

SOIL & HEALTH ASSOCIATION'S

# OrganicNZ

MAY-JUNE 2018

ORANGA NUKU - ORANGA KAI - ORANGA TĀNGATA  
HEALTHY SOIL - HEALTHY FOOD - HEALTHY PEOPLE

## Expect a miracle! how I survived terminal cancer

how to grow the best  
**broad beans**

**Cultivate  
Christchurch**

growing people  
and produce

**3 organic  
farmers**

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HOLISTIC GRAZING

Celebrating  
**Organic  
Week NZ**

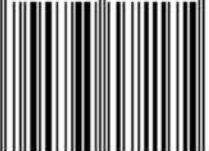
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## Message from the chair

Greetings readers, I trust your autumn is going well at your place – Central Otago is glowing with colour!

I want to briefly readdress Council's thinking on the subscription increase and the responses we have had to it. The harsh reality Council faces, as articulated several times, is that our main earner (*Organic NZ*) is also our main expense and it, combined with our other expenses, costs us more than we earn.

To remedy the ongoing loss-making situation Council decided to change the membership rate to \$95. Thus far Council has received seven letters from people expressing strong disapproval and I'm sure there are some other members a bit miffed as well. Not many of us like paying more than we are accustomed to. For myself when that happens I ask, is this increase for something that matters/is important to me?

To be frank, if the prospects of getting Roundup out of our food and environment and keeping GE/GMO out of our food and environment for the benefit of us and our grandchildren isn't worth \$95 p/a, then we really are wasting our time. Of course, we also get six superb magazines a year full of ideas and educational opportunities.

Your Soil & Health Association is not the only group fighting the above, but time and again since becoming involved with Soil & Health I've heard that we punch way above our weight. We are very happy to talk about the process at the AGM but please don't confuse what might be seen as a less-than-perfect process with a very clear need to act. So far, I believe five renewing subscribers have called the office to ask for a dispensation which we have been very happy to accommodate. We need all our members!

At the other end of the spectrum we receive some truly humbling support ranging from \$5 per fortnight member donations to a recent bequest of \$20,000+ from an estate. Both examples remind Council that it is working, perhaps imperfectly at times, on issues that really matter and we are working hard to get better at it.

As usual there will be elections at the AGM, and one of the things that you can help Council with is putting up motivated, informed members for election. This year as you will see (page 56) there are four spots up for grabs. There will be at least one vacancy as I will not be standing.

The role of Soil & Health is critical if we care about the health of our soil, plants and people; please support our goals and contact us with your ideas and offers of help.

Bye for now



Graham Clarke  
Chair, Soil & Health  
graham@organicnz.org.nz



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# Thank you for supporting us!

Did you know? By buying *Organic NZ* you are supporting the work of Soil & Health, a not-for-profit registered charity, towards a GE-free organic New Zealand. Become a member to help even more. Donations over \$5 qualify for a tax rebate.

**Subscribe and save nearly 10% off the retail price!**  
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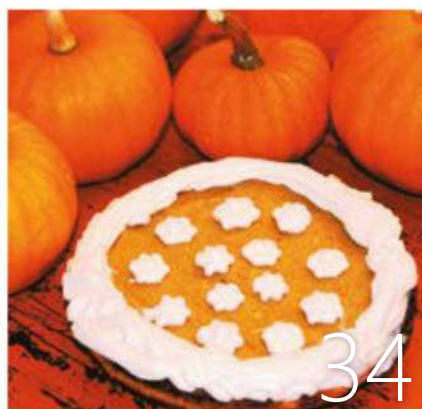
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# LIVELIHOOD & LIFESTYLE OPPORTUNITY FOR COMMITTED ORGANIC GROWER/S



**Turanga Farm Eco-hamlet, on the rural outskirts of Auckland, is looking for individuals or families committed to making their livelihood from organic or biodynamic growing.**

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Those committing to Turanga with business plan and intending long-term membership, will have the option of purchasing a lot (freehold title, services installed, RC granted) plus an undivided share of the farm as a whole. (Initial RC is for 18 lots; long term we may expand a bit by adding a few eco apartments). Long-term rental accommodation will be available, also assistance with interim accommodation and capital projects. We want to help your plan succeed!

## LIVELIHOODS: There is scope for businesses in:

- 1. Veges, fruit, and nuts, e.g. through a weekly box scheme** – already trialled on-farm by an organic grower. Producing fruit trees include avocados, tamarillos, apples, plums, chestnuts, walnuts. Two paddocks have good quality soils well suited to veges. Tractor free for start-up.
- 2. Milk and dairy products from cows and possibly also sheep: milk, butter, cream, soft & hard cheeses, yoghurt, haloumi etc.** A few cows are part Jersey; our sheep include a few East Friesian ewes.
- 3. Meat (beef, mutton/lamb, pork), also eggs and poultry from free range chickens and geese.** We have mainly Dexter cross cattle and Wiltshire sheep. Geese already free-range on farm!

**Numerous other forms of livelihood or part-livelihood will also be available within this community; e.g. building, childcare, machine maintenance, grounds maintenance, beekeeping, a plant nursery, yoga tuition, pest control ....**

Applicants should have training (formal or informal) and experience in organic/biodynamic growing. Our idea is that those running these businesses will lease land from the community, of which they will be members. Within the community they will find their primary market, also additional labour if needed, as well as help from visiting wwoofers. Further information on request.

**Please reply, enclosing CV, preferred livelihood and relevant experience, and personal info (family composition, personal skills & attributes, interests e.g. musical, artistic, recreational...)**  
to: **Jill Whitmore,**  
**jill.whitmore37@gmail.com**



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### Membership

Soil & Health Association members automatically receive *Organic NZ* six times per year. See page 59

### Editorial Contributions

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## Another GE-free win!



Photo: Martina Sandkühler

As I was writing this editorial, the news came through about another win for keeping the New Zealand environment GE-free. I feel for Federated Farmers members because their leaders keep spending members' money on legal cases, trying to knock down the right of communities to determine their own GE policies.

But it's not working – the Feds have twice lost (Environment Court and High Court) and then withdrew their appeal to the Court of Appeal. In the latest case before the Environment Court, Whangarei District Council appealed the Northland Council's Regional Policy Statement, asking to delete one word – 'plants' so the policy would require a precautionary approach towards introducing genetically engineered organisms generally to the environment. Fair enough – it's not only GE *plants* that are risky – what about animals, insects, microorganisms and so on?

Federated Farmers appeared as an interested party, and continued to present the argument they used in the cases they lost – that the Northland Regional Council does not have jurisdiction to regulate GMOs, because that is the sole prerogative of authorities under the Hazardous Substances and New Organisms Act.

However the rulings to date have stated that regional councils DO have jurisdiction to regulate GE in their regions, under the RMA. It beggars belief that Federated Farmers continue to use the argument that has twice been tossed out; perhaps they believe that money will win the day, rather than a cogent argument. The upshot of this case was in favour of Whangarei District Council, and therefore Northland Regional Council's policy is not restricted to just GE plants, but applies to GMOs generally.

It's just as well that many people in councils, communities and NGOs, including farmers, continue to stand up for our right to be GE-free, or at the very least precautionary. Soil & Health will continue to stand strong on the GE issue on your behalf. Two more important GE cases are coming up, involving Hastings District

Council and Auckland Council, again brought by Federated Farmers.

A much more productive use of everyone's time and money would be transitioning to and strengthening organic farming, for our health, wealth and the environment.

The weather has been all over the place. Climate change is the new normal. Until early April we basked in warmth. Volunteer broad beans popped up in my garden and were already flowering in March. The zucchinis and runner beans just kept on producing.

Then we were abruptly thrown into winter with snow and violent hailstorms in the south, while the storm wreaked havoc and caused power outages in the north. Perhaps it was no coincidence that the Government announced the same week that there would be no new oil exploration permits – a bold move away from planetary destruction, and more is needed!

Farmers and gardeners have always been at the mercy of the weather, but it's becoming harder to predict and cope with. We have to get smarter, and a biodiversity of microorganisms, insects, animals and crops is the key. Read about the three North Canterbury farmers and how holistic planned grazing is improving their farming and environment (page 44).

It's inspiring to see a new generation of gardeners and farmers coming through – read about Cultivate Christchurch (page 14), and 12-year-old Quinn (page 20). Does your child or school have a great story and photos to share with *Organic NZ* readers? Let me know!

*Organic NZ* readers in the Christchurch area: come along to the evening gathering organised by Soil & Health Canterbury on Friday 27 April, following the National Council's meeting that day (details on page 60). I look forward to catching up with you, and as many from the National Council as can attend.

*Philippa*

Philippa Jamieson  
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# Your letters

Email: [editor@organicnz.org.nz](mailto:editor@organicnz.org.nz) Post: PO Box 9693, Marion Square, Wellington, 6141.

## COMPOSTING OR RECYCLING PACKAGING

We live in Gisborne where organic produce at the supermarket is limited; all the organic fresh produce is on a small shelf in a corner of the fresh produce section of Pak'n'Save. Last time I checked, the organic fresh produce at Countdown was pretty much non-existent, save from the organic baby carrots imported from the USA. All the produce is packaged. Purefresh sells some of its produce in compostable packaging. While I originally welcomed the change to compostable packaging, I am not so sure about it any more.

A couple of years ago, I bought cups made from corn for a party (Pams brand), thinking we could compost them once they had been used. To date they still look like plastic cups, and have been through three compost piles (I put back into the new compost anything that hasn't broken down properly). I also added some compostable packaging from Purefresh organic kumara bought at the supermarket, with the same results. The kumara came in a plastic tray (made by Raptispax) and wrapped in a clear plastic bag. Did I just buy non-compostable bio-based plastics? How can we tell the difference?

I rang Pams and they had little information about about their biodegradable or compostable plates and cups and the company policy forbids them to give the name of their manufacturer. I was told the plates are biodegradable, i.e. they will break down faster in the landfill, the plastic cups are made from 100% plant fibre (couldn't specify which kind exactly) and should be compostable in a home compost if composted within 90 days of use.

I would love some tips on how to compost them so they break down properly. Our compost piles are made of humanure and garden waste, the humanure reaching high temperatures when it breaks down.

## WINNING LETTER FOOD SOVEREIGNTY IN AOTEAROA

A movement is growing to establish food sovereignty in Aotearoa. We take aim at the structural inequalities that impoverish our food, land and communities. We intend to reshape the food system so true agency exists in decision-making from growing to consumption.

Our movement seeks to reclaim power from the industrial and corporate dominance that commodifies food, reapplying this to grow a system where food is a right. We work towards an Aotearoa where organic is normalised, making certification redundant; where the food economy serves ecology and people rather than extracting from them.

We came together in late February at 'Growing Power', a four-day hui run at a small farm in Oxford, Canterbury. Here, a group of 20 from across Aotearoa and beyond met and found common ground around food sovereignty. Tracing the roots of inequality in the food system, we connected around deep values and began to articulate a shared purpose. Unified by food, we set out to transform the



Photo: Nathan Surendran

relationships between people, land, water, and the economy.

Previously isolated parts of a national web are now communicating and beginning to work as an ecosystem with this purpose at its core. It is a small start with many more people, perspectives and voices still to join. You and your community, your networks and your problems are invited to nourish what is growing.

To engage with our movement, watch out for upcoming regional hui (Auckland 2-4 June); find us on Facebook [www.facebook.com/growingpowernz](http://www.facebook.com/growingpowernz) or email [growingpowernz@gmail.com](mailto:growingpowernz@gmail.com).

**Rowan Brooks**  
Oxford

**Congratulations** to this month's winning letter writer, **Rowan Brooks**, you receive a \$50 voucher to spend on your choice of delicious, nutritious organic Purebread products. [purebread.co.nz](http://purebread.co.nz)



Since the compostable plastics haven't seemed to break down I have stopped putting them in our compost pile. There are no commercial facilities in Gisborne to compost these, so end up in the general plastic recycling (or accumulate in a cardboard box in the shed until I figure out how to dispose of them properly).

It is so frustrating to buy or hold in our hands a product that claims to be compostable when there are no facilities that can compost it properly. There are not enough places where these products can be properly disposed of, and what percentage of consumers would actually know what to do with them?

## Feedback

**We love your feedback, letters, tips, recipes, questions and photos!**

Deadline: **30 May 2018** for the July/August 2018 issue. Please include your name, address and phone number. Maximum length 300 words. Letters may be abridged.

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I have been tempted to buy conventionally grown vegetables rather than their organic counterpart just so I don't have to worry about all the plastic packaging.

**Natacha Lee**  
Gisborne

We contacted Ana Aloma, general manager of Purefresh Organic. She says they pack organic kumara in two ways: 800 g packs for New World and Pak 'n Save, and 500 g packs for Countdown.

The 800 g pack is made up of a recyclable plastic punnet (recycle number 1, Raptispax brand), and clear plastic film (currently also recyclable through the plastic recycling bins outside supermarkets) – so neither will break down in compost. The 500 g pack is made up of a plant-based pulp compostable tray and plant-based printed compostable film, which will break down in a home compost heap.

Purefresh packaging is only compostable if it says so on the packaging, otherwise it is recyclable. Where there is certified organic produce sold alongside non-organic, the two need to be kept separate, hence the packaging. Ana Aloma acknowledged the many issues around packaging, and Purefresh is doing ongoing work to be more sustainable. – Ed.

**Rod Gibson, general manager, Foodstuffs Own Brands Ltd responds:**

Your reader has alerted us to an issue which is fortunately isolated to that one particular product – Pams Tumblers. It appears that the product formulation was changed in response to customer needs for a disposable tumbler that handled hot liquids better, however the supplier did not update the labelling to reflect this.

Thanks to your sharp-eyed reader we have now withdrawn this particular product from sale while we work with the supplier to confirm that it complies with the relevant product requirements and standards. We would like to thank your reader for bringing this to our attention.

[Foodstuffs clarified that the cups were made of plastarch material (PSM): starch combined with several other biodegradable materials, and able to be composted in a commercial system where high temperatures can be maintained for several days, but not compostable in a home compost – Ed.]

## INDUSTRIALISED ORGANICS

The somewhat evasive response (*Organic NZ* March/April) from Soil & Health chairman Graham Clarke to disgruntled members regarding the unexpected rise in the association's fees makes it clear who is the leading voice for the organic community and its sector.

Members are expected to compromise their views on this board decision and work together to 'lead organics into the mainstream'. The mainstream being business reliant upon industrial organic agriculture and enthusiastically supported by the influential BioGro boys' club representatives. Mr Clarke informs us that sponsorship is now being sought to assist in this drive for growth.

When other credible food-focused grassroots organisations like Farmers Market NZ accept corporate sponsorship from industrial agricultural companies such as Rabobank, believing naively that it's a win-win, then Soil & Health members may question whether there is anyone Soil & Health will not accept sponsorship from? Corporate sponsorship for such grassroots organisations could be likened to the use of glyphosate, so effective at killing the grassroots.

So, where do the small, diverse, independent growers and producers who feature so frequently in *Organic NZ* belong if by definition the 'mainstream' is the large-scale industrial model of production?

In the 2001 Michael Pollan article 'The organic industrial complex' he asked "What do the words 'organic food' mean, now that the movement has become a \$7.7-billion business dominated by large corporations?" This article is as relevant now for us as it was then in the USA. Pollan's conclusion was that 'the whole industrial food system – and not just chemical agriculture – was in some fundamental way unsustainable'.

The problem is the organic movement put all the emphasis on a certification system for production and ignored distribution, allowing the distributors (supermarkets) to become all-powerful and dictate the production system to the point where organic producers needed to industrialise. Now we have business taking over the certification system and the philosophy goes where?

Soil & Health are I fear following suit by allowing its representatives to promote industrial organics as the means to an end at the expense of the local, the diverse and the community.

Do the Soil & Health members want to go down the same USA-led industry driven agricultural road? If not, we have the opportunity to take a different path at the next board election, unless you cancel your membership because of the hike in cost. After all, with enough corporate sponsorship who needs members?

**Barb Warren**  
Ohoka

**Graham Clarke, chair of Soil & Health, responds:**

Dear Barb Warren,

Thanks for your letter which raises some points I am very happy to answer.

Regarding 'organics going mainstream'. Does this mean a USA style approach from your National Council? No WAY!

What it does refer to is the need for organics to be represented by more than 3% of our nation's farmers (approx. 1% for sheep and beef) if we, which is those who would prefer not to have Roundup etc. on our Weetbix and toast, want to have a chance to shape the regulatory agenda currently being foisted upon New Zealand consumers.

While we remain close to a production rounding error we are up against it. We need more farmers farming organically and along with consumer demand we need to engender support from producer bodies and the Government to start the process of supporting farmers to move away from the chemically dependent systems we have slipped into over the last 40 years or so.

No one around the Soil & Health table has the slightest interest in following anything America (FDA) does agriculturally whether organic or chemical! Mr Pollan as you



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mention though has lots to teach us – but the challenge remains to prime the interest of farmers here to go to his events and those of others like him.

Interestingly while Rabobank do indeed bank plenty of chemical farmers they bank the majority of Otago/Southland (my patch) organic ones and actively support trying to find and develop ways to keep organic stock in the organic system. This has the potential to raise organic farmers' income which improves its attractiveness to others.

That said full participation by interested and motivated members at the AGM and through Facebook is both welcomed and encouraged. Thank you for your interest and effort.

### VACCINES: MIRACLE OR MIRAGE?

I am not writing about the pros and cons of vaccination and whether we should vaccinate or not, as that is a decision that everyone has to decide for themselves for whatever reason they may have through informed choice.

However, I wish to reply to previous letters from the Immunisation Advisory Centre Auckland University (IAC) and Karen Cleary of Auckland. Both letters have clearly shown their disapproval of *Organic NZ* publishing Dr Godfrey's article on vaccination and his opinion on it.

I wish to say good on *Organic NZ* and Dr Godfrey for opening up discussion on the subject of vaccination and any other topic that relates to Soil & Health, after all that is what we pay our subscriptions for.

To reply to IAC: to my understanding there are differing points of view on how effective vaccines are and how long they last for. The last flu vaccine is an example of ineffectiveness; also how long the whooping cough vaccine protects for is another example. With most of the population being vaccinated it makes me wonder why we are getting epidemics of whooping cough, mumps and measles, if these vaccines are as good as we are told.

Do we know the percentages of those that are vaccinated or unvaccinated who actually get those diseases? I suspect that there have been no trials at all to ascertain the health of those that have been vaccinated, and those that have not been vaccinated, in all aspects of their health. For most people that are healthy and well nourished those childhood diseases are rarely a major problem and give a life-long immunity that can be passed onto breast-fed babies by their mothers, so I understand.

Māori were so badly affected by measles when the early Europeans arrived as they had no natural communal immunity to the disease, but measles had only a minor effect on the European children where they had a greater immunity; certainly some may have got quite sick but for most it was quite normal.

To reply to Karen Cleary: I too was brought up in the 1950s. I too got measles, mumps and chicken pox, just enough to keep me in bed for a few days. I didn't get whooping cough, probably because my mother had it as a child and passed on her immunity to me as I was breastfed. Being a male I didn't become sterile as a result of having mumps as I fathered two healthy children.

It is my understanding that the polio epidemics reduced dramatically in the late 1940s due to better sanitation before the vaccines were introduced. Karen said she went to school with deaf children because their mothers contracted rubella during pregnancy. As a child I never heard of rubella and there were no deaf children in my class either.

I never heard of any children in our school having autism, ADD, ADHD or allergy problems like the numbers we are seeing these days, but I do know they got measles, mumps and chicken pox etc. and all survived.

It is not before time that we question the drug companies, chemists, food manufacturers, agricultural and animal therapeutic manufacturers because people are getting sicker with increases in many diseases.

Both medical and natural therapies have seen major advancements over the last half century; both should work together for the health and well-being of us all. I am pleased that *Organic NZ* is showing the way to a really healthy way of living in New Zealand, keep it up.

**L Marsh**

Bay of Plenty

I was thoroughly disappointed to read the article 'Vaccines – miracle or mirage?'. I found the arguments provided to be bordering on the ridiculous and a blatant example of conspiracy theories.

Godfrey mentioned that the number of vaccines had increased considerably, but failed to mention that the antigen level of all recommended vaccines is lower than a single vaccine back in the 60s. All of the diseases that vaccinations are offered [for] do have severe side effects. Not all who would get the disease would experience them, but enough do. It is up to each parent to weigh the pros and cons, but it does no one any good if they are not offered accurate information.

Godfrey's list 'Evidence of harm' lists a variety of conditions that, by their inclusion in this article, seem to imply he is linking the increase of conditions with vaccines, yet there are alternative and far more logical reasons as to why we may be seeing an increase.

For example, with conditions like asthma, it is logical to look at environmental factors such as the rise in antibacterial

chemicals regularly used in household products, children playing less outdoors, the increase in processed foods and fewer pets – especially dogs (rental property restrictions).

Further, my particular distaste for this article stems towards the inclusion of autism and his obvious sympathy towards Andrew Wakefield. The link between thimerosal and autism has been disproved. If the claim was valid there would have been a drop in autism diagnoses after thimerosal was removed from vaccines. This was not the case.

Wakefield's initial article appeared to show a causal link to gut issues, autism and the MMR vaccine. He has continued to promote the link and his research. There is strong evidence that he falsified data, that he had a severe conflict of interest – communicating with a lawyer regarding a case linking the MMR vaccine to autism for the purpose of lawsuit, he received funding via the lawyer for the case study and several of the patients were directly involved in the lawsuit and were referred to the study by the lawyer, not self-referred as claimed by Wakefield.

Wakefield's claims were taken seriously, but subsequent studies by other reputable scientists in a variety of countries have failed to replicate his findings. These studies looked at far higher numbers than the small number in Wakefield's study. These are the reasons why his licence to practice was revoked and his article fully retracted.

However, the increase in autism can be influenced by one important fact. They are getting better at diagnosing autism, especially the so-called high functioning types. I have autism. I was not diagnosed when I was a child. This does not mean I didn't have it then, I simply was not diagnosed. Many parents today are diagnosed when their children are, especially women.

I will agree with Godfrey in one respect. There will be more outbreaks of illnesses like measles but the cause lies squarely on the fact that vaccination is declining. Thus more people are exposed to the disease and the ones who will suffer the most are the very young, who are not old enough to be vaccinated. That is clear from evidence as measles is a notifiable disease. The majority who get it are not vaccinated. There have been deaths overseas; how long before we have them here?

**L Barber**

Manawatu

*[The rates of children fully vaccinated in New Zealand to the Ministry of Health's recommended schedule are 93.4% at age one, and 88.6% at age five (figures for 2017) – Ed.]*

# Competitions

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[raglancoconutyoghurt.co.nz](http://raglancoconutyoghurt.co.nz)



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## Inca Fé coffee

**When you gift a subscription to *Organic NZ*, you go in the draw to win a gift pack of organic fair trade coffee.** Sign someone up via [www.organicnz.org.nz](http://www.organicnz.org.nz) or page 60.

### How to enter

To enter the draw for these competitions, send your name, street address (no PO boxes), phone number, the name of the competition you are entering, and any extra information if required by the particular competition, to: [competitions@organicnz.org.nz](mailto:competitions@organicnz.org.nz) or *Organic NZ* Competitions, PO Box 9693, Marion Square, Wellington, 6141. Competitions are open to New Zealand residents only. One entry per person per competition is accepted. **Entries for all competitions close on 31 May 2018.**

## Winners

### Lhoste Yoga clothing

First prize: Euphemia Stonehouse, Havelock. Second prize: Maria Orr, Motueka.

### Annie Prince Aromatherapy travel sticks

Chris Berman, Henderson; Barbara Seymour, Gisborne; Megan Hindmarsh, Kaikohe; Jackie Walker, Parnell; Glenda

Muir, Gore; Nicole Bührs, Tauranga; Dee Norling, Takanini; Barbara Bensemann, Brightwater; Abby de Lacey, Christchurch.

### Trade Aid chocolate gift pack

Lara Coxhead, New Plymouth; Megan Williams, Auckland; Clare Drury, Auckland; Maggie Macnamara, New Plymouth; Laura Furneaux, Christchurch; Jill Brown, Otaki; Paul Elwell-Sutton, Haast.

### Inca Fé coffee

Byne Calder, Rotorua; Dennis Enright, Mosgiel; Waveney Warth, Auckland; Cathie Turnbull, Tutira.

### Living the Change film (digital download)

Mary DePartout, Cromwell; Jenni Cruse, Haumoana.

## Scientists want glyphosate reassessed

By **Steffan Browning**

Six leading New Zealand public health scientists have called for the withdrawal of the report by the New Zealand Environmental Protection Authority (EPA) that concluded glyphosate was unlikely to be genotoxic or carcinogenic to humans.

The scientists, from Massey University's Centre for Public Health Research (CPHR), made the call in an article – 'Carcinogenicity of glyphosate: Why is New Zealand's EPA lost in the weeds?' – published in the *New Zealand Medical Journal* in late March. They point out that the EPA's process for evaluating the carcinogenicity of cancer was flawed and invalid, and with no mention of risk assessment or current glyphosate exposures in New Zealand. Responding to media, CPHR director Professor Jeroen Douwes called for the consideration of a ban for private and council use of glyphosate.

The CPHR scientists also called for a reassessment of glyphosate-based herbicides, and '...clearer process and better understanding of science be used to inform any future review of hazardous substances in New Zealand'.

In 2015, the International Agency for Research on Cancer (IARC) concluded that glyphosate is 'probably carcinogenic to humans'. Then the NZ EPA commissioned a new report, *Review of the Evidence Relating to Glyphosate and Carcinogenicity* (2016), which found that glyphosate was unlikely to be carcinogenic. The report has been strongly criticised due to its reliance on industry-funded science, and poor process.

In August 2017 the Green Party published a 185-page review of the EPA's report, and CPHR scientists supported

this review. The review, by Jodie Bruning and myself, analysed the EPA report's methodology, the science used for its flawed decision, the science rejected or ignored, and possible illegality of the report and its commissioning. I questioned the motivation for the EPA to rebut the IARC, the world's gold standard in cancer research, and expressed concerns about the EPA's links with Ministry for Primary Industries and the independence and suitability of some EPA staff.

The commissioning of the EPA report came soon after the September 2015 appointment of GE proponent Dr Allan Freeth, a past managing director of big agricultural seller Wrightsons, to the role of chief executive at the EPA.

A year later Dr Jacqueline Rowarth was appointed chief scientist for the EPA and consistently supported industry positions, including for current levels of glyphosate use in New Zealand, rather than the statutory EPA requirements for environmental and community health protection.

Following significant public criticism, Dr Rowarth left the EPA in March, but continues to work closely with the pesticides industry. Who hired and directed Rowarth needs investigating.

How the EPA classifies pesticides and other hazardous substances influences the actions of consumers, such as territorial local authorities who frequently request guidance on the risks of glyphosate-based herbicides for use in public places such as streets and parks. For this reason, it's important that EPA advice is derived from rigorous assessment.



**Above:** Steffan Browning and Jodie Bruning with their assessment of the EPA's review of glyphosate and cancer, pictured just after they had made a presentation to Auckland Council about glyphosate last year. In the background (obscured) is the statue of Sir Dove-Meyer Robinson, who was a founding member of the organisation we now know as Soil & Health, its president (1946–1952) and patron until his death (1980–1989). He was also mayor of Auckland (1959–1965 and 1968–1980).

### More info

- IARC report: [bit.ly/2yJhdUH](http://bit.ly/2yJhdUH)
- EPA report: [bit.ly/2qvSVuz](http://bit.ly/2qvSVuz)
- Green Party review: [bit.do/ednNC](http://bit.do/ednNC)

## Soil & Health welcomes Lucy Blackbourn

Welcome to Soil & Health's new accounts manager, Lucy Blackbourn. Lucy began working for the Association late last year as the administrative coordinator, and is now making the most of her skills as an accountant and her passion for the environment, by working part-time while also enjoying the organic experience of wwoofing. She came to Soil & Health after working for the Ministry for the Environment in the waste and resources area.

"I came to the realisation that I was a lot 'greener' than many of my colleagues while I was working as a tax consultant in a big-four consulting firm," says Lucy. "As soon as this penny dropped I've been looking for a way to bring my values and

work in alignment."

Lucy loves growing her own food, and is making the most of a flexible part-time job by working remotely while learning as much as possible about organic growing from some fantastic wwoof hosts around the country.

"The more I learn about environmental issues, the more I realise how our way of living and eating is at the root cause of these. I'm really excited to be part of an organisation that recognises these causes and is campaigning towards a better way of living in harmony with nature," says Lucy. "I hope I can make a real difference at Soil & Health and meet some of our amazing supporters and readers along the way."



## Obituary

# Tony Banks

Tony Banks was a pillar of the OrganicFarmNZ (OFNZ) Waikato Branch, and by all accounts a pillar of the community in Hamilton. At a gathering held in March in the Banks family's beautiful organic garden to celebrate Tony's life, many people told stories of how Tony had helped them out or saved the day for the organisation with his careful 'cut the nonsense' approach.

Tony and Maggie Banks joined the OFNZ Waikato Branch in 2011. As well as hosting meetings in their beautiful self-designed and built home, Tony and Maggie have both been active in supporting and helping to run OFNZ Waikato. Tony chaired the group for three years and most recently joined the OFNZ National Coordinating Committee (NCC).

He has been a strong advocate for getting the organic certification process into the modern era with his focus on reducing bureaucracy and promoting a more user-friendly certification process. Together with NCC chair Jim Bennett, Tony recently put a lot of time into the crucial task of making the Food Safety Act requirements achievable for smaller organic growers and producers. By meeting and corresponding with the Minister for Primary Industries, Tony has helped to hopefully pave the way for a workable solution to the Food Safety Act for certified organic growers.

Promoting land sharing was another passion and another area where Tony has put in considerable energy. In recent years, Tony focused his law practice on environmental issues, and helped many people onto their dream farms and lifestyle blocks.

Tony had wide-ranging interests, especially in things sustainable, and was



Photo: Banks family

quick to adopt new technologies as well as keen to preserve old ones – from a specially designed broadfork, to the finer points of sharpening his scythe, through to purchasing a microscope and camera to capture the life found in compost and compost teas.

Tony was also a great community networker and had a huge database of people with whom he regularly sent or shared interesting events and information. He was always ready to support and help with educational workshops.

With his extensive knowledge of law, organic farming and self-sufficiency, Tony will be greatly missed for his wise counsel, practical approach to dealing with problems, and his kindness and patience.

– Tim Newton, OFNZ Waikato

## 'Remarkable' new apple

Congratulations to Mrs Mary Pauwels of Akaroa, who came up with the winning name for the apple tree previously known as AA12.

"I suggest it be called 'Remarkable', both to reflect its great properties and as a wee nod to the sterling work of Mark Christensen," she wrote. Mark Christensen established the Heritage Food Crops Research Trust and is its director of research. He discovered the Monty's Surprise apple on the roadside



and it turned out to have high levels of antioxidants, and anti-cancer properties. Remarkable is a seedling of Monty's Surprise, and has so far been found to have anti-inflammatory properties.

Mrs Pauwels receives a grafted Monty's Surprise tree, Monty's Surprise cider vinegar and flower essence, from the Heritage Food Crops Research Trust. [heritagefoodcrops.org.nz](http://heritagefoodcrops.org.nz)



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# Celebrating Organic Week NZ!

New Zealand's first ever nationwide Organic Week took place from 9–15 April. Organic businesses and communities got involved by organising over 50 events, offers and promotions around the country. These photos offer a snapshot of some of the field days, tastings and workshops on offer.

Organics is on the rise. Globally the organic market is now valued at around US\$100 billion. With the term 'organic' popping up more frequently on New Zealand shelves, Organic Week NZ aimed to celebrate organics and to educate people about what it means to be organic and what to look for.

"The term organic is often misunderstood – and it really is a great

choice for people who want to choose the best for their health and that of the environment," said Organic Week NZ's project manager Robyn Vickery.

"Organic Week NZ aims to achieve two things – the first is to celebrate. There are literally thousands of certified organic products available, and we want to give you the opportunity to hear the amazing stories from the passionate producers themselves by going along to these events," she said.

"The second is to educate. Organic encompasses so much more than what meets the eye, and we're excited to have a platform that really helps you to understand why organic is good for you and good for

the planet."

Organic Week NZ engaged people via its website and social media channels to find out where to buy organic, what events and promotions were happening across New Zealand and why we should go organic. Consumers voted for their favourite organic farmer, product, retail store, eatery and brand in the inaugural Organic Week NZ Awards. As *Organic NZ* went to print just before this was announced, we'll bring you the winners in our next issue. [www.organicweek.co.nz](http://www.organicweek.co.nz)



**Above:** Congratulations to Catriona and Mark White, organic kiwifruit growers in Opōtiki, who recently received the supreme award in the Bay of Plenty Ballance Farm Environment Awards in February. They also hosted a popular field day at their orchard during Organic Week.

Photo: Bay of Plenty Ballance Farm Environment Awards



**Left:** Alison White of the Safe Food Campaign organised a stall at the Thorndon Farmers' Market in Wellington during Organic Week. She also had copies of *Organic NZ* for sale and subscription sign-up. Photos: Safe Food Campaign

**Right:** Peter White-Douglas offers plates of organic fruit samples to little Juno and his mother Rachel from Planted, while Aston Gell looks on.



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**Above:** Finn Boyle checks out the Organic Week display at Taste Nature, Dunedin. The map shows where the organic growers are who supply the shop, and a pie graph shows that the growers get the greatest proportion of the money shoppers spend there on fresh produce. During Organic Week, Taste Nature gave away apples for customers to munch on while shopping – a big hit with the children especially! Photo: Taste Nature



**Above:** Rory Fogerty of Permakai in Waiuku hosted two farm tours as part of Organic Week, and in March hosted the Auckland branch of Soil & Health. Rory and Jennifer have a market garden growing vegetables using permaculture and biointensive gardening principles. Photo: Ben Cheah



**Above:** Wendy Jobling (centre) offers samples of Hohepa dairy products at Cornucopia Organics, Hastings.



**Above:** Cornucopia staff sporting Organic Week NZ T-shirts (100% organic cotton, naturally!). Left to right: Dion McGuinness, Beate Bergdolt and Donna Tuanui. Photo: Cornucopia



**Top:** Awaararoa Eco Village on Waiheke Island held a very successful open day, with all workshops fully subscribed. Here, eco village resident Rob Morton of Gulf Trees leads a session on growing fruit trees organically.

**Above:** Adrienne Tubbs with a still in action at the Alembics workshop, distilling local kanuka.

**Right:** Rob Morton shows people the resident tuna (long fin eels) who live in the wetland sanctuary at Awaararoa. Photos: Awaararoa Eco Village



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# growing people AND PRODUCE in an urban paradise

**Liz Kivi** meets the dynamic duo cultivating youth development and connected communities with their city farms.

Christchurch is famous as the Garden City but it's still surprising to discover a productive farm within its CBD. Just a block away from Christchurch Casino, flanked by a private hospital and apartment complexes, is Cultivate Christchurch, a 3000m<sup>2</sup> organic farm. Some of the city's few remaining high-rise buildings loom over beds brimming with rich soil, thriving herbs, and pumpkins so vigorous they're spilling out onto the pavement.

Cultivate Christchurch founders Fiona Stewart and Bailey Peryman have created this organic paradise and social enterprise, not just to grow vegetables, but also to offer training and mentorship for struggling youth.

The pair were independently recipients of the Vodafone World of Difference grant. When Vodafone subsequently offered grant alumni funding to work on a shared enterprise, they decided to join forces. Over a cup of coffee at a local café (which eventually became a Cultivate Christchurch customer) they hit on the idea of an urban farm, which would serve as a training ground for young people.



## Unleashing the energy of youth

Fiona had grown up on a farm, wanted to study mental health, and could easily envision combining the two experiences. "One of my biggest dreams was to start a farm school for young people," she says.

Bailey had started a number of community gardens, as well as the box delivery service that has become Ooooby Christchurch ([ooooby.org/christchurch](http://ooooby.org/christchurch)), and was eager to bring this experience to working with young people.

**Above:** Cultivate Christchurch founders Bailey Peryman and Fiona Stewart.

**Left:** Tomatoes (field tomato mix) grown at Cultivate Christchurch's central city urban farm. Photos: Charlotte Clements





**Above:** Urban farm manager Amra Wallace preparing seed trays.

Photo: Liz Kivi

“I’ve always wanted to unleash the energy and spirit of youth in urban farming,” he says.

Their vision impressed Vodafone and they were granted \$100,000 per year to run the project for three years.

“We wanted to tackle the greatest challenge, where we’d make the biggest impact,” Bailey says. They now have eight core staff, most of who came to Cultivate for work experience while studying at the Lincoln Biological Husbandry Unit (the BHU) and stayed on as employees, as well as six paid youth interns who will eventually transition to other employment.

### Greening the rubble

They secured the transitional site on Christchurch’s Peterborough St, the former site of four state houses demolished after the Canterbury earthquakes, and converted it from compacted rubble to a productive garden.

They created the garden using compost made from green waste from central city cafés. Cultivate inherited the CBD’s first green waste collection from Agropolis, a temporary community garden founded by Bailey and started on another site, but now superseded by Cultivate. Cultivate charges a fee to collect green waste bins using an electric bicycle pulling a trailer. They have created a perfect closed-loop system, collecting the waste and then hot-composting it, growing nutrient-rich vegetables in the compost, and selling the fresh, hyper-local produce back to cafés, also delivered by e-bike.

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**Above:** Urban farmer Kolle Collis weeding at Cultivate’s central city farm.

Photo: Charlotte Clements

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Above: Ashvin Goburdhane sorting tomatoes. Photo: Liz Kivi

## Cultivate Christchurch at a glance

- 2 hectares of urban farmland
- 3 sites in and around Christchurch
- 17 central Christchurch cafés and restaurants receive their organic vegetables
- 16 youth internships so far provided
- 540 work experience opportunities so far provided
- 2.5 tonnes of food waste diverted from landfill every week using an e-bike and trailer
- Central city site, 156 Peterborough Street: open day Thursday. On open days join in for mahi, kōrero, and a shared lunch at 1 pm (koha if you can).
- Halswell Commons, 211 Hendersons Road: open day Wednesday.
- cultivate.org.nz, hello@cultivate.org.nz



Above: Young workers gain skills and confidence at Cultivate. Photo: Charlotte Clements



Above: Bailey spreads leaves on a compost heap. Photo: Charlotte Clements



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**Above:** Amra Wallace weighing tomatoes.  
Photo: Charlotte Clements



**Above:** Healthy kai. Photo: Charlotte Clements

### Organic and biodynamic

The farm is on a temporary site so isn't certified organic. But Bailey says using organic practices was 'non-negotiable', given that their aim was to grow not just healthy vegetables but healthy people.

"The bare minimum that you can do is work with nature and seek to restore the integrity of local ecosystems. How that comes through for Cultivate is not only the way we apply our growing practices. It's the way we work with everyone."

They use netting for pest control and season extension as well as strategically placed beer traps for slugs. They also garden by the moon and began using the biodynamic preparation 500 last year. Fiona says the best form of pest control is paying attention to the soil. "By making really healthy soil to create really strong plants, pests aren't such a problem."

### Growing great people

Bailey says biodynamic gardening and organic philosophy underpins everything they do. "We need to apply the same to all people and plants, where all things are supported to be their best possible version."

Working alongside their interns, they find them more likely to open up in the nurturing space of the garden. Bailey says they put a lot of effort into mentoring and have had great outcomes, with six interns transitioning to other work in the past six months.

Fiona says their mentoring encompasses everything from how to job hunt and create a CV through to flat finding, dealing with the IRD and other 'life admin', like going to doctors' appointments.

"We give them the skills they need to gain confidence to gain and retain employment," she says. They also work with other organisations to give others the opportunity to connect with the land. It's a busy place, with 700 people taking up the opportunity in 2017 alone. "It's a therapeutic space. You're getting your hands in the soil and learning to eat the right foods," Fiona says.

### Learning to like veges

She loves introducing people to food that is both healthy and delicious. "Just seeing a young person's face when they eat organic produce and realise that they *do* like vegetables."

Cultivate has a knack for converting self-proclaimed vegetable haters, according to Fiona. "Some people come in here saying 'I don't eat leafy greens,' and then come away with mouthfuls of lettuce literally stuffed into their mouths!"

Produce is also popular with locals who buy from the on-site shop. Excess produce is donated to the City Mission, taken home by volunteers, or used for twice-weekly shared lunches where anyone is welcome.

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**Above:** Beetroot: Bull's Blood and Chioggia. Photo: Charlotte Clements



**Above:** Volunteers Julia Zuverr and Joanne Monjol hoeing and weeding. Photo: Liz Kivi

### Compost collection a runaway success

Cultivate's compost collection has been an overwhelming success, with high demand from businesses wanting to get rid of their waste more sustainably. They have the only composting facility in Canterbury to accept compostable packaging, including takeaway coffee cups, and have worked with Christchurch City Council to trial composting slightly larger volumes.

They currently collect only 5–10% of the CBD's potential green waste and planned to expand. In November 2017 they exceeded their PledgeMe crowd-lending target of \$160,000 to grow their infrastructure. They offered 'broccoli bonds', where investors would be paid back with interest in varying combinations of cash, fresh produce, compost or gardening expertise. However, after some staffing changes in the intervening months, including Fiona expecting her first baby in June, they decided to prioritise their youth work.

They are now working with another organisation keen to take over the wider composting operation. "That's the thing about taking the organic approach. You generate positive spin-offs that are economically viable as well," Bailey says.

### Strategic partnership

Another positive spin-off was being approached by the Wayne Francis Charitable Trust, which also works in the youth development arena. Cultivate was invited to manage 1.7 hectares of land eventually destined to be an 800-unit housing subdivision in Halswell. This is the first project of the edible landscaping contracting service they are calling Urbundance. Combining 'urban' and 'abundance', they offer productive landscape construction and green space maintenance as well as community engagement.

"It's a strategic partnership to bring an organic philosophy to urban development," Bailey says.

When they took on the Halswell site in June 2016 it was already blessed with rich organic matter from past lives as a dairy farm and horse paddocks – perfect for growing root vegetables. But the challenge of the Halswell site has been ridding the soil of particularly invasive twitch.

Bailey says they were determined not to resort to chemical warfare, "despite a lot of people saying 'You should spray it off'".

Instead they cultivated as deeply as possible with a rotavator, then covered the area with a silage tarp. "That smothers and stops the plant getting any light. It tries to find the light and essentially exhausts its reserves and becomes organic matter for the soil," says Bailey. This method succeeded in killing 95% of the twitch. "Then you're in an intensive cropping cycle and it doesn't have a chance. It's gone within one or two cycles."



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## Growing and evolving

Their newest site is in Hillmorton, in the southwest of the city, where they will be re-activating Canterbury District Health Board's old propagation unit, a relic from the days when Hillmorton Hospital grew its own produce. Fiona is looking forward to seeing the old glasshouses and shadehouses come back to life.

Their enterprise still requires grant funding and financial support but they are working towards it being self-sustaining. They're also on the lookout for a permanent home. "It would be great to find something in the red zone," Fiona says, referring to the 602 hectares of land deemed unfit to repair by the government post-earthquakes.

With so much positivity at Cultivate's heart it seems certain the right thing will come their way. 🌱

**Liz Kivi** is a freelance writer based in Canterbury.



**Above:** Ashvin Goburdhane with the electric bike nicknamed 'the iron kermit' used to pick up green waste and deliver produce.

Photo: Charlotte Clements



**Above:** Bailey amongst the pretty and edible violas. Photo: Liz Kivi



**Above:** Volunteer Julia Zuvver hoeing rows in preparation for planting.

Photo: Liz Kivi

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# QUINN'S garden

By Quinn Hoare

**H**i, I'm Quinn. You might remember me as the young guy that nearly killed himself when I found an old agri-chemical dumpsite on our property while I was building a hut. Well, I have had other close calls since then including bike crashes, dog bites and wasp attacks; all

normal stuff for a young guy growing up on the land.

We live on certified organic land in the Waitakeres called Long Breath Farm. We grow food for ourselves and locals who we trade and share with. As part of our production we have chickens and

tunnel houses and we run our farm using polycultural practices common in Asia.

I want to share with you a simple process of how I grow vegetables and provide daily food for my family. Using the following steps you too can grow great fresh veges.



**2** They love it in there. It is warm and dry and they never have it easier eating, pecking and scratching the broad beans down to the ground. We get heaps of eggs from them when they are in here. Every so often I also throw in some hay cut from our orchards. This is important as it helps balance out all the chicken poo. I do this when it gets a bit smelly. (My dad says it's something to do with the carbon-nitrogen ratio.)



**1** Every two years in our tunnel houses, we rotate planting a crop of broad beans in the autumn. This introduces nitrogen into the tired soil and we get the yummy beans. After we have harvested them, we let a small flock of chickens into the house for a month or two.



**3** The chickens tell me when they have had enough because they get grumpy. I move them on to do other work and then start to shape the garden with a spade and rake and of course something extra for the soil – compost.

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**4** In the meantime, I've been growing seedlings of plants we want to eat. These include kale, silverbeet, sweet peppers, a range of salad veges (rocket, leafy things), beetroot, turnips, an array of green leafy Chinese veges, sprinkle of herbs, a tomato or two, cucumbers, dwarf beans. Once the beds I've created are nicely watered-in I can get ready for planting. This is a very satisfying part of the steps because all the work comes together about now.



**5** Because a lot of good preparation has gone on, and the soil is in primo condition, all I really have to do now is observe the garden, tend to its needs by watering and a little weeding (not that there are many weeds actually because I made the chickens work and really scratch and find the seeds before they got too grumpy), and make sure I keep harvesting. I feel good about working with nature to get a result I can share.



**Above:** This is me fixing the hay rake.

So, I reckon anyone could do this. Of course, I have to maintain tools, make compost and do other things, and while I'd rather be playing games sometimes, there is great enjoyment in providing food for my family table. It amazes me how all this comes from something as small as a seed and I'm still working out where that comes from.

So, when we do a simple blessing of our food at night it is remembering all the things that bring it together and make it happen. From the plants, chickens, microbes and compost, to the seeds and water and of course my family that help, plant, harvest, prepare and cook the food. My sister and I still however fight over who does the dishes. 🍷

**Quinn Hoare** is 12 years old and lives in a temperate rainforest on the edge of the Waitakere Ranges. His passions are nature, trees, gardening, football, family and food.

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# Broad beans

## EVERY PART is useful

By **Mike Bradstock**

Last year, 17 July was about the worst day imaginable for gardening, but that did not stop me from finding something to do. Planting broad beans.

Standing in cold rain like a masochist, I pushed them about 6 cm deep into the cold, soggy earth, 10 cm apart in rows spaced at 40 cm. I looked dubiously up at the inky sky and down at the miserable, frosted and sagging state of my crops and the puddled soil, and asked myself am I wasting my time?

But within 10 days the young, deep green leaves of Exhibition Long Pod beans were optimistically pushing their way up into the bleak winter sunshine. It seemed hard to believe anything could make such a good start in the short, cold, largely sunless days of winter.

You can plant broad beans any time from now until late spring. I'd forgotten to

make an autumn sowing but as it turned out, my winter sowing would do well too.

### Soil preparation

Soil preparation was minimal. I roughly forked through a plot that had previously grown tomatoes, not turning the soil but just loosening it. This soil had been well dressed with compost and mulched with horse manure during summer, so it still had good residual fertility. The main need of bean crops is adequate minerals – phosphorus, potassium and calcium. They don't require much nitrogen, because they fix it themselves.

### Set the stakes high

What you must provide, though, is protection from wind, as they will grow up to 1.5 m tall and their brittle stems will become top-heavy with the weight of the

beans. When my plants are 20 cm high, I surround the plot with stakes and run strings back and forth between them 15 cm above the ground. Later I repeat this when the plants are about 50 cm and at 80 cm. At the first stringing, I thin the plants to average 20 cm spacings. This also provides a delicious early snack of broad bean tops (about which more later).

### Flowers and growing tips

Flowers start to appear at about two months. If the weather is still cold, don't worry if the first flowers don't set pods. The plants will continue producing flowers almost throughout their life, and as soon as the bees are more active they will do the job. Companion-growing of bee-friendly plants like borage may help to attract them.

When the plants have a good number of pods set on them, pinch out the tips to stop further vegetative growth. Take out the whole cluster of growing leaves at the top and be sure to eat them, raw in a salad or steamed as a leafy vegetable. They're deliciously nutty and provide a bit of green leafage when greens are still scarce.

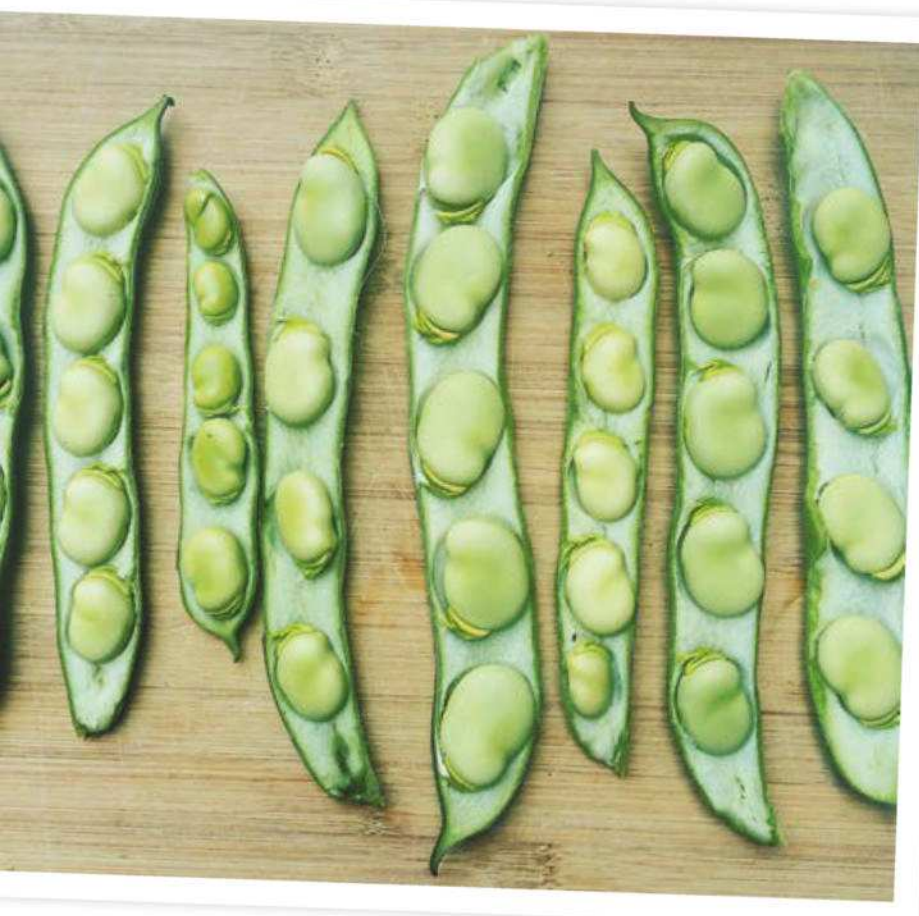


Photo: iStock/the\_mindful\_chef



**Above:** One of the broad beans sprouting in my garden. Young seedlings may need protection from birds, snails and slugs at this stage. An unusual thing about broad beans is they don't lift the two cotyledons (seed leaves) out of the soil when they germinate.

Photo: Mike Bradstock



### Weed, water and harvest

The plants usually require nothing more than weeding and watering during the whole growth cycle. What you must not do, however, is unnecessarily wet the foliage when watering, or work among the plants when they are wet. That may cause them to get a fungal disease that blackens first the leaves and then the pods. It does not always spell the end of your crop, but will greatly reduce quality and productivity.

Broad beans can be eaten at two stages. 'Cutting beans', small beans about as long as your finger, are good to cook and eat pod and all – whole or sliced. Then when the pods are much larger, swollen and expanded (but still green), you shell them and cook the actual seeds. Don't leave them until the pods start to yellow and dry up (except to save seed for next season).

### Varieties to grow

- **Exhibition Long Pod:** Probably the most commonly grown variety in NZ. Tall, hardy, large pods and big seeds.
- **Greenseed:** A shorter variety with characteristically green seeds of excellent flavour.
- **Red Epicure:** An older variety with distinctly reddish seeds.
- **Green Windsor:** Large, pale green seeds, ideal for autumn planting.
- **Superaguadulce:** Tall, fast-growing variety up to 2 m tall with extra-long pods (up to 25 cm).
- **Dwarf Early Green:** Reaching 1 m tall, this is only slightly shorter, with bright green seeds; matures in just 75 days.

### Compost or mulching material

After harvest is over, cut or snap off the finished plants at ground level. Their roots will have loosened the soil beautifully, ready for planting a spring or summer crop without digging. They will also break down in the soil to recycle their nutrients.

Because beans fix nitrogen, the stems and leaves make a net contribution to the nitrogen status of your soil. Break or cut the harvested stems, then dig them into the soil, or compost them. Or pile them around large garden plants like a courgette or a grafted tomato that needs lots of nutrients and well-mulched soil throughout the next summer. The leaves break down quickly; the stems more slowly, so they provide a long and gradual nutrient release.

So you see, every part of the plant is useful.

### Bean cuisine

Don't like broad beans? If you were put off them in childhood, try them again. Fresh from the garden, they are nothing like the dreadful, leathery-skinned frozen beans I dreaded as a child. Cutting beans are delicious steamed with butter, or stir-fried. Shelled beans can be boiled and then skinned (you 'pop' the contents out by squeezing – a bit messy and laborious but well worth the effort), then puréed with lemon juice, garlic and oil to make a delicious dip. Even people who say they hate broad beans can be won over with this recipe.

The Italians eat the shelled beans raw as a snack with pecorino cheese, and I can confirm that the combination is delicious. They also go well in a mixed-bean casserole or added cooked to salads.



**Above:** These broad bean plants have partly collapsed from not being supported. The yield is reduced and the plants are more disease-prone. Photo: Mike Bradstock

### Covering all bases

Still not convinced? Well here's a final tip for entrenched broad bean haters: grow the plants over the winter, without thinning them as described above. You don't need to support them with string. Just wait till they start to fall over, then chop them up and dig them in. Or pull them out for mulch. They are the finest of cover crops to suppress weeds and build soil fertility over winter. (But let a few grow to maturity and give the beans away to your friends. Someone will appreciate them.) 🌱

**Mike Bradstock** gardens in sand at Raumati South, and writes, edits, hunts and fishes.



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# Homegrown sweeteners



By **Denise Cox**

**W**hat's nicer than making sweeteners from plants growing in your garden? You can make syrups from apples, grapes, pomegranates, figs and cherries, extract the sweetness from sugar beets or sugar cane, or make low-glycaemic sweeteners from stevia, yacons and Jerusalem artichokes – perfect for diabetics or dieters.

Too much sugar isn't good for you though; humans aren't designed to consume excessive amounts of sugar, which is metabolised directly into fat. Overconsumption causes a range of serious health problems including obesity and diabetes. Sugar, especially fructose, feeds cancer cells, accelerating their growth and expediting the cancer's spread.

## **Stevia**

Stevia (*Stevia rebaudiana*) is a South American plant that's been used as a sweetener for centuries. Its leaves contain steviol glycosides, compounds containing up to 150 times the sweetness of sugar. They're packed with phytonutrients, and are calorie free. Use stevia sparingly, otherwise its sweetness will overwhelm.

Stevia is a frost-tender perennial. Buying a plant is the fastest way to secure an abundant supply, although stevia grows well from cuttings or seeds started indoors in spring. Space plants 60 cm apart, in well-drained compost rich soil, in a sunny site. Don't overwater. Stevia also thrives in containers, which can be moved indoors in autumn.

Trim plants regularly to stimulate leaf production and cut back entirely before the first frost. Mulch around plants; they'll happily resprout in spring.

Pick individual leaves or stems during the growing season. Use fresh or dried.



**Top:** Stevia can be grown in most parts of New Zealand. Photo: iStock/fbxx

**Above:** Stevia leaves dried and ground to a powder. Photo: iStock/StudioAnnika

## Yacon

Yacon (*Smallanthus sonchifolia*) is a South American native that is distantly related to sunflowers. Yacon and Jerusalem artichokes both contain FOS (fructo-oligosaccharides) and inulin, naturally occurring sugars indigestible to humans. They taste sweet, and have a prebiotic effect, supporting friendly bacteria. The syrup made from them is low glycaemic and is as sweet as honey..

Yacon plants produce sweet crisp juicy tubers, up to a kilo each. It is a gardener's dream; its roots condition and break up the soil, it's not invasive, is generally pest- and disease-free, and its flowers attract beneficial insects.

Yacon thrives in full sun or dappled shade. It loves rich well-drained soil and hot humid weather. In spring plant tubers 20 cm deep in compost-rich soil, and mulch thickly. Space a metre apart. Water during dry spells.

Dig up tubers in autumn, after the flowers and stems die back and the tubers accumulate the sugars. Use the largest tubers for syrup. Store tubers for several months in a cool dry place, and replant crowns in spring.

## Jerusalem artichokes

Jerusalem artichokes (*Helianthus tuberosus*), also called sunchokes or topinambur, are perennial sunflowers native to North America. They tolerate cold better than yacon. They produce copious knobby white or red tubers that resemble ginger roots. They can be invasive; they'll sprout from tiny fragments. Jerusalem artichokes prefer more alkaline soil than yacon; dress the soil with dolomite before planting. Plant 10–15 cm deep and 30–45 cm apart. They'll



Above: Jerusalem artichokes grow easily and tolerate cold well.

Photo: iStock/Chengyuzheng



Above: Jasper Cox (13) has just cut some sugar cane with a machete. Sugar cane will grow in warmer areas of New Zealand.

Photo: Denise Cox

## Types of sugar

Most people think of sugar as being table sugars refined from sugar cane and sugar beet. Other types of sugars with varying levels of sweetness include:

- **Fructose:** the sweetest form of sugar, contained in fruit and honey
- **Sucrose:** the main component of sugar cane and sugar beet
- **Glucose:** in honey, fruit and vegetables
- **Maltose:** in sprouting grains
- **Dextrose:** in corn and starchy vegetables
- **Lactose:** in milk

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**Above:** Yacon tubers and syrup. Photo: iStock/Amawasri

grow up to 3 m tall. As per yacons, dig up tubers in autumn and use the largest tubers for syrup. You can leave tubers in the ground over winter; they'll resprout in spring.

### Sugar from sugar beets and sugarcane

Commercially made sugar uses ingredients including charcoal, bones, and mineral lime, to separate the solids from the syrup, destroying the nutrients in the process. Homemade raw sugar needs just water and heat to produce a superb tasting natural product.

Fresh sugarcane juice contains antioxidants, fibre and nutrients, including calcium, potassium, iron, manganese and phosphorus. It's not as sweet as refined sugar. Intriguingly the glycemic index (GI) of refined sugar is 64, while the GI of fresh sugar cane juice around 30.



**Above:** Sugar cane and brown sugar. Photo: iStock/Boonchuy1970



**Above:** Evan Jordan (7) holds a yacon tuber dug from the patch behind him. Photo: Denise Cox

### Sugar beet

Sugar beet (*Beta vulgaris*) is a cool climate alternative to sugar cane. Their sugars are identical, however sugar beet is a root crop, directly related to beetroots and chard. Mature beets weigh up to two kilos and contain about 18% sucrose.

Beets thrive in temperate climates with a growing season of around five months. They love acid soils with a pH of 6.0–7.5. Sow seeds indoors in spring, transplant, and space 30 cm apart. They'll grow in full sun or partial shade. Mulch transplants with a layer of straw to retain moisture and help root development. Beets grow surprisingly well in deep containers. Just keep them well watered.

Harvest in autumn when the beets are large. Remove the entire plant. Chop off the leaves and cook as greens or feed to stock.

### Sugar cane

Sugar cane (*Saccharum officinarum*) is a perennial grass originating from South East Asia. It is a relative of bamboo, but isn't invasive. Sugar cane is hardy to  $-6^{\circ}\text{C}$ , but produces the sweetest canes

### Sugar stats

- The average New Zealander consumes 37 teaspoons of sugar per person per day.
- The World Health Organization recommends a maximum intake of 12 teaspoons of sugar per day, excluding sugars found in fruits, milk and vegetables.
- NZ food labelling regulations require only the *total* sugar content to be declared, hiding the true levels of added sugars and obscuring the amounts of natural sugars.
- Added sugars include dextrose, powdered sugar, corn syrup, honey, maltose, molasses, brown sugar, nectars, invert sugar, malt syrup, coconut sugars, agave, brown rice and maple syrups.
- Although many countries compulsorily require food labels to specify added sugars in grams, and as a percentage of the daily diet, there are currently no plans to do this in New Zealand.
- Other sources of sweeteners include maple, birch and walnut tree saps, date, sorghum and agave.

## Recipes

### Low GI sweeteners

It's simple to make sweeteners from yacons, stevia, or Jerusalem artichokes for a fraction of the cost of commercial products – a 300 g jar of yacon syrup sells for around \$40 dollars, but it's under a dollar to make! Yacon syrup contains 130 calories and Jerusalem artichoke syrup contains 73 calories per 100 g. Stevia contains none.

### Stevia powder

Air-dry stevia by hanging in bunches to dry in the sun for 12 hours, use a dehydrator, or dry in an oven at 65°C until leaves are crisp. Store dried leaves in an airtight container in a cool, dark place. Grind dry leaves to a fine powder using a spice mill or coffee grinder.

### Stevia extract

Put 1 tablespoon of dried stevia powder in a heatproof jug. Cover with 2 cups of just boiled water. Steep 10 minutes. Strain, cool, and store the liquid in bottles in the fridge for up to 6 days. Sweetness is equivalent to 2 cups sugar.

### Yacon and Jerusalem artichoke syrups

1. Peel and wash yacons, or scrub Jerusalem artichoke tubers with a brush.
2. Weigh tubers/chokes.
3. Chop roughly and pulverise in a food processor with a little water.
4. Place in a large slow cooker. Cover with 1 litre water per kilo of pulp. Simmer overnight.
5. Next day strain the pulp from the water into a large heavy-based saucepan.
6. Feed pulp to chickens.
7. Gently simmer the liquid until it reduces by three-quarters and thickens slightly. Your kitchen will smell divine.
8. Cool, then strain syrup through muslin or cheesecloth. Pour into clean jars. Store in the fridge. The syrup will thicken as it cools.

when grown in full sun, hot humid conditions with warm night temperatures. It tolerates a range of soil types but performs optimally when grown in well-drained, compost-rich soil with a pH ranging from 4.5–8.5.

Space plants a metre apart, and mulch to retain soil moisture and suppress weeds. Water well in summer to produce juicy sweet canes. Clumps grow to 3–8 m tall, with stems 2.5–7 cm thick, which double in size each year.

Buy plants or propagate from existing plants; during warm weather bury a stem with up to six knobby nodes, horizontally in a shallow trench, or wide pot. Keep soil moist and new canes will sprout in a fortnight.

Harvest by cutting canes in late autumn 1–2 years after planting and before the first frost. Choose thick canes with yellowish, dry-looking leaves. Lightly tap the canes – they'll make a metallic sound if they're ready. The base of the canes contains the greatest concentration of sugar, so cut canes as close to the ground as possible. Use a machete; the canes are thick and fibrous. They'll ooze sweet sap. Strip off the leaves. Mulch the remaining plant with leaves or straw to protect it over winter, and inhibit weeds. 🌱

**Denise Cox** is a writer and former commercial grower. She lives in Kerikeri.

### Sugar syrup and crystallised sugar

**Sugar beet preparation:** 5 kg beets yields about 850 g sugar. Peel beets, chop into chunks.

**Sugarcane preparation:** Wash canes. Use a machete or meat cleaver to cut canes into 10 cm chunks then quarter them again.

1. Put sugar cane/beet chunks into a large crockpot. Cover with water and simmer overnight.
2. Next day strain the sweet water into a large pot.
3. Discard beets/cane.
4. For syrup: Simmer until liquid reduces by half and becomes honey coloured. Stir constantly – the liquid will become thick and glassy as syrup forms.
5. For sugar: Heat oven to 80°C. Pour syrup in a large shallow oven tray. Bake 3–5 hours until crystals form.

### Simple fruit syrups

Use windfall fruit to make syrups to sweeten drinks, desserts, pancakes and as a spread.

1. Using a blender or food processor, juice large quantities of sweet fruit such as apples, pears, cherries and peaches (2 litres freshly pressed apple juice yields one cup finished syrup.)
2. Place in a large pot. Simmer gently over medium heat until juice reduces by half.
3. The syrup made from them is low glycaemic and is as sweet as honey.
4. Simmer until mixture changes to a dark honey colour and thickens slightly (approx. 30 minutes although time varies according to fruit used).
5. Pour into clean jars. Store in the fridge for a month. Syrup can also be canned or frozen.



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# Growing **HEALTHY** mind food

Biodynamic food can increase not only health, but also consciousness, writes **Gill Bacchus**.

Eating fresh plant food provides us with formative forces (or organisational energies) that stimulate our digestion and the formative energies in various parts of our bodies. Our bodies continually experience degenerative energies from our environment that need to be counteracted by enlivening energies. A good organic system with fertile soil will provide plants with strong, appropriate, formative energies that can be stimulated and balanced using a biodynamic system.

Biodynamics helps you to develop your property as a unique system in harmony with the particular environmental, soil and weather conditions. It is resilient to climate change because a wide diversity of dynamic microorganisms develop in the soil.

## Stimulating consciousness

The biodynamic preparations help to stimulate soil forces that activate these microorganisms and help to balance soil forces with forces from the sun, moon, planets and stars. Most of the preparations are made using animal parts that contain the energies that stimulate movement, and heighten sensitivity to energies from the earth and cosmos.



**Above:** Raised beds in Thames Community Garden: some made with railway sleepers, the rest are mud bricks made from a mixture of clay, straw and cement. Photos: Gill Bacchus

When we eat plant food grown using biodynamic preparations they can contain more nutrients but, more importantly, they stimulate our consciousness, our thinking, and our ability to create and fulfil our goals.

This assertion is difficult to back up using modern scientific research methods because of large variations between people and the many factors that affect us. One unreplicated trial was run with nuns in a convent in Germany. A few weeks after changing to a diet of biodynamic food, their blood pressure and stress decreased and they reported they were able to think more clearly. The best way to assess this question is to try it out for yourself.

## Soil fertility and raised beds

The fresher a vegetable is, the more formative energies it contains, so homegrown vegetables are ideal. But the way you grow them also affects how nutritious they are.

If your soil lacks basic minerals and trace elements then your vegetables will also be low in nutrients. Many people grow their vegetables in raised beds and bought garden mix, which overcomes the problem of poor soil. Some garden mixes are better than others. Does it contain soil life or has it been sterilised? It should be mixed with some soil that contains sand (to store sunlight) and clay (to store plant nutrients and bring sunlight energies back up to plants). If it contains too much high-nitrogen compost you may be able to grow large plants quickly, but these plants will be less nutritious than plants grown more slowly in a more balanced way in a mix that contains good soil.

## Hydroponics: lacking life

Hydroponic systems are fed all the minerals and trace elements they need to produce nutrient-dense vegetables, often with very few pesticides or herbicides used. I find they are often rather tasteless and lacking in life. I assume this is because the plants have no contact with enlivening earth energies at all, and in greenhouses there is no direct contact with sunlight energies. When plants grow in soil they interact with soil bacteria and mycorrhizal fungi, enabling them to take up the right nutrients that they need in an organic form, rather than being force-fed dead minerals.

## Adding biodynamics to an organic system

A biodynamic system includes all the good organic practices of recycling organic matter, rotating crops and using only organic sprays. Biodynamic growers try to bring in as few inputs as possible from outside, but if you start with poor soil and no compost, bringing in some compost and mineral nutrients to start with is helpful.

Once you are using the biodynamic preparations regularly and have a good fertile system going you can mostly manage pest issues without needing bought sprays. The preparations can be used individually to manage pest and disease issues, but usually they are all applied a few times a year to bring more balance and activity to the whole property.

The biodynamic preparation 500 is made by burying cowhorns filled with cow manure under good soil for six months in winter, then stirring a little in good water for an hour and spraying it over soil and pasture. It stimulates soil life, enabling better breakdown of organic matter and rock minerals. The compost preparations (numbered from 502 to 507) are made from various cow parts and

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herb plants. A little of each is inserted into compost and liquid manures, to enable an ordered breakdown of organic matter and retention of more nutrients and a wide variety of microorganisms. All these preparations enable better nutrient assimilation and growth of your vegetable and fruit plants.

### Energies from the sun, stars and planets

The preparation that particularly interests me is the preparation 501 or horn silica, which, when sprayed on plant leaves (only after the other preparations have been applied), helps them to absorb more sunlight energies. These energies also contain forces from planets and stars.

Sunlight activates enzymes in plant leaves that convert nitrates to more complex compounds, including amino acids and protein. This results in more nutritious, less watery and bitter vegetables. Growing vegetables with a lot of nitrogen fertiliser results in plants that grow lushly and quickly but contain fewer, more simple nutrients. More light energies are needed to build protein, essential oils and antioxidant properties in plants.

Research has shown that increasing sunlight energies increases levels of dry matter, true protein, vitamin C, decreases nitrate levels and improves taste (Koepf, 1993).

Ehrenfried Pfeiffer, a scientist who extensively researched the effects of using biodynamic preparations, said that bringing more light into plant food beneficially affects our health. I have spent many years seeking to understand what he meant, including doing my own research trial, and found that the biodynamic horn silica enables plants to take up more phosphorus and to build more amino acids, possibly through stimulation of enzymes as mentioned above. More research is needed on these effects.

### Strengthening body and mind

Biodynamically grown plants provide strong formative forces that stimulate your body processes during digestion. This strengthens the body to build up protein, fats etc., and keep healthy with a good immune system. This is particularly important for growing children so their internal organs such as heart and liver develop their own strong formative forces.

The light forces enhanced by spraying the horn silica preparation on food plants also stimulate your consciousness so you can think better and be more in charge of your feelings, senses and actions. 🍀

**Gill Bacchus** is the author of *Food Full of Life* (Floris Books). She works with biodynamic methods to grow fruit, vegetables and herbs in Coromandel.

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Above: Biodynamic gardener Peter Bacchus stirring preparation 500

### More info

To buy and learn more about the biodynamic preparations, contact the Biodynamic Association: [biodynamic.org.nz](http://biodynamic.org.nz). Or there may be a biodynamic group nearby you can join. A further option is to use sprays made from homeopathic dilutions of biodynamic preparations (see [www.bdmax.co.nz](http://www.bdmax.co.nz)).



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# Moon calendar for May

By Rachel Pomeroy

## Life is busy underground

Prepare for winter by composting and mulching the soil, sowing green crops, then, while you sit by the fire or knead your solstice stollen bread in the warmth of your kitchen, the earth workers will be busy preparing your soil for next spring.

Winter is a busy time underground. Everything from the tiniest bacteria and fungi to springtails, millipedes and earthworms are feeding on exudates from living plant roots, on semi-mature compost, on mulch, and on each other. This activity results in the rich brown humus that is the fertility bank for next season's growth.

The soil life is sensitive to the changing qualities of the moon as it passes through its cycles during the month. Any time we disturb the soil to prepare a seedbed, add compost, plant seedlings or remove weeds, many soil organisms are destroyed or totally changed in their

relationship to their surroundings. A period of rapid growth, change, and rebuilding ensues. In that moment of disturbance the ambience of the earthly and celestial environment is breathed in and influences the nature of the subsequent growth in that area of the garden. So it helps if we do these activities when the ambience will best support the growth of the particular crop we are growing there.

Remember those delicious first raspberries in spring? Now is the time to prune out last year's fruiting canes plus any weak canes and leave only the strongest of the new canes. Compost generously and mulch, then look forward to a bountiful harvest again this year.

Star watching and home gardening are **Rachel Pomeroy's** interests.

## May 2018

Date	Day	Constellation*	Full moon, new moon and nodes	Ascending (A) / Descending (D)	Things to do
1	T	Flower		A	Dry last rose petals for winter potpourri
2	W	Leaf 1 am		A	Sow lawn seed
3	Th	Leaf		A	Make mint jelly with last apples and mint clippings
4	F	Fruit and Seed 10 am		A	Sow broad beans
5	Sa	Fruit and Seed		D 11 am	Water, if needed, and apply liquid manure to tamarillos and citrus
6	Su	Fruit and Seed		D	Weed, compost then mulch around fruit trees
7	M	Root 1 am	Node 10 pm	D	Rest day
8	T	Root		D	Apply any remaining compost around roses and fruit trees
9	W	Flower 7 am		D	Clip dry tops from perennial herbs and flowers
10	Th	Flower		D	Divide and replant clumps of flowering perennials or lilies
11	F	Leaf 8 am		D	Plant out lettuce, silverbeet seedlings
12	Sa	Leaf		D	Divide large rhubarb clumps and replant
13	Su	Leaf		D	Divide and replant perennial herbs as required
14	M	Fruit and Seed 5 am		D	Continue composting and mulching grape vines and fruit trees
15	T	Fruit and Seed		D	Low moon energy day
16	W	Root 1 am	New moon 1 am	D	Collect leaf fall and other materials for compost
17	Th	Root		D	Mow lawns and layer clippings with wetted leaf material
18	F	Flower 8 am	Moon opp Saturn 11 pm	D	Good energy for an 'in-the-garden' day
19	Sa	Flower		A 3 am	Make sauerkraut with remaining late-summer cabbage, beans, Florence fennel
20	Su	Leaf 6 am		A	Rest day
21	M	Fruit and Seed 5 pm	Node 1 am	A	Prepare support structure or wind protection for broad beans
22	T	Fruit and Seed		A	Sow broad beans
23	W	Fruit and Seed		A	Harvest mandarins to eat or juice
24	Th	Root 6 am		A	Sow beetroot, radish seed
25	F	Root		A	Sow green winter green crop
26	Sa	Root		A	Collect compost materials
27	Su	Flower 6 pm		A	Collect fresh green material and make compost
28	M	Flower		A	Sow seed for flowering annuals
29	T	Leaf 5 am	Full moon 2 am	A	Sow lettuce, spinach, silverbeet
30	W	Leaf		A	Sow kale, broccoli, cabbage
31	Th	Fruit and Seed 5 pm		A	Sow green crop

Starting time given: until that time the constellation of the previous day is still active.

Key						
	Flower		Leaf		Ascending	* These are the signs of the zodiac that the moon can be seen in for a certain period of time. The 12 constellations are divided into the four categories of root, flower, leaf and fruit/seed.
	Fruit and Seed		Root		Descending	

For further information refer to the *Biodynamic Farming and Gardening Calendar 2017-18* (see next page for contact details).

# Moon calendar for June

By Rachel Pomeroy



## June 2018

Date	Day	Constellation*	Full moon, new moon and nodes	Ascending (A) / Descending (D)	Things to do
1	F			7 pm	Divide rhubarb if needed, replant or give pieces to friends
2	Sa				Hoe or hand weed around young broad bean plants
3	Su	6 am			Plan any changes to your compost or vermicompost system
4	M		Node 1 am		Purchase or construct compost or vermicompost system, as required
5	T	3 pm			Plant out shallots
6	W				Plant seedlings of spring flowering annuals
7	Th	4 pm			Divide and transplant large clumps of perennial herbs
8	F				Plant out lettuce seedlings
9	Sa				Plant out leek seedlings for 'baby' leeks in spring
10	Su	2 pm			Compost, mulch currants and gooseberries
11	M				Prune raspberries
12	T	7 am			Plant out garlic cloves
13	W				Low moon energy day
14	Th	6 pm	New moon 8 am		Work on composting today
15	F		Moon opp Saturn 6 am	1 pm	Harvest and press best pansies or violas for making flower cards
16	Sa	3 pm			Sow rocket and microgreens for garnishing soups
17	Su		Node 6 am		Rest day
18	M	1 am			Sow broad beans
19	T				First sowing of peas
20	W	1 pm			Sow beetroot, carrots
21	Th				Hoe leeks if required
22	F				Hoe carrots, parsnips
23	Sa				Sow radish
24	Su	1 am			Make tamarillo chutney
25	M	11 am			Sow brassica seeds in punnets to prepare for early spring planting
26	T				Sow spinach, silverbeet, lettuce
27	W				Sow green crop
28	Th	1 am	Full moon 5 pm		Sow broad beans
29	F			3 am	Plant new fruit trees or grape vines
30	Sa	1 pm			Plant out garlic cloves

\*Starting time in brackets; until that time the constellation of the previous day is still active.

Key					
	Flower		Leaf	Ascending	* These are the signs of the zodiac that the moon can be seen in for a certain period of time. The 12 constellations are divided into the four categories of root, flower, leaf and fruit/seed.
	Fruit and Seed		Root	Descending	

## Notes

Note: Always consider your particular climatic conditions and the weather. Plant and sow the varieties most suitable for the time of year in your own location. Check with experienced local growers.

### Full moon

Seeds germinate rapidly when sown one or two days before full moon. Avoid harvesting any crops for storage in the few days before full moon.

### Ascending moon

Seed sowing, e.g. carrots, beans, spinach etc. Particular days for certain plants have been selected following the position of the moon in the constellations.

### Descending moon

Soil cultivation, transplanting of seedlings and trees, composting (making and application), harvesting of root crops (e.g. beetroot, celeriac, carrots), cutting firewood, pruning fruit trees.

### Moon-Saturn opposition

It is an excellent seed sowing time for all crops, in the 24 hours prior to the opposition.

### Nodes

Times to avoid work with the land or plants: When the node occurs in the middle of the night, you may continue working during the day as its influence is strong for only a few hours. The effect of the node is, approximately, from 6 hours before until 3 hours after the time given. Avoid garden work on Node days given above.

For further information refer to the *Biodynamic Farming and Gardening Calendar 2018-2019* available from the Bio Dynamic Association, PO Box 356, Martinborough 5741, info@biodynamic.org.nz, ph 06 306 8582, www.biodynamic.org.nz.

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# COOKING with agar agar

By **Diana Noonan**

**A**gar agar is a wonder product in the vegan kitchen (or indeed any kitchen), yet many of us have tried, without success, to use it. But don't be disheartened. If you want to ditch dairy and gelatine yet still enjoy 'cheeses', flummeries, jellies, marshmallow and 'cream', read on to find the secret of cooking with agar agar (often simply called agar).

## What is agar?

Derived from specific species of algae, agar is a 100% vegan gelling agent. Because it has no odour or colour, it's incredibly useful as a cooking ingredient. Agar gels in minutes, even in warm temperatures, which means you don't need to plan too far ahead when preparing dishes such as jellies and terrines. Agar sets more firmly than gelatine (an animal product) so many recipes that use it as their gelling agent incorporate other ingredients (such as vegetable or fruit pulp) to create a soft texture to the finished dish.

## Activate!

Learn this one secret of cooking with agar and you'll never look back: agar needs to be cooked for 5–6 minutes in order to activate its gelling properties. There's no use stirring it into boiling water and

hoping that will do the trick – because it won't.

When using agar, sprinkle it onto liquid, whisk it in, and bring the liquid to a simmer, whisking all the time. Because agar melts when heated, you can use it to make vegan cheeses which set when cold but turn to a delicious melt when used as pizza topping, on mouse traps, cheese toasties or in cheese sauce.

**Diana Noonan** writes and gardens in the Catlins. Her passion for traditional cuisines and horticultural practices regularly takes her to far-flung parts of the globe.

## Fact file

- Agar is a fat-free, gluten-free, vegan thickener.
- It comes in several forms including powder, flakes and (outside of New Zealand) bar.
- 1 teaspoon of the powder equals 1 tablespoon of flakes
- 1 teaspoon of powder sets 1 cup of liquid.
- It contains just 21 calories per 7 grams.
- It provides only a very small measure of vitamins and minerals but is full of fibre and contains no sugar.

## Pumpkin pie

To fill a 20 cm diameter pie crust – serves 4.

### Pie crust

Use your favourite pie crust for this dessert. If the crust is a baked one, cook it ahead of time and cool before adding the filling.

### Filling

- 200 g steamed, cooled pumpkin
- 2 T golden syrup
- 200 g silken tofu
- ½ t cinnamon
- ¼ t ground nutmeg
- ¼ t ground cardamom
- pinch salt
- 25 ml water
- 90 ml soy milk
- 1 t agar powder

1. Combine all ingredients except soy milk and agar in a blender, and blend to a fine purée.
2. Pour soy milk into a small saucepan. Sprinkle the agar on top of the soy milk.
3. Heat, whisking continuously, until the mixture bubbles. Simmer, whisking continuously, for 6 minutes.
4. Pour into the pumpkin mixture and blend for 1–2 minutes.
5. Pour into the pie crust and leave for 20 minutes to set.



### Piping cream

- 2 cups soy milk
- 2¼ t agar powder
- 2 T icing sugar
- 2 T coconut cream
- 1 t vanilla essence
- 1 t maple syrup

1. Place the soy milk in a small saucepan. Sprinkle the agar on top.
2. Heat, whisking continuously, until mixture bubbles. Simmer, whisking continuously, for 6 minutes. Leave to set.
3. Take 1½ cups of the set soy milk and blend thoroughly with the remaining ingredients. (There will be some set soy milk left over; it's difficult to work with just a little milk when mixing in the agar as it sticks too easily, but having this mix stored in the fridge is really useful.)
4. Pipe the cream immediately or, for even better results, first chill in the fridge for 1 hour.



## Garden vegetable terrine

Made in a 22 cm x 11 cm loaf tin.

- 1 medium courgette
- 3 medium carrots
- 1 large piece pumpkin
- 2 red peppers
- 1 cup peas
- 3 large leaves silverbeet
- 1 vegan vegetable stock cube
- 2 cups warm water
- 2 t agar powder

For garnish: thinly sliced lemon, parsley

1. Steam vegetables until tender (lightly steam the silverbeet leaves to retain their vibrant green colour). Leave to cool.
2. Cut courgette and carrot lengthwise in thin flat slices, and pumpkin into 3 mm slices. Remove skin from peppers.
3. Beginning and ending with the silverbeet leaves, layer the vegetables into a flexible loaf-shaped container.
4. In a saucepan, dissolve the stock cube in the warm water. Sprinkle the agar on top.
5. Heat, whisking continuously, until mixture bubbles. Simmer, whisking continuously, for 6 minutes.
6. Pour gently over the vegetables. Leave for 30 minutes to set.
7. Turn out gently onto a serving dish. Garnish with lemon slices and parsley. Slice with a serrated knife.

## Vegan cheese

Melts like a dream!

- 2 cups soy milk
- ½ cup polenta (cooked and set)
- 200 g cooked, cooled carrot
- 1 red pepper (steamed and with skin removed)
- ½ t Marmite (or Vegemite)
- 1 t onion powder
- 1 t lemon juice
- 2 t olive oil
- 1 t liquid smoke
- 2½ cups water
- 4½ T agar powder

1. Place all ingredients, except for the water and agar, in a blender, and blend to a fine purée.
2. Place the water in a saucepan. Sprinkle the agar on top.
3. Heat, whisking continuously, until mixture bubbles. Simmer, whisking continuously, for 6 minutes.
4. Add to the purée and blend for 1–2 minutes.
5. Pour into a flexible plastic container (or two). Knock the base of the container on a bench to help the mixture settle. Leave in the fridge to set for 1 hour.
6. Flex the sides of the container to loosen the cheese. Turn out onto a serving dish.
7. To melt the cheese, place under a hot grill or in the microwave. 🍷



### Above and right:

Vegan cheese slices and melts easily - perfect for cheese toasties.

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# EXPECT A miracle!

**Tremaine Barr** shares his experiences of surviving pancreatic cancer.

“**S**orry, but the cancer has spread from the main 12 cm neuroendocrine tumour in the pancreas to throughout your liver and there is nothing we can do. We expect you probably have around 3–6 months left to live.”

These are not the words one wants to hear from one’s doctor at the age of 44. I got this diagnosis in July 2012. For the previous six months I had been feeling unwell with nagging symptoms of bouts of diarrhoea, a sore lower back, sore muscles and feeling increasingly lethargic. I put these down to post-traumatic stress from the then ongoing earthquakes in our hometown of Christchurch, and battling EQC, but finally relented to my wife’s insistence to get a scan done which revealed the awful truth. Knowing we had no conventional options we quickly consulted with alternative health care practitioners, but they all agreed that there was nothing that could be done.

However, my wife is a formidable woman who rarely takes no for an answer. She asked a naturopath friend to at least think about what could be helpful. Fortunately, the naturopath did come up with a plan for an organic diet and supplements, which provided the foundation for my recovery and ongoing survival to this day.

## Cancer of the pancreas

At the time I only vaguely knew I had a pancreas and very little about what it actually does, but it turns out it is rather crucial to one’s health as it is central to secreting the chemicals necessary to digest food upon which one’s health depends. Pancreatic cancer is a particularly deadly form of cancer because once the pancreas is compromised it is not possible to get the nutrition needed from one’s food.

What follows is a brief overview of the diet developed for my particular condition that I strictly followed for the first three years until I started to recover.

## Breakfast

- 2 apples – take core out and stuff with walnuts and barberry

**Above:** Tremaine Barr and his family are keen home gardeners, but discovered the soil had been contaminated with lead, cadmium, chromium and arsenic. “We are still on the same property, but were lucky enough to have the soil where the garden is now dug out and replaced with new soil. I have had it tested and it’s safe to grow and eat from.” Photos: Barr-Glintborg whānau



Photo: iStock/Mariana Mikhailova

berries and bake for 1 hour at 180°C. While making and baking this I would do coconut oil pulling by having a tablespoon of oil in my mouth for 20 minutes followed by drinking 2 large glasses of water with the juice of 1 lemon squeezed into them.

- Buckwheat and millet porridge with coconut yoghurt and homemade almond milk. I would wait until an hour after eating the baked apples before having the porridge.

**Lunch**

- Carrot juice: after drinking (500 ml) of juice I waited at least half an hour before eating lunch.
- Bread (homemade and gluten-free, containing linseed, almonds, chia and chickpea flour), topped with tahini, homemade hummus, avocado, cucumber, sprouts, lettuce and sauerkraut.

**Afternoon tea**

- Rosehip and berry drink: I make rosehip tea the night before in a thermos, then blend with 250 g blueberries, and some raspberries in season. When I could not get fresh berries in season I used frozen ones.
- Green juice: broccoli, silverbeet, spinach, celery, kale and parsley. To the juice I added in nettle tea along with a teaspoon each of wheat and barley grass with a pinch of broccoli sprout powder (about 500 ml in total).

You probably have around  
3–6 months left to live.

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**Above:** The whānau left to right: Quoyah Barr-Glintborg, Kiri Barr-Glintborg, Tremane Barr and Jytte Glintborg.

### Evening meal

- Quinoa with salad made of raw broccoli, carrot, sauerkraut and avocado.

### Snacks

- When I was feeling peckish between meals I would snack on macadamia, cashew, almond and/or Brazil nuts.

### Supplements

None of the above food would have done me much good without the use of digestive enzymes and acidophilus pills to help break the food down, making it digestible, so my intestines could get the nutritional value out of it to fuel my body and immune system.

The next key supplement is herbal tonics. While people would like to know what was in them, the naturopath tailored them to my particular circumstances and the evolving state of my health over time – there is no one magic herb or herbal mix. An experienced naturopath or herbalist should be able to tailor a tonic to suit the individual.

## there is no one magic herb or herbal mix

Other key supplements I use are:

- Chlorella/spirulina
- Vitamins B, C (natural acerola) and D (fish oil)
- Curcumin (turmeric contains this)
- Minerals: zinc, magnesium etc.
- Seaweed (Irish moss or New Zealand wakame)
- Lauricidin
- Essential oils e.g. frankincense, myrrh, sandalwood, lavender, vetiver etc. (diffused not taken internally).
- Homeopathics

### Eliminate toxins

The above diet was tailored specifically to me. I only list it above to help inspire people who might find themselves with a similar diagnosis to mine, and are wondering what type of diet potentially might be a useful starting point. Unfortunately, this diet alone would simply not have been enough for me, and if it was the only thing I did then I would have died a long time ago.

It can also pay to do an audit of one's life to find out where the toxins came from that might have caused the cancer. In my case we were lucky enough to find out that my organic garden soil was contaminated with the carcinogenic heavy metals of lead, cadmium, chromium and arsenic (see *Organic NZ* Sept/Oct 2014, [organicnz.org.nz/magazine-articles/is-your-soil-toxic](http://organicnz.org.nz/magazine-articles/is-your-soil-toxic)). Once I stopped touching the soil and eating from my garden then my health really started to recover.

### A total lifestyle change

In my opinion to survive a serious cancer diagnosis using only natural methods requires total commitment to a complete revision of one's lifestyle.

I don't have the space here to go into the details of everything I did, but fortunately Dr Kelly Turner has managed to sum it up through her research into over a thousand cases of people who have survived and healed cancer using natural methods. Her book *Radical Remission – Surviving Cancer Against All Odds* describes the nine key factors that are common to people who do survive using natural methods (see [radicalremission.com](http://radicalremission.com)).

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## 9 key factors for survival

1. Radical change of diet to an organic plant-based one.
2. Using herbal tonics and supplements.
3. Taking control of one's health.
4. Following your intuition.
5. Releasing repressed emotions.
6. Increasing positive emotions.
7. Embracing social support.
8. Deepening your spiritual connection.
9. Having strong reasons for living.

I also found this website very useful: [www.dralexanderloyd.com](http://www.dralexanderloyd.com).

## The hard work behind the miracle

Today the cancer is gone from my liver and the tumour in my pancreas is either sleeping or dead, as the marker in my blood is now back within its normal range. It may, or may not, wake up and kill me some time in the future, but for the time being I am very healthy and back to being physically active and working full time.

I said to myself when I was told I only had months to live: "Be reasonable – expect a miracle!" Miraculous my survival may be, but it has only come about through bloody-minded self-discipline, hard work and painful persistence. 🌱

**Tremane Barr** (Ngāi Tahu/Kāti Mahaki ki Makaawhio) is currently a research fellow based at the Ngāi Tahu Research Centre at the University of Canterbury and is working on the Māori case study in the NZ Sustainability Dashboard Project.



Above: Tremane and Jytte

Today the cancer is gone from my liver and the tumour in my pancreas is either sleeping or dead.

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Type 5		Soft blobs with clear-cut edges
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. Entirely Liquid

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# MEGAN and the budding vegan

Philippa Jamieson chats with NZ Herald columnist Megan Nicol Reed about organics, microbeads, and the vegan aspirations of her daughter.

Without necessarily thinking of organics as 'a thing', Megan Nicol Reed has always been aware of it.

"My parents were quasi hippies – we didn't grow up on white bread and Raro. They had a natural approach to diet and health," she says. "Mum was into homeopathy and fed us molasses and cod

liver oil." Her parents grew a lot of veges, and her mother was the coordinator of a co-op, sorting and packing produce.

## Harvest heart

When Megan was eight, the family moved to Grey Lynn, the heart of Auckland's organic movement at the time. The pioneer

organic shop Harvest Wholefoods (now Harvest by Huckleberry) was just up the road. Later, as an adult, Megan moved back to the area. Also in the neighbourhood is the well-known organic community garden and city farm, Kelmarna Gardens. "We visit frequently, but mainly to see the pony," she says. Both her children have been there on school trips.

Megan's interest in things organic was reignited when she had babies, and she started looking for products that were as close to nature as possible.

"What's really put a rocket up my bum – it's fear-driven really, is the future of the planet, and climate change. I'm more aware of what I'm buying."

Friends were keen on buying organic food, but Megan was initially a bit sceptical, particularly because it became fashionable. She wasn't convinced about organics just as a way of 'clean' eating. "For me there are bigger reasons... it's important for political reasons."

"I'm so far from perfect!" she laughs. "I drive a really big car. But it's important at least to be thinking about it."

## Moving away from meat

When it comes to food, it's Megan's daughter who has been continually challenging her and the whole family. Megan and her husband are pescetarians, but decided to give their children meat – the best they could find, which was organic. While their son was happy to eat meat, their daughter



Above: A donburi bowl is a family favourite: everyone starts with a base of rice and adds the veges and protein options of their choice. Photo: iStock/Yonghae Cho

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Three small glass bottles of Zurma botanical oils are lined up on a wooden surface. The bottles are labeled 'LEMON', 'TEA TREE', and 'CLEARY SAGE'. Each bottle has a decorative label with a circular logo at the top.



Above: Megan Nicol Reed

rejected it, even though they told her the animals had been treated really well. Finally they gave in when she was five and agreed she could go vegetarian.

Now aged nine, she wants to go vegan. Already she has helped to convert her brother, two grandmothers, and a couple of friends to vegetarianism, as Megan wrote in one of her columns ('Should you let your child go vegan?' – bit.ly/2FxdcJI).

"The compromise is she continues to eat dairy and eggs as long as they're organic," says Megan. Organic milk is easy to find, and cheese is OK, but finding organic yoghurt and butter can sometimes be tricky.

"I imagine eventually the world is going to go vegan," she says. In the meantime she hopes that her family is at least not doing quite so much harm to animals or the planet by being mostly vegetarian.

### Fresh produce

The family has tried out organic delivery boxes, although Megan prefers to choose fresh produce herself.

"A few years ago my husband planted a big vege garden, but we had some really awful veges! I'm absolutely scrupulous about not wasting food, but the spinach was awful. So tough. Thankfully he let that slide."

Since then the family has focused on growing herbs and salad greens, and had a prolific crop of tomatoes over summer. Both Megan's parents still grow 'very healthy' vege gardens.

### How we feed our children

"I'm endlessly fascinated to see how parents treat food in terms of their kids'

relationships with it," says Megan. "I prepare [almost] everything my kids eat, whereas another friend lets them prepare more food themselves."

Some of her friends are super-strict about what their children eat: no biscuits or lollies.

"I don't mind if my kids eat chocolate biscuits for example as long as that's offset by heaps of veges. I encourage them to eat flavoursome food, and challenge their palates."

One of their favourite meals is a donburi bowl. It has a base of rice, a couple of protein options (such as prawns, marinated tofu or bean sprouts), and then they each put on their own toppings such as dumplings, capsicum, carrots, lettuce, coriander, shallots and Asian chilli sauce.

"It took a long time of me coaxing them, but now they love it," says Megan. "Often our meals are like that – building up a creation on a plate."

Both children do some cooking and food preparation. Megan's daughter (9) likes baking, while her son (13) likes making pasta, stir-fried noodles and vegetables. Sometimes Megan bakes bread, but most of the time she buys it, although she's concerned that it comes in a plastic bag.

### Plastic and packaging

Megan tries to have a light environmental footprint in other areas such as cleaning products and packaging. She was alarmed to read about how the plastic microbeads in some skincare and personal care products wash out into the sea and are eaten by marine life, and realised she had some exfoliating products that possibly contained microbeads. We debated that one and concluded the best place for them was the landfill.

She still buys some cleaning products, mostly Ecostore or Earthwise. She's trying to wean herself off plastic bags and rejects excess packaging.

Like many of us, Megan thinks a lot about the environmental impacts of her everyday choices, wondering how worthwhile her actions are in the grand scheme of things, while still conscientiously recycling and seeking out organic food.

But the one to watch here is the next generation: the up-and-coming vegan – stay tuned. 🌱

**Philippa Jamieson** is the author of *The Wild Green Yonder: Ten Seasons Volunteering on New Zealand's Organic Farms*.

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# Still sprouting KINGS SEEDS *celebrates 40 years*

By Theresa Sjöquist

**K**ings Seeds carries over a thousand varieties of seed. If you're looking for something special, they probably have it. This year they celebrate 40 years in business.

Owners Barbara and green-fingered Gerard Martin, who grew flowers commercially through the 1990s in Levin, were friends with Ross and Glenys King. The Kings had started Kings Herb Seeds in 1978 and, when the Martins were looking for a change, they expressed an interest in buying the Kings' mail order business. A couple of years later, having been in business for 21 years, the Kings agreed.

The Martins wanted a rural child-friendly environment, and one Friday afternoon in February 1999 after they'd bought the Auckland-based business, they moved Kings Seeds to Katikati, opening the following Monday.

## Herbs, flowers and gourmet vegetables

Kings Herb Seeds primarily listed herbs in its 1978 catalogue, but also introduced a small selection of gourmet vegetables such as Florence fennel, rocket and salsify (root vegetable that tastes like oysters). These were innovative then, but are household names today, and are still popular inclusions in the 2018 catalogue along with many other gourmet surprises. Flowers, particularly dried flower varieties for the potpourris of the 1980s, were slowly added to the range.

Today, principally a mail order business with an online shop, Kings Seeds also opens to the public on Fridays from 9 am until noon.

Commercial growers now account for over fifty percent of their business but in the early days home gardeners were by far the largest market. A burgeoning trade to small market gardeners who sell through farmers' markets, only one step removed from growing your own food, has delighted the Martins.

## Open-pollinated, heirloom and organic

Their core range is open-pollinated and heirloom varieties that enable growers to



**Above:** The Kings Seeds team, clockwise from bottom left: Jude Smith, Deb Jefferson, Carmen Dunlop, Karen May, BJ Simmons, Camilla Persson, Liz Rosemyers, Barbara Martin, and (centre) Gerard Martin with Chester the dog. Photo: Kings Seeds

collect their own seed. Opinions vary on what constitutes an heirloom, but generally they are more established, open-pollinated varieties of at least two or three human generations (50+ years).

Kings Seeds' organic range has been available since 2000, and in 2014 Kings achieved BioGro certification.

"The source, type, and processes of our organic range remained unchanged so certification formalised the paperwork," says Barbara. "We've always protected the integrity of our seed, both conventional and organic, but we've noticed that if an organic variation of a conventional variety becomes available, it whooshes out the door."

A small number of their seed varieties are grown in the South Island (broad beans, peas, phacelia, buckwheat, wheat, oats and green manure mustard) but most varieties aren't available in New Zealand. Because their business relies on importation, existing processes in the countries from which they source are critical, and are all audited to International Federation of Organic Agriculture Movements (IFOAM) standards.

Increasing Ministry of Primary

Industries (MPI) regulations have become a major challenge. When MPI reacts to disease in a plant group anywhere in the world, Kings Seeds can face costs of a thousand dollars to test just one variety. If it's a major seller, they absorb the cost, but unique varieties kept for interest value are likely to be deleted. "Lettuces are the latest. Two years ago it was cucurbits – melons, pumpkins, squash, cucumbers, gourds, and zucchini," says Barbara. "A lot of paperwork and testing is required to get seed into the country without it being stopped and, if necessary, destroyed."

## Growing their own

Gerard grows some seed, particularly if he sees something he can't source but which takes his fancy, for example a new variety of passionflower (red banana). He grew the vine and in January harvested the seed, which had sold out the previous season. A metre-high crop of kumikumi (aka kamokamo) has, like a trifid, taken over their backyard. Jude, Kings Seeds' manager, has a trial garden at home with a number of crops. At work, an oriental cucumber

scrambles up one side of the shed. This cucumber has a creamy flesh (as opposed to white) with a mild taste, and possibly a slightly smoother texture than other cucumbers. It has a prickly skin and grows to about 40 cm long.

At Whangamata, popular Painted Mountain Corn uses up a friend's garden space. The GE debate made importing corn problematic and expensive, but they now sell two edible corns imported through another seed company, and two locally grown ornamentals, both of which can also be ground for flour.

### Germination and viability

Critically important for gardeners are germination rates, which are provided to Kings Seeds by their suppliers.

"We keep a feedback register," says Barbara. "A single feedback is usually a



**Above:** Red Banana passionfruit (*Passiflora antioquiensis*, also known as vanilla passionfruit) is sold for its flowers. Kings sells two other *Passiflora* varieties: Black Passionfruit (*P. edulis*) and Foetida White (*P. foetida alba*, also sold for the flower). They all have edible passionfruit but the black one is possibly the nicest, says Barbara.



**Above:** Deb Jefferson processing a shop order of seeds.

reflection on the grower, but three about the same variety galvanises us to undertake germination trials in the propagation shed. If our rates are good we consider customer methods, but if we have the same problem, we remove the seed from stock and order fresh. Sometimes we'll 'overpack' (add extra seed) to compensate for lower than average germination rates."

Most seed will last well in a packet that is sealed, folded over, and stored in a cool, dark and dry place. Lily seeds found in King Tutankhamun's tomb were successfully germinated, but generally seeds should be good for two to three seasons. Lettuces, the onion family, parsnips, peppers, chillies, and eggplants don't keep well and are best bought fresh every year.

"The good thing about working with seed is it brings you back to the seasons," Barbara says. "Plant too early and you won't have success. If you plant at the right time when the plants want to succeed, you'll have a great crop. Except for weather, you can have total control of vegetable choices for your family and friends throughout the year."

### A fragrant experience

"It's certainly a fragrant experience," she says. "We forget this until a customer points out how nice our shed smells, however we have discovered seed can also be fragrant in less positive ways. Gerard husked hot chilli seed at the back of our shed one day. Slowly his eyes and nose began streaming and he started coughing. Eventually the powerful smell affected all the staff, including me 100 metres distant and through two rooms. That fragrant experience led to a new process involving masks."

Barbara finds it therapeutic to dip her hand into a container of seed. With seed counts from hundreds (lettuce) to thousands (poppy) per gram, the knowledge one handful can become an acre of crop is an appealing sort of magic.

Spring 2018 is Kings Seeds actual 40th anniversary. They'll celebrate with specials, and celebratory events throughout the year plus a festive launch of the new catalogue. 🍀

**Theresa Sjöquist** is a freelance writer based in Helensville. [www.theresasjoquist.com](http://www.theresasjoquist.com)

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# Grazed *and* CONFUSED

**John King** talks to three farmers about how holistic planned grazing (HPG) strengthens their organic farm management and enhances the environment.

**H**ow could converting to organic farming be easier? David Fincham, Phil Gray, and Chris Ensor are North Canterbury organic farmers who have done partial or total training in holistic management – a systems thinking approach to farming and land management that was originally developed by Allan Savory for reversing desertification.

## Seeing the whole picture

David Fincham from Hawarden thought holistic management worth investigating after reading articles and thinking it sounded credible. “It was a good fit for us.” He was in the throes of taking over his family’s farm with his partner Sandy, who was not from a farming background. “It was good for her to learn about the reality of farming with nature,” says David.

“Holistic management created a more successful pathway for organic [conversion] than we would have achieved conventionally,” says David. Organic farmers find it develops new insights into environmental, financial and social aspects of their farming businesses.

David believes that without holistic management, simply shifting from conventional to organic farming fails, because decision-making and financial budgeting are not integrated with environmental processes; biological capital is not equated with financial capital. Furthermore, reach-for-the-shelf mentality is never dealt with.

## Strengthening organic farm management

A primary weakness of organic farm management is its inability to link landscape function to grazing practice, resulting in the



**Above:** Chris ENSOR. Photo: John King

same problems as conventional grazing management: overgrazing, bare soil in pastures, erosion between plant bases, shallow-rooted pastures, leaching nutrients, problem weeds, and rainfall runoff. HPG strengthens that relationship by managing the complexity of grazing.

Zimbabwean wildlife biologist Allan Savory developed HPG, a component within holistic management, after years of working with African ranchers to improve their properties and soils. HPG caters for the many factors farmers juggle when planning grazing, by mimicking the great herds of African grasslands.

It’s not just how much grass is available to feed livestock. All grazing planning as currently taught to farmers and students focuses on quantity and quality of grass biomass and excludes many other factors necessary to make farms viable. Even the New Zealand *Organic Pastoral Resource Guide* ([organicnz.org.nz/product/organic-pastoral](http://organicnz.org.nz/product/organic-pastoral)) makes no reference to changing grazing practice to excel at organic farming. This is where HPG strengthens organic farming: when farmers struggle switching from conventional management.

## Nature’s web of relationships

The ecosystem is the foundation of farming business. Grazing planning needs to start with how environments work – the relationships between:

- the water cycle (rainfall absorption, erosion),
- the nutrient cycle (carbon and minerals, root depth, soil cover, decomposers),
- harvesting of sunlight (leaf size and shape, growing season length), and
- the ever-changing patterns of biodiversity (plant and soil species).



**Above:** David Fincham. Photo: Siobhan Griffin



**Above:** Grazing both sheep and cattle together at Phil Gray's farm.  
Photo: John King

When one of these ecosystem processes is influenced, the other three change simultaneously, not one after another. This is what is meant by holistic, and this can be taken further to include financial return on investment because it's immediately affected too.

#### Four basic tools

From there farmers explore four basic tools to influence ecosystem processes: technology (in all its guises), fire (no fire lit by a human is natural), rest (removing livestock from landscapes), and living organisms. All tools are considered when managing holistically, there are no prejudices. The first three tools are readily accepted by mainstream management, science and the public.

Living organisms emerged through the sustainable farming movement, within which are techniques of grazing and animal impact. Living organisms counteract technology by adding organisms or emphasising their roles in the environment rather than eliminating them with herbicides, pesticides, fungicides, etc.

The current battle with vegetarian and vegan lobby groups over livestock roles in climate change occurs because relationships between tools and ecosystem processes are often misunderstood and abused by conventional agriculture. Globally, grazing livestock are not the largest contributor to climate change, it's the many cropping practices associated with food production by turning over soil and using synthetic chemicals to 'feed the world' that are questionable. Bringing ecosystem processes and tools together is what makes HPG so successful.

#### Farming: the most complex profession

The urban community struggles to grasp that farming is the most complex profession and grazing the most complex farming activity. Even current mainstream primary industry practices simplify grazing management down to budgeting livestock feed: an inventory of grass growth and quality. It ignores the wider context beyond animal and pasture.

The process of HPG allows farmers and land managers to work logically through all issues associated with shifting livestock around pastures to accommodate four factors:

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Above: Phil Gray. Photo: Siobhan Griffin

1. Production (birth dates, growth rates, mating, husbandry activities, livestock genetics, crops, shearing, stock water, irrigation, fertiliser, selling)
2. Financial (cash flow, seasonal expenses)
3. Ecological (soil and plant health, riparian areas, water, shelter, biodiversity and wildlife, fire prevention)
4. Social (labour availability, holidays, public access, family anniversaries).

### Enhancing landscape function

From there farmers can plan grazing to enhance landscape function. That might include:

- Sabbatical fallowing (not grazing a paddock for a year) to deepen roots, increase root biomass, and feed soil biology
- Concentrating livestock to trample weeds, creating sites for germinating plants, healing over livestock trails, transferring fertility and seeds
- Opening up scrub or riparian areas for better access
- Crushing forestry trash to reduce fire risk
- Growing out young livestock, and many other practices.

### Phil & Viv Gray

Longford Farm, Waiau: 327 ha, 93 paddocks  
Rainfall: 750 mm, summer dry, 120 mm evaporation per month mid November to March

History: Father (Hugh) bought in 1973, since 1983 Phil was in partnership with Hugh, now in partnership with Viv since 2014  
Overwinter 1200 ewes, 300 replacement, 80 cows, 70 calves mixed sex. Ram breeder Allan Richardson, Tapanui

### David & Sandy Fincham

Ti Kouka Farm, Hawarden: 300 ha  
Paddocks: 60 cropping – kept paddock size bigger  
Rainfall: 750 mm, summer dry, autumn optional for rains  
History: 100 years in family, David started managing from 2002  
Overwinter: 1750 ewes 525 hoggets mostly Wiltshire, ram breeder David Arvidson, South Auckland  
Crops: wheat 6 ha, linseed 30 ha, rye 8 ha, oats 4 ha

### Chris & Lika Ensor

Richmond Farm, Cust: 200 ha, 60 paddocks  
Rainfall: 750 mm, summer dry  
History: 65 years in the family, Chris started managing from 2017  
Overwinter: 1750 ewes, 525 hoggets. Rams from Mt Cass, Amberley and Colin Matheson, Otago

### Using a chart for planning

Placing this information on a chart makes it visual. This allows farmers to see graphic patterns quickly, not just within seasons but also across seasons, and is more in tune with how farmers access information. Conventional feed wedges do not do this.

“The grazing charts create more control when sorting through decisions,” says Phil Gray from Waiau, “It makes me proactive and less cocky with situations because I can see quickly where challenges are.” Furthermore, he says, “It’s great for planning around events, holidays, social occasions, and short breaks because I can have water and feed sorted and stock in easier paddocks for those looking after the place”.

“It takes me two half-days to fine-tune by thinking over what issues [ecological or production] need addressing and achievements to make in each paddock. When [pasture] quality changes I start skipping paddocks and recheck the grazing plan to change it”.

*continued on page 58*

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## FARM AND GARDEN

# Meet the bacteria

### Part Eight

**Dr Tim Jenkins** presents the final article in a series on how most bacteria can help us and others challenge us in organic growing and eating. After covering many of the different kinds of bacteria, the series now puts the spotlight on nutrient cycles and some of the bacteria involved. This time we look at phosphorus.

**P**hosphorus has the slowest cycle of all the major essential elements. The transformation of phosphate rock in nature to available phosphorus and back to phosphate rock has taken place over millions of years. This slowness comes from the low solubility of most phosphorus compounds. It is largely microbial activity that makes phosphorus available to the plants that rely on it.

Phosphorus is essential in plants and animals as a part of DNA for the storing of genetic information and RNA for transferring that information into protein production. Phosphorus is also required for the storage and transfer of energy. Phospholipids are key components of all cell membranes for nutrient transfer – another vital role for phosphorus. In animals, phosphorus plays a further structural role in teeth and bones.

#### Inorganic and organic phosphorus

Most developed agricultural soils have quite a large pool of phosphorus but the majority of this is only of limited availability to plants. Much of this can be in organic form, which can become available through the action of decomposing microbes releasing phosphate ions. The more active soil microbiology is, the faster the cycling rate of phosphorus in soil organic matter, and thus the greater availability of this element. Some bacteria produce phosphatase enzymes that biochemically release phosphate from organic forms.

Microbial activity also makes inorganic minerals such as phosphate rock release phosphate, mostly through the production of organic acids that act on the phosphate minerals. Many rhizosphere bacteria living in association with plant roots are particularly efficient at solubilising phosphorus; they utilise sugars released from plant roots and convert that into organic acids.

#### Soil bacteria help phosphorus uptake

Bacteria also help initiate the relationship between mycorrhizal fungi and roots. In turn the mycorrhizal fungi increase the effective root volume of plants and produce phosphatase enzymes: both factors important for the phosphorus uptake of many plant types. Some other types of plants such as brassicas and buckwheat do not form



**Above:** Buckwheat is a fast-growing cover crop with some evidence of making phosphate more available in the soil, at least partly through the action of phosphate-solubilising rhizosphere bacteria. Photo: Tim Jenkins



**Above:** Compost addition helps boost organic vegetable production partly through supplying readily available phosphorus as well as stimulating soil biological activity important for nutrient efficiency.

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mycorrhizal relationships, and these plants are more reliant on the rhizosphere bacteria for their role in releasing available phosphorus.

In acid soils, phosphorus may become unavailable due to the formation of insoluble aluminium phosphate or iron phosphate molecules. It is postulated that some phosphate-solubilising bacteria chelate such metals (particularly iron) and thus further improve the availability of phosphate.

In organic agriculture reactive phosphate rock (RPR) and guano are often used as mineral fertilisers. Again the organic acid producing action of soil bacteria is important for the release of phosphate from these and other calcium phosphates in the soil. The trick of applying elemental sulphur with these natural phosphate fertilisers also relies on the action of the sulphur-oxidising bacteria that produce sulphuric acid, which can solubilise the nearby phosphate minerals even faster.

### Phosphorus pollution

Phosphorus is recognised as one of the major elements that causes waterway pollution. Although phosphorus movement through soils and into waterways is slow, it only takes small amounts to make a big difference in many of the typically low-nutrient waterways around New Zealand. The effect of pollution is often to make aquatic organisms grow and then the biomass of the organisms rotting depletes the water of oxygen in the process called eutrophication.

Many waterways are even more vulnerable to phosphate pollution than nitrogen pollution because many of the aquatic microorganisms causing eutrophication and toxicity (such as cyanobacteria) are nitrogen-fixing; they can make their own available nitrogen from the atmosphere as long as they have sufficient levels of phosphorus.



**Above:** Riparian strips help protect waterways from nutrient pollution, and aquatic plants can sometimes be harvested to remove nutrients from the water system.

### Focus on soil biology

A focus on good soil biological activity makes better sense for reducing phosphorus pollution, rather than continuing to apply much more phosphorus than is actually being harvested in crops or removed in livestock production. This can be achieved through ensuring good soil organic matter levels, good soil structure, use of cover crops and ensuring good available calcium for earthworms and other soil life, and indeed through avoiding highly available phosphate sources that tend to reduce the level and effectiveness of mycorrhizal fungi.

The organically allowable forms of phosphate fertiliser are also less susceptible to surface runoff compared to artificial fertiliser forms such as superphosphate and di-ammonium phosphate. 🌱

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**Dr Tim Jenkins** is a microbiologist and agricultural scientist travelling the world with a base in Christchurch.

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# eurofins

## Determine the amount of bio-fertilisation taking place in your soil

**Not all the chemical nutrients in a soil are readily available in forms that plants can utilise. Soil microbes naturally aid fertilisation of the soil, as some of them can release bound nutrients or convert elements to compounds that can be used by plants. This bio-fertilisation is dependent on which bacterial and fungal organisms are naturally present in the soil and the growing history as chemical fertilisers & sprays suppress certain types of soil microbes.**

- **Phosphorus** solubilising microbes release Phosphorus (**P**) from insoluble soil minerals (where the Phosphorus is bound and unavailable). This is then converted to Phosphate (**PO<sub>4</sub>**), which is the form that can be utilised by plants.
- **Potassium** solubilising microbes release Potassium (**K**) - another essential plant nutrient - from insoluble soil minerals.
- **Sulphur** oxidising microbes convert Sulphur (**S**) to **Sulphate (SO<sub>4</sub>)** which can then be used by plants.
- **Nitrogen (N)** fixing bacteria are present in soil in two main zones; predominately on the roots of many plants but also free living in the soil. These organisms promote plant growth.

**Eurofins offers analyses which can count the levels of each of these categories of bio-fertilising microbes. Additional analyses can estimate the amount of Phosphate or Potassium or Sulphate naturally released on a Tonne per Hectare basis. Monitor these beneficial micro-organisms, so you can adjust land management practices, to over time, increase their abundance and activity. We can also isolate your soils organisms, for you to make your own biological liquid fertilisers.**

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# Built TO LAST

Retiring architect **Graeme North** looks back more than 45 years on the first of his hundreds of natural building designs: Yvonne Rust's house at Parua Bay.

**I**n 1971 I headed north, a refugee from architecture school, along the Whangarei Harbour, down miles of dirt road to the tip of a remote peninsula.


After meeting Yvonne Rust, I scrambled through scrub to end up beneath an ancient pohutukawa, draped over a small cove. I went out onto a sandspit that separated this beach from the sweep of the next bay, threw out my line, and retreated back under the tree.





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**Above:** The clerestory along the top admits light and warmth into the back part of the house.  
**Below:** Looking from the living area through to the kitchen.



**Above:** The house in 2015, showing the now closed-in north-facing veranda, the two counterpoint inverse curved roofs, and the large round window. Photos: Graeme North

A two-kg snapper! *This will do!*

And so it began. I stayed. I fished. I helped Yvonne and her fellow potter friend Barry Brickell build a kiln and procure a shed to put over it.

It was a great summer. Yvonne taught pottery at summer schools to topless women and lusting men. It was the '70s, after all. Life was good and life was fun. Yvonne's thoughts turned to her house. I offered to design it. The cheek of a youthful architecture student!



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**Above:** The huge circular window is a major feature in the living room and still a much sought-after sitting spot.

Photo: Graeme North

### Artist of the earth

Yvonne Rust was a retired school art teacher and studio potter. She wanted a house made from clay. It was really important to her to use materials that were as natural as possible, raw or minimally processed, and locally available.

Yvonne had purchased the property on the shores of Parua Bay years beforehand. Now that she had retired (female school teachers could do that at 50 years of age) she set to, to build her studio and house.

While teaching in Christchurch she was aware of the soil-cement houses that engineering lecturer PJ (Pip) Alley had built around Canterbury in the 1950s and '60s. He used a slip-form mould – a hysicon – a type of mould that was originally used to make in-situ concrete walled houses one block at a time, and now

has been modified for rammed earth.

Yvonne took soil samples from her site for Pip Alley to test and he devised a mix for soil-cement.

No one knew about earth building then, but the librarian at the School of Architecture found me an old English book on earth building, along with a few papers by Pip Alley. The general rule was 'give them a good hat and good boots and they will last for years'.

Armed with all this, I started on the design. The house was to be a two-bedroom cottage. The site had been excavated and faced north.

### Demolition and design

Every three years the furnaces at the Whangarei Window Glass

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works were pulled down to be rebricked, and Yvonne negotiated to get truckloads of these demolition bricks dumped at her place rather than the tip. They came in a variety of sizes, types, and colours, some very dense and more like rocks, some with embedded glass.

Yvonne had also sourced some abandoned demolition bridge beams to use as major structural members.

The roof was inspired by playing with shapes made possible by fabricating wiggle-bar trusses similar to those used in Yvonne's half-round pottery barn.

Inverse curved sections of roof met over beams. These were to be separated to form clerestories facing north, to bring light and warmth into the centre of the building, as part of passive solar design.

The higher walls at each end of the house were conceived as reinforced brick masonry (RBM) with new fired bricks on the exterior and the less standardised, and possibly less durable, ex-glassworks bricks on the interior. These, along with a centrally placed core of RBM would support the massive bridge/ridge beams.

The lower walls were made from rammed earth with a reinforced concrete bond beam.

The outer edges of the roof were held up on hardwood timber posts, and the concrete floor overlaid with a rough parquet made from halved recycled railway sleepers.

The curved ceiling linings were inspired by old villa match lining, using new, rough-sawn, thin kauri planks (limited kauri was still available). Timber windows and doors were designed, and some were sourced second hand.



**Above:** Two interior walls made with salvaged bricks. The top ones are from the Whangarei Window Glass works, some with glass embedded.

Photos: Theresa Sjöquist



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### Council consent

Don Dunning carried out structural calculations, an interested builder was found, and a building permit was applied for.

At the District Council counter the design was condemned. “My wife would hate that!” was the verdict of the plumbing and drainage inspector. The toilet and bathroom/laundry were off a sheltered back veranda. He shook his head and repeated his judgment, in case I was dim.

“Does it comply?” I asked. In case he was dim, I repeated my question.

It did.

### All hands on deck

The concrete foundations were poured. Heaps of old bricks were sorted and laid to make the higher structural walls. The owner, helped by friends, students and local farmers, used a hyspicon to form the rammed earth walls.

Those were the days when an aspiring architect was not afraid to take off his shirt and ram earth, make adzed heart rimu doors, or adze the hardwood floor. I even made a stained glass window by gluing shards of coloured glass – collected by one of Yvonne’s friends over many years off a beach in the Bay of Islands – onto a roundel of plate glass. The builder did not install the circular brick window surround exactly where planned as he had left his plans at home that day.

Some stories do not change.

### Practical and beautiful

The bathroom/laundry and toilet services backed onto the kitchen, making one of the most economical services layouts possible.

The large round window in the west wall looks out and engages with a huge old pohutakawa tree. The window frame was made from a pre-cast cattle trough 2.4 metres in diameter, made without its usual bottom, and tipped on its side. It has been one of the most loved features of the house, and most sought-after seat.



**Above:** The wooden kitchen has a warm, almost luminous quality.

Photos: Theresa Sjöquist



**Above:** Stained glass window high up in the kitchen.

Yvonne made doorknobs, a hand basin, and light fittings out of pottery.

Owner building, in conjunction with a wider community of friends and neighbours, is a slow business. It took some years before the building was finally closed in and largely completed.

The building timbers were finished with tung-oil-based mixes. People today still fondly recall the pleasant smell of the natural oil finishes.

The building was a non-toxic, natural, eco-building well before such ideas were even given names, and as such became an early and influential example of eco housing in New Zealand.

### Decades later

But all buildings have a life of their own. The new owners have closed in the verandas fairly recently. This has been done very sensitively and detracts little from the original. It makes for larger interior areas, and some walls have received decorative finishes.

A mural of cherubs painted by Yvonne on her bedroom wall on hessian is still there, using paint made by Yvonne from clay, pigments and oils. One red-headed cherub is my daughter.

The current owner told me when I met her that not a day goes by when she does not thank me for the beautiful house. Wonderful.

### Uniting the earth builders

Yvonne strongly promoted the formation of a united group to enable earth builders to combine and talk to councils about earth building. She was a key player behind the formation of the Earth Building Association of New Zealand (EBANZ). This was formally set up in 1988 to promote the art and science of earth and natural building, with myself as chair and Yvonne Rust as its patron.

EBANZ went on to work with Standards New Zealand to write the world’s first comprehensive set of modern earth building standards:

- NZS 4297:1998 – Engineering Design of Earth Buildings (Specific Design)
- NZS 4298:1998 – Materials and Workmanship for Earth Buildings
- NZS 4299:1998 – Earth Buildings Not Requiring Specific Design

These were published in 1998, are currently in use, and are currently undergoing revision.



## An inspiring example

Yvonne Rust's house was one of a very few buildings to be built using unfired earth as a material in New Zealand during the 1970s, as well as combining earth with a variety of local, natural, and reused materials. A biography about this remarkable artist gives a wider view of her life: *Yvonne Rust QSM, Maverick Spirit*, by Theresa Sjöquist.

This 1970s building was pivotal in my own architectural career, and in the history of earth building, non-toxic building, and eco-building in the architectural history of New Zealand. Yvonne, through the example of her own house, and her encouragement of EBANZ, has inspired many people and practitioners to work with natural materials.

And the house still looks great! 🌱

**Graeme North** is the chair of EBANZ, and of the Standards New Zealand Development Committee for Earth Building Standards. This house has been entered into the 2018 NZIA Awards programme in the Enduring Architecture category. This article borrows from Graeme's essay 'Yvonne's House', which was highly commended in the Open Category of the 2016 Warren Trust Awards for Architectural Writing. [www.ecodesign.co.nz](http://www.ecodesign.co.nz)

### EBANZ

The Earth Building Association of NZ promotes earth building, organises workshops including an annual conference each Labour Weekend, and publishes a quarterly magazine for members. [www.earthbuilding.org.nz](http://www.earthbuilding.org.nz)

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# Soil & Health Association AGM

**Saturday 28 July 2018**  
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All members and supporters warmly welcome. Further details including National Council nominees and voting papers will be published in the July/August issue of *Organic NZ*, and will be simultaneously available at [www.organicnz.org.nz](http://www.organicnz.org.nz) (25 June).

## Call for nominations for National Council

Members of the Soil & Health Association can nominate someone for the governance body, and/or submit a remit to the AGM. The closing date for nominations and remits is **FRIDAY 25 MAY 2018**.

(As a subscriber to *Organic NZ* you may also be a member – if you need to check your membership status please contact our office – contacts below.)

Those nominated should submit a brief background history including strategic experience with a national organisation and governance strength, and a note of their aspirations for their term in office.

The National Council consists of seven elected members who are voted in for two-year terms. Marion Thomson, Mike Ryan and Moko Morris have been elected for the 2017–2019 term. The terms of Mark Houghton-Brown, Gaz Ingram and Chris May are up for renewal at the 2018 AGM. Graham Clarke is stepping down from the National Council at the AGM.

Nominations must include the names of a nominator and seconder who are eligible voting members of the Association.

## Remits and other business

If submitting remits or other matters of business, please accompany these submissions with relevant information, arguments and explanations to assist members to develop an informed opinion. Remits and other matters of business must include the names of a proposer and seconder who are eligible voting members of the Association.

**For more information see [www.organicnz.org.nz](http://www.organicnz.org.nz) or contact the Soil & Health National Office, PO Box 9693 Marion Square, Wellington 6141, 09 419 4536, [manager@organicnz.org.nz](mailto:manager@organicnz.org.nz).**

# Ongoing work to keep NZ GE-free

Advocacy report, by **Mischa Davis**, Soil & Health policy advisor

Since the fantastic news back in October last year that Federated Farmers had abandoned its appeal to the Court of Appeal (thus confirming that there is power under the Resource Management Act for territorial authorities to make provision for control of the use of GMOs through policy statements or plans) we have been working hard to ensure that other council plans around New Zealand adopt precautionary and prohibitive provisions regarding GMOs.

So far this year Soil & Health has made submissions on the Draft Waikato District Plan and the Draft New Plymouth District Plan. We are also gearing up for the council hearing on the Proposed Regional Plan for Northland, which we submitted on late last year.

Further, while the jurisdictional issue is now resolved there are still several outstanding appeals that Soil & Health is involved in regarding Federated Farmers and GE. The Hastings District Plan appeal is set to be heard in the Environment Court and the Auckland Unitary Plan appeal is to go to the High Court, both later this year. So while we can celebrate that councils have the right to regulate GMOs, the fight for these regions to declare themselves GE-free is still not over.

## New GE techniques

Soil & Health has also made a submission on the 'Food derived from new breeding techniques' consultation paper released by Food

Standards Australia New Zealand. We requested that all new foods derived from new breeding techniques be regulated, including gene editing, CRISPR, GE rootstock grafting, cisgenesis, intragenesis, RNA interference and null segregants.

Soil & Health is also in the process of updating its GE/GMO policy to align with that of IFOAM's policy on new breeding techniques.

## Gene editing in pest control and health care?

One of the functions of the Royal Society of New Zealand, under its Act of Parliament, is to provide expert advice on important public issues to the Government and the community.

The Royal Society Te Apārangi has convened a multi-disciplinary panel to consider the potential uses and implications

of gene editing in Aotearoa. Their first two discussion papers were released late 2017 on healthcare and pest control. A valuable part of this process is receiving critical feedback, so the Royal Society has been hosting a number of workshops with stakeholders around the country, and I attended one in April. They are welcoming feedback on the social, ethical, cultural, legal, scientific and economic challenges of gene editing technology for New Zealand.

Find out more here: [royalsociety.org.nz](http://royalsociety.org.nz)

or for GE pest control: [bit.ly/2qpzslT](http://bit.ly/2qpzslT)

GE in health care: [bit.ly/2JFzbgq](http://bit.ly/2JFzbgq)



**Above:** Should gene editing be used for pest control in New Zealand? Have your say!

See [bit.ly/2qpzslT](http://bit.ly/2qpzslT) Photo: iStock/Kevin Wells

# OANZ forum brings sector together

A successful national forum in Wellington in February brought together people from across the organic sector, including Soil & Health.

Organised by Organics Aotearoa New Zealand (OANZ), the forum included an address by Damien O'Connor, Minister



**Above:** Minister of Agriculture and Food Safety Damien O'Connor addresses the OANZ forum. Photos: Philippa Jamieson

of Agriculture and Food Safety, and presentations on the regulation of the term 'organic' in New Zealand and the creation of a single national organic standard. Minister O'Connor is fully supportive of the regulation and a national standard, which have been championed by OANZ for several years, and are being progressed by the Ministry for Primary Industries.

During a brainstorming session participants expressed their visions for OANZ and strong support for its work as a national body for the organic sector.

On 20 June OANZ will launch their 2018 Organic Market Report at Parliament. In addition to OANZ's own research, it is also partnering with Dairy NZ, Wine Growers NZ, Horticulture New Zealand and the Federation of Maori Authorities to participate in a survey to understand the level of interest from their members in going organic. OANZ remains open for sponsorship for this work – contact [info@oanz.org](mailto:info@oanz.org).



**Above:** Bill Martin from the Biological Husbandry Unit, Lincoln University, during the brainstorming session

## Farming in a changing climate

At the Farming for the Future Seminar held in Carterton in April, guest speakers and 145 attendees discussed how the Wairarapa farming sector can adapt and manage the risks around climate change, and take advantage of the opportunities.

"As a farmer myself, the interest by the banks in this year's event was a real eye opener for me," said Heather Atkinson. "Rural lenders are now recognising that if we wait to take action on climate change it will hit our pockets hard in the future. It's pivotal we engage as a community in



how we meet not just the challenges of climate change but also the opportunities it presents."

The event was organised by the South Wairarapa Biodiversity Group and the Mangatarere Restoration Society, with support from Perception Planning and Greater Wellington Regional Council, with Radio New Zealand's Susie Ferguson as MC.

**Left:** Wairarapa organic farmer Heather Atkinson and Hawke's Bay farmer and guest speaker Greg Hart share a laugh at the Farming for the Future seminar. Photo: [farmingforthefuture.org.nz](http://farmingforthefuture.org.nz)

## Happy 25th birthday TranzAlpineHoney!



In March TranzAlpineHoney NZ celebrated 25 years of organic certification by BioGro, with a day that included tastings and a tour of their honey factory in Ashburton.

The origins of the family-owned honey business go back to 1910. TranzAlpineHoney hives are located in Canterbury and the West Coast. honeys produced include manuka, kamahi, rata and white clover. honeys produced include manuka, kamahi, rata and white clover. honeys produced include comb honey, propolis lozenges and tincture, and manuka honey lozenges. Each batch of honey can be traced directly to the hive.

[www.tranzalpinehoney.co.nz](http://www.tranzalpinehoney.co.nz)

**Left:** Pictured here are three key TranzAlpineHoney people, with BioGro's CEO. Left to right: Victoria Soshnikova (administrative manager), Yuri Soshnikov (general manager), Donald Nordeng (CEO of BioGro NZ) and Derek Newton (managing director).

continued from page 47

### Less stress, more confidence

Chris Ensor at Cust noticed the charts reduce stress. “I got interested in using holistic planned grazing at a video evening on drought. In taking over the family farm lease I was mindful of my inexperience organising grazing mobs. I’ve found HPG gave me structure to organise livestock movements across the property. It’s helped me be proactive rather than hanging on daily weather reports for rain. I’m making plenty of mistakes, but I’m already looking at grazing particular paddocks differently next season.” The grazing chart makes that easier.

This season he notes: “I felt far more confident heading into the dry November-December period with abundant feed ahead. The growth response when decent rains arrived in January was incredible. My balage/hay contractor said ‘that paddock’s a hay paddock, without knowing it had been hard-grazed in the dry and had only just over three weeks of growth.’ The secret to produce such results is greater root biomass.

### Feeding the ecosystem, not just livestock

All soil life requires energy from plants. Grasses secrete carbon into soils as sugars, which feed soil life, and in turn those microorganisms increase the soil’s water storage capacity. Overgrazing stresses grass plants, as does drought, and soil fertility declines, whether under organic or conventional management. Stressed plants go to seed faster to ensure species survival.

When stress is reduced grasses are vegetative for longer and change their leaf shape and size to capture more sunlight. This sequesters more carbon into the soil, increasing resilience against climatic events such as dry, wind, flood, and frost. The secret to



**Above:** Red clover emerging through sward. Photo: John King

resilience is large root biomass to drive new leaf growth after grazing. Large root biomass occurs after longer recoveries between grazing events. It’s how to achieve this plus address livestock performance goals simultaneously that is the purpose of HPG.

### Biodiversity and other benefits

Furthermore, the nature of pasture swards change. Plants that require longer recovery from severe grazing begin to emerge if the seeds are present: red clover, cocksfoot, prairie grass, tall fescue, timothy, lotus major, birdsfoot trefoil, lucerne, lupins, chicory, plantain, and even tall oat grass. All these species tend to have deep roots that pull up nutrients and moisture from further down the soil profile.

Phil Gray observed red clover began popping up like mushrooms within 12 months despite it not having been sown for 25 years.

Another benefit is increases in geckos, skinks, spiders, and bumblebees, which bring in birds and other wildlife. “Visitors often comment on level of birdsong around the house,” says David. There is more life in pastures, even slugs but they are not a problem. “Flies are not an issue in the house due to more spiders and insect predators across the farm.” Animal health issues like flystrike are much less than they were expecting when converting to organics. Spider webs catch dews and mist, which keep pastures going during dry spells.

Chris, Phil, and David changed livestock breeds to handle pasture of greater maturity: Wiltshires or composites promoted within organic farming. All three have more feed at critical times of the year.

David and Phil observe that rainfall infiltration rates increase, meaning dams do not fill up from event runoff but over several days. Importantly for North Canterbury, it’s during the critical autumn period when they notice there is more moisture in the soil to optimise pasture growth, so they don’t have to resort to inputs.

### Challenges and unlearning

Challenges for farmers doing HPG include paddocks looking ‘untidy’ and coping with ‘wasted grass’. However, this is what creates flexibility and resilience for pastures to cope with variable climatic events. Scalping every paddock in the name of livestock performance only results in expensive and risky pasture renewal programmes.

The problem for farmers switching from ‘conventional’ to organic farming is unlearning their habits and insights, particularly around reaching-for-the-shelf solutions. Holistic management and HPG help farmers organise the complexity they face daily. This improves mental health, confidence, and quality of life for their families. 🌱

**John King** is a Holistic Management educator specialising in holistic and regenerative farming. Contact 027 6737 885 or john@succession.co.nz.

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# Book review

## Healthy Home, Healthy Family

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Nicole Bijlsma

Reviewed by Anne Gastinger

Building biologists view the built environment we spend most of our time in – our homes, workplaces or children's schools – as our 'third skin' (the second being clothing). Nicole Bijlsma is a building biologist, naturopath, and founder of the Australian College of Environmental Studies. This third edition of her book *Healthy Home, Healthy Family*



analyses various contaminants harboured in this 'third skin' that potentially cause ill health. Working her way through every aspect of our building envelope and its contents, Bijlsma explains how certain building construction methods, pathogens like moulds and dust mites, chemicals in building and furnishing materials, everyday items and electromagnetic fields can singularly and synergistically cause harm. Solutions for mitigation, and alternative health-based product options, are provided.

This edition is a significant departure from the two earlier editions. Drawing on numerous referenced scientific papers, Bijlsma widens her analysis, alerting the reader to the inadequacies of weak laws, and regulations that benefit industry rather than the consumer. This book enables readers to make wise health-based decisions about which products and technologies to use and which to avoid.

Even though Bijlsma writes for an Australian audience, the book is equally useful for New Zealanders.

This book is of high interest for every homeowner, architect, those working in building and construction, environmental medicine and the educational sector. I predict this go-to practical reference guide will become one of your most dog-eared and well-thumbed books – keep it handy!

In addition to her book, Bijlsma has an informative website: [www.buildingbiology.com.au](http://www.buildingbiology.com.au).

Anne Gastinger is a freelance writer living in Christchurch.

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**Soil & Health**

**events and contacts**

The Soil & Health Association – publisher of *Organic NZ* – has groups that meet in different parts of the country. These meetings and field days are wonderful ways in which to meet fellow gardeners and growers, and other people interested in healthy soil, healthy food and healthy people.

Here are the contact details of Soil & Health branches and groups, and coming events.

**Soil & Health Auckland Branch**

All welcome. Meetings are held at 7.30 pm on the third Tuesday of each month (Feb to Nov) at the Auckland Horticultural Council Centre, 990 Great North Road, Western Springs (directly opposite Motions Road, the road that goes to the zoo). Trading table from 7 pm. Supper contributions appreciated. Entry: \$2 for hall hire. More details: Dave Woods, 09 489 5470, email [dave.woods57@gmail.com](mailto:dave.woods57@gmail.com).

**Tuesday 15 May, 7.30 pm**

Derek Craig (restoration manager, Kaipatiki Project and science officer, Auckland branch of Tree Crops) will talk about useful productive trees for the garden and agriculture.

**Tuesday 19 June, 7.30pm**

Soup and Serengeti – a midwinter event with warming nourishment, and Bruce Grenville will screen the 16 mm film, *Serengeti Shall Not Die*, about the saving of the Serengeti National Park.

**Soil & Health Hawkes Bay contact**

Marion Thomson, [marion.thomson@live.com](mailto:marion.thomson@live.com), 06 877 5534, 027 555 4014.

**Soil & Health Palmerston North contact**

Margaret McKenzie, 06 358 2535.

**Soil & Health Wellington Branch**

Contact Dave Treadwell, [dave@ecoseeds.co.nz](mailto:dave@ecoseeds.co.nz), 04 976 4448

**Soil & Health Levin Branch**

The Levin branch has gone into recess. Any local members wanting to be involved in re-establishing the branch, contact Fay Tekira-Macdonald, [fay1213@yahoo.co.nz](mailto:fay1213@yahoo.co.nz)

**Soil & Health Canterbury Branch**

**Friday 27 April, 7–9 pm**

Eat ice cream (dairy or vegan) and talk about what's happening with organics on a national level. Some of Soil & Health's National Council will be present. Venue: Rollickin Dessert Café, 35 New Regent St, Christchurch. All welcome. Contact [canterbury@organicnz.org.nz](mailto:canterbury@organicnz.org.nz).

**Soil & Health Mid-Canterbury Branch**

Contact Di Candy, 021 0298 9945.

**Soil & Health Central Otago contact**

Cass Watson, [casswatson@yahoo.com](mailto:casswatson@yahoo.com), 027 213 3758.

**Soil & Health Dunedin Branch**

Occasional events. Contact Dennis Enright, [topveges@gmail.com](mailto:topveges@gmail.com), 022 678 4396.

# What's on

## MEETINGS AND EXPOS

### Soil & Health 2018 AGM

Auckland  
Saturday 28 July, 10–11 am  
Ferndale House,  
830 New North Road,  
Mt Albert, Auckland.  
Full details on page 56.

### Permaculture Hui Waihi Beach 10–13 May

Theme: Generating Change, also designing for climate change.  
Contact: [permaculture.org.nz](http://permaculture.org.nz),  
[info@permaculture.org.nz](mailto:info@permaculture.org.nz).

### Edible Paradise film screenings Nationwide May

Subtitled 'Growing the Food Forest Revolution' this film is premiering at New Zealand's 2018 Doc Edge Film Festival: [docedge.nz](http://docedge.nz). To view trailer and host community screening see [www.localisingfood.com](http://www.localisingfood.com)

### Launch of the 2018 OANZ Market Report

Parliament Buildings, Wellington  
Weds 20 June  
[www.oanz.org](http://www.oanz.org)

### 2018 Biodynamic Conference Wanaka

22–24 June  
Theme: Water, Light and the Seasonal Festivals. Preceded by Introduction to Biodynamics Workshop, 21 June.  
[www.biodynamic.org.nz](http://www.biodynamic.org.nz)



**Above:** Soil & Health Auckland branch stalwarts Ian and Patricia Fielding stepped down from their chair and secretary roles last year, and at the branch's AGM in March were honoured for their services to the branch. Photo: Bruce Grenville

**Australia New Zealand Biochar Conference**  
14–16 August  
Gold Coast, Queensland  
[anzbc.org.au](http://anzbc.org.au)

**Earthbuilding Conference**  
Auckland  
27–28 October  
Kawai Purapura Retreat Centre.  
[www.earthbuilding.org.nz](http://www.earthbuilding.org.nz)

## WORKSHOPS & FIELD DAYS

### Bay of Plenty Permaculture Workshops Tauranga

Join our email list for BOP events, workshops and gatherings:  
[www.plentypermaculture.co.nz](http://www.plentypermaculture.co.nz),  
Catherine 027 240 1305.

**Understanding Soils with Kazel Cass**  
5 May, 9 June, 7 July

**Plant Propagation**  
9 June, 25 Sept, 20 Nov

**KoruKai Workshops**  
KoruKai Herb Farm,  
Banks Peninsula  
[www.korukai.co.nz](http://www.korukai.co.nz), [info@korukai.co.nz](mailto:info@korukai.co.nz)

**Composting Workshop**  
6 May, 1–4 pm  
Hot composting, bokashi, worm farms and aerobic liquid fertilisers.

**Fermentation Workshops**  
9 June, 10 am – 3 pm  
10 June, 10 am – 3 pm  
Milk kefir, sauerkraut, kimchi and more.  
Two dates to choose from.

**Alembics Distillation Workshops**  
Auckland Botanical Gardens  
Bookings [www.alembics.co.nz/](http://www.alembics.co.nz/)  
workshops, 09 372 3639, 027 477 7826.

**Gin Immersion Workshop**  
Sat 12 May, 10.30 am – 2.30 pm

**Alembics Distillation Workshop**  
Saturday 9 June

**Learn about Living Sustainably**  
Tirau, Waikato  
Bookings: 07 883 1898, [www.LaLS.nz](http://www.LaLS.nz)

**Block and Orchard Design**  
25–27 May

**Planning the Home Orchard**  
8–10 June



**Above:** Acting out guild designs at the 2017 Kahikatea Farm food forest workshop: Nick Ratcliffe, Diane Sutton, Debbie Harris, Kathleen Breslin, Clyde Sutton and Naomi Smith. Photo: Jo Duff

**Pruning and Maintaining a Home Orchard**  
16 June 10 am – 4 pm

**Midwinter Foodie Weekend**  
22–24 June

**Workshops on Biochar in Vineyards and Orchards**  
5 locations throughout NZ  
24 May – 8 June  
Contact Dennis: [nzbiocharltd@gmail.com](mailto:nzbiocharltd@gmail.com) or see [allblackearthevents.org.nz](http://allblackearthevents.org.nz).

**Kahikatea Farm Workshops**  
Hawkes Bay  
Contact: [www.kahikateafarm.co.nz](http://www.kahikateafarm.co.nz)

**Food Forest (Forest Garden) Workshop**  
2–3 June  
Theory, practice and food forest tour.

**Introduction to Permaculture Design Course**  
13–16 July  
Permaculture ethics and principles, site design, house design, soil, organic gardening, composting, water in the landscape, community and alternative economics.

**Koanga Institute Workshops**  
Wairoa  
Contact: 06 838 6269,  
[www.koanga.org.nz](http://www.koanga.org.nz).

**Solstice Tree Day**  
Sunday 24 June, 11 am – 4 pm

**Butchery and Meat Processing**  
27 May – 1 June

**Avondale Community Gardeners**  
Avondale, Auckland  
Monthly social gardening tutorials and practicals. Contact Imi: 09 828 5854,  
[avondalecommunitygardener@gmail.com](mailto:avondalecommunitygardener@gmail.com).

**Auckland Biodynamic Group**  
For information about biodynamic events, workshops and gatherings, subscribe to our monthly newsletter: [aucklandbd@gmail.com](mailto:aucklandbd@gmail.com), or contact Diane 09 418 0438.

**Ecomatters Environment Trust**  
New Lynn, Auckland  
Environment Centre and community gardens open Mon–Fri, 10 am – 4 pm, Sat until 1 pm. For info on workshops, see [www.ecomatters.org.nz](http://www.ecomatters.org.nz), 09 826 4276.

**Kaipatiki Project Environment Centre**  
Birkdale, North Shore  
Workshops, community planting days, parent-child groups. Contact: 09 482 1172, [admin@kaipatiki.org.nz](mailto:admin@kaipatiki.org.nz), [www.kaipatiki.org.nz](http://www.kaipatiki.org.nz)

**Hamilton Organic Gardeners**  
Hamilton  
To find out about our meetings and a wide range of events (health, gardening, political, environmental) in the Hamilton area, join our email list. Contact: [hamiltonorganicgardeners@gmail.com](mailto:hamiltonorganicgardeners@gmail.com).

**Sustainable Taranaki**  
New Plymouth  
Monthly workshops, speakers, field trips. Contact: [info@sustainabletaranaki.org.nz](mailto:info@sustainabletaranaki.org.nz), [www.sustainabletaranaki.org.nz](http://www.sustainabletaranaki.org.nz)

**Environment Centre Hawke's Bay**  
Workshops, eco tours, events.  
Contact: 06 870 4942, or email [info@environmentcentre.org.nz](mailto:info@environmentcentre.org.nz), [www.environmentcentre.org.nz](http://www.environmentcentre.org.nz)

**Riverton Organic Growers Group**  
Fourth Tuesday of the month, 7.30 pm  
South Coast Environment Centre: 03 234 8717, [office@sces.org.nz](mailto:office@sces.org.nz), [www.sces.org.nz](http://www.sces.org.nz)

Please let us know of any organic-related events coming up. Deadline for the July/August issue is 1 June. We also welcome your photos from organic events.

Contact [editor@organicnz.org.nz](mailto:editor@organicnz.org.nz)  
ph 03 473 9293  
PO Box 9693, Marion Square, Wellington, 6141

# Goods and services directory

This directory is your guide to a range of goods and services that are either certified organic, or supply organic products.

- Certified organic goods, services or businesses are marked: ✓
- Non-certified producers are included on the implicit expectation that they share a philosophical and practical commitment to recognised standards of organic production.

## Books

**Organic Gardening Calendar** by Kath Irvine \$15 (less for orders of 10) and the Starters Guide To Organic Growing \$5. Requests to Wendy Batterbee via email at [wendek@clear.net.nz](mailto:wendek@clear.net.nz) or Pauline via phone 04 293 4413.

## Certification

**OrganicFarmNZ.** Low cost certification for producers supplying the New Zealand market. Contact us at [organicfarmnz@outlook.co.nz](mailto:organicfarmnz@outlook.co.nz), 09 814 9051, 021 228 4866, [www.organicfarm.org.nz](http://www.organicfarm.org.nz)

**Demeter New Zealand.** Contact the Bio Dynamic Farming and Gardening Assn, PO Box 356, Martinborough 5741. Ph 06 306 8582. Email [demeter@biodynamic.org.nz](mailto:demeter@biodynamic.org.nz), Web [www.biodynamic.org.nz](http://www.biodynamic.org.nz)

**BioGro Certification.** Contact PO Box 9693, Marion Square, Wellington. Ph 04 801 9741. Fax 04 801 9742. Email [info@biogro.co.nz](mailto:info@biogro.co.nz) Web [www.biogro.co.nz](http://www.biogro.co.nz)

**AsureQuality.** Contact: 0508 00 11 22. Email: [certificationservices@asurequality.com](mailto:certificationservices@asurequality.com). Website: [www.organiccertification.co.nz](http://www.organiccertification.co.nz)

## Eco-Building

**Pyroclassic IV Woodburner** – New Zealand made. Very low emission woodburner with high efficiency. Free catalogue. Ph 0800 479 762. Website [www.pyroclassic.co.nz](http://www.pyroclassic.co.nz)

**Straw Bale Building Design & Construction Workshops,** for design/building professionals & homeowner builders, [www.soldesign.co.nz](http://www.soldesign.co.nz)

## Education

**Learn about Living Sustainably.** A wide range of courses sharing the skills to produce your own food off the land. See [www.LaLS.nz](http://www.LaLS.nz).

## Fertilisers/Pest control

✓ **Fodda - Feeding the Earth.** Organic Soil Enhancer and General Fertiliser. NZ made, odourless, increases earthworms & microbes. [www.tuturu.co.nz](http://www.tuturu.co.nz)

✓ **Visit: [www.greentrading.co.nz](http://www.greentrading.co.nz)** for BioGro certified neem products for people, pets and plants

**INGROUND WORM FARM. WORM WORLD Vermi-composting system.** Worms deposit Vermi-Caste and Vermi-Juice directly into soil enhancing soil and plant growth. See Trade Me Listing for details. Contact [stooglenz@xtra.co.nz](mailto:stooglenz@xtra.co.nz)

## Fruit / Veg / Produce

✓ **AVOCADOS,** Doug Brown, BioGro # 10, "ECOAVO", 221 Thompsons Track, RD. 2, KatiKati. Ph: 07 549 0617 Cell: 021 668 117, [doug.brown@wave.co.nz](mailto:doug.brown@wave.co.nz) - [www.ecoavo.com](http://www.ecoavo.com)

✓ **Organic apples,** Demeter cert., Jan.-June, 06 364 3451, [hgw@xtra.co.nz](mailto:hgw@xtra.co.nz)

✓ **Purebread ONLINE.** NZ's only BioGro certified, FREE delivery over \$26. Naturally fermented, certified organic for OPTIMUM NUTRITION [www.purebread.co.nz](http://www.purebread.co.nz)

## Grains / Pulses / Nuts

**Macadamias,** Honey, Chocolate, Salt Roast, Butter, Dukkah, etc. Raw kernel and Nut in shell. Spray-free. OFNZ (UC2) Available at 79 Childers Rd, Gisborne and [www.toreremacadamias.co.nz](http://www.toreremacadamias.co.nz)

**Macadamia Nuts** Raw Out of Shell in bulk. Spray-free since 2011. OFNZ Certified Conversion(C2) [www.simstal.kiwi](http://www.simstal.kiwi)

✓ **Milling Wheat, Rye, Barley, Linseed Straw,** Scotsburn Farm, BioGro #5236, 2615 Methven Highway, R.D. 6, Ashburton. Ph 03 3028462 or [scotsburn@slingshot.co.nz](mailto:scotsburn@slingshot.co.nz).

✓ **Terrace Farm BioGro certified Grains & Flours.** Bread wheat, rye, buckwheat. All either whole, stoneground flour or Zentrofan flour. Buckwheat for green manure. Ira & Geoff Wilson, Terrace Farm, RD 12 Rakaia 7782. Ph 03 302 8663 or [terracefarmorganic@gmail.com](mailto:terracefarmorganic@gmail.com)

## Health & Beauty

✓ **Certified organic skincare,** personal care and cosmetics. Totally chemical free. 15-day money back guarantee. World's first. Order online at [www.maximumwellbeing.com](http://www.maximumwellbeing.com).

com or phone 07 571 1141. Global organic business opportunity available [www.miorganicbusiness.co.nz](http://www.miorganicbusiness.co.nz).

**Make your own natural skincare products with Go Native,** NZ's premium supplier of pure, organic carrier oils, essential oils, clays, butters and more. Let our team of experts guide you with easy-to-follow recipes, video tutorials and tips at [gonative.co.nz](http://gonative.co.nz)

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**Mountain Valley Organic meats.** TUFTY® Beef & SHIRE® Lamb raised organically on Alpine & Herbal pastures near Fiordland delivered direct throughout NZ since 1990. Email: tim@organicmeats.co.nz

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✓ **Green Trading: Biogro certified organic products for people pets and plants.** Ayurvedic products, Neem and coconut oil: [www.greentrading.co.nz](http://www.greentrading.co.nz)

**Meals in steel:** For stainless steel lunch boxes and water bottles. Visit: [www.mealsinsteel.nz](http://www.mealsinsteel.nz) Call:099483876

✓ **IE PRODUCE - YOUR BIOGRO CERTIFIED ORGANIC SUPERMARKET** IE Produce "an award winning food retailer and New Zealand's first BioGro certified organic retailer, since 2000." IE Produce, 1 Barry's Point Road, Takapuna, North Shore. [www.organicfresh.co.nz](http://www.organicfresh.co.nz) Phone 09 488 0211

✓ **Liberty Market** is South Island's first and only AsureQuality certified organic retailer and is still family owned. Best range of organic groceries plus organic bread baked daily right here. Corner of Moorhouse & Fitzgerald Aves. Christchurch. Open 7 Days. [www.LibertyMarket.co.nz](http://www.LibertyMarket.co.nz)

**Organic Living Healthfoods.** Manawatu's complete organic grocery store. Also herbal and homeopathic remedies, natural skincare and more. Broadtop Shopping Centre, Broadway Avenue, Palmerston North. Ph 06 353 0549. Email [info@organic-living.co.nz](mailto:info@organic-living.co.nz)

✓ **Piko Wholefoods** has over 35 years of experience in organics, wholefoods and special diets. We are a BioGro certified store with a range of groceries to suit everyone. Piko is owned by a charitable trust and donates its profits to community organisations. 229 Kilmore Street, Christchurch 8011. [shop@pikowholefoods.co.nz](mailto:shop@pikowholefoods.co.nz) Phone 03 366 8116 [www.pikowholefoods.co.nz](http://www.pikowholefoods.co.nz)

✓ **Taste Nature** – Dunedin's Organic Food Shop and Eatery. Stocking extensive range of organic groceries especially certified organic

produce, bulk dry and wet goods and organic gardening supplies. Eatery serves seasonal organic fare. Check us out at 131 High St, Central Dunedin or [www.tastenature.co.nz](http://www.tastenature.co.nz) or phone us on 03 4740219.

**Waiheke Organic Food**, 20 Tahī Rd, Ostend, Waiheke Island. Ph 09 372 8708, email [organic@pl.net](mailto:organic@pl.net). Specialising in natural remedies & homeopathy, organic produce, dairy and meat, dietary and fine foods providing for vegetarian, vegan, paleo, raw and gluten free requirements. Stockist of Trade Aid, Bob Red Mill's, Dr Hauschka, Weleda, Giovanni, Kiwiherb & Harker Herbals. Focus on locally and NZ sourced products. Opening hours: Mon-Fri 9am-5pm, Sat 9am-2pm

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✓ **Delicious Heritage Fruit Trees.** Disease resistant fruit trees, berry shrubs and companion plants. Certified Organic. Delivered bare rooted July /August. Your Southern specialist. 0272273004. [www.habitata.co.nz](http://www.habitata.co.nz)

**Grow mushrooms and edible fungi at home.** Learn from the kits, then use your own materials. Buy MUSHROOM GOURMET kits at garden centres or visit [www.mushroomgourmet.co.nz](http://www.mushroomgourmet.co.nz)

**Koanga Institute...** Home of New Zealand's Heritage Seeds and Fruit Trees and Workshops for Regenerative Living [www.koanga.org.nz](http://www.koanga.org.nz)

**Setha's Seeds**, NZ Heritage Varieties of Vegetable and Flower Seeds grown organically. Workshops, internships and courses. [www.sethaseeds.co.nz](http://www.sethaseeds.co.nz).



## Services

**Helix Organics** - Organic Certification made easy for you – Full support for organic producers and operators, and new applicants to obtain and safeguard their organic certification. Organic standard requirements, full technical support, product development, preparation of application and management of certification process. Contact Dr. Heli Matilainen heli@helixorganics.co.nz, 04 384 5358 or visit [www.helixorganics.co.nz](http://www.helixorganics.co.nz)

✓ **Organic consulting** and BioGro certified approved horticultural contracting. Available for small lifestyle blocks or commercial orchards. Contact Peter Downard 07 872 4703.

## Websites

✓ [www.tuturu.co.nz](http://www.tuturu.co.nz). Fodda - Feeding the Earth, NZ made, odourless, organic Soil Enhancer & General Fertiliser.

## Miscellaneous

**Property wanted by sustainable living charitable trust** 100 - 300 acres of land for a new ecovillage, including some fertile soils for large-scale food production. All land tenure options considered. Option for current owners to continue residing. Contact: [earthcarecommunity@gmail.com](mailto:earthcarecommunity@gmail.com)

## Properties for sale / lease

**Kotare Eco Village:** Lease on section for sale by owner. For more information please visit: [www.ecovillages.co.nz](http://www.ecovillages.co.nz)



**Barfoot & Thompson**  
REAL ESTATE






**WAIUKU** 1510 WAIUKU ROAD

3
1
1
2
2

**ORGANIC FARM - 15.2HA**

A family run enterprise that has supplied the Auckland retail & hospitality market for 19yrs. Under certified organic production since 1998 this cropping operation produces a range of baby leaf salad greens, culinary herbs & leafy greens for the growing organic market. This business has a proven track record with an established client base. All products are grown, harvested, processed, packed & chilled on site. Ripe for expansion, this business is set up for future growth.

**FOR SALE**  
By Negotiation

**VIEWING**  
Phone For Viewing Times  
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**Scott McElhinney**  
027 230 8887 / 09 237 3125  
[s.mcelhinney@barfoot.co.nz](mailto:s.mcelhinney@barfoot.co.nz)  
Pukekohe 09 238 7019

## Advertising in Organic NZ

### Display Advertising

Advertise your business with a full-colour ad.  
**Contact Maria Biggelaar, 09 419 4539,**  
**Email: [advertising@organicnz.org.nz](mailto:advertising@organicnz.org.nz)**

### Goods & Services Directory

Ads under the Property, Business and Miscellaneous sections may be listed for one issue. Ads under all other sections must be booked for six issues. Producers wishing to list as certified organic must provide proof of certification.

Miscellaneous \$1.15 per word; Property and Business ads \$2.30 per word; all must be pre-paid. All other listings \$1.15 per word, with 10% discount for year's listing. All ads minimum 14 words.

**Send to: Soil & Health Association, PO Box 9693,  
 Marion Square, Wellington, 6141.  
 Ph: 09 419 4536, Email: [info@organicnz.org.nz](mailto:info@organicnz.org.nz)**

**Booking deadline for advertising in the July/August 2018 issue is 30 May 2018.**

Please contact us for more information and to book your advertising.

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- Testing – from seedling to leaf-tip, we have all the tools to bring you the answers.
- Quality products – view the range in our Horticulture Product Guide at [www.farmlands.co.nz](http://www.farmlands.co.nz) or visit your local Farmlands store for your free copy.
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**OUR**  
growers

*certification*

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story



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*<http://purefresh.co.nz>*