damage, grazing and browsing. As they cross we cannot guarantee the colour of the flowers.



#### SUPPORT SPECIES

Lupin, Russell (*Lupinus polyphyllus*), Perennial, root trainer \$6.50 (UG)

*Lupinus polyphyllus*. 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.



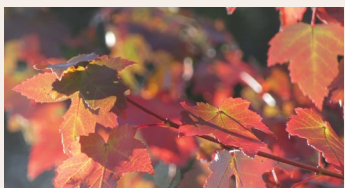
#### SUPPORT SPECIES

Lupin, Tree, Blue flowered (*Lupinus perennis*), Perennial, root trainer \$6.50 (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.

## Tree Seeds

We have a range of seeds for you to grow your own support trees and plants for the forest garden. This range is expanding as we trial and collect seeds, particularly from our nitrogen fixing support trees. These will be listed on our website as they become available so please check there to order or to place your name on the waiting list <https://koanga.org.nz/product-category/tree-seeds/>.



#### SUPPORT SPECIES

Maple, Red (*Acer rubrum*), \$12  
Fast growing acer with scarlet foliage in autumn.



#### SUPPORT SPECIES

Mock Orange (*Philadelphus coronaris*), cutting grown \$8  
Hardy shrub that produces masses of white, highly fragrant flowers in spring. Fast growing and can be pruned back.



#### SUPPORT SPECIES

Oak (*quercus faginea*), root trainer \$12  
A smaller, upright, conical, deciduous oak with leathery dark green leaves. Produces bountiful sweet edible acorn crops that can be used to feed pigs. Tolerates exposure, heat & dry conditions. Trims as a hedge. Height to 20m.





# 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  
\$239

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. At supermarket prices the value of the food grown from these could be \$2,300!

*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**  
\$49

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**  
\$44

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**  
\$49

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**  
\$44

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**  
\$38

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, Dekka Cucumber, Ohno Scarlet Turnip, Watermouth Tomato, Austrian Yellow Lloberlicher Carrot, Henry's Chinese Cabbage.







### Kiwi Superfood Collection

\$44

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

\$54

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

\$44

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, Lightheart Lettuce, Genovese Basil, Carrot Touchon, Rainbow Cherry Tomato Mix.



# 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](mailto:gail@koanga.org.nz)

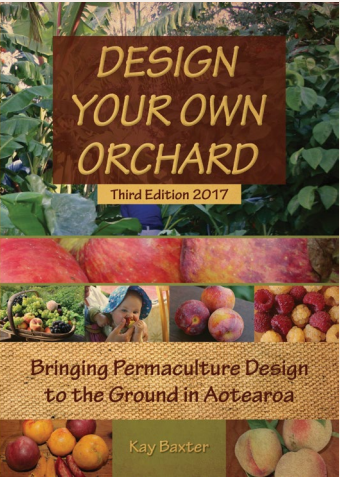
## PERENNIALS SECTION OF OUR KNOWLEDGEBASE

We make a huge range of information available to gardeners through our knowledgebase including details on many of the perennials in our collection and how to grow them. <https://knowledge.koanga.org.nz/knowledgebase/gardening/gardening-with-perennials/>

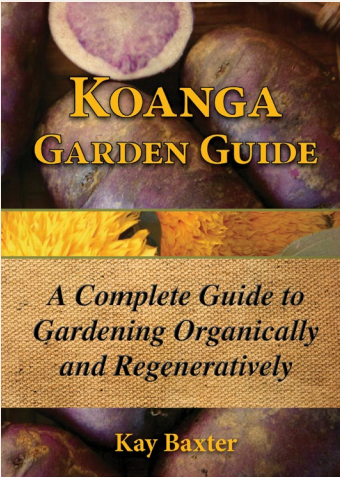




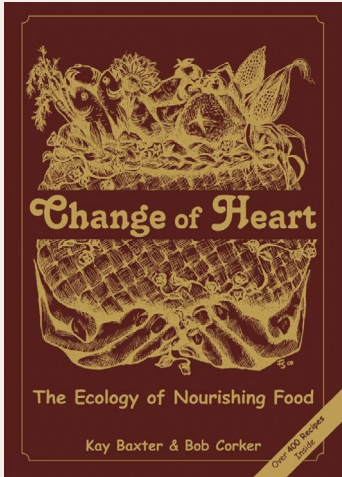
# Kōanga Bookshop for Regenerative Living



**Design Your Own Orchard**  
Third Edition 2017  
Kay Baxter



**Koanga Garden Guide**  
Third Edition 2015  
Kay Baxter



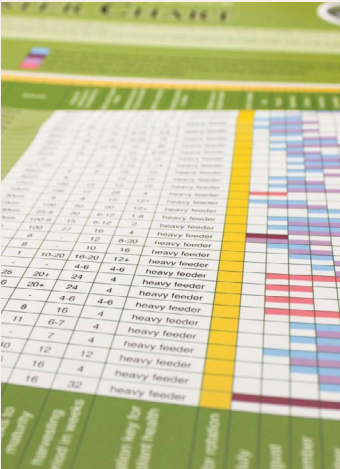
**Change of Heart: The Ecology of Nourishing Food**  
Kay Baxter & Bob Corker  
Includes over 400 recipes!



**THE KŌANGA BOOKLET SERIES**  
*Beginner Gardener • Design Your Own Forest Garden • How To Grow 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)



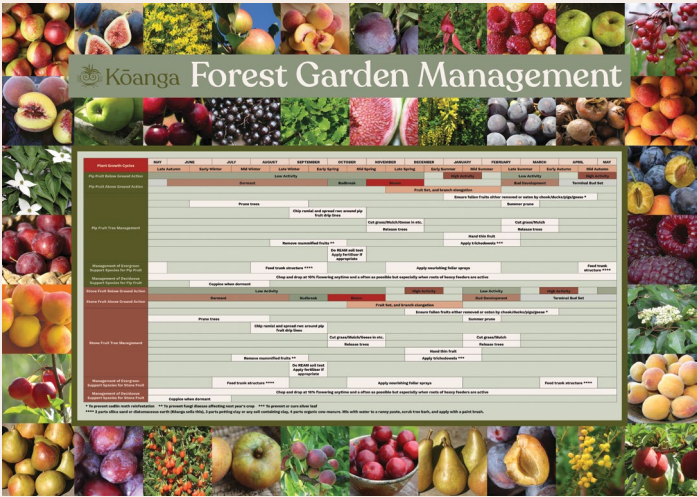
**Koanga Garden Planner (New Updated Version)**  
Kay Baxter  
If you want to get serious about your home garden and take permaculture to the next level, this is for you!



**Koanga 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.



**Koanga 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](mailto:officemanager@koanga.org.nz)



# Life Members

Susan Adam  
Guillermo Aldao-Humble  
Lorna Alden  
Peter Alexander  
Sookmee Almquist  
Diana & Justin Anderson  
Anita's Shop  
Cindy Arnesen  
Leigh Astill  
Banyan  
Barbara Baragwanath  
Stephen Batsch  
Bedford Mackay  
Family Trust  
Sonya Bennett  
John Billings  
Sue Bingham  
Nick Blennerhassett  
Helen Boyd-Alspach  
Richard Burgess  
Donna Campbell  
Fiona Campbell  
Brian Cartmell  
Patrick Corrieri  
Gwenda Costello  
Grant Croft  
Emma Darke  
Fiona Davidson  
Karyn Davis  
Maggie Dawson  
Bryony De Boer  
Mark Denekamp  
Robyn Diamond  
Cherry E Dibley  
Inge Diks  
Greg Dillon  
Natalie Dromgool  
Sabine Drueckler  
Robyn Dyer  
Mavson & KA Early  
Emily Eile  
Bridget Elworthy  
Angela Emery  
Rona Ensor  
Susan Erskine  
Brett Fallen  
Faye Fausett

Dene Fowler  
Noeline Gannaway  
Kirsten Garrabrant  
Monika Geister  
Claire Goodwin  
Wayne Gordon  
Merryn Grace  
Simon & Stacy Griffiths  
John Griggs  
Denis Grennell  
Jo Hainsworth  
Joanne Hamlyn  
Rob Hammington  
BT Hammond  
Jaquie Hardinge  
Stephen Harris  
Melissa Hartley  
Sonja Hay  
Grace Heart  
Joanne Hedge  
Wolf Hiepe  
Vivienne Hill  
Liz Hodgson  
Emma Horgan  
Barry Hutchings  
Rochelle Hutchinson  
Ruth Illsley  
Philippa Jamieson  
Tricia Joe  
Sajini Jones  
Murray & Rob Joyce  
Kahukuri Bloodstock Ltd  
Elizabeth Keet  
Michael Kelly  
R Kent  
Jenni Kent  
Jennifer Kerr  
Susan King  
Lyn & Fred  
Kingdon-Sanders  
Wendy Klink  
Jude Knights  
Pat Knuckey  
Heike Koester  
Susan Lane  
Kay Langdon  
Stephen & Alicia Lange

Jane Lenting  
Chris Livesey  
Ingrid Losch  
Hugh Lusk  
Pat Mabbett  
Pauline Macdonald  
Anne MacLennan  
Keoni Mahelona  
Eli Maiava  
Shirley-Anne McBeth  
Alistair McKay  
Jan McKenzie  
Tania McLean  
Suzanne & Andrew McLeod  
Fiona McQueen  
Nicola Mechen  
Jackie Mills  
Chris Morrison  
Susan Morrison  
Kathrina Muller  
Jo & Bob Munro  
Elisabeth Nairn  
Annette Nixon  
Richard Noke  
Pip Norvell  
Alison Nuttall  
Lesley O'Callahan  
Lauren Overend  
Craig Palmer  
Viola Palmer  
Marco & Teresa Partridge  
Gina Payne  
Jane Penberthy  
Samantha Penman  
Lucy Petrie  
Jennifer Pirihi  
Phoenix Organics  
Jenny Quilliam  
Randell, Tutton & Bell  
Jan Rata  
Betty Rawley  
Christine Robb  
Carla Roberts  
Daphne Ross  
Kirsten Rudolph  
Annina Rueegger

Doug & Jane Russell  
Te Awhina Savage  
Alana Savage  
Robyn Scanlen  
Dick & Bertha Schoneveld  
Rachel Scott-Wilson  
Roy Shackleton  
Pam & Brett Shand  
Yvonne Shanks  
Virginia Sharplin  
Sandra Sheard  
Suzanne Stelmock  
Richard Stoks  
Matt & Debbie Sutcliffe  
Rox Sutherland-Valentine  
Chas Symes  
Jenny Tait  
Lisa Talbot  
Elaine Taylor  
Lynelle Taylor  
Grace & Iohangawai  
Te Pahi  
Phyllis Tichinin  
Denise Twentyman  
Martin Ulenberg  
Christine Vano  
Melita Van Wordragen  
Chris & Julene Wake  
Nate Walker  
Derell Walker  
Yannick Walrelam  
Nadia Webber  
Dave Webster  
Morley West  
Yvonne & Jim Wheeler  
Maara White  
Makayla Wilde  
Charlotte Wilderland  
Tania Williams  
Julia Williams  
Alison Wilson  
Ritz Wood  
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

For more information visit

[www.koanga.org.nz](http://www.koanga.org.nz)

RD 5, Wairoa, 4195, New Zealand

Email [contact@koanga.org.nz](mailto:contact@koanga.org.nz)