HARVESTS

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HARVESTS

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Membership
Bio Dynamic Farming and Gardening Association members receive HARVESTS three times per year.
See page 5.

The Association exists to guide, foster and safeguard the biodynamic approach in New Zealand. This involves agriculture, horticulture, forestry and animal husbandry as indicated by Rudolf Steiner. It is affiliated with the General Anthroposophical Society.

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Editorial

Our gardens say so much about who we are, and about how we see our place in the world.

I've been reminded of this by a talk that we've printed in this issue on the history of gardens (see page 32). As French biodynamic leader Jean-Michel Florin explains there, ever since humans began cultivating plants, gardens have reflected their gardeners' beliefs about cosmic order and our human place in it. At some points in history, gardens have reflected humanity's sacred connection with the wider cosmos. At other times and places, gardens have embodied particular people's desires to organise, tame and control the world. Sometimes these two tendencies have overlapped, just as they war in our social world.

So what can we see in the gardens around us today? What vision of cosmic order do our society's gardens project?

Even in people who don't profess a strong affinity for plants, the impulse to order the landscape is a strong one. Consider the strange contemporary phenomenon of the mowed lawn. I was once kicked out of a rental home in large part for my failure to mow the lawn. The landlady thought it made the property look untidy. In her eyes (and in many people's), a tidy lawn has a huge social significance – but why? Perhaps lawns are a visual way of implying that the lawn-owner has life under control.

On my last visit to my birthplace in California, in the midst of the state's worst drought in recorded history, I was amazed to see that in the suburb where I grew up, even in the presence of water rationing, people were still watering their withered lawns. One house on the block where I grew up had let their lawn die into barren brown; everyone else was still clinging to the illusion of an orderly, manicured suburbia, no matter how ecologically insane.

Of course, lawns are just industrial agriculture writ small. Large industrial farms are a landscape of control, nature subdued into neat and orderly rows, designed for the use of machines.

How do we bring the sacred back into our society's gardens? How do we do it in a way that places humanity in right relationship to nature?

There are many answers to that question in this magazine. The biodynamic practices offer us a way of re-ensouling our gardens, of bringing cosmic connection back into our landscapes.

Societal influences on our gardens are not a one-way street; the way we interact with gardens can influence our behaviour more broadly as well. Living with the biodynamic calendar has strengthened my relationship with the moon. I don't always follow the moon calendar perfectly, but I do think about it when planning garden tasks. Subtly, this shapes my understanding of who I am as a human in the universe.

Imagine a whole society reflecting daily on what the moon is doing. Considering the cosmic before we do even simple tasks like pruning the trees has the power to radically change our perspective on who and what we are. Biodynamic gardeners may use machines, but there is an inherent nodding to a greater order, a capitulation to the rhythms of the cosmos.

Simple organic gardening practices, like encouraging beneficial insects (see Anne Dodds' article in this issue), also remind us that we have to cooperate with the very small – that creatures nearly unseen can create order for us, if we make a home for them. These practices too can have deep consequences for how we see and treat the world around us.

This time of year is a great time to set intentions for the growing season ahead. What vision of the world will your garden or farm embody? How does your garden reflect your relationship to our earthly world and the cosmos? What destinies will you choose to sow, for yourself and for our wider world?

- Rebecca Reider

MEMBERSHIP

Becoming a member of the Biodynamic Association is more than just a subscription to Harvests *magazine...*

You become part of a special community where biodynamic ideas are shared and biodynamic ideals are nurtured. You have the opportunity to participate in relevant discussions that affect your food, your animals and your environment. You have access to a myriad of different resources and, most importantly, the knowledge and spiritual companionship of the membership.

Since 1939, the Bio Dynamic Farming and Gardening Association in New Zealand has campaigned for healthier and more sustainable living through the practice and implementation of the biodynamic ethos.

Membership to the Bio Dynamic Farming and Gardening Association:

(including *Harvests* subscription)

- ☐ Commercial membership ($133 per year)
- ☐ Individual membership ($92 per year)
- ☐ Student membership ($46 per year) **
- ☐ The Biodynamic Calendar ($32) *
- ☐ The Demeter Standards ($29.10)

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*Note: Annual membership includes three issues of *Harvests*, the biodynamic calendar, member's library catalogue and three resource guides: *Using the Biodynamic Preparations*, *Towards an Understanding of the Biodynamic Preparations* and *Other Biodynamic Measures* (all by Gita Krenek).
**For students of related courses

An amazing year in the greenhouse

(with thanks to some tiny collaborators)

By Anne Dodds

Anne Dodds' greenhouse is at Te Awaiti on the Wairarapa Coast. A visit to her garden is part of the coastal walk for many people.

What a season!

Day after day this past summer, I would walk into my greenhouse and be amazed. Never have I had a season with such high plant health and low pest burden. So what did I do to warrant such a season in the greenhouse this year?

I don't believe it was any one thing but rather a combination of several practices. As I have often commented, biodynamic materials are not a magic bullet, but rather very effective tools to have in the tool kit, along with other sound organic management practices. A combination of the timely use of biodynamic preparations (including cowpat pit), good compost, companion planting and biological control of pests formed the essence of organic management this year in my greenhouse.

The start of the process was the incorporation of well-rotted bull kelp, dug in and mixed with good biodynamic compost. The use of sequential sprays of 500/501 twice in spring at moon opposition laid a good foundation, along with planting out and side-dressing with CPP.

This year I also decided to try some companion planting with my tomatoes, and decided to have a go with carrots. The Rodale Institute book *Carrots Love Tomatoes* must have been named that for a reason, I thought. Now I think it is worded that way because it comes off the tongue better, because "tomatoes love carrots" doesn't sound as good. The carrots didn't do very well – they were a bit small – but I suspect the tomatoes did love them.

The biggest contributor to the pest management was that I again used predators from Bioforce NZ. This season I used the pack that came with *Encarsia formosa* for whitefly, *Aphidius colemani* for aphid control, and dusky ladybirds.

E. formosa is a parasitic wasp which lays its eggs in the third and fourth nymph stage of the whitefly (see diagram). Once the nymph has been parasitised, it turns black; shortly thereafter, the adult wasp hatches out. *Aphidius* is another parasitic wasp. It lays its eggs in the adult aphid, and again, once parasitised, the aphid turns orange and then the *Aphidius* hatches and goes about its business. The dusky ladybird quite simply feeds on both the whitefly and aphid.

I introduced these predators about a month after planting out, around the middle of September. I have used them before, but never with such success. I put down the difference to the fact that I also planted out alyssum, which

> **… biodynamic materials are not a magic bullet, but rather very effective tools to have in the tool kit, along with other sound organic management practices.**

Photos by the author, inside her greenhouse

Alyssum flowers weep over the bed border under the eggplants, providing food for beneficial insects.

Photos by the author, inside her greenhouse

is well known for attracting beneficial insects. The tiny white nectar-producing flowers allow the *E. formosa* and *Aphidius* to feed as they go about controlling the pest population. It is also entirely possible that the alyssum attracted other predators such as hoverflies at the same time.

In the past I would need to reintroduce the predators a couple of times a season, but this time, as I was growing food (flowers) to nourish their little bodies, I had no increase in the pest population up until the beginning of June. Both aphids and whitefly were under control. By the middle of June, the aphids were getting up to a problem stage again. I put that down to the fact that possibly the *Aphidius* doesn't like the cooler temperatures, as well as the fact that the eggplant and capsicum were by then under stress due to the lack of sun hours and warmth.

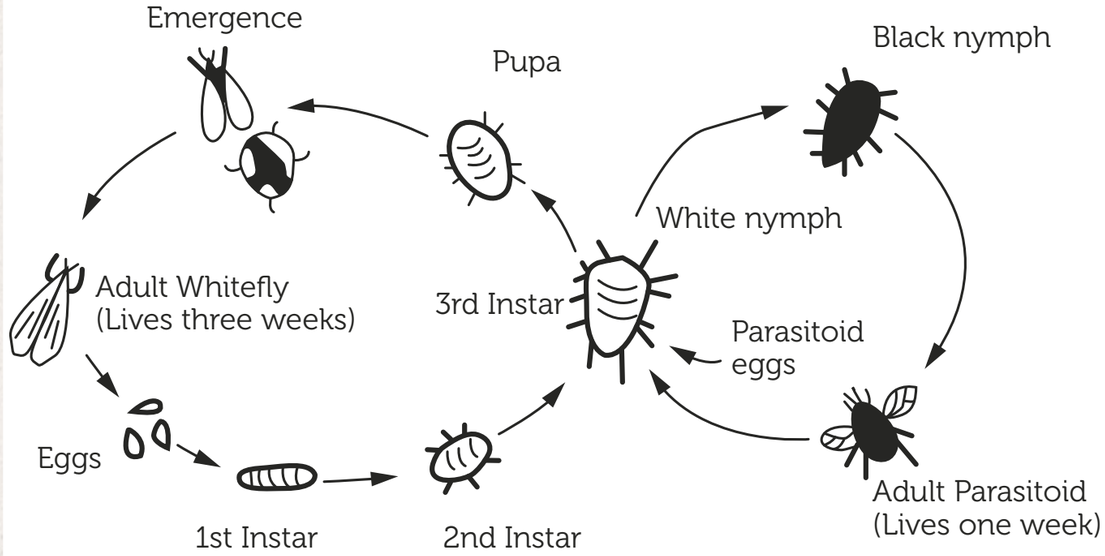
I very carefully observed what was happening with these amazing little guys, and the most incredible thing is that they "farmed sustainably." In other words, they did not destroy the entire population as we humans have tended to do; they actually maintained a small population so that they could maintain a lifestyle that they seemed to enjoy in my little Garden of Eden greenhouse.

> **The predator population needs to be well-established in order to work with the pests. If you want to try this method of control, do not leave the introduction too late.**

With the pests under control, the plants were not stressed, and therefore there was no disease. So often the moulds and fungal diseases are able to get a foothold due to the honeydew secreted from the whitefly – but no whitefly, no honeydew. No honeydew, no disease.

A couple of times this season I did need to do a spray of Bt (*Bacillus thuringiensis*) to control caterpillars (unsure of the variety, but they ate the leaves and left their unwelcome deposits). Still, this comes under the umbrella of biological control.

It is very important to keep up with regular observation of what is happening to your plants. If you see early evidence of a problem such as caterpillars, then the remedy can be simple and effective. Too often, if a problem is not spotted early on, it can become very difficult to manage. For instance, if the aphid or whitefly population gets too big, and then you introduce the predators, it will not be successful. The predator population needs to be well-established in order to work with the pests. If you want to try this method of control, do not leave the introduction too late; you will be behind the eight ball and that can mean only trouble.



Source: Wikipedia

There is one other factor that I would like to acknowledge, and that is the love that I have of my greenhouse garden space as I walk in every day to tend and nurture my plants. My heart goes out with thanks as I harvest the bounty; I am fully aware that I had considerable help from the unseen forces of the elementals.

Now all I have to do is to repeat what I have done next season and hope that I get the same results.

Photo by Goldlocki at the English language Wikipedia

Parasitised whitefly larva (black) on tomato leaf.

LAND TRUSTS SUPPORT SMALL FARMERS

AN EXAMPLE FROM FRANCE

By Loran Verpillot

Loran Verpillot previously worked for the French land trust organisation Terre de Liens. Now she lives in Central Otago, where she is applying biodynamic methods to a rural block.

Becoming a farmer is not easy, and it's even less easy when you do not inherit any land from your family. First you have to find the land; then you have to finance it. Usually farmers fully own their land after years of paying off a mortgage. But what about not owning the land, but renting it from a land trust? After all, why are we preoccupied with "owning" the land?

The origin

The farming context is very different between France and New Zealand, and so are the rural areas.

In France, there are fewer and fewer farmers (and fewer farms, as they become bigger and bigger). But every year sees more people who would like to become "small farmers." They are usually under 40 years old, come from the cities, are highly educated, and want to create or take over a small farm. They often farm organically or biodynamically on 20-50 ha of land with some goats or cows to make cheese they will sell locally, or 2-3 ha for commercial gardening to sell veges to the local farmers market. For these people, buying land is often impossible. No bank will lend them the hundreds of thousands of dollars they would need to start their dream project in a way that will be successful. In that context, in 1998, a small nonprofit organisation called *Terre de Liens* (meaning "land of links") was created, to work on different options to access and conserve farm land.

How does it work?

Over the years, there have been many examples of local land trusts. The problem with these was their sustainability. When the members of the trust leave the trust or die, it is hard to replace them and to keep the trust alive.

So what about having a national land trust that could replace those small land trusts or help them to live longer?

> **Becoming a farmer is not easy, and it's even less easy when you do not inherit any land from your family.**

In that spirit, "La Foncière" was born in 2006 as a tool created by Terre de Liens. Its goal is to raise money from citizens to buy organic or biodynamic farms. Since its creation, this land trust has collected almost €41 million, and bought 110 farms spread throughout the country (2,500 ha of land). The money is collected through sale of shares that anyone can buy; so far, there are more than 9,500 shareholders. Those shareholders do not make money from the shares, but they do not lose any either, as each share's value follows the inflation rate. However, the shares of the Foncière are considered to be "ethical investment," which means that shareholders receive a tax deduction, similar to what we get when we make donations to charitable trusts in New Zealand. To be granted this tax deduction, people have to keep their shares for at least five years. They can withdraw their

Photos by Loran Verpillot

This farm in Burgundy, called St Laurent, has been biodynamic since 1992. It is now owned by the land trust organisation Terre de Liens, and farmed by four people. With 130 ha of land and 40 ha of woodland, it has dairy cows to make cheese on the farm, goats, sheep, commercial gardens, and wheat to make flour and bread on the farm. A small shop on the land sells the farm's products, and the rest is sold at farmers' markets. The farm also hosts biodynamic training, as well as school camps.

Ferme Jointout, another land trust-owned farm in Burgundy, is a mixed farm with three people working on it: one commercial gardener, one sheep farmer, and one goat farmer who makes cheese. Everything is sold on the farm, via CSA and at farmers' markets.

money after that five-year period (or sooner if holders don't want the tax deduction), but at only one time in year, at the AGM.

The farms owned by the Foncière are then rented out to farmers. Renting farmland in France is still very common. In France, farmers who rent farmland are very protected by the law, and it is really hard for a landowner to get rid of a farmer.

The aim of the organisation is not only about buying land; it is also about rethinking the way we eat and buy our food; about creating links and networks between people, between consumers and producers; and about promoting community connections and solidarity in rural and urban areas. The Foncière is also a great way to raise awareness about ecological agriculture.

> **The aim of the organisation is not only about buying land; it is also about rethinking the way we eat and buy our food; about creating links and networks between people, between consumers and producers.**

Going further

When I started working for Terre de Liens, I met a group of biodynamic farmers. They had struggled for years to buy land through a small land trust, and had converted it to biodynamic; now they were thinking of what would happen to the farm after them. They wanted to help future farmers avoid the struggle that they had lived through. They told me they never felt like owners of the land, because we can't own it; we can only borrow it for a certain amount of time. They wanted to find a way to keep the farm biodynamic. Meeting them really changed my relationship to land ownership. They were talking about guardianship, or what Māori call kaitiakitanga.

So to go further, they wanted to donate their farm to an organisation, but there were none In France that could take it. Finally in 2012, La Fondation, a land foundation, was created by Terre de Liens. Its purpose is to welcome farm donations and keep the lands farmed in a way that respects the water, the soil and the local environment. It is a way to protect farmlands for more than just one generation. So far eight farms have been donated to the foundation, but many others are to come.

For more information: www.accesstoland.eu/-Terre-de-liens-

A LAND TRUST FOR NEW ZEALAND

SECURING OUR FOOD FUTURE

By Carolyn Hughes

Carolyn Hughes is a trustee of The Land Trust New Zealand.

Who are we?

The idea of a land trust in New Zealand has been in the ether for some years. The practice is already well established in the UK, Europe and North America. Inspired by the creative ways these overseas trusts have been tackling exactly the same issues as we have here, the late Lis Alington pulled together a group of trustees and set up The Land Trust as a registered charity (CC37781).

In so many countries, land speculation has had devastating effects on family farms, the environment and opportunities for young farmers. By going beyond the marketplace, holding land in a nonprofit trust and separating ownership from the right to use, land can be conserved in the commons on behalf of all New Zealanders and can continue to be farmed by future generations.

The priority is to take certified biodynamic and organically farmed land out of the speculative economy. The Land Trust considers biodynamic Demeter certification to be the highest internationally recognised standard of agricultural integrity and productive resilience, but we also acknowledge the efficacy and possibilities that exist within other regenerative methods.

What are The Land Trust's aims?

Our first priority is to protect such food-producing land from becoming an overpriced commodity that is bought and sold for speculative purposes. Family farms are struggling with debt and rising costs. With so much capital tied up in a farm's infrastructure, there is little left over to invest in the business of farming. Many farmers feel they have no choice but to sell their land. Agriculture is fast moving away from being a multi-generational family pursuit where farms are inherited; farmland worldwide, including in New Zealand, is becoming part of corporate portfolios where shareholders often have little interest in protecting a farm's ecological gains for future generations.

A second aim is to provide a succession plan for organic farmers concerned about how their life's work of ecosystem restoration and topsoil improvements may continue. Organic and biodynamic farmers have often spent many decades building quality soils, improving biodiversity, waterways and animal health, nurturing the environment and implementing practices that will provide for the welfare and resilience of future generations.

The average age of farmers in New Zealand is over 60, and the question of who will take on the farm and continue to steward the land is often a pressing one. Farmers with no succession options are often forced to sell their organic farms to real estate developers or agribusiness interests. These compromise the capacity of younger New Zealanders to get into farming, let alone find the capital to start a sustainable business. The Land Trust will make land available to a generation of young farmers and skilled growers without the financial means to purchase land. They will benefit from a leasehold arrangement based on the actual economic productivity of the land, and from sharing economic responsibility and kaitiakitanga/guardianship with consumers.

A third aim is to build food security as a vital component of national security. The Land Trust will encourage the production of fresh, biodynamic/organic locally grown food. It will also support people living in rural and urban areas to unite in support of the land and our shared long-term interests. The Land Trust will also support a variety of social arrangements around land, such as community-supported agriculture (CSA), on-farm education, mentoring and social enterprises.

How will it work?

The Land Trust will seek donations, legacies and philanthropic gifting to acquire productive land. In the future we will also look at various forms of public and community shares. The Trust will provide a vehicle for farm succession for those retirees wanting to remain connected with their land, enabling them to pass on their life's work and skills while helping young people access land and develop their livelihoods as farmers without the burden of mortgages.

Through networking with other organisations, we hope to provide a stimulus for collective action to enable New Zealanders to secure our economic, ecological and food futures.

There is a volunteer board of trustees who have knowledge and experience in many necessary areas, but there are some specialist gaps we still need to fill.

To know more, please contact info@thelandtrust.co.nz

Photos by Julian Vares

Leading Farmland Trusts Overseas

UK:
www.biodynamiclandtrust.org.uk

European Union:
www.accesstoland.eu/-Biodynamic-Land-Trust

France:
www.terredeliens.org

Germany:
www.bauckhof.de

North America:
www.yggdrasillandfoundation.org

Mitigating climate change through biodynamics

Peter Bacchus explains how farmers can optimally store carbon.

The author with a clay-covered compost heap.

Much hot air is vented these days on the subject of the climatic changes that the Earth is experiencing. However, a very relevant omission usually accompanies the focus on emissions – no mention is made of where carbon might be stabilised. Forests are sometimes mentioned; but look how often they burn in forest fires, or blow down in winds, only to rot and give off some of the carbon again. The carbon sink that is missing is the soil, which can hold carbon in a deep slow cycle for centuries. This is where good biodynamic practice is very productive.

Managing soil carbon

So how does the carbon get into the soil?

One way that we can manage carbon to a certain extent is via photosynthesis. If the soil is in poor condition, photosynthesis is poor, unless it is via self-propagating weeds that grow luxuriantly. The more synthetic nitrogen the farmer applies, the less the plant photosynthesises, and the more carbon from the soil is lost to the atmosphere. This is the very opposite of what the world needs at this present moment.

So what needs to be done differently?

We need to manage and amend the soil so that the plants we wish to grow for food, fodder, fibre, timber and park amenities self-propagate and grow luxuriantly. The soil needs to be full of life from a great range of aerobic organisms, to form a complete food cycle within the soil.

We need to ensure that all mineral levels are adequate for the plants, animals and humans we wish to nurture. There should be an adequate supply of plant and animal waste to supply the whole life cycle. If any part goes short, then all go short. The art of farming is to ensure that all have sufficient nourishment.

One of the most important elements that plants need is carbon. It can form up to 40 percent of dry leaf content.

Much of this carbon is absorbed through the leaves as part of the process of photosynthesis. Plants return carbon to the soil through their roots, and carbon is released from the soil through the respiration of soil organisms. Over the last century, tractors have replaced horses and oxen in the rural landscape, so carbon emissions in the rural landscape have also changed.

Sugar is 41 percent carbon. Plants exude it through their roots each night, feeding the root-colonising bacteria and fungi that are at the beginning of the soil biology food chain. If the soil is in optimum aerobic condition, it is possible to have the top metre of soil contain up to 10 percent carbon, which is about ten times more than present levels in many farm soils. For every tonne of carbon that plants cycle into the soil, three tonnes of carbon dioxide come out of the atmosphere. (The other two tonnes are turned into plant matter). Just imagine for a moment what a difference this would make if the whole Earth was managed this way.

A high concentration of carbon dioxide in the atmosphere is an opportunity for every farmer and grower, especially if they understand natural processes well.

Where biodynamics comes in

The biodynamic preparations, especially the two spray preparations, cow horn manure (preparation 500) and cow horn quartz (preparation 501), are important to the carbon cycle. Sunlight pours through the plant assisted by 501's silica on and around the leaves, and by 500's stimulation of calcium carbonate activity under the soil. These elements draw light towards them.

The leaves make sugar with the help of magnesium, iron and nitrogen. Root-colonising organisms feed on this sugar and are at the beginning of the food chain within the soil. When this system is operating at the optimum rate, significant changes appear in the soil. In a recent case, we had a terraced garden with clay paths. Over a period of eighteen months, when we had the whole system working well, we observed a clay path penetrated by large worms that filled the clay with castings down to a 200 mm depth.

In the eighth lecture of Rudolf Steiner's *Agriculture Course*, Steiner mentions the importance of having the right balance of trees and shrubs within a farm landscape. I have seen cases where farmers have done this, covering 30 percent of the farm with fenced-off areas of trees and shrubs. One farmer reported that the farm grew more

Photo: Peter Bacchus

Worm castings in pasture help carbon to accumulate in the soil.

grass and the farm was more profitable. Also, where plantings were continuous from a stream's beginning in the hills to where the streams entered the harbour, there was no more flooding, and the streams become stony-bottomed and full of fish.

To minimise the loss of carbon from the leaf canopy to the atmosphere, place shrubs and trees where they will have optimum shelter from the wind and just the right amount of light from the sun. This will vary from one climatic zone to another. The light factors can be managed to a degree by the use of the biodynamic preparations. Extra 500 can help when there is too much light; when the opposite is the case, use extra 501.

From what I have seen, it is possible to mitigate some local effects of climate change by following the guidelines above. At the same time, if more than 50 percent of farmland was involved in these practices, there would be significant changes in the way agriculture contributes carbon to the atmosphere.

Peter Bacchus has been involved in the biodynamic movement for most of his life, as a farmer, teacher and adviser.

REFLECTIONS ON THE BIODYNAMIC CONFERENCE 2016

Warwick Mather shares lessons from the annual Biodynamic Association Conference, held in Havelock North in May 2016.

Biodynamics is about so much more than just practical work based on a thorough knowledge of organics – and this conference reflected that. The weekend not only traversed a very broad spectrum of topics, but also attended to what lies behind and beyond information.

I came away feeling called to action in land-based work – action informed by a deepening awareness of and connection with the life that weaves through and between everything we see in the physical world. For me, that was the underlying theme that ran through everything at the conference.

At the heart of biodynamics are the completely interconnected relationships between all life, the chemical and geological elements of our planet and the heavenly bodies beyond and around us. This explains why the conference programme included such a range of topic areas and activities.

One quote from the keynote speaker, Hans van Florenstein Mulder, points to this interrelatedness: *We do not see the life that lives, We only see the form it gives; We do not see the soul that wakes, We only see the form it takes.*

Hans' two talks contained a wealth of wisdom and a call to act in harmony with the life that weaves through all of nature. Hans pointed out that to change from our society's current destructive practices in agriculture requires a completely different worldview from the current one, which emphases individualistic endeavour and competition for resources. That current worldview is also reflected in our economic system, which is closely linked to our industrial agricultural model. The words *ecology* and *economy* are both derived from the same Greek root, implying a concern for the household – *ekos* – in which we live. Fundamental changes in worldview and direction are needed to bring the two into harmony.

Hans pointed out the key differences between three types of farming: chemical, organic and biodynamic.

Photo: Clare Buckner

Rachel Pomeroy addresses the conference.

In chemical farming, farmers work with the forces of decay (gravity and entropy). This chemical model, based on soluble fertilisers, is a selfish activity, treating the earth as a commodity. Now with climate change causing heavy rains and long periods of dry, chemical farms are becoming increasingly impossible to farm, with soils either cracking or turning to mud and plants becoming weaker. Hans' experience with farmers in Asia has brought this into sharp focus.

Organic farming recognises a balance between the forces of decay and those of life, thus bringing an aspect of soul into farming. Modern organic farming, with its knowledge of microorganisms and their role in the life of the farm, has increased productivity over traditional organic practices and also over chemical farming.

With biodynamics we bring back another lost dimension of agriculture – the spirit. Our farms and gardens are not only living organisms, but they also have a consciousness. Animals help bring that consciousness to the farm, and the farmer/gardener brings yet another higher level of consciousness, the "I" or individuality. Each farm is a unique enterprise and needs the individual sensitivity of the farmer; we cannot apply a template approach to our farms.

The two keynote talks from Hans really laid out the bigger picture of biodynamics and its role in healing the land and the life it sustains. All the other speakers, the farm visits and the artistic activities filled in other key aspects of this bigger picture. I will attempt below to give just a hint of what those other speakers brought before us.

Hans' note that the "dynamics" in biodynamics implies rhythm – which comes from the universe – led beautifully into Rachel Pomeroy's talk, which extended our thinking into the connection between the firmament and heavenly bodies and all that lies below them, right to the centre of the Earth. She also referenced the link between the biodynamic preparations and the sun and planets, and the link between the stirring of the preparations and our human will.

Tyne Nelson provided us with a wonderful vision of whakawhanaungatanga – building relationships between biodynamics and traditional Māori values and practices. She highlighted some of the close similarities between Anthroposophy and some key elements of Te Ao Maori – the Māori world view (see separate article on page 24).

Sue Simpson spoke on "Enhancing Awareness as a Path to Becoming a Better Biodynamic Practitioner," reminding us

> **With biodynamics we bring back another lost dimension of agriculture – the spirit. Our farms and gardens are not only living organisms, but they also have a consciousness.**

Photo: Clare Buckner

Tyne-Marie Nelson addresses the conference.

Photo: David Wright

Michelle Vette.

that our love of technology can put us in danger of losing the ancient art of "common sense." Waiting for data to inform our decisions may keep us from using our intuition to guide our actions. We need to build relationship with the world around us and open our hearts, which are the sounding board for our thoughts.

Michelle Vette, in her address "Beyond Food Stuff – Real Nutrition," focused our attention on the broader significance of food. We need proper nutrition to enable us to gain the strength to manifest the spirit within the physical. It's commonly said that we are what we eat. But by pointing out that 70-80 percent of our immune cells are in our guts, Michelle argued that "you are what your gut microbes do."

James Millton's talk on the "Mindfulness of Growing Biodynamic Wine" was a marvelous medley of insights from his years of practical biodynamic experience. He shared how what lies beyond the world we perceive with our ordinary senses gives us so much more insight to inform our decisions and practices.

To conclude the presentations, Gui Vilhena gave us a fascinating view into the amazingly complex world of bees and how finely tuned they are to the world around them.

The closing plenary session on Sunday addressed a number of questions that conference participants were invited to post on large sheets of paper during the weekend. These questions were then opened up to the whole gathering to answer and discuss, stimulating a multifaceted discussion.

The tea breaks and meals provided a key component of the life of the whole organism that was the conference over those three days. Together with the talks, artistic inner activities and farm visits, the weekend was a truly refreshing, stimulating and enlivening time, sending us out with renewed vigour and passion for creating a better world.

BIODYNAMIC AWARD GOES TO JAMES MILLTON

The Biodynamic Association Council gave its award for commitment and service to biodynamics in Aotearoa New Zealand to James Millton.

James has pioneered and championed the cause of biodynamics in New Zealand and around the world tirelessly for over 30 years.

The award was presented at this year's conference by Association Chair Mackenzie. Logie said that James "has the ability to inspire, challenge and make you think of things in many different ways; he is respected by his peers in his industry and is often asked to present at conferences or MC events. He was invited to become a member of the order of merit in 2012 for his services to the New Zealand wine industry."

"He often speaks about the merits and journey that biodynamics will take you, your property and the world on. He has an infectious personality with a brilliant way of grabbing a crowd of very conventional farmers and holding them captive for long periods of time as he eloquently describes how it is to be a biodynamic farmer growing grapes in Gisborne," Logie said.

Logie also paid tribute to James' wife, Annie: "Nearly all of this work and energy is possible in no small way due to the support, encouragement, direction, understanding and love over the years from Annie."

Logie said that James often speaks about commitment – of a person, or a business or organisation – using the analogy of a plate of bacon and eggs. The chicken has a passing interest; but the pig is fully committed. James is truly committed, like the pig, but he is also like a chicken – always peck, peck, pecking away and rattling the cage.

Logie ended with a quote from James that sticks in his mind: "If your plants are grown biodynamically they will ultimately end up growing in balance and will not be in a state of 'dis-ease'."

Photo credit: Millton Vineyard

James Millton with the award trophy.

James Millton accepted the reward with characteristic humour and humility. "An award such as this is given only to those who have shown long-term commitment to this type of very specialised work," he said.

"To find that our peers have chosen us is a great privilege and honour." He also paid an emotional tribute to his wife, with whom he established Millton Vineyards & Winery in 1984.

"Her support has been paramount to the success of our business and for this I am eternally grateful."

The Peace of a Biodynamic Farm

A Visit to Tauroa Station, by Jen Macdonald.

A visit to Tauroa Staion was the one of the first day's activities at the 2016 Biodynamic Conference. Owner Heather Smith and manager Nick Radley showed visitors the workings of this biodynamic farm in the Tukituki Valley behind Havelock North.

My first impressions were of lushness and quietness. As on other biodynamic farms I have visited, there was no sense of agitation, but an air of calm. The cattle were quiet as we walked towards them. They looked as if they had a sense of belonging.

I could see something of the history of the place in the stockyards, which looked as if they had been added to over time. The yards also told me that this was a farm where things were done quietly, because the ground was not churned up as stockyards so often are.

As with the cattle, so with the chooks, which also seemed calm, as if their needs were being met. Chooks can be intensely agitated, but there was no such intensity in these. I liked what Nick said about accepting what they produce rather than pushing them past their natural cycle. They seemed to be at home in their surroundings – good for both human and beast, as the animals have an effect on us and we have an effect on them.

> **“ In recent years I have visited a number of other biodynamic farms, and one thing is obvious – biodynamic farms are different.**

I recall a story that a fatstock drafter I knew told me years ago about his apprenticeship. The fatstock drafter would come to the farm and collaborate with us to draft out those animals that were ready to be sent to the abattoir. He recalled that as they drove away from another farm one day, his older supervisor asked him what he thought of that particular farmer. The young man said: “He didn't seem to do much.” The older man said: “Yes, but he knows when stock are doing.” The essence of farming stock is to know when stock are doing. I felt that at Tauroa, all the care taken was evident in cattle that were “doing.”

At this point I should explain that I grew up on a farm in Hawke's Bay. My relationship with farm animals began early, as I rode a pony to school from the age of 5½. Later, I helped my father in the stockyards and after school rode around the paddocks checking for animals that needed attention – a ewe that was cast or one that had lost her lamb, for example. As an adult I was first a farmer. Later, when I came to live in the city, I worked in a saddlery shop – again on a farm. So I have, over more than 70 years, observed farms and farmers, and in fact during rural social activities I visited Tauroa several times before it became a biodynamic farm. In recent years I have visited a number of other biodynamic farms, and one thing is obvious – biodynamic farms are different.

On Tauroa Station I experienced again what I had first seen at Kate and Shorty Buckingham's in South Auckland. The Tauroa cattle were like Shorty and Kate's dairy cows – their needs were met through the way the land was farmed to

Farm visitors hear about Tauroa's cattle. Te Mata Peak in background.

Photo credits: Niki Morrell

Looking across the Tauroa Station pasture towards the hills just north of Te Mata Peak, with feijoas in the middle distance.

Tauroa Station owner Heather Smith (red jumper) and manager Nick Radley lead the farm tour.

provide balanced nutrition. Sometimes I see people in the town or on the bus whose needs don't appear to be met, but I saw nothing like that in the animals at Tauroa.

Nick told us about putting homeopathic drops in the water when Tauroa's calves were weaned. That care, recognising the distress that animals might feel, seems to me to be the difference between farming and grazing. So many times I have seen aggression shown to farm animals – in moving them on the road, in stock yards, going from paddock to paddock – with no thought of a respectful way of associating with them. Instead of calm appreciation, farmers often have some level of aggression and need to control rather than manage. I have never understood why some people feel the need to yell around animals or create noise, which in my observation is simply confusing to the animal. On TV's *Country Calendar*, animals are so often chased by dogs or machines that perhaps it's considered normal.

In older forms of agriculture, herders worked with goats, sheep and cattle in places without any fences. Those people herded their animals and they would not – could not – scream and yell at them. In some cultures, the cattle lived below and the people above; no one wanted stock that would become restless under the house.

At Tauroa it seemed that the soul of the place was at peace. Even the dam seemed serene, with the grass growing right to the water, and there was harmony in the landscape thanks to the dam's nourishment. The dam looked as if it had been there forever, but Nick told us about building it with his father. It looked as if it fitted into the landscape, and it was beautiful.

So many times I have seen land modified or divided up in a way that takes no account of the topography and no account of the way animals live on it – no account of sheep tracks, for example. The attitude is "I impose my will on the land" rather than "I work with it." I recall one example of a block divided by a new fence. To enable the fencing, the land was scraped in a way unrelated to anything. Six years have passed and the scars are still there. Tauroa is an antithesis of all that.

> **That care, recognising the distress that animals might feel, seems to me to be the difference between farming and grazing.**

The other story I take away from Tauroa is about the feijoas. It is a story with so many nuances – Heather's enthusiasm for the taste, for example, an enthusiasm which I certainly share. Although I have eaten feijoas for many years, it was the first time I had eaten the skins. They were delicious. Heather had discovered that the skin was so nutritious. I noticed the glossiness of the leaves and

Farm manager Nick Radley takes questions from the tour group.

fruit, which I have seen in other types of fruit on other biodynamic farms.

Also remarkable was the use of sheep under the feijoa trees. The lambs trim back the grass and the lower branches – ewes are not used to do this as they would reach too high. The farmers then remove the lambs to allow the fruit to drop. It seemed a harmonious rhythm. Only an observant person would match the rhythms of lamb weaning with those of the fruit coming on. I could see that Heather is really in touch with what is around her. Her commitment is clean – not like where half your mind is going trout fishing and you are not quite there.

Heather is also thinking of various ways to distribute this beautiful fruit, which will mean that many people can share the benefits of her energy and commitment. It seemed to me she truly had her feet on ground. She was growing the best, most nutritious feijoas in that environment, but also had a flair for different ways of marketing them. She started with a few tonnes, and figures went up steadily; then suddenly there were a lot more feijoas, as the amount harvested increased dramatically. I have heard of a leap like that before from other biodynamic farmers on other farms, after the biodynamic practices have bedded in.

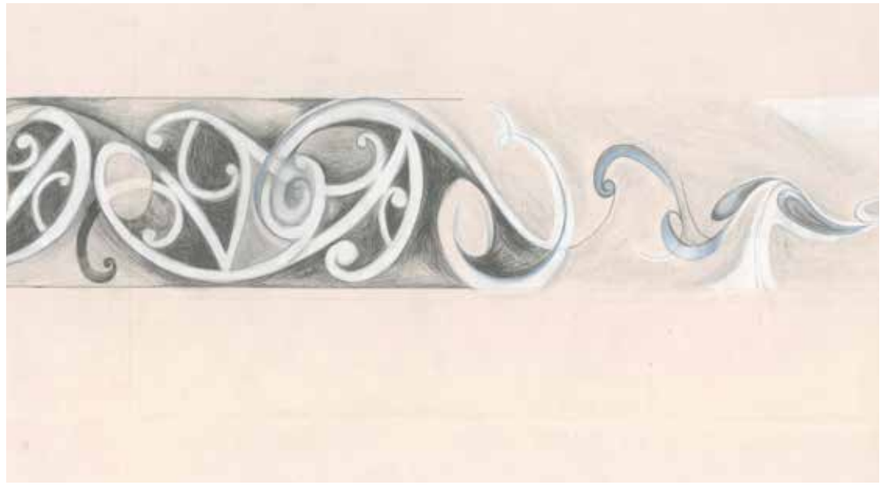
It was a pleasure and a privilege to visit Tauroa Station.






BIODYNAMICS AND TRADITIONAL MĀORI AGRICULTURE

By Tyne-Marie Nelson



Iain Trousdell, Flowform International Corporation

Left. Kowhaiwhai drawing by Tyne-Marie Nelson. Right. Patterns of flow (photographic experiment).

I studied biodynamics with Taruna College in 2014. Whilst doing so, I found myself wondering: *Why aren't there more Māori practising biodynamics?* In 2015, with the help of Taruna and the Biodynamic Association, I began exploring this question. The Kete Ora Charitable Trust gave a grant to Taruna for this work. It was with a touch of delight and great nervousness that I recently shared some of my insights at the biodynamic conference held in Havelock North.

As a guide for my presentation, I took on Steiner's indication: *'Our considerations in agriculture must range more broadly than is generally assumed to be relevant.'* I focused on the unique social and cultural environment we have here in Aotearoa.

In my own family unit, I had seen that people can grow up in the same environment but experience it very differently. As a daughter to a Māori mother and a Pakeha father, I've experienced firsthand the issues that can arise if this point is not taken into consideration.

In *The Challenge of the Times*, Rudolf Steiner said: "Especially in the future will it be necessary that mutual understanding shall come about between human beings... by an understanding between man and man." With this in mind, I endeavoured to walk through time, from the Polynesian arrival to Aotearoa in the 1300s to the present day, in order to gain some appreciation for Māori experience.

> **Shared cultural ideas include the recognition that soil is the basis of all life; that everything of the natural world is connected; that water is the life giver of all things; that the Earth is but a reflection of the cosmos; and that matter is never without spirit.**

This was how I was able to realise something that I had previously been oblivious to: that Māori are still recovering from the rapid displacement and subsequent alienation from their ancestral lands which occurred during the 1800s. Whereas once upon a time every individual in Māori society carried with them at least the basic knowledge and skills of food cultivation, this is no longer the case. Māori have become a largely urbanised people, and in order for them to embrace biodynamics in any considerable way, they need more opportunities to connect to and cultivate the land.

In my presentation I also addressed how we can build relationships between the existing biodynamic community and Māori. Why? Donna Kerridge, a Rongoa practitioner, puts it beautifully when she explains the concept of whanaungatanga:

> *Relationships are the scaffolding within all groups and communities. There are few people in this world who can say they could live a truly satisfying life, independent of all other human beings. The Māori word for this concept is 'whanaungatanga' and the process of getting to know each other or building relationships is referred to as 'whakawhanaungatanga.' Building relationships with those who share a common purpose helps to develop a synergy within a group that enables individuals to achieve greater outcomes than if they were to attempt their tasks in isolation of other members of the group. The art of whanaungatanga is about recognising and valuing our connections.*

A shared purpose, common to both biodynamics and Māori culture, is to feed and nourish ourselves *whilst upholding our responsibility to care for our environment*. In Te Ao Māori, this responsibility is called kaitiakitanga. Initially, the objective of my project was to identify similarities between traditional Māori methods of agriculture and biodynamics. However, I realised that more importantly, the similarities between the two actually comes from shared underlying cultural ideas – similarities in the way that each culture understands and relates to the world. Shared cultural ideas include the recognition that soil is the basis of all life; that everything of the natural world is connected; that water is the life giver of all things; that the Earth is but a reflection of the cosmos; and that matter is never without spirit. These shared values are a good premise on which to build whanaungatanga.

I had not previously attended any biodynamic conferences, so it was difficult to anticipate whether what I was bringing to share would be recognised as relevant to the audience. However, the overwhelmingly positive response indicated that this project has been timely. How do we keep up the momentum of this discussion? There is a genuine desire from within the biodynamic community to connect with and engage Māori and their culture. It is my hope that the organising bodies within the biodynamic movement in New Zealand lead the way by shaping things in a way that is culturally safe and supportive.

Meet a Member: Sophie Siers

Hawke's Bay couple Sophie Siers and Andy Tait-Jamieson run a BioGro-certified farm at Waimarama and a butchery in Hastings. Sophie recently took some time out to chat about her biodynamic journey with Niki Morrell.

How much land do you have?

About 750 effective acres.

What do you farm?

Beef and sheep. The cattle are mainly South Devon – a big, very quiet beef breed. Actually, it's dual [purpose] and you can milk it – not that we do. The sheep are Wiltshires, which is a meat breed.

Do you sell biodynamic produce?

We're certified organic with BioGro, but we don't sell anything under Demeter or biodynamic labels because we don't use the preparations over the whole farm. A lot of it's very steep, so we'd have to spray by helicopter. We've got a home property of seven acres below the main farm, so that's really where I use biodynamics.

How and why did you become interested in BD?

Andy's family were already involved in biodynamics, so I sort of joined the club. Andy was on the very first biodynamic course with Hans [van Florenstein Mulder] and Peter Proctor. When we came back from overseas and bought some land, biodynamics was just something he did, so I did it too, but independently.

Also, being in Hawke's Bay, I knew Lis Alington through other family, and she was very inspiring.

I probably do more biodynamics here than Andy. He's pretty busy just farming. I've got my own relationship to it now.

How do you apply biodynamics?

I use the preparation 500 more than I do 501; I don't know why. It seems harder to do 501. I use all the compost preps and I also use the CPP (cowpat pit).

Photo: Allan Gillard, phone 021 982 436

Sophie Siers.

Do you make your own CPP?

No, I used to make it a lot, always had a pit, but I haven't for a while. We had a huge flood here in 2011 – our house was in a river, it was that big – and I lost my lovely brick-lined pit. It got taken out and I just never got around to redoing one. That might be next on my list!

Do you use the biodynamic calendar?

Yes, although I've always taken Rachel [Pomeroy]'s saying to heart: If you've got the time to make compost, I don't care what's on the calendar, just make it – it's so important.

I do use the calendar for making cheese and bread. I avoid water signs for those and try to make them in flower signs. Andy uses the calendar for planting, cutting hay, making silage, or for planting any crops or seeds. And, of course, for applying 500.

What changes have you noticed as a result?

The piece of land we bought here was quite wild. A family had been here for 12 years who weren't biodynamic but they were real hippies, so the place was long-grassed and unsprayed. [The mother] was a mad gardener – she composted everything – so it was already a really lovely wild, healthy property and nothing's changed, really. It's not like we've gone from a very heavily sprayed or parched sort of place. Andy applied a lot of lime and a little bit of 500 on some top hay paddocks, and they've improved every year, but I suspect that's more to do with the lime than anything, because they really needed it. So we haven't really got much to go on.

In that case, why do you keep doing it?

We know it works. I know it changes the quality of food. It's a bit like asking people why they go to the Christian Community service. People often say, 'I don't need it.' And I always say, 'Well, I don't go because I need it, I go because it's a service to something else.' You create a space and something else happens.

It was interesting what [guest speaker] Tyne-Marie Nelson said at Conference about traditional Māori agriculture: you didn't do what you did to get good food, you did it because it looked after the land. So the outcome of trying to get good food is just a byproduct for us, really.

What do you most like about biodynamics?

I'm really interested in anthroposophy, the whole anthroposophical picture of the world and the fascinating way in which it turns cause and effect on its head. The further you get into it, the more you realise it runs backwards. Cause and effect is a purely materialistic way of analysing the functions of everything, from the way we think to the way we act.

And that takes you right back to chicken and egg, and of course in biodynamics that takes you to someone asking Rudolf Steiner about health. And he said, 'If you want to talk to me about health you need to talk to me about nutrition.' And then when he talked about nutrition, he said the first thing you need to understand about nutrition is the most important part of it is the blessing or the grace of the food. The point of that is that nutrition's not necessarily about any physical process.

But then he also said in some of the other lectures that there was an inability of people to think, to understand anthroposophy – which was to understand the backwards thinking, the non-cause and effect – and to be able to think in that way you had to have good nutrition. But you can't think about creating good nutrition unless you can think, so it goes round and round in circles.

Steiner was disappointed in the Anthroposophical Society just before his death, and a couple of times he said, 'The daughters have neglected the mother.' Once you start separating biodynamics out from an anthroposophical conception, you move it back into a materialistic cause and effect type of thinking, which doesn't interest me. It just leaves me cold, really.

> **"If you've got the time to make compost, I don't care what's on the calendar, just make it – it's so important.**

What challenges you most about BD?

I'm prone to being interested in it intellectually. That would be my tendency. And biodynamic practice is a rhythmical will activity, so the thinking about it isn't enough; it's only a part of it. I can have difficulty getting the will to maintain the rhythms of biodynamics – getting compost made, my 500 stir organised, and actually getting on and doing it. I think it's quite a meditative practice, actually. I just came across Rudolf Steiner writing about how long it takes to gain the advantage from regular meditative practice, but how quickly you lose it. And I notice that with the 500 and 501, making compost, any of it – the more regularly I do it, the more I want to do it. The longer I leave the gap, the harder it is to reconnect to it.

What's your biggest biodynamic goal?

Just that – to do it regularly and with rhythm.

If you could summarise biodynamics in five words or fewer, what would it be?

Interesting, enlivening, fruitful, effective, contributing.

A CURIOUS ANOMALY

By David Wright

Science now wants to know if organic food is better than conventional. But why didn't it ask if chemically produced food was good enough from the start?

Every now and then, newsletters from the organic sector light up with the results of the latest study of organic food. Recently a study by scientists at Newcastle University, UK[1] led to a half-dozen mentions appearing in my inbox. References like these are more frequent now than when I first became involved with biodynamics over 25 years ago. That's probably because organic food has become more mainstream; the general public has become aware of it and knows more of its value. And as every biodynamic farmer knows, science sometimes has a need to study what we already know, and to reassure us that we do, in fact, know it.

Scientific research often starts with ideas that eventually become questions. Take, for example, the NZ study by John Reganold and colleagues who paired biodynamic and conventional farms.[2] They developed questions about differences that they could study. Were there different soil properties? If so, were the differences at the expense of financial performance? These could be measured. All of this started with curiosity about the performance of biodynamic farms that appeared to be thriving.

So what are the people who study organic food curious about? I haven't asked them, but their reports tell me something. They suggest that it's whether organic food is better for us. That's where their scientific interest seems to be.

Today's farmers have strong beliefs in science, especially in soil chemistry. In the 19th century, scientists discovered that plants could be made to grow rapidly by supplying them with various minerals. Out of this grew a chemistry of plant nutrition and a vast chemical industry supplying soluble chemical fertilisers to agriculture. A second industry – pesticide manufacturing – followed to solve problems often caused by the first one. Various events boosted their growth. At the end of the Second World War, factories making ammonia for explosives lost their customers, but they found new ones in factories making nitrogenous fertilisers. In the US there had been a hunt for potash as war loomed and German supplies appeared to be under threat. The hunt was successful and potash use increased on American farms. Superphosphate from local manufacturing appeared here in New Zealand in the 1880s. And since the Muldoon government built an ammonia urea plant in Taranaki in the 1980s – part of its "Think Big" programme – the use of chemical nitrogen fertilisers has become more and more common.

> **"... once upon a time the food we ate was food that suited us very well. The main problem was that there wasn't always enough of it. So, understandably, when new techniques grew more food, most people didn't ask too much about quality.**

City people may know that these fertilisers are used on farms, but are usually not much concerned about their effect on food. They are more concerned about the effect of fertilisers on waterways and the environment. With food, if they worry about anything done on farm, it is more likely about pesticides. They may know that food growing today is radically different from what was done by, say, Hauraki Māori who shipped food to New South Wales in the 1840s, but they don't ask whether the food grown in this chemical way is as nutritious as what it replaced.

Whatever our views on the way human beings originated, most of us probably agree that once upon a time the food we ate was food that suited us very well. The main problem was that there wasn't always enough of it. So, understandably, when new techniques grew more food, most people didn't ask too much about quality. Westerners remembered the Irish potato famine of the 1840s or the Swedish-Finnish famines of the 1860s. An old problem was solved but a new question was missed.

Since ancient times the human diet has changed many times, through necessity, or new opportunities. Only recently has it changed because of science. Farming techniques that were essentially organic gave way to something new, something based on science. But the science didn't look at all the issues.

Scientists, seeing how their discipline was producing food in new ways, might have wondered whether this new, chemically grown food was as good for people as any other sort. So you might expect they would investigate. But that isn't what happened. Instead, it was hardly noticed that things had changed.

So science led to radical changes to the food supply, but no check on the effects those changes had on quality. Scientists could have checked the nutrition from chemical agriculture as thoroughly as they investigated the chemical management. They didn't. They were like Conan Doyle's dog in the night-time:

> Inspector Gregory: "Is there any other point to which you would wish to draw my attention?"
>
> Sherlock Holmes: "To the curious incident of the dog in the night-time."
>
> Gregory: "The dog did nothing in the night-time."
>
> Holmes: "That was the curious incident."[3]

It also seems curious to me that scientists were not as curious about conventional food then as they are about organic food now. Was everyone so entranced by the greater quantity that they entirely forgot about quality? Except of course a minority didn't forget, and they include those farmers who came to Rudolf Steiner for help when they saw quality declining in the early 20th century.

And what about genetic engineering? It doesn't seem likely that we have seen the last of new techniques for genetic manipulation. The curiosity of scientists to see what they can do will ensure that. Let's hope and demand that they will be just as curious about the quality of whatever they produce.

[1] *http://www.ncl.ac.uk/press/news/2016/02/organicandnon-organicmilkandmeat/*

[2] *J Reganold, A Palmer, J Lockhart and N Macgregor, 1993. Soil Quality and Financial Performance of Biodynamic and Conventional Farms in New Zealand, Science 260 (5106): 344-9.*

[3] *A Conan Doyle, The Memoirs of Sherlock Holmes, 1894.*

An Assumption Behind Industrial Farming

The law of the minimums **is often illustrated by a barrel, called von Liebig's barrel. Each stave of the barrel represents how much of each chemical nutrient – nitrogen, potassium, phosphorus, magnesium and so on – is present in the soil. The shortest stave is the one that stops the barrel filling, and it won't fill any further no matter how much longer the other staves are. The Law of the Minimums assumes that the same thing happens with soil nutrients – the one that is most lacking limits growth, and supplying more of the others will make no difference.**

From a biodynamic perspective this is a great oversimplification because there are many complex relationships that it doesn't take into account.

OUR EARTH – A GLOBAL GARDEN?

Photo credit: Anne Dodds

This is an abridged report of a talk given at this year's biodynamic agriculture conference at the Goetheanum, Switzerland, a centre for the study of the work of Rudolf Steiner. Its author, Jean-Michel Florin, is co-leader of the Section for Agriculture at the Goetheanum and Coordinator of the Biodynamic Association of France.

This article is reprinted from *Our Earth – a Global Garden?: Report of the Agriculture Conference 2016*. The full report is available at www.bit.do/globalgarden.

In this contribution I would like to sketch a rough history of the garden. What is a garden? Why have human beings felt the need to create gardens since the earliest of times? What is a gardener's eye? What can be seen through a gardener's eyes? Can a farmer learn something through it for his work on the fields, with vegetables, fruit production, vineyards, forests etc.?

The whole earth as a garden

It had long been thought that the tropical rainforests are an example of untouched nature. More and more has been discovered over the last decades however that indicates how these unique forests have always been and still are the creation of 'subtle gardening activity' – the Amazon rainforest continues to be cultivated by the indigenous Kayapos people. They clear small patches of forest and for a short period of time use them as gardens to produce a great variety of plants. After a while they move on and choose a new patch to cultivate, leaving the previous area to grow back into a forest. These people never sought to conquer nature. Indeed there never was any distinction between 'culture' and 'nature.'

With the beginnings of agriculture in ancient Mesopotamia came the first distancing of mankind and nature – plant breeding began and plots of land were enclosed and cultivated. This is the region from where gardening and farming spread across the Middle East, Egypt and into Europe.

In that early period gardens were places of ritual sacrament, places in which the divine world could be revealed to mankind. They were places conceived according to divine cosmic laws. They were often surrounded by a wall as protection against the desert and to secure moisture and shade.

In ancient Egypt the garden was also an image of this divine cosmos. Every garden was developed around a holy pool representing the primeval ocean of life. Each plant was an image of a divine being – the date palm for instance was an expression of the sun God Re. The divine world was experienced in this way out in nature. The separation between the inner and outer worlds was not as pronounced as it is today.

Landscape as the garden of God

Later on, in ancient Greece the whole landscape was looked upon as a garden and a house or temple was built for each of the Gods dwelling in a particular landscape. The Greeks felt the presence of spiritual beings in the various kinds of landscape. This came to further expression in the Roman concept of *genius loci* – spirit of place.

With the Romans the garden lost its connection to the divine. The living world of nature became more an object by which to satisfy one's needs. The idea of distinguishing between 'private' and 'not private' came from the Romans. They introduced the idea of owning land. Around the great villas, large gardens with many specialised subdivisions were created – herb garden, vegetable garden, topiary garden, pleasure garden, leporarium (for keeping rabbits). Gardens were now being designed in human proportions. The divine order was replaced by a purely human design. The natural wilderness, perceived as ugly, was now to be tamed and structured. The human being became more individualised and distant from the Gods, who were experienced ever less frequently in nature.

The garden as an image of heaven

During the Middle Ages the sacred garden reappeared, at first in the Islamic world where the divine cosmos was expressed in the highly structured gardens. It was a place of inner contemplation and prayer. The human being no longer sought the divine among the plants of the garden but in himself. The quest now turned inward and nature became a reflection of the soul. The pool of water as a symbol for life was once again at the centre of the garden. The garden was an image of paradise on earth. It was a similar situation in the 'Hortus Conclusus' of the European Middle Ages. The Cloister garden was enclosed and protected. It was the place where the human being, once expelled from paradise, could prepare himself for an eventual return to God. Here too the garden was an image of the human soul. The various plant families symbolised different human soul attitudes. Within the Cloister garden one could seek knowledge of the self and of the divine, protected from the wilderness of nature. It was a place for nourishing the soul.

With the coming of the Renaissance, the sacred quality all but vanished from the art of gardening. All genuine connections with the divine had been lost even if images and sculptures of Greek and Roman Gods were still to be found in the gardens. Nature was reduced ever more to mere building material. The gardens had a strong architectural form and the plants were clipped geometrically in accordance with the overall design but without letting their individual qualities express themselves. This tendency led the garden to become more and more a prestige symbol for the owner. Garden design was something for architects and technicians. The peak of this development is found in the massive garden of Versailles. It was intended to demonstrate how the Emperor of the Sun, Louis XIV controlled the whole of nature. The king took the place of the sun (or God) upon the earth.

A counter movement arose during the 18th century in which various attempts were made at developing a new relationship between the human being and nature. It was no longer about realising the divine order on earth but of creating a new design approach based on an actively engaged relationship to nature. This originally came from the landscape painters who were looking at nature with 'new' eyes.

The discovery of landscape in European art played a strong role in the development of European gardens. Inspiration is no longer sourced in divine law as it was in ancient times or during the Middle Ages. Instead it arises from the direct experience of individual human beings in the landscape. A characteristic of this landscape garden impulse is the dissolution of boundaries. In contrast to all earlier forms of garden that were separated from the world around it by high walls or fences, the landscape garden seeks a connection to the surrounding nature. It would ideally like to encompass the entire landscape.

The diversity of gardens

From the mid 19th century and on into the 20th, the story of garden development becomes ever more diverse. A number of gardening personalities such as Gertrude Jekyll (1843-1932), William Robinson (1838-1935) and of course Rudolf Steiner (1861-1925) could be mentioned who sought to give the garden a spiritual dimension. "A garden should be full of life – its living quality based not on beautiful forms and colours alone but whose breath is permeated by the divine," said garden philosopher Jeremy Naydler.[1]

New farming initiatives have been springing up all over the world in recent years and in our towns and cities gardens are being created in which the previously strict division – production and amenity – is being overcome. Today we are no longer content as mere observers but wish to become creatively active.

What routes are open to us?

1. Connecting the garden with the cosmos once more. Today this means connecting the terrestrial and cosmic qualities of each individual location. It means experiencing the place in a qualitative way and not simply as an empty space.

2. The three qualities underlying all design work from Plato till the end of the Middle Ages need to be rediscovered today in a new way: Truth, Goodness and Beauty. The Franco-Chinese author François Cheng writes in his book *Five Meditations on Beauty*: "The world needs truth and goodness in order to survive.... The world could exist without being beautiful. There needs to be beauty in the world however so that we can experience something of the higher, the cosmic, the sacred." This is why gardens were always beautiful.

What is beauty? Something is beautiful when it is able to radiate out and outwardly express the spirit living within it. This is the cosmic quality of beauty. Rudolf Steiner describes it in the following way: "A space where forces appear to approach the earth from all parts of the cosmos and sculpt the forms present on the earth's surface from outside."[2] It is no longer the divine order which determines the beauty of the world 'from above'; far more important is what streams out from the specific place (*genius loci*) and from each plant and animal. This means for example that an understanding for the place, the garden or the farm is needed before any new design can be countenanced.

The gardens, farms and parklands of today and tomorrow need to develop these three qualities of truth, goodness and beauty. They need to feed us and be productive; they need to nourish the soul through their beauty; and they must serve an ethical and social purpose.

[1] *Jeremy Naydler, The Garden as a Spiritual Place (in German), p. 118, Stuttgart 2011.*

[2] *Rudolf Steiner, Anthroposophy and the Visual Arts. Lecture held in The Hague on 9th April 1922.*

Photo credit: David Wright

Photo credit: Anne Dodds

This page:

Top. Sissinghurst Gardens, Kent. European formal gardens have long reflected their creators' beliefs about natural and social order.

Bottom. Anne Dodds' biodynamic garden on the Wairarapa Coast evokes a reverence for the wild landscape.

HOMEMADE HALOUMI

By Eva Henderson

Our family has a Jersey house cow. Every day we get between 5 and 12 litres of milk from her. The families living on the farm use a good deal of it as raw milk for drinking. The kids especially love to drink straight from the bucket or milk bottle, preferably even when still warm! One child here on the class camp said, smacking his lips, "It tastes like chocolate!"

But of course, if you harvest so much milk every day, even three families can't drink it all, so you really have to think about what to do with such a volume. Either you can give it away, or you start to process! It's easy and relatively quick to make yoghurt, various fresh cheeses, quark and various light cheeses. Hard cheeses are also a possibility, but greater amounts of milk are needed to yield a sensible-sized cheese for the longer curing time.

One cheese which is easy to make is haloumi, or mozarella.

I put some fresh haloumi on the table at a recent meeting of the Demeter inspectors at our farm. David Wright's spontaneous reaction was, "Would you like to write an article about this delicious cheese?"

It is actually easy to find haloumi recipes, so that can't be the reason that David asked me to write about it. So what makes our haloumi so tasty? In my opinion there are some essential components. First, the milk I use is fresh. Immediately after milking, I process the milk, even before the cream has time to rise. Normally, directly after milking, the milk even has the right temperature for cheesemaking, though sometimes I need to bring it back up 32°C before I add the rennet, if there is a little delay or the day is cold.

To produce about 400g of haloumi, you need about 4 litres of milk. Pour the milk into a clean cooking pot, bring it carefully to 32°C and add the rennet for coagulation. Since there is little to no ripening time and acid development for this cheese, a bit more rennet than normal is needed.

Haloumi cheese is a relatively expensive delicacy in shops. But it is relatively easy to produce it in your home kitchen, ideally made from raw milk. If you make it at home, it costs about half the price.

The name 'haloumi' comes from Cyprus, where it is traditionally produced from goat's or sheep's milk or a mixture of both. It is also tasty when produced from cow's milk. It is characterised as a semi-hard, unripened, and brined cheese.

Haloumi has a high melting point and can easily be fried and grilled. It turns into a crispy golden-brown fried cheese; it softens but it does not melt.

You can use the rennet from the supermarket – okay as long it is not genetically modified – but even better is vegetable rennet, if you are able to find it. Follow the instructions on the rennet container to determine the amount of rennet needed for your amount of milk. Stir the rennet gently into the milk, then leave the mixture to stand, covered, for at least an hour. By that time the curd has formed – a solid-looking white mass with little sign so far of the golden whey. It is okay if the temperature drops a few degrees during this time.

It is important that you work as cleanly as possible during the whole process. I don't use any cultures in my cheesemaking. They can however be an advantage, as they guarantee better results if undesirable bacteria are present in the environment.

Cut the curd into 1-2 cm cubes with a large knife. Then heat the mass slowly to 38-42°C (over the course of about five minutes), stirring now and again during this time. The curd will break up, and you should stop stirring just before it looks like scrambled egg. If you like, at this point you can

add herbs and spices, such as chili, thyme and rosemary, and stir in gently. Then leave the curd to settle for a while. You'll see how the curd separates from the whey.

Pour the top whey into a pot which you can later heat. Scoop the curd into lined moulds sitting on a draining mat, and press the cheese for 3-4 hours with some 5-7 kg of weight. Keep all the resulting whey for later as well. If you don't have a press and a way to weigh down the cheese, you can press it by hand to remove much of the whey, or take the edges of the cheesecloth and hang it on a hook, squeezing out extra whey now and again by hand. My experience is that it is better to use at least light weights rather than squeezing. If you use small forms, you should stack and turn them several times, as this helps to get a firmer cheese. The end result should be a nice firm mass that you can remove from the press or cloth and cut carefully into slices about 2 cm thick.

Heat the whey you have collected to about 80°C (be careful not to let it boil), and place the slices into the hot whey, leaving them there until they float to the surface. As they do, take them out and place them to drain on a sushi mat, draining board or even a clean tea towel. Sprinkle the slices with salt on both sides. The cheese can be folded

Equipment

- Clean pots
- Fork for gentle stirring
- Knife for cutting the curd
- Ladle (with holes)
- Cheesecloth
- Moulds
- Weights
- Draining mat
- Food thermometer (a clinical thermometer can also do the job)

into a crescent and pressed slightly as it cools. If you didn't add herbs or spices earlier you can do it now. Mint leaves, for instance, give haloumi a lovely fresh taste; traditionally mint leaves were used as a preservative to keep the cheese fresh longer.

You can use your haloumi straight away – it's great fried in a pan or grilled on a barbeque. Because it has a high melting point, it is easy to fry or grill haloumi to make a crunchy brown cheese, which is delicious served with a fresh salad.

Fried haloumi is perfect as an entrée. It also tastes excellent with a fresh salad, potatoes, paprika or even melon, depending on what is seasonally available. You can also use this cheese filled with other wonderful things, such as peppers and grilled vegetables, or cut it into cubes and use it in kebabs or cold in salads.

If you want to keep it in the fridge for a few days, it's best to put it in a brine solution (15 percent). When you keep haloumi in its own brine, it gets much drier and saltier – as in commercial haloumi from the shop. Another more traditional method of storing is to pack cheese tightly into closed jars or containers, covered with 8 to 12 percent brine. They can then be aged for anywhere from a few weeks up to several months. These cheeses will be rather high in salt too, but can be used much like feta in dishes that would normally be salted.

Eva Henderson lives in North Canterbury at Milmore Downs farm, New Zealand's longest continuously Demeter-certified biodynamic farm.

Preparation

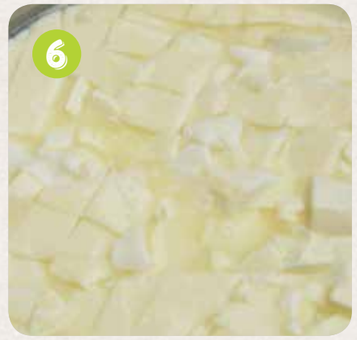
Milking.

Straining the milk.

Controlling the temperature.

Adding the rennet.

Cutting the curd.



Curd before pressing.

Slices are salted after being boiled in their own whey.

Bon appetit.

All photos by Eva Henderson

BIRTH OF THE BIODYNAMIC ASSOCIATION

By David Wright

The first newsletter for the Biodynamic Association in New Zealand was distributed in late 1939, when the Association was formed. An extract from the text is opposite.

The newsletter was produced on a cyclostyle machine. Stencilling was cut into a flimsy waxed sheet with a typewriter; metal keys hit the sheet as one typed. The stencil was then placed on a machine that forced ink through it on to foolscap-sized paper (a size a little taller than A4). Such machines were common until they were replaced by modern printers and photocopiers.

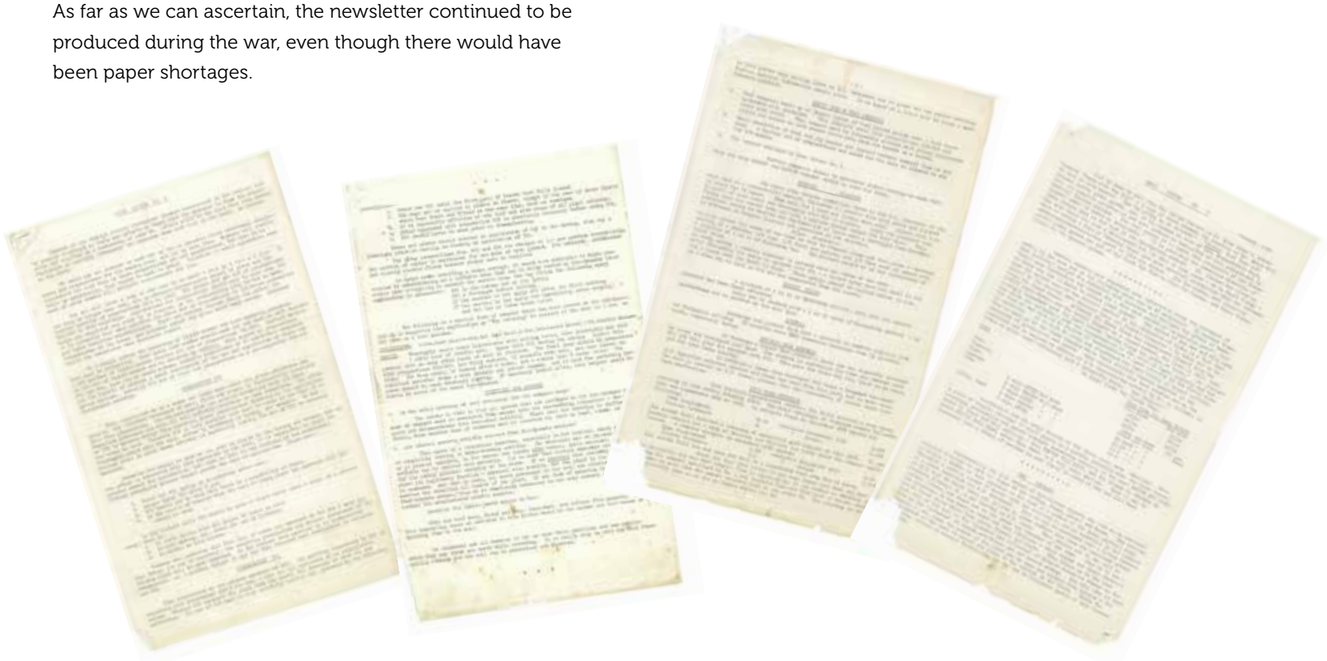
It is notable that the Association was formed shortly after New Zealand declared war on Germany, when things with German names or connections may not have been the most popular. In the name of the Association, the English spelling "Rudolph" was used rather than the German "Rudolf," but we don't know whether that was just a simple mistake or whether it was influenced by the mood of the times.

As far as we can ascertain, the newsletter continued to be produced during the war, even though there would have been paper shortages.

The recommendations for the use of the biodynamic preparations back then were very similar to those given today, with the exception that today experience has shown that preparation 500 works well without being hoed or harrowed in, and in fact grass does not even need to be mown. The 1939 recommendations would have been based on over ten years' experience of their use, which began in New Zealand in 1928.

The price of the compost preparations, at five shillings per set, would be $23 in today's money. The Bio Dynamic Farming and Gardening Association today sells them to members at $7 plus GST and postage, so these costs have definitely not kept up with inflation.

The request for requirements to be estimated for 1941 takes account of the fact that a new batch of preparations would not be laid down until autumn 1940 and lifted later that year.



NEWS LETTER NO. 1. 1939 (Excerpt)

Members of the Rudolph Steiner Biological Dynamic Association in New Zealand will be greatly heartened in their own efforts to learn that the response to form the Association has resulted in a membership of over 25. Better still is the fact that this number represents an activity throughout the Dominion from Keri Keri in the North, to Dunedin in the South.

We would ask all members to work out as far as possible their individual requirements for the coming year, and let us have them. Members will readily appreciate the fact that as these preparations are not manufactured, but have to be built up organically, they cannot be made to order. Therefore we would greatly appreciate very much if every member will estimate requirements for 1941.

One set will treat a heap of any size up to about 9 feet by 6 feet x 5 feet. If the heap is larger than this, the approximate measurements should be given and the correct quantity of preparations will be sent. The charge for one set of preparations 502/507 is five shillings. Applications for preparations should only be made when the heaps are completed and ready to treat, as the preparations keep better in bulk.

PREPARATION 500

This preparation is in a sense the basis upon which all other activities are created, and therefore treatment of soil, field and plants is fundamentally necessary with this preparation. The characteristics are related intimately with all root formation processes and with soil activity precedent to root formation. The effect of 500 is dynamic rather that manurial, hence quantitative thinking in its application can never be used. Whenever 500 is used especial care must be taken to see that it is thoroughly mixed with the soil either by harrowing or hoeing, for example. In New Zealand soils in which humus activity is especially lacking the use of 500 is urgently demanded.

Normally 500 should be used on the soil or fields in the Spring and Autumn, but as the effect connected with life processes in the soil, it is impossible to state the precise moment for application, this must be left to the thinking of the individual, Certain principles however should govern the time of application. These are:

1. Never use 500 during or immediately after rain
2. Always spray 500 after 3 p.m.
3. 500 should not be used when there is a possibility of frost
4. In dry spells of weather when the seed or young plant has sprouted well 500 should be used.

In New Zealand soils 500 should be used at least three times a year, as a general spray, that is:

1. In early Spring when all danger of frost is over
2. In late Spring, say, about the end of November
3. In middle or late Autumn.

Farmers and gardeners will find that if seeds are immersed in 500 for 1 hour and then dried (in the sun if possible) the resulting germination and disease resistance of the ensuing plant will be much enhanced. In New Zealand this practice is to be especially recommended. As a guiding thought we may say that wherever root development is required use 500.

The Gypsy Gardener

By Annette Kapa

Annette Kapa is a former member of the Biodynamic Association Council, and has spent many days and months looking after other people's gardens, mostly in the upper North Island. Here she describes some of her experiences as a gypsy gardener.

I have an unusual life. I spend a lot of time housesitting and caring for homes and gardens.

I started my love of gardening when I was a child. Each Sunday I watched my granddad Charlie as he showed me and told me all about his vegetables, fruit trees and flowers. He always gave me a grape or peach or bean to taste. He had a beautiful, magical garden jam-packed with goodies.

Thirty-five years later, I met Bert Johnston, when he lived on his property in Glenbervie, Whangarei. I noticed that his garden was orderly, like my granddad's, and that everything tasted so delicious and had that taste and smell like the way a peach tasted 35 years before. His vegetables were huge and strong. I asked what he did, and he started to teach me about biodynamics. This is how I began wwoofing and looking after other people's gardens. When I wwoofed at Bert's, the first thing I did for a long time was to weed between the vegetables. This way I got to know which plants were weeds and which were vege seedlings.

Bert direct-sowed seeds straight into a patch in the garden and then later transferred them, when they were a little bigger, to a bigger space in the garden. I loved weeding, as it is meditative, and we got to talk as we worked. Next I learnt to transplant seedlings and also sowed seeds. Every Friday we would harvest from early in the morning until about 2pm, getting vegetables ready for the farmers market the next day. There was a lot to harvest –carrots, beetroot, lettuce, beans, endive, silverbeet, broccoli, avocados, lemons and much more.

Then I did the biodynamic course at Taruna College in 2009, and it changed my life. I had been a wwoofer at many farms and home gardens. I had noticed that there was a difference amongst gardens – not just a physical difference, but something else. For Bert, the garden was always a pleasure, and he did it with such ease. Perhaps the biodynamic preparations were helping him with his tasks. After a garden has had even one application of preparation 500, it feels different. I can feel this as I move around and put the 500 onto friends' gardens. It is as though the whole garden comes alive. It then helps me to enjoy the experience of being there.

> **“ After a garden has had even one application of preparation 500, it feels different. I can feel this as I move around and put the 500 onto friends' gardens. It is as though the whole garden comes alive.**

Bert has left such a legacy of fruit, nuts and vegetables around Northland. On the first property where he gardened, there are bananas and macadamias that are still occasionally sold at the farmers market. On his Glenbervie property there are loads of lemons and avocados, which are still the best avocados and lemons I ever tasted. These are sold at the market by the new owner. Then at Mamaki Farm he and Kath Watzig planted bananas, cherimoya, and many more vegetables, fruits, and flowers that are still living on and on and on. There is a special quality about these crops. I think they are full of love, responding to the love the gardeners had in growing them.

Wherever I housesit, I get to enjoy the vegetables and flowers that someone else has planted, and I really get to enjoy them once I have applied preparation 500 or cowpat pit. When I recently housesat for nine weeks, I worked in the garden weeding, planting seedlings, sowing seeds and applying preparation 500. It was palpable to feel the difference it made to the garden. When the owners returned home, they could not stop walking around the garden and admiring it. They commented over and over again about how it felt so wonderful. I told them I had put a biodynamic preparation 500 on the garden and they just smiled.

I learn a lot about each person as I spend time in their garden. I also learn about plants that I haven't seen before and how to use them, such as Chinese plants when I housesat for a Chinese friend. There were edible plants that go into stirfry that I had never seen before.

The downside is that I never get to see a garden through all the seasons. Each garden is so completely different, but each garden loves the biodynamic preparation 500. It must be all those elemental beings dancing in the garden.

Gardens make me smile. It is a joy to bring them alive. I am always surprised when people talk about a plant or flower such as sweet peas that I planted in their garden, and how it is thriving. I heard this recently from a friend who I housesat for two years ago. I had completely forgotten that I had planted them. Some gardens I look forward to going back to – gardens where I have made a deep connection by eating from the vege patch every day or by applying the biodynamic preparations. But not every garden is fully organic, let alone biodynamic.

I think every garden represents the person or persons who tend to it. Some gardens are very orderly; you might say immaculate. Others are quite chaotic. I believe if every person had a garden – big, small or tiny – we would be the happiest beings ever.

Photo credit: Bert Johnston, 2014

Photo credit: David Wright

Top. A hillside at Mamaki Farm, Northland, terraced and planted with banana trees by Bert Johnston.

Bottom. An avocado tree at Glenbervie, originally planted by Bert Johnston.

THE TWO OF US

The symbiotic relationship between mentor and apprentice.

By Andy Black and Hanna Braun

Andy and Hanna worked together when Andy grew Demeter-certified greenhouse vegetables for Poraiti Farm, Hohepa Homes in Napier. Hanna took on the twin challenges of working in these greenhouses during the Hawke's Bay summer, and of putting up with Andy as her mentor in a six-month intensive biodynamic growing apprenticeship. They recently wrote these reflections on that experience.

Andy

On some days during the early summer, it was hard to recall just how I managed before Hanna came. Busy times always emerge as the sun climbs higher and our tasks group together more and more tightly, often making a mockery of careful planning. Hanna was here before, about a year ago, as a wwoofer, and I easily recognised her competence and attention to detail. To find a volunteer with such qualities is a treasure. I was glad when Hanna decided to return to learn how to do this work.

Our days start in a swirl of words, as a morning verse and meeting gives shape to the day. My task is to vie for time to accomplish our greenhouse work, amongst the competing demands of our colleagues. Hanna has become adept at cheerfully reminding me of missing details or forgotten intentions. Often plans will change in a moment, as the weather dictates or as another priority emerges. We get along quite well, I think. Most of the information we exchange is done while working together, as we chat. I do try to shape the day by explaining my decisions, and we make an effort to meet weekly to review what we have shared.

I feel I am able to offer some hints for learning this work; really all of us only know what we know because we have repeated it many times and our senses are attuned to the plants and soil. I guess one of my stock phrases is *"Look at the colour and shape of the plants."* I do believe most of our decisions, as growers, can arise from this simple exercise. Often any remedies – more or less water; a liquid feed; removal of diseased plants – become clearer when we have time to digest our impressions. Discussion with Hanna has helped me in this regard, as I am challenged to actually explain what I am doing on a daily basis. My tendency to regularly hide in the depths of the climbing beans has been moderated.

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Biodynamic growing involves us all, plants and growers alike. Our work together has reminded me that I am also an apprentice. I have just been one for a lot longer than she has. I recall the wonder and enthusiasm with which I sought out my vocation decades ago. This is being repeated alongside me and gives great hope for the future of our work.

Hanna

My journey to Hohepa started when I quit my job in the corporate world 2.5 years ago; I traded my company car and steady income for a 50 litre backpack and the taste of freedom. On my quest for alternative ways of living and self-sufficiency, I wanted to find out how to make my own compost, grow veggies and build an eco-house. I had so many questions. What are "grey" and "black" water? What are the consequences when I choose to eat meat? How can a community work?

So I left Germany and did a lot of wwoofing on very different farms and households, both in New Zealand and Australia, and just kept floating around and travelling for the next 18 months. When Andy offered the internship to me, I didn't have to think twice. The peace and wholeness of the Poraiti Gardens still felt so present for me, and I am in love with Aotearoa anyway.

It took me a while to get used to the physical aspect of horticultural work. You spend two hours continuously squatting down, bending over, fiddling with your hands way above your head. I had considered myself reasonably fit, but the greenhouses take it to the next level.

However, time flies in our encased little world as we work away and have our discussions. What Andy is casually referring to as "chatting" is a lot more. We don't only talk about greenhouse and plant management; we get quite political sometimes, philosophical even. No topic is safe from us while we are weeding or taking off side shoots, doing those jobs that have to be done. Yes, we *do* get along.

Andy and I have a very similar way of working and learning. We are both analytical and straightforward. There is not much dawdling around. We plan the week and mostly stick to what we've written on our task board. This way we managed to keep up regular spraying and feeding of our crop. Our tomatoes get a liquid feed weekly; the cucumbers are happy about a foliar feed once a week as well. We apply 500 and 501 on a monthly basis, and it feels wonderful to walk the greenhouses in the morning and create little rainbows with my sprayer.

I have learnt a lot during this internship, and it has helped me grow and develop on many different levels. I am thankful for this opportunity and can only hope that the Poraiti farmers will continue the program and give more young people the chance to explore the community and biodynamic farming.

A friend of mine said: "Hohepa is an amazing, life-changing place to live and work." That is exactly what it has been for me.

Photo credit: Hanna Braun

Andy Black and Hanna Braun in the greenhouse at Hohepa Poraiti.

Photo credits: Bob Zuur

MAKING COMPOST AND COMMUNITY

Doris Zuur reports on "Stars and Spades," a biodynamic home gardening weekend workshop with Rachel Pomeroy in Paekakariki.

A wonderful group of people with very diverse backgrounds and a shared enthusiasm for gardening, aged between 21-67, gathered at my place in Paekakariki on a Friday night this past April. Some came from as far as Tauranga or Hawke's Bay. The local Paekakarikians helped with hosting everyone for the weekend. A garden soup and fresh bread nourished everyone, and soon the stress of a busy Friday in everyone's lives dissolved as we all introduced each other and made our first connections.

In the weekend's activities, sitting down in the living room was the exception. After a very brief introduction on Friday night, we were out on the veranda, discovering Rachel's best friends, the stars in the heavens. The connection from the stars to our plants in the garden soon became clear from her teachings, and we began to feel a part of it all. A line from Rudolf Steiner came to mind: "Spirit is never without matter and matter is never without spirit." Steiner once said in a lecture that a person who comes to know the stars "will find the whole cosmos warm, and have the feeling that he has when reclining on the bosom of a friend." What a reassuring and all-connecting worldview.

On Saturday morning, the practical work in the garden began. It continued for the two days. We made a compost heap, built a cowpat pit, stirred preparation 500 on Saturday evening and stirred preparation 501 early on Sunday morning, before breakfast. My garden was well and truly ensouled by then. After a healthy and hearty Swiss muesli breakfast with homemade bread, we prepared new garden beds, incorporating some compost I had made a few months earlier; planted my winter garden; and took great care of the raspberries and our fruit trees. I will let the images describe this wonderful community experience.

We had a heartening final round of reflections around the circle, each of us sharing what new skills, ideas and inspirations we would take home. A week later, I was swimming in emails describing the practical steps and actions that everyone was already undertaking after returning to their own gardens. Compost heaps and cowpat pit were multiplying rapidly! And then there were all the unexpected ripple effects of new connections and friendships. Thank you Rachel, for your tireless and enthusiastic sharing of your amazing expertise and knowledge, as well as your wonder and deep care for our sacred mother Earth and the universe beyond.

Wish you were there? You are lucky. We will have another one in September 2016; see details below. Enrol soon, as the April one was booked out quickly. Alternatively, get some friends together and invite Rachel into your living room and garden.

COMING EVENT

Stars and Spades II: Biodynamic home-gardening workshop

23-25 September 2016, Paekakariki

Led by Rachel Pomeroy

This event will be similar to the April workshop on the same site.

Inquiries to:

Doris Zuur – doris.zuur@gmail.com, 027 281 1570 or Rachel Pomeroy – rachelpomeroy1@yahoo.co.nz, 021 129 8806

Registration:

www.chalkle.com/grow-biodynamics

Top. Fostering community over soup and bread after a day's work in the garden.

Bottom. Participants Richard Hale and Sascha Wassong, proud with the completed brick CPP pit.

Workshop participants Doris Zuur, Tony Littlejohns and Rhys Wilson plant a winter garden in the newly prepared bed.

Many hands make light work; participants crumble the manure in preparation for making cowpat pit.

Making Cowpat Pit

By Rachel Pomeroy

Four weeks after the workshop, several of us gathered to turn the compost and the cowpat pit (CPP). Both were very well underway. Indeed, the CPP looked close to being ready!

In my experience, it is the consistency of the cow manure which determines how quickly the CPP matures. When I make CPP, it is usually ready for use three months after mixing. My three cows are primarily a "dung herd." They graze on very mixed pasture and herbage, resulting in firm, well-shaped cowpats. The dung gets well aerated during the mixing-in of the ground egg shell and basalt dust. And it doesn't lose that air content when we place it in the pit.

I like the brick pit because the bricks hold moisture and breathe. I don't recommend cement bricks, but old fired clay bricks are excellent. Well built, it will last for years. If you have several pits, adjacent ones will share common walls. Ideally, the pits should be within a roofed structure so you can easily check on them. Then you can quickly lift a corner of the sack and see if it needs anything. Is it too wet, too dry, forming a crust on top? Are roots growing into it, are there excessive earthworms, has it turned at the periphery but not at the middle?

All these issues can be quickly dealt with, but if it is under a sheet of corrugated iron with concrete blocks to hold it down in the wind, you probably WON'T look at it, and when you do, it may be too late.

I've seen good CPP made in half wine barrels. However, if the consistency of the dung is rather wet, or the surrounding soil is waterlogged and cold, or the layer of dung is more than 15 cm deep, then the nature of the wooden barrel doesn't ameliorate the problem in the way the bricks can, especially if the barrel has a tight-fitting lid that stops air movement.

Rachel prepares a cowpat pit. She has jars of compost preparations lined up to add.

Biodynamics in Coromandel

By Gill Bacchus

Making compost during a visit to Coromandel Community Gardens.

Biodynamic enthusiasts enjoy a Harvest Festival at the Coromandel Community Gardens.

When Peter and I moved to the Coromandel Peninsula two years ago, we found many people interested in biodynamics. We have been meeting every two to three months for over a year now, with 10-20 people coming to workshops. We visit different properties each time, and always feature a walk around the property. We discuss what the owners are doing there, look at soil and plant indicators of how dynamic and healthy it is, and discuss what biodynamic preparations and other practices could be applied to balance and enhance production.

For one of our first workshops last year, we visited the Community Gardens in Coromandel Town. The Gardens are run by Louis and Tracey Kittleson, who have made it part of the homeschooling of a small group of children who follow the Steiner School curriculum. We built a compost heap; then the children had a harvest festival celebration with songs and karakia.

We have stirred and spread preparation 500 several times, and also preparation 501; built several compost heaps; and discussed how to build fertility and manage weeds and pests. Most of the properties we have visited have fruit trees of all kinds. We are lucky to have so much fruit in Coromandel. I think the beautiful songs of all the variety of birds here contribute to this abundance.

At our most recent workshop, on 25 June we visited an orchard near to Coromandel Town. We demonstrated how to make and apply tree paste to orchard trees and discussed winter tree management and pruning.

Gill Bacchus is a former member of the Biodynamic Association Council. She has also done research on the effects of some of the biodynamic preparations as part of a Master's degree.

Biodynamic conference in Switzerland

By David Wright

The theme of this year's biodynamic conference at the Goetheanum, Switzerland, was "The Earth, a Global Garden." In-depth reports on many of the main talks are posted online for all to read. We've reprinted one talk on page 32 of this magazine.

The conference speakers came from a wide range, inside and outside the biodynamic movement. This year they included Marie-Monique Robin, a French filmmaker best known for her documentary "The World According to Monsanto." As well there were speakers with years of biodynamic experience as farmers, researchers, gardening teachers, historians and others.

A contribution from Ola Aukrust caught my eye:

"It is a great paradox to experience how different places on the earth are becoming increasingly similar. Just think of shopping centres or airports; they are no different in Norway, Switzerland or Hongkong. There are more and more places that I would describe as being 'non-places': Places without history, character or atmosphere. They are soul-less places that cannot feed our spirit. To be truly present and create real places, we need to come into a conversation with the place, the time and with ourselves – right through into the practical reality."

Ola Aukrust, who has been a biodynamic farmer for decades, went on to lead listeners on "an exotic journey" into the Norwegian mountains, from where he approached his theme, "the spirit of the place."

There are many thought-provoking contributions, and you can find them in the report on the Goetheanum website, at www.goetheanum.org (you then choose "English"). I believe it's worth looking through what's on this site, but if you'd prefer to go straight to the conference report, try www.bit.do/globalgarden.

FROM THE ASSOCIATION

Biodynamic Preparations

See next page

Books (prices include postage)

Bio Dynamic Farming and Gardening Calendar
(Aug-Sep prices, calendar year ends 31 May 2017)

Non Members	$30.00 (includes $3 postage)
Members (extra copy)	$16.50 (includes $3 postage)

Grasp the Nettle - P Proctor $36.10
A guide to the how-to-do it of biodynamics

Biodynamic Perspectives - Ed: G Henderson $16.50
Wide range of articles on useful practical topics

Biodynamic Farmers Handbook - N Pearce $13.90
Biodynamic practices in a condensed guide

The Sustainable Dream - J Pearce $13.90
Choosing and using your land

Review of Organic Land Management Research
Association R&D Group survey of world scientific literature $30.80

Biodynamics in Home Garden - P. Proctor $26.70

One Man, One Cow, One Planet (DVD) $25.90

NZ Organic Production Standards for Biodynamic Agriculture (Demeter Standards) $29.10

Biodynamic Pasture Management - P Bacchus $27.00

Food Full of Life - G Bacchus $35.00

Books are supplied as orders are received

Resource Guides

Reports by experienced NZ farmers and growers on the conversion of enterprises to organics and biodynamics, and their on going management. (Prices include $3 postage)

Organic Pastoral Guide	$33.00
Organic Avocado Resource Guide	$23.00
Organic Citrus Resource Guide	$28.00
Organic Summerfruit Resource Guide	$28.00

Members order by post, email, or phone to the office or 24-hour message recorder. (Orders received by email are acknowledged.) Non members cash with order please or email for invoice with bank transfer details.

HARVESTS MARKETS

Buying Biodynamic Products Direct from Growers

Beef. All cuts of organic beef and German style sausages from full Demeter livestock. Couriered frozen (with chilled courier) to your doorstep. From 10 kg. Ask for price list and order form:
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Ph/fax: 09-405 3833
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www.organicbeef.co.nz

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Contact: Treedimensions Orchard,
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Ph: 03-528 8718. Fax: 03-528 8454.
treedimensions@paradise.net.nz
www.treedimensions.co.nz

The "apple meadow". Orchard fresh fully Demeter certified apples, small amounts of pears, plums and other fruit from Jan to June.
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Woodhouse Farm Organics. Demeter certified raspberries, boysenberries and black currants, plus small quantities of other seasonal fruit and vegetables. Visit us at www.woodhousefarmorganics.co.nz.

Harvests *offers Association members who direct supply products that carry an appropriate certification a free listing in this section.*

ASSOCIATION INFORMATION AND SERVICES

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Facebook: BiodynamicsNewZealand

Subscriptions

Subscriptions $133 or $92
Students (of related courses) $46
Institution libraries $41 (magazine only)
See page 5.

Biodynamic Preparations

We dispatch preparations by post or Fastway Courier to members of the Association.

All orders go through the Association office, and if received by midday Monday will be dispatched that week. To be sure of them reaching you by a particular time allow another week. i.e. order on Monday morning at the latest to ensure delivery by the end of the following week. Please specify in orders the amount needed, membership name, delivery address and phone number. Send orders by post or email, or phone to the office (24-hour message recorder). Only emailed orders are acknowledged.

Checking your preparations
Please check your preparations as soon as you receive them, and transfer them to storage suitable for the length of time you need to keep them. (See instructions in *Using the Biodynamic Preparations*). If you have any queries about them, please contact the office within two working days.

Preparation Charges
Preparation 500 $7 per portion
Preparation 501 $3 per portion
Compost preparations 502-507 $8.40 per set of six
Cowpat pit $7.50 per portion (100g)
GST, postage or courier and handling charges extra.
Please pay on invoice - do not send cash with order.

Rates for preparation use
See the booklet *Using the Biodynamic Preparations*. Members who do not have a copy can request one from the Association office.

Council

The Bio Dynamic Farming and Gardening Association, founded in 1939 and an incorporated society since 1945 and a registered charity, is governed by an elected council of up to six members.

Current councillors:

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David Wright (Secretary)
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Demeter

Demeter inspections $512
($50 discount for prompt renewal applications)
Extra time $60/hr + GST

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