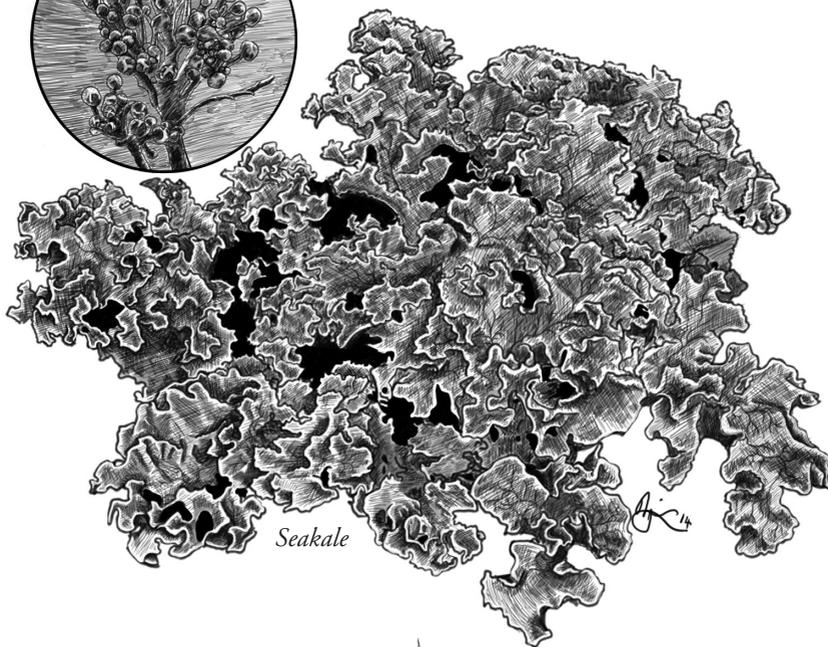


FOREST GARDENS & PERENNIAL VEGETABLES



KOANGA INSTITUTE
FEBRUARY 2015 TREE CATALOGUE

koanga.org.nz

“Crop varieties incorporate the values of their creators. When you grow varieties bred by others, you propagate their values, along with their varieties. It is time for new patterns — new patterns for agriculture, and new patterns for plant breeding. It’s time for the rising up of a new generation of plant breeders out of the very soil of our farms and gardens. It is time for farmers and gardeners everywhere to take back our seeds, to rediscover seed saving and to practice our own plant breeding. It is time to breed plants based upon an entirely different set of values.”

Book: *Breed your own vegetable varieties - The Gardener’s and Farmers Guide to Plant Breeding and Seed Saving*

Author: Carol Deppe



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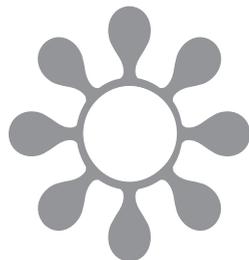
OUR MISSION

The vision of the Koanga Institute was born out of 30 years of collecting heritage fruit trees, vegetables and flowers by Kay Baxter and others, in association with the Koanga Institute. 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 Koanga Institute'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 the Institute 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.*

If there is a star in the circle, your membership expires before the next catalogue comes out! Please re-subscribe now and be a part of the solution.



LIFE HERE IS FULL AND MEANINGFUL!!!



The connections between soil health, food health and our health are becoming more and more visible, and our heritage seed and fruit tree collection is becoming more highly valued as time goes by because of these more and more obvious connections, as we knew it would be.

The exciting edge is that these seeds and trees are the best, when placed in highly mineralized and microbially active soils to create maximum connections with the life in the soil and maximum connection with our own DNA. It is in the end the strength and quality of the connections that keeps all life strong resilient and regenerative! The connections are strong and communication is clear and strong when there is enough

mineral energy being exchanged to power things at an optimal cellular level.

A lot of our energy these days is in challenging ourselves to design and create regenerative systems, systems that take on a life of their own and build life... we can feel it happening.

KOANGA GUIDED TOURS

Come to a Koanga Institute Guided Tour and check out what we're doing, it is feeling and looking very special around here. We cover a lot in three hours, you'll leave inspired! See website for more details, koanga.org.nz.

PERENNIALS

It is exciting to be offering a *Perennial Seed and Plant Material* section on the website from now. We have always had the *Back Order* section (which are perennials) but we have a stronger and new focus there now and feel that it will be continue to be a very popular section of our work. The heading *Back Orders* is now *Perennials*. More info on page 28.

KOANGA HERITAGE (REGENERATIVELY GROWN) FRUIT TREES.

When we say regeneratively grown, we are saying that we are actively finding measurable ways to increase soil health, which increases tree health and the potential of our trees to remain healthy and produce high quality fruit.

The higher the health of the soil, the more connections the trees are able to make within the soil communities, the higher the brix of the leaf sap of the tree, the more of its nutrition the tree is able to pull in from the

universe, the higher that tree's potential to feed us in a way that fully nourishes us!

Human health is about being fully nourished, ensuring all cellular communications and connections are working beautifully.

It is not an instant process to go from using the soil as something to hold the roots in place and then 'main lining' the plants either industrial or organic fertiliser, to rebalancing the mineral levels reconnecting the microbes and the fungi, re-establishing communication pathways and creating a living soil that has enough energy being released to grow high brix plants.

Ecological health is also about nourishment and connections. Our work here is about finding ways to create these systems at a home gardener's practical level. Join us on our journey, we love to hear from you, love your support via memberships and guided tours, sponsorship, workshops etc.

BEQUESTS

Bequests are welcome and a wonderful way for you to know some of your legacy will go to creating the regenerative future that is so badly needed. We welcome enquiries about bequests, or see info on our website under support.

GIFT VOUCHERS

You are now able to buy gift vouchers on our site, this has been a long time coming, but I'm glad to say is now up and running and will make things a lot easier for all of you choosing this gift option.

URBAN GARDEN

As many of you will have seen we put up a crowd fundraiser in January to raise money to develop and maintain our very exciting Urban Garden project. This garden is already

producing very impressive results in terms of quality food output and is still really in its infancy. We are planning to develop this project into an online education course. We're looking for sponsorship to create an online education course about Urban Gardening for Nutritional Resilience. The urban garden is not only a high profile project but in the front entrance to the Institute so any sponsorship will attract a lot of attention. Are you interested?

FOREST GARDEN

Our next sponsorship project will be our forest garden research project led by Shaked. We are making a crowd fundraiser to go up in February to attract donations to support us to develop that over the next year. This project is another very high profile one that will result in making a lot of research and information available to all, useful for everybody in temperate climates in this land especially, but also others around the world. We are also planning online education and videos based on this work, and we already have a booklet, *Design Your Own Forest Garden*, published. We'd love to hear from anybody interested in sponsoring this project.

AWAY FROM HOME WORKSHOPS HAMILTON GETS THEM THIS WINTER!

After our national tour last year we decided to change the way we held some of our workshops. We decided that we would travel on a regular basis, and bring our workshops to you!

Hamilton is going to be top of the list because our biggest audience on the National Tour was there and we did not get back there to do workshops.

A group of us will be in Hamilton teaching nine, one day workshops in June, and available for design and consultancy work

for a few days after that. We will also hold two evening talks. Kay will open the week with *Journeys in Soil and Health*, a great chance to catch up with the latest work and findings at Koanga and a great chance to ask hard questions (Koha entry). This will be a one and a half hour talk followed by a discussion, opening out into the following workshops over three days (see page 10). On Saturday evening we will hold another evening hosting Grant from Environmental Fertilizers (also Koha entry). This evening will be a discussion night based around growing nutrient dense food. If you've done the workshop the previous day this will reinforce and add to your understanding in a significant way, or if you have been on the journey yourself this is your chance to ask hard questions to support forward growth. See page 10 for details of all the workshops.

TE KAKANO

We have finally created a design and consultancy team:

Te Kakano

Design for a regenerative future

It is a design team made up of Kay, Bob, Shaked, Tes and Michael, whose stories are on the kotarevillage.co.nz website and who together hold a vast range of experience including a strong interest and experience in regenerative land use, community design and living, and growing food and health. Together we can help you with everything from choosing your land to designing it to create a regenerative system to meet yours and future needs.

If you would like your forest garden or any other aspect of your environment designed call us. Our profits go back into supporting the saving of the seeds at Koanga, and

the research we do finding ways to create regeneration in our soils food and health.

Email design@koanga.org.nz for more information or to talk with us.

WINTER PLANNING

Finally this is the time of the year to be planning your winter forest garden plantings, and your winter gardens. Check out our books *Design Your Own Orchard* and *Design Your Own Forest Garden* and do your planning. You might like to book into a *Design Your own Forest Garden Workshop* in Hamilton in June, but it will be critical to order your fruit trees well in advance of that time. First in best served!

The *Design Your Own Forest Garden* booklet was written to go with *Design Your Own Orchard*, key information in both. Check out the Forest Garden articles further in this catalogue to see how we are doing.

The Seed list in the centre of this catalogue marks all those seeds that are good planted in Autumn to help you along with garden planning, and if you don't have a *Koanga Garden Planner* then now is the time of the year to get one and seriously begin to plan your garden so that you are actually creating repeatable systems that are capable of producing all of your food in a nutrient dense way whilst building soil in the most efficient manner!

This planner is an amazing tool and I regard it as the most important thing I have written.

FINALLY SPONSORSHIP & SUPPORT

We are making a big effort to ensure our work of saving our seeds and trees is sustainable as well as our research programmes. This year we will be looking for major sponsors, for both the urban garden project and the forest garden project. Check

out our urban garden crowd funder up right now and expect a forest garden funder in March. As well as that we have developed a relationship with environmental fertilisers whereby we get a percentage of fertiliser sales that come through us. Please by their fertiliser through our website shop which

gives you instructions for use (see page ... for details). These income streams will make our lives a lot less stressful and enable us to continue our research and outreach.

Enjoy the autumn, arohanui, Kay

∞ BEQUESTS ∞

Should you wish to remember the
Koanga Institute in your will...

By making a bequest to the Koanga Institute you will be supporting us to continue our important work. This gift is one that you may not be able to make during your life time, but will ensure that our heritage plants are available for future generations as a resource for cultivation and genetic diversity. The Institute receives no external funding, and we rely on our membership fees and royalties from associated small businesses for support. 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 send a request for more information to:
Koanga Institute, 96 Kotare Road, RD 5 Wairoa
or email kay@koanga.org.nz



BECOME A MEMBER OF THE KOANGA INSTITUTE AND BE PART OF THE SOLUTION

Over the past 29 years we have been instrumental in collecting and saving over 600 (mostly New Zealand) heritage vegetable seed lines and over 300 Northern heritage fruit tree lines. Together with the plant material we have collected the stories; the whakapapa of our food plants and the old people who carried them to today. Growing out these food plants to make them available to our members and the general public, is a work of love rather than an economic proposition, which is why the Koanga Institute is a registered Charitable Trust. Membership is an opportunity for all of us to be part of this wonderful work.

∞ ***New Zealand Membership: \$45 one year***

Full membership benefits as outlined below

∞ ***International Membership: \$65 one year***

Full benefits as outlined below, for members with overseas postal address. Seeds will be posted at buyers' risk, and are subject to local customs laws and restrictions.

∞ ***Community Gardens and Schools / Marae Membership: \$75 one year***

Full benefits as outlined below for Community Groups, Schools with Gardens, and Marae. A mixed bundle of 10 seed packets will be sent along with the "How to Grow Nutrient Dense Food" and "Save Your Own Seed" booklets. Please use just one email address per membership.

∞ ***Life Membership: \$1000***

Full benefits as outlined below – for your lifetime!

KOANGA INSTITUTE MEMBERSHIP ENTITLES YOU TO...

- ✓ Receive 2 free catalogues each year: the July edition with a full seed description list, and the February edition focusing on heritage fruit trees
- ✓ 6 free Preservation seed packs per year
- ✓ One free Institute e-booklet of your choice
- ✓ 10% discount on Koanga seeds
- ✓ Special Members promotions
- ✓ Monthly E-Newsletter
- ✓ Discount on selected workshops
- ✓ It means you are actively part of the solution!



KOANGA GARDENS

CENTRE FOR REGENERATIVE LIVING

PERMACULTURE DESIGN COURSES INTERNSHIPS, WORKSHOPS AND GUIDED TOURS 2015/2016

We are actively pursuing, accumulating and sharing the knowledge and skills required to live regeneratively and simply in Aotearoa. Empower yourself with the practical skills to turn your dreams for sustainability into reality. We use the Permaculture Design process to design and teach solutions for all aspects of our lives and environment.

- * Our workshops are full-on learning experiences - prepare to see the world through different eyes!
- * Our teachers are all outstanding in their fields, and recognised international teachers.
- * Workshops are subject to change. See www.koanga.org.nz for further information.

KOANGA INSTITUTE GUIDED TOUR

All guided tours \$20 per person

Free for kids

March 1st 2015

April 5th 2015

May 3rd 2015

November 1st 2015

December 6th 2015

Come and see the Koanga magic in person. If you're keen book early as we require a minimum of 10 people – we will decide one week before if it will go ahead.

PERMACULTURE DESIGN COURSE

1st - 13th February 2015 | Cost \$1900

6th - 18th September 2015 | Cost \$1900

Tutors - Bob Corker, Kay Baxter, Shaked From, Tes Rae, Michael Stahl & Others

This 12 day workshop will change the way you view your world and encourage optimism in the face of the many challenges we are faced with. Empower yourself with the knowledge and skills to be able to apply the principles and patterns of Permaculture Design to all aspects of your environment

and life. As well as covering the international curriculum we focus on daily practise of design so you will feel confident in understanding design and its application. 2 weeks of inspiration, learning and hands on experience, with experienced tutors who live what they teach. See website for details. www.koanga.org.nz/growing-soil-food-health-internship/

SPRING INTERNSHIP – GROWING SOIL, FOOD & HEALTH (10 WEEKS)

21st September - 27th November 2015 | Cost \$5000

Tutors - Kay Baxter & Others

Limited to 8 interns only

10 weeks of intensive learning and hands on experience, including the 8 workshops below: Preparing/Cooking Nutrient Dense Food, BioIntensive Gardening, Growing Nutrient Dense Food, Design Your Own Forest Garden, Let your food be Your Medicine, Urban Garden Design, Managing & Milking a House Cow, Designing & Managing Regenerative Systems for Egg production.

HAMILTON TOUR

EVENING DISCUSSIONS

JOURNEYS IN SOIL AND HEALTH

May 2nd 2015, 6:30pm - 9pm | Cost - koha

A talk by Kay Baxter

GROWING NUTRIENT DENSE FOOD DISCUSSION

May 31st 2015, 6:30pm - 9pm | Cost - koha

With Koanga Team & Grant from Environmental Fertilisers

WORKSHOPS

PROPAGATION

May 30th 2015 | Cost \$250

9am - 4pm

Tutors - Kay Baxter & Shaked From

An empowering economical way to begin your home orchard/forest garden. Learn how to save your own local heritage trees, and propagate all of them including grafting and budding. Includes starter kit worth \$100 of plant material (including rootstocks) to take home to form the basis of your home orchard or small nursery.

DESIGN YOUR OWN SMALL HOLDING

May 30th 2015 | Cost \$130

9am - 4pm

Tutor - Bob Corker

A guide to designing your small holding, issues covered include:

- ☞ The pattern language of design (ethics/principles/patterns/strategies and techniques) getting your priorities right
- ☞ Land use and climate patterns and the effect on placement of structures/development
- ☞ Soil analysis and development
- ☞ Water analysis (doing the maths), strategies and techniques
- ☞ Self-reliance, practical and financial strategies and techniques.

GUT HEALTH

May 31st 2015 | Cost \$130

9am - 4pm

Tutor - Tes Rae

Fermentation for Gut Health - a practical workshop making and tasting fermented vegetables, fruits and milk. The day will be an introduction to some of the important foods which are so beneficial to our digestive health. The aim being that every one feels confident to continue making and tasting so that fermented foods become a part of your everyday diet.

- ☞ Vinegars
- ☞ Lacto ferments
- ☞ Milk kefir
- ☞ Kombucha
- ☞ Water kefir

APPROPRIATE TECHNOLOGY

May 31st 2015 | Cost \$130

9am - 4pm

Tutor - Bob Corker

Hear about our experience in designing and constructing appropriate technologies for self-reliance and living simply. You'll learn about rocket stoves, bio-char, solar ovens and much more.

GROWING NUTRIENT DENSE FOOD

May 31st 2015 | Cost \$130

9am - 4pm

Tutor - Kay Baxter

A two day workshop covering the basics of growing Nutrient Dense Food, with an emphasis on making high quality compost and learning how to use a refractometer.

URBAN DESIGN

June 1st 2015 | Cost \$130

9am - 4pm

Tutor - Kay Baxter

Learn to make the most of your urban spaces

both within your own backyard and public spaces. Design your garden to meet the nutritional needs of your family and your neighbourhood in a regenerative way.

FOREST GARDEN DESIGN

June 1st 2015 | Cost \$130

9am - 4pm

Tutor - Shaked From

Learn to design a forest garden that will regenerate the soil, provide nutrient dense fruit, nuts, berries, edible leaves, chicken food, firewood, weaving and medicinal materials etc etc in the image of a natural forest.

*For all workshops longer than one day,
prices include camping facilities and all meals.*

LET FOOD BE YOUR MEDICINE

2 days: October, 19th - 20th 2015 | Cost \$320

Tutor - Tes Rae

Learn to recognise, harvest, store and use your local weeds and herbs so that they become a critical part of a nourishing diet essential for health.

FOREST GARDEN DESIGN

2 days: October 12th - 13th 2015 | Cost \$320

Tutor - Shaked From

Learn to design a forest gardens in the image of natural regenerative systems. A mixture of theory, design and practice in the Koanga fledgling Forest Garden, and nursery, and Kay and Bob's 3 year old Forest Garden. Kay has 30 years experience and Shaked is a tree man who grew up on an Israeli Kibbutz in a Mediterranean forest garden.

MANAGING & MILKING A HOUSE COW

1 day - 26th October 2015 | Cost \$130

Tutor - Bob Corker

Learn to use Holistic Management practices to manage your grazing, encouraging stronger soil and plant growth meaning better cow health and milk quality. Learn the basics of milking by hand and small machine and how to choose and take care of your cow.

PREPARE & COOK NUTRIENT DENSE FOOD WORKSHOP

2 days: 21st - 22nd October 2015 | Cost \$320

Tutor - Kay Baxter

This course will look at the essential relationship between the quality of our diets and its reflection in our overall health and that of our children. You'll learn the principles of a traditional diet, as documented by Weston Price, and how to prepare food following those principles.

BIO INTENSIVE GARDENING WORKSHOP

3 days: 28th - 30th September 2015 | Cost \$450

Tutors - Kay Baxter

Learn the basic theory and practice of BioIntensive gardening, the most efficient way to grow vegetables, with amazing results. We use these methods, and encourage others to do the same. You'll leave this course with some real skills that will get your garden pumping.

GROWING NUTRIENT DENSE FOOD WORKSHOP

2 days: 5th - 6th October 2015 | Cost \$320

Tutor - Kay Baxter

A two day workshop covering the basics of growing Nutrient Dense Food, with an emphasis on making high quality compost and learning how to use a refractometer.

DESIGNING AND MANAGING REGENERATIVE SYSTEMS FOR EGG PRODUCTION

1 day - October 27th 2015 | Cost \$130

Tutor - Bob Corker/Shaked From

Bob and Shaked will take you through the theory and practice of designing and managing various systems for egg production including chicken and duck systems so that you can choose the most appropriate ones for your situation. You'll cover design for regenerative systems as well as appropriate breeds and management systems.

URBAN GARDEN DESIGN

2 days: November 2nd - 3rd 2015 | Cost \$320

Tutor - Bob Corker, Kay Baxter & Shaked From

This workshop is about getting maximum nutrition in a regenerative way from tiny spaces. We will begin with the principles involved and work through strategies and techniques for various situations, including your own. This is an amazing opportunity to experience and learn in our own 2 year old 200 sq urban research project. Check out the Urban garden section on our website to get a feeling for the possibilities!



KOANGA FRUIT TREES

Koanga fruit trees are available from Kotare Village, Wairoa, and from Edible Garden, Palmerston North.

We both mail order Koanga Gardens fruit trees around New Zealand. The Koanga Institute, at Kotare Village here near Wairoa, holds an annual Open Day for you to check out our developing Forest Gardens, and to collect your trees (see opposite page).

KOANGA FRUIT TREE CATALOGUE

You can order your trees on the enclosed order form, or you can go online and buy them directly on our website ww.koanga.org.nz you can also download this tree catalogue and order form from our website if you wish another copy (at the top of the fruit and nut trees part of the online shop).

This winter we have an excellent and growing range of heritage fruit trees and berries available for you. They have all been grown organically by artisan growers, either here at Koanga, or by Abraham and Patrick Land in the Hokianga.

- ☞ These trees and berries will be available to be picked up from the Koanga nursery on Saturday July 4th 2015.
- ☞ We will be available on July 4th to prune your trees if you wish.
- ☞ We can also courier your tree orders to you from July 6th.
- ☞ All of our trees will be open ground grown and bare rooted so relatively easily shipped.
- ☞ Our nursery will not be open to the public throughout the year except for posted guided tours or by arrangement, however we will be available for tree sales from July until the end of August by appointment only, please email contact@koanga.org.nz.
- ☞ All trees will have a white dot on the north side, showing you how to place the tree in the ground - trees do better if planted facing the same direction as they were grown in the nursery.
- ☞ See our website for more details, as well as a planting guide for fruit trees.
- ☞ We will email all fruit tree buyers planting instructions as we send the trees.

OPEN TREE DAY

We will be open from 11am – 3pm on Saturday July 4th 2015 to celebrate trees and forest gardens here at Kotare Village.

- There will be an introduction to forest gardening and a guided tour of our developing forest garden at 11am.
- We will be available to prune the trees you buy.
- We will provide a hearty broth based soup and sourdough bread for lunch at 1pm.
- Everyone is welcome, you don't have to be buying trees!
- Please email us to let us know you are coming so we can plan for numbers.
- This will also be an opportunity to stock up on seeds for spring etc. See you here, but don't forget to order your trees before hand, as numbers are very limited.

KOANGA PROPAGATION MATERIAL

One fantastic way to start or increase your own orchard is to propagate trees yourself.

If you need help to design an orchard, to learn how to propagate trees, or to save your own local heritage trees, then check out our workshop program at www.koanga.org.nz/courses where you will find loads of different workshops including Propagation (see page 11). The Propagation workshop not only helps you gain the skills you need, but you also go home with heaps of plant material to grow your own trees.

It's possible to buy scionwood or cuttings from us in the Winter and then grow your own trees. For trees that require grafting, you'll need a rootstock (to graft onto) plus the scionwood to graft onto the rootstock. There are details of what we have available on our website:

www.koanga.org.nz/articles/fruit-trees

If you don't have internet access, please send a self addressed and stamped envelope to:

Gail Aiken, PO Box 19, Rawene, 0443, and we will post the list out to you.

∞ KOANGA GARDENS ∞

FRUIT TREE CATALOGUE 2015

It is with excitement we send this catalogue out to you all. 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.

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 stonefruit section of our catalogue (except plums) 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. We tip the central leaders in the nursery to produce a low branched tree most suitable for home gardeners.

As well as being a stronger tree, we are able to offer them at a cheaper rate than grafted trees.

ALMONDS

Monavale - Seedling

Aka Monavale. 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 insects and pests can't get in there. \$24



Wilderland Bitter - Seedling

This is a bitter almond (*Prunus dulcis amara*) from Dan Hanson's collection in Wilderland, bitter almonds received the name of a poisonous dangerous fruit, to our best knowledge they are highly medicinal fruit, very high in B17, medicinal almond oil is made out of those, on-line information indicates that heat or fermentation takes out any risk if excised before. \$24

APPLES

ROOTSTOCK OPTIONS

- ☞ **MM 106** - Developed for free draining lighter soils. A semi dwarfing tree, if well pruned can be kept to 2.5 m high and 3m wide. An excellent choice for home gardens if you have the right soil.
- ☞ **793** - Large tree. Has been bred from Northern Spy and does well on heavy soils.
- ☞ **M9/M26** - Produces a dwarf tree. Can be espalliered, cordoned or grown as a staked tree.
- ☞ **Northern Spy (N/Spy)** - The old rootstock that does best on heavy clays. Can easily be kept to a manageable size (3m).

Bert's - 793

Medium sized, round apple with red skin. Dessert apple with good flavour and firm flesh. \$28

Early Strawberry - M26

A small flattish, very sweet, early apple, ripening Christmas to late February. Green yellow skin with bright red streaks when ripe. Golden Delicious type flavour and texture, dessert apple. A very old variety coming to us from an old tree in Birkdale Auckland, and previous to that Papakura (Mr Tom Shepherd since 1896). \$28

Freyberg - M26, N/Spy

Large, pale green skin which turns yellow

when ripe, the flesh is crisp, juicy and very sweet. good cropper. Ripe late February to late March. \$28

Giant Geniton - MM106, N/Spy

Green skin, similar to Granny Smith, but reddish striping when ripe, sweet/tart crunchy eating apple from April on and great cooking afterwards, reliable heavy cropper. \$28

Granny Smith - M26

Another well remembered apple by those lucky enough to have been able to have a tree ripened version! These apples taste so good eaten as a dessert apple when they have been left on the trees to ripen, when the skin goes yellow with a brownish tinge, and the flesh goes super sweet and juicy. Also great

used for cooking. These apples were bred originally in Australia and they grow well in Northland. Large round bright green skin, crisp, sweet tasty/acid tangy flavour. Ripens April, May. \$28

Haywood Wright - M26, M9

Bright red/golden russet skin, red coloured flesh, excellent texture and flavour, juicy, sweet, heavy reliable cropper. Outstanding apple!. It was selected by one of our most famous NZ nursery men, Hayward Wright of kiwifruit fame. It is ripe mid January-February and is a desert apple. \$28

Jonathon - 793, MM106

Jonathon is an old fashioned desert apple, that is crisp with very juicy crunchy flesh mostly red skin with green patches when ripe, and white flesh. Keeps very well, ripe March April. \$28

Koanga Red - M26, N/SpY

This is a tree from an unknown member of the institute around 1995, grown from seedling wild tree, similar to red delicious but larger and brighter red, possibly seedling of red delicious, full flavoured. \$28

Lady Finger Cider - M26, MM106, N/SpY

Round, small-medium, bright red streaky skin, golden russet when ripe, very sweet, full of flavour, used as a cider apple but every bit as good as a mid season desert apple. ripe February. \$28

Ohinimuri - 793

Came to us from Jim Cox, Tangiteroria, 1989, ex Te Puke, originally from Ohinemuri area, Hauraki. Round, yellow skin, classic old fashioned cooking, great dessert when fully ripe, prolific bearer, very healthy, must take fruit off until bigger, full flavour. \$28

Slack My Girdle - MM106

Slack my Girdle are medium size, flat, yellow green with bright red patches, sweet flesh, late ripening, for cider making. \$28

Sweet Coppin - M26, MM106

Cider apple, Mid-late season, Medium to large conical fruit, white soft flesh, no astringency, very good cropping, Tends to produce well biennially. \$28

Vaile Early - MM106, N/SpY

Small-medium, conical, yellow greasy skin with red streaks; juicy sweet, sub-acid; reliable cropper, medium vigour, takes some years to ripen early. \$28

Willie Sharp - MM106

A well known apple in NZ in the mid 1900's. Pale yellow skin when ripe, similar in looks to Golden Delicious but firmer, with excellent flavour, sub-acid, sweet, juicy, heavy cropper, excellent for both desert and cooking, with a tang modern apples just don't have! Gifted to the Koanga Collection by Bert Davies of Wellsford fame who also gifted us his entire pear collection. This apple was actually bred in NZ by a Mr Sharp who was one of our early NZ plant breeders. \$28

Winesap - MM106

Red skin, old fashion apple, very sweet tart dense flesh, with winy flavour. \$28

Zimmerman - 793, M9

Large, elongated, conical, square bottom, bright red streaky skin, excellent rich juicy sweet flesh, ripe late February March. \$28

APRICOTS

Apricot- Maungaone - Seedling

This is a new castle type apricot, a small orange skin with red blush, bright yellow flesh, from mangaone road, northern hawkes bay. \$24



BERRIES

This collection of NZ heritage berries has come to us from many people around New Zealand, however a significant part of the collection came from Henry Harrington.

A growing part of the collection is from a member and Koanga Seed Curator, Wendy Evans, who lives near Wellington and collects heritage berries. She has named her collections after the places she found them.

Cherry - Mt Morency - Colt

Large, bright red fruit, amber flesh with tangy flavour, self fertile, perfect for pie making. \$28

Cherry - Tangshe - Colt

Early, self fertile cherry, producing well in mild climates. It produces large crops of firm, juicy fruits with great flavour and pinkish red skin. \$28

Currant - Aniwaniwa Red

From the Henry Harrington Southland collection, which Henry collected from plants growing wild along railway lines all along the tracks in his area near Ohai, an old coal mining area and a trail the old goldminers used. \$16

Currant - Early Black

From the Henry Harrington Southland collection, which Henry collected from plants growing wild along railway lines all along the tracks in his area near Ohai, an old coal mining area and a trail the old goldminers used. \$16

Currant - Giant Ruby Red

From the Henry Harrington Southland collection, which Henry collected from plants growing wild along railway lines all along the tracks in his area near Ohai, an old coal mining area and a trail the old goldminers used. \$16

Currant - Palmer Black

Classic black currants high in flavour and nutrition, fruiting in hawkes bay, from Henry Harrington's collection. \$16

Currant - Pauatahanui

From the collection of Wendy Evans. \$16

Currant - Seddon's Early

From the collection of Wendy Evans. \$16

Elderberry - Adam

Fast growing, large bunches of black berries, even in warmer areas of New Zealand. Highly medicinal fruit and flowers. Loves wet soils. \$16

Gooseberry - Big Red

From the collection of Wendy Evans. \$16

Gooseberry - Aniwaniwa

from the collection of Wendy Evans. \$16

Gooseberry - Large Black Red

Gifted to the Koanga Collection by Henry Harrington, found growing wild along the railway lines around Ohai Southland it is an outstanding large black-red colour and sweet fruit. \$16

Gooseberry - Levin Early

This gooseberry came to the Koanga Collection from Wendy Evans. It is an old early one from the Levin area. Ours hasn't fruited yet. \$16

Gooseberry - Pauatahanui

Gifted to our collection by Wendy Evans who found it in Pauatahanui. \$16

Raspberry - Lake

Raspberry Lake A red raspberry from the lake Rotorua area. It fruits twice a year, that is prolific and suckering like the Yellow one. These raspberries grow into patches, and require managing. Beds with wooden sides

could be useful in very free draining light soils. They like moist soils. \$16

Raspberry - Yellow

This outstanding raspberry was well known all over this land 100 years ago. It has come into our collection from many places, including all the early settled gold mining areas and settlements along rail tracks. Will fruit a little the first year and will be full fruit production the following year if they are taken care of. Average sized pale yellow fruit that is one of the best eating raspberries! An added bonus is that the birds don't find them, and they have two crops, with a strong Autumn crop following a Summer crop. \$16

Worcesterberry - Henrys

Worcester berries are ripe later in the season than other berries, and will hang on their vines for many weeks ripe, especially if espaliered in a cold south facing place as they were on Henry Harrington's garage when I first saw them. This fruit has come from the original French settlers in Akaroa, the de Malmanche family. The vines are thorny like gooseberries, and the fruit are black like a currant but taste sweet like a gooseberry. they are ideal as espaliered vines. \$16

FIGS**Batley**

A fat, mid season, squat fig with green skin, white flesh, very sweet excellent flavour. This is a very reliable cropper, and is an outstanding fig from the old Historic Places Trust house at Batley on the Kaipara. This house is the original house belonging to the old fish factory near the tamatea marae, the same place our Batley peach comes from. \$18

Black

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. Only one crop per year. From the old orchards of Oratia. \$18

Hyndemans

These are old figs from the early settlers around the Kaipara Harbour. Two crops if you don't prune it - the first around Xmas, the next in March/April. Small figs with a purply skin and silky pink centre. Quite different from the Black Fig, I think this is the old Malta fig. Very good for drying. \$18

McLeod

Large, round, green skin, dark red very sweet pulp, huge reliable crops, not suitable for areas with short summers. This is one of the early figs that came to NZ with the gum diggers and was a staple part of the diets of the early settlers around Northland. The figs were eaten fresh but also dried in a paste form and used as sweetening for all baking by many. \$18

Pouto Sugar

This fig is from the original old McLeod homestead, Pouto. It is a very sweet fig, hence its name. An early fig, small, pear shaped, red brown colour on one end with pale flesh. \$18

GRAPES

Bishop Pompallier

Bishop Pompallier is a large black grape, sweet with a full flavour, excellent as a dessert grape. Originally from France, this variety came out from France with Bishop Pompallier, and came to us via the Andrews homestead in Kohukohu. Disease resistant, ripe in March. \$18

Black Dalmatian

This grape come to us from a very old Dalmatian orchard in Kohekohe. Outstanding disease resistance and delicious strong flavour. We believe this was originally used as a wine grape, it has very dark skin, a musky flavour and lots of tannin. Also good as a dessert grape. Ripe in late March. \$18

Niagara

Niagara grapes are an excellent choice for the organic home gardener. A very early white dessert grape, sweet with a lovely mild flavour. Ripens early March. Easy to grow with reliable heavy crops. \$18

Torere

Tiny but very sweet thin skinned black grapes, outstanding table grape. These plants were grown from a 100 year old vine that covers over 1/2 an acre in Torere in the eastern Bay of Plenty. They are like currant grapes and may well be. \$18

HAZELNUTS

Alexandra - Seedling

Alexandra is a New Zealand selection from Central Otago. It forms a large vigorous, open, spreading tree with few suckers, The husk is about the same length as the nut and most nuts fall free of the husk. Great for nut production in a hedge, these are grown from seed. \$12

Hedge Mix - Seedling

This is a variety of hazelnuts, grown from seed, collected from a hedgerow, a range of those will create a great hedge, polinator hazelnuts, and some varietal production. \$8

NECTARINES**ROOTSTOCK OPTIONS:**

Peach - Do particularly well in light, dry boney soils. Produce larger trees than Marianna.

Goldmine - Seedling

A medium sized, mid season, white fleshed nectarine with red over green skin. Dessert quality with a sweet flavour. An outstanding old variety from the Kaipara. \$24

Black Pearl - Peach R/S

Smooth skin, flesh similar to Blackboy peach, free stone, excellent for drying and bottling. \$28

Pouto Gold - Peach R/S

Sweet, juicy, old fashioned small, gold fleshed fruit with red on green skin when ripe. Outstanding old variety from Logan Forrest's front garden at Pouto. It is one of the old gold nectarines that were common in that area 100 years ago. \$28

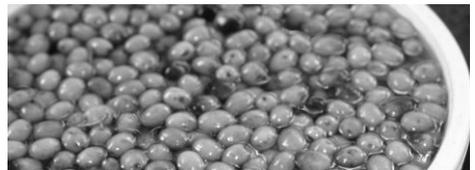
OLIVES

The olives in our collection come from the Pouto area. Over the years these trees have had a lot of attention, and many have been tested for oil quality etc. The oldest tree was carbon dated in 1970 to be 200 years old. The local stories say that these olives came with the Portuguese and Spanish whalers and explorers in the 16th - 17th centuries. There are many ancient trees naturalised, self seeding and suckering in the area.

We have selected what Logan Forrest considers to be the best dual purpose oil/pickling olive, and the largest greek type pickling olive to make available to you.

Pouto Large Pickling

Super large greek type pickling olive, these are potted in 25L bags and are 2 years old, we do not send those so must pick up from our nursery at northern Hawkes Bay. \$28

**PEACHES****ROOTSTOCK OPTIONS**

Peach - Do particularly well in light, dry boney soils. Produce larger trees than Marianna.

Seedling - Trees grown from seed, same characteristics as peach r/s only not disturbed by grafting.

Arapahoe Red Leaf - Seedling

This variety has red skin, golden flesh and freestone with red streaks around the stone. It has an outstanding flavour, excellent texture and is very juicy. It is an outstanding Dalmatian cultivar and originally came from Ruawai. Red leaves on the tree. \$24

Blackboy - Seedling

Small-medium, dark red grey skin, bright port red/white streaky skin, freestone, juicy, strong flavour. \$24

Christina - Seedling

White flesh, red around stone, green skin, red blush when ripe, similar to River Peach but firmer, sweeter. \$24

Four Winds - Seedling

This is a peach collected on a trip around the far North from Kaitaia with David Austen and over the past 10 years has proved to be a beauty in my orchard. Late ripening, disease resistant, very sweet, firm full of flavour, clingstone. Excellent dessert peach. Pale skin red blush. Excellent cropper. Ripens March. \$24

Hokianga Golden Queen - Peach R/S, Seedling

Extremely disease resistant peach, heavy cropper of small very sweet exquisitely flavoured golden fruit. They are the prolific old original Golden Queens that grew wild over much of Northland. Clingstone. Originally from the Hokianga, ripens February March. \$28 (Peach), \$24 (Seedling)

Jim Armstrong Black - Seedling

Seems to be a variant on the River Peach. It's strong, healthy and a precocious cropper. Dark red centre. \$24

Mamie Ross - Peach R/S

We are excited to be able to make this peach available again to you all. It came from Mavis Smith's Totara House collection, the original tree is still alive on the front lawn (very unusual for a peach to live 100 years). Mamie Ross peaches were listed in the early nursery catalogues in nz in the 1800s and are outstanding white/ green skinned and white fleshed peaches. they ripen early after Mary's x-mass, in late Dec early Jan. They are super juicy, melt in the mouth, unlike anything available commercially today. \$28

Orion - Peach R/S

Very early flowering and ripening peach ripe from late November - early Dec. Small white fleshed peach, red blush, extremely heavy, reliable cropper, fruit often needs thinning to avoid breaking branches, free stone. Ex Kumeu. \$28

Puhoi - Peach R/S

Large fruit with very green skin until just before ripe. Yellowish velvety skin with red blush when ripe. Firm, very juicy, pale yellow flesh. Clingstone. \$28

River - Peach R/S

River Peaches are the ones that set Kay off on this whole journey. 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. \$28

Peacherine - Matakohe- Seedling

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. \$18

PEARS**ROOTSTOCK OPTIONS**

Quince BA29 - produces a dwarf pear tree and prefers moist conditions.

Quince C - the best rootstock for very small espalliered / cordoned trees.

Berts Early - Quince BA29, Quince C

Early small sweet round dessert pear. Ripe January. Self fertile (does not need a pollinator). From Bert's orchard in Wellsford, planted 1917. \$28

Berts William Bon Cretian - Quince BA29, Quince C

An outstanding selection of William Bon Cretian. Superior flavour, ripe early Feb. Good dessert and bottling. Bert had many Bon Cretians, this one grew and tasted different. \$28

Kiefer - Quince BA29 R/S

Large, yellow, russety skin with crisp, sweet, juicy, firm flesh, excellent keeper. Ex Wellsford, Bert Davies. Pollinator: Seckles,

Ripens late March. \$28

Seckles - Quince BA29, Quince C

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, if you only have room for one pear, this is it! The bees love it too. \$28

Triumph de Vienna - Quince BA29, Quince C

Excellent dessert pear. Ripe March, after Bon Cretian. One of the very best pears for flavour and texture, large brown russet. This was Bert's favourite pear (he made pear sandwiches with this one). \$28

PLUMS**ROOTSTOCK OPTIONS**

Peach - Do particularly well in light, dry boney soils. Produce larger trees than Marianna.

Marianna Plum - Prefer heavier, moist soils. Excellent semi dwarfing, and non-suckering.

Myrobalum - Works particularly well for European plums. Semi dwarfing, prefers heavy soils and tolerates wet feet.

Angelina Burdett - Peach R/S

Soft, very sweet, dessert plum with purple skin, yellow flesh. From Red Bluffs Nursery, Warkworth, came to us from the collection of Tom and Robyn Morrison. Over 150 years in Northland. Ripens February. Pollinator-Greenage. \$28

Black Prince - Marrianna, Peach

Japanese. Large dark red, meaty flesh, purple/green skin, freestone, excellent taste.

Pick over long period, keeps well. Ripens February-March. From an old French orchard in the Hokianga. Heavy precocious cropper. Partially self-fertile, hedgerow pollinator plums will help. \$28

Damson - Peach R/S

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. \$28

Dan's Early - Marrianna, Peach

Large, yellow flesh, red skin, great texture and flavour. Heavy cropper. Large spreading tree, the best quality early plum around. Partially self fertile. Originally from Dan Hansen. \$28

Greengage - Peach R/S

A classic Greengage, came to us from Robyn and Tom Morisson from Kenilworth orchards at Workworth. Naturalized to fruit well also in warm winters, Exceptional flavour, Semi free stone, self fertile though other plums around will make better. \$28

Little John- Marianna, Peach

An outstanding large plum with dark red skin and red meaty flesh, sweet, full of flavour, juicy, tends to fruit bi-annually. It ripens just after Tamaki Special and fruits best with other Japanese type plums around or pollinator plums. \$28

Maungamuka Golden Drop - Peach R/S

Delicious yellow green soft fleshed plum with transparent skin for dessert. It came from the schoolgrounds at Maungamuka with a big name from many past pupils. Self fertile, ripens January. \$28

Scarletina - Marrianna, Peach

Red skin and flesh, outstanding flavour and colour. Great for dessert, jam and bottling. An ex commercial Australian plum, it came to us from Matakoho, Self fertile, ripens mid January. \$28

Tamaki Special - Marrianna, Peach

This is an outstanding plum, from the collection of the late Dan Hansen of Wilderland fame. \$28

Taneatua Burbank - Marianna R/S

Large, red/yellow skin, yellow meaty flesh, excellent flavour, compact tree. Came to us from Frazer homestead, Taneatua. \$28

Ahipara - Peach R/S

A very special plum that I found growing in a long abandoned orchard on the Ahipara Gumfields many years ago. We think it is the old Victoria plum that many people ask us for. A large egg shaped classic looking prune except it ripens earlier than all the others, in January. Dark red skin, yellow very sweet sugary flesh and free stone it is an excellent plum for dessert and cooking. Pollinator - Angelina Burdett / Self fertile. \$28

PRUNES

ROOTSTOCK OPTIONS

Peach - Do particularly well in light, dry boney soils. Produce larger trees than Marianna.

Sugar - Peach R/S

Old European plum from the Morrison collection, which has come from the original White Bluffs Warkworth collection from the early 1900s. Naturalised and fruits well in the north. Very sweet, free stone, red skin, yellow meaty flesh. \$28

Victoria - Peach R/S

This is a classic victoria plum, came to us from Jim Cox, it's a free stone, self fertile, yellow skin. Ripens in January. \$28

YACON & JERUSALEM ARTICHOKE

The perennial back order collection contains lots of interesting and amazing plants. Here I'm going to focus on two that are part of the group that are sent out around September of each year. Both are reliable, heavy cropping plants that are easy to grow and I wouldn't be without them in my garden.

YACON

Yacon is a member of the Asteracea family and is native of South America where sources say it has been cultivated and used for at least 2000 years! It is an attractive plant with large, slightly furry looking leaves and small yellow flowers. Apparently the young leaves can be eaten but I haven't tried this and we grow it for the tubers. Yacon produces two kinds of tubers: central, knobbly tubers with buds that will form next year's growth and large, smooth storage tubers which are the ones we eat. The tubers are planted in the spring and grow away strongly, they require little input throughout the year once they are growing and are then harvested in the winter. We dig up all of the plants in winter, separate the storage tubers from the growing tubers and re-plant the growing ones. They are quite heavy feeders so it's good to add manure or compost to the soil.

The smooth tubers are delicious – they have a crisp texture almost like an apple, are sweet, very moist and have an almost mild gingery flavour. Yacon apparently means 'water root' in the Incan language and they were valued for their juice which can also be boiled down to make a sweet syrup. We mainly use them in two ways though – chopped for salads (we don't grate them as they are too moist

and tend to become mushy) or to add a crisp, crunchy texture to stir fries. I think my favourite is to chop them to add to a salad of grated beetroot and daikon radish. Delicious!

JERUSALEM ARTICHOKE

Jerusalem artichokes are related to Yacon, also being part of the Asteracea family. They are native to North America and have been an important food source there for thousands of years too. In America they are usually called Sunchokes (which makes more sense than 'Jerusalem artichoke' as they are not from Jerusalem and are not artichokes!). Until I started growing them I had no idea how beautiful they were and now always want some in my garden. They are very tall with yellow sunflower like flowers that flower over a long period and are loved by the bees. They are heavy yielding and produce large clusters of tubers. We have three different types of Jerusalem artichokes in the collection: 'Jerusalem', with pale, knobbly tubers; 'Red Skinned' with smoother tubers with a red tinge to the skin and 'Dalmatian' that are similar to Jerusalem. The Red Skinned ones came from the South Island white baiters huts along the West Coast and need a bit of encouragement to grow this far north in the Hokianga. They prefer the colder winters. I put the ones to be planted into damp sawdust and keep them in the fridge for a few weeks before planting them out. Without that treatment the Red Skinned Artichokes take months to sprout and don't yield heavily. The Dalmatian artichokes came via Logan Forrest, from a Daly friends garden on the edge of the Kaipara.

They are harvested from the autumn and can be used in a variety of ways. They are usually cooked and can be boiled, steamed or roasted. They have a reputation for being quite persistent in a garden and difficult to get rid of so its best to designate a particular bed in which the artichokes are planted every year because its difficult to get all of them and any that are not harvested will come up the following year.

Both Yacon and Jerusalem Artichokes are a valuable addition to a garden and as they are high yielding can also produce useful animal food too. Pigs in particular love both kinds and our chickens happily tuck into damaged yacon tubers. They are both nutritious and great food for people with diabetes. Definitely worth making some space for!

Gail Aiken



PERENNIALS (BACK ORDERS)

BULBS, POTATOES, KUMARA, GARLIC, MULTIPLYING ONIONS,
STRAWBERRIES, ARTICHOKEs, COMFREY

This is an important and expanding part of the Koanga Institute heritage food plant range. These plants were important additions to old gardens but over the past 60 - 70 years have become endangered and rare, and it is our aim to make these plants available to all 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.

Many of these plants are available in New Zealand only through Koanga Institute and at times we struggle to meet the demand so may need to provide substitutes at times. It is of great help to us if you could list substitutes or indicate if substitutes are not desired. Orders can be placed at any time 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. Please use the correct order form on page 35 and make sure you place your order before the closing date.

Some perennials are usually grown as annuals eg. Potatoes, kumera, even shallots and garlic, however naturally they remain in the ground and grow as perennials. Others are clearly left in the ground eg. Strawberries, Sea Kale, Rhubarb and asparagus. We also sell some of our perennial vegetable in the form of seed - see the list in the perennial section. We have some exciting new lines this year including Everygreen Comfry, Giant Solomons Seal, Sea Kale, Purple Asparagus and Dalmatian Rhubarb.

BULBS

Order by 30th January, delivery in February

COATES FAMILY HEIRLOOM BULB COLLECTION NZ

\$20 for 20 bulbs including some of each variety.

A mix of heirloom bulbs. These bulbs were all collected from a property at the base of Pukekaroro, a reserve near Kaiwaka that used to be owned by the Coates family. The bulbs are pretty special. Apart from the snow drops they all have outstanding scents and are really old varieties.

Snow drops Classic white bells with green dots around them.

Paper Whites Multiheaded, 5 single white petals with a white centre.

Bacon and eggs Multiheaded, very double, yellow centres.

Sol d'or Multiheaded, yellow petals with gold centres.

Jonquil Pale lemon petals with yellow centre.

GARLIC, ONIONS AND STRAWBERRIES

Orders close by 30th March, delivery in April/May

CHIVES (*Allium schoenoprasum*)

Multiplying Spring Onions / Giant Chives NZ

\$8 for a starter clump

We love these onions. They are the size of Spring Onions if grown well, they keep on multiplying like chives, and they are able to be picked all through the Summer when the

Welsh Bunching onions are flowering. They die down in May when the Welsh Bunching Onions come into their own again. You can pick big handfuls every day and use them whenever an onion or chives are required. We always use them raw.

GARLIC (*allium sativum*)

All \$8 for a starter bag of approx 15 cloves.

NEW ZEALAND PURPLE NZ

This is a delicious old garlic, particularly adapted to grow in warmer areas, that is more well known in Australia than here. Develops a central stem which produces bulbils on top or half way up the stem. The flower stems can also be picked when young for eating which will mean larger garlic cloves. These have come from the Coromandel area, and have large, purple, easy to peel, excellent flavoured cloves in one circle around the hard stem. Rocombole type.

GARLIC ROCOMBOLE EARLY WHITE NZ

A Rocombole garlic from the Henry Harrington Collection, that came to Henry from Gerald de Koning. It has a hard flowering central stem, with pearly white skin surrounding pearly white cloves. The bulb is a very unusual flattish shape. All Rocomboles have one circle of large cloves around the central stem, so they are very easy to use in the kitchen. The flower spikes are edible and this garlic can be harvested early before all main crop cultivars. This a strong flavoured garlic. Clearly does well in the South Island as it came from Henry's collection, also does well in the Far North planted in April or May.

GARLIC ROCOMBOLE EARLY RED NZ

Another from Henry Harrington's garlic collection which he began collecting in 1956. This is an outstanding variety that can be

planted from march onwards up until late may, it is harvested in November, and can be cured and ready to eat or sell before Xmas, so it has huge potential for Farmers markets etc. The garlic bulbs are very flat shaped with at least 10 large cloves around the hard stem. It is a medium strength garlic excellent cooked or raw and keeps well, but not as well as the mid season varieties. Very similar to Early White except the colour. Brownish red skin when harvested, with small bulbils on top if the flower head is not removed. Remove stems for large garlic bulb. As with all rocomboles, the stem can be picked young and eaten.

GARLIC SOFT TOP PEARL NZ

A beautiful white, pearl skinned, soft top garlic with faint pink blush on some cloves, again from the Henry Harrington Collection. This one came originally from Jim Mitchell of Twizel. Quite a strong garlic. Large easy to use cloves.

TAKAHUE RED NZ

Available as a starter pack and also as a large pack (approx 500g). An heirloom variety found growing wild in the sand dunes near Takahue in the Far North. Excellent quality, streaky red skinned cloves. A soft top garlic good for plaiting. Quite a strong garlic so great for culinary and medicinal purposes. Turned up from a different source as an old Dalmatian garlic

LEEKS (*Allium ameloprasum*)

MULTIPLYING LEEKS NZ

\$8 for a starter clump

Many of you will remember these from grandma's garden, every body grew these. They are a real backstop throughout the late winter and spring. They just keep on keep on multiplying up, and as long as you divide them up occasionally and compost

them occasionally they'll provide you with very delicate flavoured leeks as thick as your thumb.

ONIONS / SHALLOTS (*Allium cepa*)

All \$8 for a starter bag.

The most nutritious onions we have are our "green" onions eg. Mikes Bunching, Welsh Bunching, Multiplying Spring Onions. The greens can be eaten raw or cooked and add great flavour as well as nutrition. Our next most nutritious onions are the Shallots, Potato, Egyptian Tree Onions. Our least nutritious onions are the larger more recently bred for size onions like Pukekohe, Long Keepers Californian and Californian Red. Koanga versions of these onions will be more nutritious than current commercial cultivar's because our genetics are older and we have selected in biological systems not just for production of size and uniformity. We have a very special onion collection.

EGYPTIAN TREE ONION - GERALD DE KONING NZ

Approx 8 bulbs per bag.

Gerald de Koning grew these onions for many years at the Mount Linton Station until his retirement in 1996. He passed them to Henry Harrington many years ago and we now hold them. They grow well all over the South Island, Northland and also in the Eastern Bay of Plenty. These are clump forming onions. You eat the large ones and save the small ones or the bulbils that form on the flower heads for seed.

FLOWERING SHALLOT NZ

Approx 5 bulbs per bag

Gifted by Dawn Deaker to Henry Harrington and then to Koanga. These are unusual shallots which form seed heads above each shallot and also form lovely big

hard shallots which keep well. Sometimes they do not flower and sometimes only some flower but most usually do! If you pick and eat the flowers, you will get bigger bulbs.

POTATO ONION BROWN NZ

Approx 8 bulbs per bag.

These little beauties came from 'Puss' Chadwick of Paparoa. Many veges and fruit varieties (including the Pahi apricot) came to us from her very special garden. These onions grow by planting a bulb which multiplies and you will harvest around 10-12 onions for each one planted. They string up well and keep very well. They are sort of potato shaped and about 3cm diameter. Fantastic either vinegar or lactic pickled.

MIKE'S MULTIPLYING ONIONS NZ

\$8 for a starter clump

These are a strain of multiplying top set onions. Plant in a clump or row in a permanent position. They multiply and the clump quickly increases in size and can be divided for new clumps. Can be picked to use like spring onions. Very tasty and reliable onions.

SOCIETY GARLIC (*Tulbaghia violacea*) **NZ**

\$8 for a starter clump

A very drought tolerant, ornamental plant, related to the garlic/ onion family. This one has purple flowers for many months which are edible as are the leaves (you get the garlic flavour without the garlic breath!). A perennial like garlic chives, and can be divided in the same way.

STRAWBERRY (*Fragaria sp.*) **NZ**

\$10 for 5 plants

EARLY TIOGA

These are the original Tioga strawberries with white flesh and were gifted to our collection by strawberry growers near Oamaru 10 years

ago. They taste better than red fleshed ones, are very vigorous and healthy growers.

CAPTAIN COOK

Early commercial variety with excellent flavour but small fruit. These plants are not as vigorous as Tioga and other modern varieties, but they are healthy and strong.

MARGEURITE

Healthy vigorous plants with numerous small strawberries that are dark red when fully ripe and have a beautiful, intensely sweet flavour. The plants produce many runners and quickly form a dense ground cover which should be particularly good in an orchard or forest garden situation.

POTATOES (*Solanum tuberosum*) NZ

Order by 30th May for delivery from June. Orders will continue to be accepted after June 30th while stocks last (availability can be checked via the website).

All \$11 for approx 1kg

All of the potatoes we have are very old varieties that often have come to us with many different names from different places, all over the North and South Island, Stewart Island and the Chathams. All are good croppers given the right conditions.

GLADSTONE

Tubers are white splashed with pink. An oval creamy fleshed potato with great floury texture.

KARORO

This is a creamy skinned potato, with a creamy coloured, very waxy flesh. Deep eyes. It is a small, round, hard potato, excellent for potato salads, and just simply steaming. Beautiful in a hangi.

LA RATTE

A traditional French potato that has been in NZ for a long time. Very similar to yellow fir, a yellow waxy finger type. An early cropper. Excellent taste.

MAORI

A very round and large potato, with no inset eyes. It has white flesh and a bright purple skin, is an early potato and is an excellent one for baking in the jacket (it comes out nice and fluffy). Or, if you have to have a potato for mashing and you only grow old potatoes like us, then this one can be peeled, or cooked with the skin on when new, and it mashes

really well. It is not good for boiling, chipping, sautéing, etc., because it falls apart. It has been sent to us from all around NZ, with various names and it's clear it used to be very common

MATARIKI

Matariki is the same as Karoro in every respect except its shape. It grows bigger and more blocky, so that the larger ones from each plant are almost square around the edges. They are quite curvy, bumpy potatoes. They are cream skinned and fleshed, the flesh is very dense and waxy, and they are wonderful potatoes cooked anyway except mashing. They make excellent potato salad and roast potatoes and oven baked chips.

PARAKETIA

An old potato from the East Coast, and is still well known over here. Its growing habit is very amazing, when you dig them up you see that the potatoes grow on long runners in the ground, like strings of potatoes in a line. They are oblong shaped, with round ends, have purple skin, very shallow eyes, light

cream flesh with purple streaking. They have particularly good flavour, and are best boiled, steamed or hangi.

SCOTS

An old cultivar sent to us by a Scotsman who says it came to this land with its family from the homeland. It is white skinned, white fleshed and has a very good flavour and texture.

STEWART ISLAND

Found growing wild in a cliff face along the shore on Stewart Island. Very tasty and a big cropper.

TARANAKI

Block shaped, cream coloured potatoes with dense waxy flesh and many eyes. Excellent eating. Similar and possibly the same as Karoro.

URENIKA

A long potato with dark purple skin that retains its colour when cooked. Waxy when small, floury when large. Great boiled or steamed. Produces big crops but needs a long growing season.

UWHI

Large round, light pink skinned, with deep set eyes. A heavy cropper of tasty potatoes with a floury flesh.

WHATAROA

A quite large, irregular, round to oblong shaped potato with a light purple and cream blotchy skin and yellow waxy, firm flesh with purple streaks throughout. Great for making oven-baked chips or steamed or in a hangi. A heavy cropper and a good keeper.

ARTICHOKES / COMFREY ETC

Order by 30th August, delivery in September

CHINESE ARTICHOKE (*Stachys affinis*) NZ

\$8 for a starter bag

We have been sent these little beauties from many parts of NZ, however we believe they came to NZ with the Chinese goldminers and so are quite common around the old goldmining towns of Coromandel, Central Otago etc. They are a member of the mint family, and grow just like mint so keep them in a barrel if you're worried about them running away. Like the yams do not harvest until the tops have died right back, which will be the middle of winter up north. They taste a lot like kumara, but look like maggots or similar, certainly like wriggly grubs! They require very little cooking, maybe two minutes, or they go soft. Sautéed is best. They are known as brain food.

CHINESE WATERCHESTNUTS

Eleocharis dulcis) NZ

5 chestnuts for \$18

Complete growing instructions will come with these chestnuts. They will need a barrel or plastic lined pool which will hold up to 10cm of water. Each plant will produce up to 50 chestnuts. They are delicious eaten raw or cooked with a taste a bit like fresh coconut!

COMFREY (*Symphytum officinale*) NZ

RUSSIAN (REGULAR)

Regular - Approx 500g for \$10

A perennial herb for herbal leys, kikuyu barriers, liquid teas and feeding animals.

EVERGREEN

Perennial - Approx 250g for \$10

Smaller leaves and more compact. This makes an excellent border plant, does not spread by seed, never loses its leaves, purple flower.

GLADIOLI (*Gladiolus sp.*)*Whitianga Bay NZ \$6*

An old cultivar found growing wild. Tall spikes of beautiful orange flowers with yellow centres. Stunning in the flower border and as a veg garden companion.

JERUSALEM ARTICHOKE*(Helianthus tuberosa)**\$8 for approx 500gms***DALMATIAN NZ**

These were gifted to us by Logan Forrest, and they came from an old Dalmatian garden right on the estuary near Pouto. They are similar to but different to our common artichokes. The colour and shape varies but they taste the same. Jerusalem artichokes were a staple of the gum diggers fare.

JERUSALEM NZ

Jerusalem Artichokes, or Sunroots as they are called in North America where they are an indigenous food, are a member of the sunflower family. This vegetable has been a very important peasant food in the past. Extremely hardy and prolific, beneficial garden insects are attracted to its leaves. The edible part is high in slow release sugar, so it's an excellent vegetable for those with sugar imbalances such as diabetes and hypoglycemia. Great pig, duck and chook food too. They are ready for harvesting in autumn when the tops die back, but we prefer to leave them in the ground and just to help ourselves as we need them. If you dig them all up you have to store them in a way that keeps them all damp or they dry out and become inedible.

RED SKINNED ARTICHOKE

These red skinned artichokes are very different to look at, when compared with

the white skinned artichokes above. These ones have far smoother shapes, less knobs on them and are very red skinned, particularly when first harvested. Excellent winter crop that must be cooked to eat. They came from around white baiters huts along the West Coast of the South Island so prefer colder winters. To grow in the north must be stored in the fridge for a few weeks before planting.

ALPINE STRAWBERRIES*\$12 for a starter clump*

Clump forming strawberries that do not form runners. Great as edging plants. Delicious and very easy to grow. Once established clumps can be divided to increase stock and they also self seed.

RED ALPINE STRAWBERRIES

Small red fruit with beautiful flavour and scent. Great for young children.

WHITE ALPINE STRAWBERRIES

These are outstanding strawberries. They fruit continually except when there are heavy frosts. They are large white berries, larger and sweeter than the traditional white Alpine. Awesome addition to the garden with young children around.

YACON (*Polymnia sonchifolia*) **NZ***\$8 for a starter bag*

A stunning looking member of the Asteraceae family with large red furry leaves and little yellow sunflower type flowers, which flower late autumn when you harvest the large juicy sweet tubers. This is a South American vegetable which produces huge crops. Above the tubers you eat, but just below the surface of the ground are the little knobby things that you keep for re planting next year's crop. The crunchy tubers are sweet, juicy and carrotty, and are being hailed as a wonder food for diabetics.

YAMS (*Oxalis tuberosa*)

\$8 for approx 200 grams

NANA'S YAMS NZ

These yams came to us from the Thames area, where they have been grown for a long time, so they are very special for those of us in the north because yams normally require colder winters. These yams grow very big tops and have yellow flowers. Make sure you do not harvest them until the tops have totally died back or you will not get a crop!

KUMARA (*Ipomoea batatas*) **NZ**

Order by 30th October, delivery in November

\$12 for 15 plants of one variety (no mixed bundles)

We are honoured to hold a very special collection of ancient kumara. The kumara in this collection has been gifted to us from the Far North, Marlborough, Bay of Plenty, the Hokianga and the Kaipara, where they have mostly been continuously cultivated since pre-European times. Many of these kumara grow differently to those we commonly know today. The leaf shapes vary a lot, the growth patterns vary, as do the colours of the leaves, stems and the kumara.

We also have kumara which were originally commercial cultivars that have now been grown organically and selected for keeping qualities for many years (over 20). These lines are very superior to using tupu from commercial kumara.

CANDY

A stunning kumara with candy pink skin and pink and yellow mottled flesh. Sweet, good flavoured flesh which retains its pinky colour when cooked. Very nice roasted or boiled and looks amazing mashed with onion, garlic and cheese as a pink stuffing for baked squash.

HAWAIIAN BLUE

Pale coloured skin with streaky bluey-purple flesh. When cooked the flesh looks very blue and is firm with a good flavour.

HONEY RED

Beige coloured skin with a faint orangey-

RAINBOW MIX YAMS NZ

A colourful mix of red, pink and yellow yam's from Henry Harrington's collection from Southland.

GIANT SOLOMON'S SEAL \$8

A common clumping perennial in old houses at the back door in the shade, sometimes mistaken for Lilly of the Valley. New shoots in spring are delicious, raw or cooked. As they get older they are still edible, as are the flowers. The root is also delicious, edible and highly medicinal.

red blush in places. Flesh is pale with light orangey-red colouring throughout. When cooked the flesh is firm and orange with a good flavour.

MAHINA

Healthy vigorous plants with excellent crops of good sized white tubers.

MAIKIO GOLD

Developed from the commercial lines of golden kumara of 20 years ago; this one has been selected by Joseph as a good keeper in Whirinaki, Hokianga. This one produces quite distinctly different shapes on each plant, bearing both the long thin and the

short round fat types. The weight of the crop on this variety seems to vary a lot. They are very sweet and one of my favourite.

MAIKO RED

This is one that Joseph has been growing, originally from commercial stock (Waina) and especially selecting for keeping and disease resistant qualities. It is a good productive main crop kumara.

PARAPARAPARA

One of the very special old ones. This is reputed to be the old medicinal kumara that was used to feed the elderly, the babies and the invalids. It has pink skin, and is a large fat kumara. It is reputed to be more easily digested than others and you can tell that when you eat it. Also from the Far-North.

PAUKENA

An old one from the East Coast, orange coloured and very sweet to taste. A reliably good cropper. This one contains more water than most others and was traditionally used to make Kumara kao, a traditional or dried kumara. Kumara kao was made by cooking them in a special hangi built for the purpose including the leaves of papa and karamu, (to flavour and to blacken) and then the kumara were left in the hangi for two days and nights, before either eating or drying for storage. This was one of the traditional foods of the hunters and bush food gatherers. They were regarded as sweet treats by many.

REKA RAWA

A reliably large, old, cream skinned and fleshed kumara that is my favourite tasting one. Also the best cropper. This is the ultimate kumara, tastes like roasted chestnuts to me! From an ancient Far-North collection

ROMANAWA

This is another very old kumara remembered perhaps better than all other old cultivars, by elders all around this land. It has a gold skin and yellow flesh but with orange mandalas within the flesh when cut in half. It is very sweet and of a medium texture, not too dry or too soft.

TAPUTINI

An ancient cultivar that does not run. It produces large numbers of long, cream skinned and fleshed kumara, with dark green deeply lobed leaves similar to Hutihuti but in a more compact form. This one was traditionally grown in cooler areas than other varieties because it could easily be grown in woven kete and moved around with the sun in front of rocks.

PERENNIALS AVAILABLE AS SEED IN THE SEED LIST:

Globe Artichoke, Aparagus, Seakale, Runner Beans & Rhubarb



PERENNIALS ORDER FORM FEB 2015

Complete the form below, enter the total on the main order form, or send by itself with payment to Koanga Institute, RD 5 Wairoa 4195.

NAME

POSTAL ADDRESS

COURIER ADDRESS

EMAIL PHONE (DAY) FAX

CARD NUMBER EXPIRY CARD TYPE

NAME ON CARD

BULBS

Order by 30 Jan - Delivery Feb 2015	QTY	TOTAL
Coates Family Bulb Collection \$20		
FREIGHT & HANDLING 1 items \$4		
2-3 items \$7		
4 or more items \$9* (*Add \$2.80 if RD)		
(*ADD \$2.80 IF RD) SUBTOTAL		

GARLIC, ONION & STRAWBERRIES

Order by 30 March - Delivery Apr/May 2015	QTY	TOTAL
Spring Onions / Giant Chives \$8		
Garlic NZ Purple \$8		
Garlic Rocombole Early White \$8		
Garlic Rocombole Early Red \$8		
Garlic Soft Top Pearl \$8		
Garlic Takahue Red NZ \$8		
Garlic Takahue Red NZ (Large) \$25		
Multiplying Leeks NZ \$8		
Tree Onion Gerald De Koning \$8		
Flowering Shallot NZ \$8		
Potato Onion Brown NZ \$8		
Mike's Multiplying Onions NZ \$8		
Society Garlic NZ \$8		
Strawberry Early Tioga \$10		
Strawberry Captain Cook \$10		
Strawberry Margeurite \$10		
FREIGHT & HANDLING 1 items \$4		
2-3 items \$7		
4 or more items \$9* (*Add \$2.80 if RD)		
SUBTOTAL		

POTATOES

Order by 30 May - Delivery June 2015* *While stocks Last	QTY	TOTAL
Gladstone \$11		
Karoro \$11		
La Ratte \$11		

Maori \$11		
Matariki \$11		
Paraketia \$11		
Scots \$11		
Stewart Island \$11		
Taranaki \$11		
Urenika \$11		
Uwhi \$11		
Whataroa \$11		
FREIGHT & HANDLING 1kg \$6		
2kg \$7		
4kg North Island \$9* (*Add \$2.80 if RD)		
4kg South Island \$14		
SUBTOTAL		
ARTICHOKES, COMFREY ETC		
Order by 30 August - Delivery Sept 2015	QTY	TOTAL
Chinese Artichoke NZ \$8		
Chinese Waterchestnuts NZ \$18		
Comfrey \$10		
Evergreen Comfrey \$10		
Giant Solomon's Seal \$8		
Gladioli \$6		
Jerusalem Artichoke Dalmation \$8		
Jerusalem Artichoke NZ \$8		
Red Skinned Artichokes \$8		
Red Alpine Strawberries \$12		
White Alpine Strawberries \$12		
Yacon NZ \$8		
Nana's Yams NZ \$8		
Rainbow Mix Yams \$8		
FREIGHT & HANDLING 1 items \$4		
2-3 items \$7		
4 or more items \$9* (*Add \$2.80 if RD)		
SUBTOTAL		



KUMARA

Order by 30 October - Delivery Nov 2015
 \$12 for 15 plants of 1 variety (no mixed bundles)

QTY TOTAL

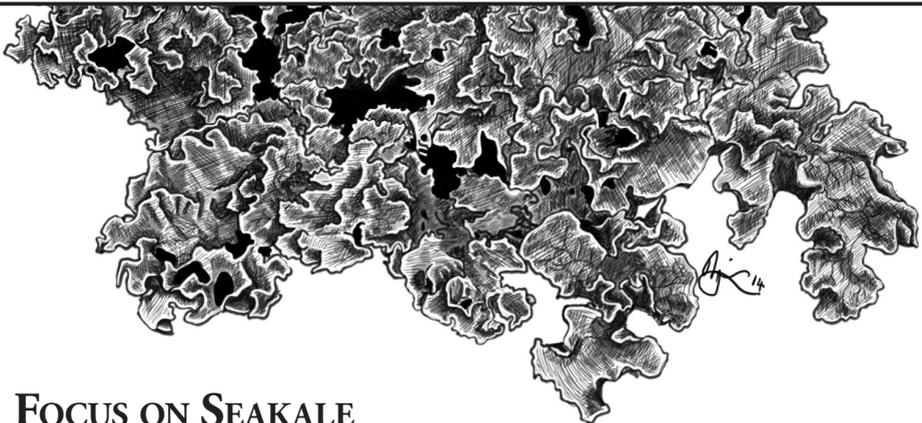
Candy \$12		
Hawaiian Blue \$12		
Honey Red \$12		
Mahina \$12		
Maikio Gold \$12		
Maiko Red \$12		
Paraparapara \$12		
Paukena \$12		
Reka Rawa \$12		
Romanawa \$12		
Taputini \$12		
FREIGHT & HANDLING 3 items \$8*		
4 or more items \$9*		
4 or more items South Island \$14*		
(*Add \$2.80 if RD) SUBTOTAL		

GRAND TOTAL (inc. freight) \$

*Please add freight for each section as each is sent out at a different time of the year. Thank you

FOR OFFICE USE ONLY

Date received -

**FOCUS ON SEAKALE**

Seakale is my latest discovery, we all love it here. It is a perennial that grows wild around the seacoasts of Northern Europe and has been popular as food for many centuries. Somehow we forgot or didn't remember about it! It is very ornamental to grow, a sort of compact mound that gets covered in bright white blossom for weeks in Spring. The blossom becomes pods with seeds inside, and I've noticed that the flowers are much loved by many varied pollinators including moths at night. Each plant becomes a mound covering a square meter or so, and they get larger over time. The first shoots in Spring are edible and if not picked become the flowers. The shoots, leaves, stems and flower buds are all tender, tasty and very very delicious raw or coked in Spring. After they flower they grow more shoots from the base of the plant and these leaves are not as tender but still excellent when cooked. Traditionally the new spears in spring were covered with stones on the beaches where they grew and so were blanched, which made them more tender to eat, but I find this is not necessary and anyway leaves that are photosynthesizing contain far more nutrients.

PERENNIAL VEGETABLES

with Kay

Perennial vegetables are the most reliable, easiest to grow and most delicious vegetables during the Spring months when other things are in short supply or more difficult, especially for those of us in colder areas.

I have been actively trialling a collection of perennial vegetables that are easy to grow, taste wonderful and are productive in my garden, for a few years now. I'm fussy... easy to grow means once a year only... they get divided if necessary, and they get composted, fertilised and mulched (and they have drip irrigation on them).

Any perennial that will produce well with that level of attention, tastes great and is productive, will do me. My list is quite short compared with those in the books.

This is my list so far (all available through the perennial section of the website):

1. *Globe artichokes Purple de Jesi.*

Super easy, super productive, super high in phytonutrients.

2. *Purple asparagus.* You have to wait three years from seed, and prepare well initially, but this asparagus grows like trees, huge, super tasty, super tender, super nutritious, super productive spears.

3. *Seakale.* This is one of our two most exciting new perennial vegetables. Seakale has roots like tree roots, they head fast, very, very deep, recycling nutrients from the subsoil like many perennials. All parts of the plant are tender, super tasty, super nutritious and produce from early Spring until late Autumn, see insert for more info.

4. *Rhubarb.* Our only fresh fruit in September/October apart from Citrus. We love the heritage cultivars, Hong Kong 3 and Dalmatian.

5. *Welsh Bunching onions.* Wouldn't ever be without these, they are our onions that we pick every day to use raw or coked instead of normal onions, far more nutritious than stored onions too. The more you harvest them the more they grow!

6. *Multiplying Spring onions.* Just like the Welsh Bunching onions, harvest all summer, we love them and they keep multiplying. We eat these every day, they are above the ground! Super nutritious.

7. *Giant Solomon's Seal.* This is a relatively new one for me, and is the second of our two new exciting perennials but a must have now that we are coming to know it well. It's another great spring vege, you can eat the spears, the leaves, the flowers and the roots over a long period. They all taste really good and are super full of phytonutrients and have many medicinal qualities.



KOANGA FOREST GARDENING

✎ *Written by Shaked From* ✎

It's been another year since the last tree catalogue, in which I have spread out our forest garden plans, and described our aims for the year. We have been through a lot, and the implementation feels like it's moving forward.

We have several different blocks now:

APPLE BLOCK, PEACH KIND STONE FRUIT BLOCK, PLUM KIND STONE FRUIT BLOCK

4 year old apples, pears, peaches, nectarines, plums, prunes, mostly pruned and trained to shape. This is a steep learning curve for me, and was great to be able to observe my pruning and tying from last year, watch the affect on the trees and make decisions for the next season. It was great to learn how different cultivars of apples, for example, react different for same technique of training, and how spring/summer pruning affect the growth of the trees separately from the winter pruning.

Tagasastes, some, on the well-drained spots have done great, and we will get some seed off them this season. Others, on the wet spots (obviously) had just gone backwards, these have been replaced with some water loving plants.

Siberian pea trees, as a very slow growing plant, they are slowly coming up, starting to take shape, it will be long before they will reach their desired size in the forest garden.

Italian, red and black alders, have done amazing. They love these water logged spots, and had doubled (at least) their size during this season, and they are going for it as I write, next season we could already coppice

them – release nitrogen into the soil, feed the apples, and make bio-char to go back into the forest garden, maybe the quickest way to sequester carbon for many years.

Casuarinas are doing great as well. These want to be huge trees, next year we will cut them back and try to create more of a bushy shape before they go above our desired canopy – our collection of heritage fruit trees. As we cut them, again – nitrogen release, bio-char, and mulch around the apples (the needles like leaves are phosphate accumulators).

Maakias are doing good, they are not as quick as the alders but are coming nicely. Those few big, nitrogen fixing trees are an experiment for us as another species for those water logged spots, at the moment seems very successful. (We are growing many more of them in the nursery, as many spots here will appreciate them).

This season we have filled the gaps in the medium size trees, and have started to plant lower shrubs, we have there:

Choke berries - 1m height approx. in a clump growth pattern.

Goumi - 2m height thick bush that is nitrogen fixer and great mulch.

Under all this we have ducks and geese, which have supplied us with big amounts of eggs, they are feeding on the grass, keeping it down, and sprouted organic corn and barley.

Tree lupines are a plant we have started using where appropriate. Those hardy plants are very easy to grow from seed and when planted as a tiny seedling (directly from the seed tray) grow quickly above the grass (even

in the blocks without grazing animals) and develop this beautiful dome shape bush, that totally covers 2m diameter circle at 1.5m height within two years, we have used them in two ways, mass planting to cover and replace grass, will be easy later to take one out and plant a different tree instead, and one in front of almost every fruit tree, these will be chopped backwards every time its needed, supply dead and live mulch for the trees, shade the grass around the tree trunk, and fix nitrogen directly around the fruit trees roots, there will be some management in cutting them back, but I think that the reward is going to be great.

OUTSIDE RING

Around the edge of the institute's land, where forest garden is designed to be, but not yet planted with fruit trees, we have started to develop from the edge inwards, creating a boundary and shelter for the seed gardens and future planting, these areas are getting filled with:

Ship Mast Robinia - a nitrogen fixer, which can be coppiced for ground durable posts.

Dog wood - a very low feeder (low demands) which produces sweet fruit, good for us and great for animals under it.

Alders - as described before.

Elder berries

Roses

Basket willows, and forage willows (in between those are Japanese ones and Egyptian which are in leaf ten months of the year)

Hawthorns of three kinds: Mexican, jones, and big fruited. Those three are great eating and fruit during different times of the season. (We have been eating wild turkeys from around our neighborhood, these had crops filled with hawthorn berries - might be a great sign for something our chooks will love).

Hedge plums - these are great hardy pollinator plums, that apart to pollinating can offer the local birds some food that is not the main crop we are after.



THE BIG BLOCK

Which in my head is slowly getting the name of 'the scrub block' but I am not yet convinced that we are going to let it go that way...

As we didn't have enough geese/ducks or the resources to fence well and get more animals, the block got left with no grazing, and yet had almost no support tree planting in it (apart from the alders in the wet spots). While this had been like that for two years now, the grass is high, but is already starting to strangle itself, around the fruit trees - apples, pears, stone fruit, the grass is creeping in through the mulch and I am not too keen to mulch those trees again (though most of them are big enough to handle it anyhow). Instead I planted in 0.5m distance on the north side of each tree one tree lupine seedling within a short while those will take care of the grass as described before. The fruit trees are doing well, and are going to fruit this season for the first time. I have taken most of the fruit off from the tip of most branches, that's to allow them to grow in the right direction and not bend down from the weight of the fruit, once the main branch hardens we will leave those to fruit

as well, for now, it's good enough to eat fruit from the middle of the branch, where its strong enough to support good fruiting.

Next are tagasastes, we've planted many, on the dry spots and it's already starting to feel different.

It was very interesting planting this block, the block is all small, 0.5m patches. Live mats of grass and dry dead grass. where the grass is strong and alive and creates a mat, it is hard digging and we lost a lot of top soil on the grass roots, the soil was dry under the grass roots. Where the grass is dead it was very easy digging, all the top soil stayed with the planted tree, the soil was nicely moist and well mulched with the dead grass itself, and was very easy to mulch the tree again after planting with the dried grass. Of course, we have used that pattern, planted on the dry grass patches, and soon enough those islands of dead grass will get bigger and bigger as the trees shade the more. I'm excited to watch it for the next season and tell you all how it went, of course we don't get any eggs or meat from this block at the moment, but it shows (hopefully) that there is no need to kill the grass totally before even starting - any of us, with an orchard, can easily transform it into a forest garden, there is no need to start from scratch!

THE MEDITERRANEAN BLOCK

This small section, maybe 500sq meter, has been grazed from many years now, and had no planting in it.

We have shut the cows away from it, and started planting, it is a well drained spot, so for us means good Mediterranean guild possibility.

On the edge we have started with peaches, pomegranates and almonds - those do not need shelter, the opposite they appreciate the wind.

Inside, feijoa seedlings and a bit of citrus to

start with.

In between, tagasaste, tree lupine, tree medicand myrtle, those nitrogen fixers, mineral accumulators will set the first path for the rest of the guild to come in later.

So in total, there are maybe 500-600 more trees/shrubs planted in the forest garden, that means that next season it will start to feel like a forest in there, which is almost the most exiting part for me :-) (apart to the fruit, the planting, the design, the new species and so on of course..)

This season we are starting to put more focus on the smaller stuff, as a lot of the area is filled enough with the big/small tree layer (and if we wait longer with the smaller layer, I can predict how it would be too hard to stop planting and it will all get too crowded very quickly..)

So the plan is to learn how to efficiently propagate all of these shrubby plants that we want to test, and get ready for planting those around next season.

We are starting to have occasional visits at Eastwood Hill arboretum, they hold an amazing collection of plants, which we could identify many to be super beneficial at our forest gardens, we are starting to learn about their growth patters, propagation and so on, and hopefully some day, we could get them out there, for more people to use...



Our forest garden is 2 years old now, and really beginning to look exciting!

The list of species and layers it contains is growing each season and currently stands at:

- ☞ 40% of the canopy in heavy producing heavy feeding traditional 'fruit trees'.
- ☞ Plus nitrogen fixers tagasaste, tree lupins, tree medic, acacia retinoides, goumi, Russian olive, viburnum, maakia amurensis, alfalfa and Siberian pea tree.
- ☞ Plus mineral accumulators, cardoon, cornus spp, plantain, comfrey, chicory, yarrow, salvias, geranium and echium.

I know this list will continue to grow as we find seed and source plants and trial everything we can.

In the mean time there are some key lessons I have learned:

- ☞ Firstly and possibly most critically, don't plant more than 40% of your canopy in traditional heavy feeding and producing fruit trees if you place a high value on a vibrant seven layer forest with many other edible berries seeds nuts containing super high levels of phytonutrients included. The higher the percent of the canopy is on heavy feeders the harder it is to fill all your other goals!
- ☞ As a fast growing ground cover that out competes grass I can't speak highly enough of Tree Lupins on free draining soils, and dry sites. They form a shrubby bush that totally shades out grass, creates a great poultry habitat, and produce a lot of biomass and carbon as well as fixing nitrogen. They are best used as a pioneer species.
- ☞ As a fast growing pioneer mineral accumulator cardoons are hard to beat, they are perennial, grow fast, produce a lot of high value biomass for mulch compost forest floor minerals etc outcompete grass because of the deep roots and leaf shape, are amazing bee food and have edible stems.
- ☞ We're establishing chokeberry thickets within the forest garden and I'm very excited about them as their berries have super high phytonutrient levels. A bit like elderberries they need to be used in ways other than the ways we eat today's super sweet fruit! They are heavily laden with berries in year two.

Pictures of this emerging forest garden are on Kay's garden blog on the Koanga website and in the July Koanga Catalogue we will be introducing our first *Forest Garden Tree Seeds* catalogue, which will go onto the website as well.

If you have any interesting species that could add to our current lists please let us know.

P.S. Our master forest garden data base is free on our website to browse at your convenience.

FERTILISER

This journey of learning to grow nutrient dense food we're on has been partly possible for us through the mentorship of Grant at Environmental Fertilisers.

Grant already had a background working with mainstream fertiliser before becoming disillusioned and researching other options. He attended all of Arden Anderson's early workshops in NZ and has since been a student of many others following the principles of Dr Carey Reams.

Grant is a driven scientist who will go to any lengths to do the best job possible, to support farmers on a large scale... regenerate the land and produce healthy food for people. He is doing incredible work and getting amazing results.

I learned to grow nutrient dense food using Grant's fertiliser mixes, and initially was very reluctant to promote them because we'd always had a policy of not doing that.

I trialled several other companies fertiliser over the past years however and came to the clear conclusion that Environmental Fertilisers' mixes are the absolute best available in this land if you are on this journey of seriously learning to grow nutrient dense food. It became difficult for me to talk about how to grow nutrient dense food without being able to recommend fertiliser, as that is the only fast way to do it that I know of.

I decided a few years ago to not only recommend their fertiliser but also to sell it, which meant bringing ½ ton bags here repacking it and couriering around NZ. That

was very successful but now that Grant is repacking into Home Gardener size bags it is not sensible for us to do it any more.

We've been working hard to find a shape that meant we had our research sponsored because it all takes time and money, and Grant at EF has offered to give Koanga a percentage of the retail price for all the fertiliser sales they make that come through us.

This could be critical for us in terms of allowing us to continue this work, so we have set up a page in our online shop that gives you instructions on how to use this fertiliser in a home garden situation and a link from there to his EF's online shop. If you take the time to go through this process and click that one extra link, then Koanga will benefit.

We're hoping that you will all support us here and get your friends to do so as well.

Our soils are in far worse condition than most of us realise, and in a home garden situation where many of us may even have toxic soils, we are faced with needing expert advice and support.

Environmental Fertilisers offer:

- ☞ The only Reams soil tests available in NZ
- ☞ Way the best range of fertiliser suitable for actually growing soil health and plant health I know of.
- ☞ An advisory service that is really useful for home gardeners.

All of this costs, but the costs are very reasonable and the returns are huge... what

is the real cost of degeneration of the earth soil, our food and our health? When you spend the money and get the minerals right production and brix go up exponentially over time.

When you step into this journey you see that most other readily available fertilisers actually makes things worse in the medium long term, giving short term results that are not nutrient dense. You can test this with a refractometer, check it out for yourself! Actually food grown with soluble nitrogen, rather than calcium and phosphorous, is low level carcinogenic as nitrates concentrate in the food, and do not carry other minerals into the photosynthesis process.

We must begin with the earth.

If you're into learning to grow nutrient dense food, and are keen to buy fertiliser designed to support that process then please buy it through our website... it will help us help you and many others re-enter the process of co-evolution that is essential for a vibrant regenerative future

PS It is rare for home gardeners to have access to his knowledge so take advantage of the evening with him in Hamilton in June. See editorial and our website (koha evening)

BUY YOUR FERTILISER THROUGH THE KOANGA WEBSITE AND HELP KOANGA SAVE OUR SEEDS

Grant's Basic Home Gardeners Recipe... if you are on a tight budget (cost per m², per year, ie two crops grown - \$2.26 plus freight)

400 gms **EF: Nature's Garden** per m² when planting, once then 200 gms per m²

100 gms per sq m **EF: Bio Rocket** applied to soil after planting, monthly for heavy croppers

Kay's Dream Recipe (cost per m², per year, ie two crops grown - \$10 plus freight)

If I was able to spend whatever it took to create the best possible soil in the fastest time so I could have huge crops of nutrient dense food asap (probably 3-5 years) this is what I would use, whilst *perfecting my ability to make top compost* which could then do all the work for me. I believe this is the best investment any of us can ever make.

The recipe we use is as follows per m² of garden bed, forked into the top 5-10cm before planting seedlings:

Paramagnetic Rock Dust 1kg (once only)

EF: Nature's Garden Fertiliser 400gms (first time only after that 200 gms when planting)

EF: Nano Cal 200gms (if I knew I had an available calcium/magnesium imbalance by doing a Reams soil test)

After seedlings are planted we sprinkle 100 gms of **EF: Nature's Garden** fertiliser over each m² then we water the seedlings in with a watering can or two containing **EF: Fish Plus** at 100 mls per 10 litres of water.

If our crop is a heavy feeder we will apply 100 gms per m² of **EF: Nature's Garden** each month for the following 3 months.

We will then apply a weekly foliar spray of **EF: Vegetative Foliar** for a month or so then switch to **EF: Reproductive Foliar** until harvest, unless the crop is a heavy feeding leaf crop and then we just continue with the **EF: Vegetative Foliar**.

All of that product costs \$6.36 per m².

This level of applying this particular fertiliser will mean you are sequestering carbon, growing Nutrient Dense food and you don't have to keep doing it forever.

I would continue with the foliar feeding program, and testing the brix levels until I know my vegetables are high brix, over 16 or so.

We have been figuring this recipe out for some years now and the following are some things worth keeping in mind...

- ☞ I always use when growing my own seedlings and never use seed raising mix with fungicide in it.
- ☞ Firstly, there seems to be some kind of threshold with the minerals that you have to reach for things to work at all i.e. if we take the attitude that this is expensive fertiliser and only put on half as much as recommended, you will possibly get no result at all, making it even more expensive. The application rates that I have found to work, in all cases, is about the same, and this is what we put on the bags we sell. I have found however that in occasional situations it requires more applications and higher quantities to kick things off.
- ☞ Secondly, all the various bits are critical – it's not just **EF: Nature's Garden** fertiliser, but also the **EF: Fish Plus** applied in a watering can to the soil and roots at planting time that actually kicks things off. This form of liquid fish is complexed to a carbon source, so does not burn up soil carbon or wash away fast like other forms of liquid fish. All of the soils I have worked in produced better results when I added as a one off an extra dose of calcium also complexed to a carbon source: **EF: Nano Cal**

Kay Baxter, Koanga Institute - March 2013

WISH LIST

Right now we badly need some -

- Old or Cheap Caravans
- Building materials
- Windows
- Timber
- Roofing iron
- Old garden tools, spades, fork, rakes
- Netting for fencing
- Fencing wire,
- Buckets, all sorts – with (or without) lids, food grade or metal
- Glass jars, eg: Agee preserving jars
- Old crocks for ferments

E-mail contact@koanga.org.nz or call on (06) 838 6269 to find out where to send or deliver, or to arrange pick up.

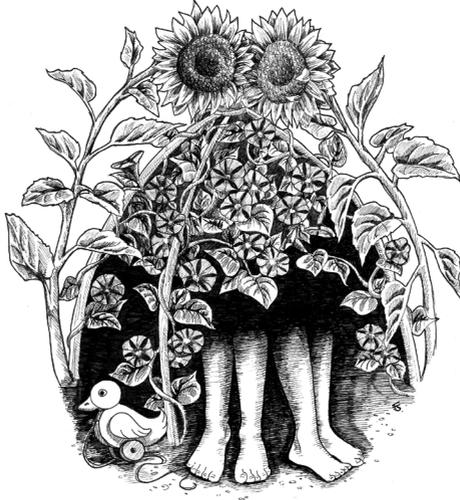
Thank you.



LIFE MEMBERS

Special thanks also to all of our Life Members listed below:

Peter Alexander	Jo Hainsworth	Phoenix Organics
Diana & Justin Anderson	Rob Hammington	Jenny Quilliam
Banyan	B.T. Hammond	CE (Betty) Rawley
Barbara Barangawath	Jacquie Hardinge	Amy Roberts
ME Bedford	Henry Harrington	Carla Roberts
Bedford Mackay Family Trust	Raewyn Harris	Daphne Ross
Rachel Benjamin	Emma Horgan	Jane Russell
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Simon Griffiths & Stacy Shuck	Thompson	Rox Sutherland-Valentine
John Griggs	Jane Penberthy	



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Printed on 100% recycled paper

Cover art by Rianna Stahl

Illustrations by Franzi Corker

Published by Koanga Institute

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