

Star & Furrow

THE JOURNAL OF THE
BIODYNAMIC ASSOCIATION

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In this issue:

**Food Quality
Ripening**

**Climate Change and Agriculture
Biodynamic Flowers**



Leaving a legacy: With your will we can regenerate our world

'As your proud patron of the Biodynamic Association, I urge you to consider making a bequest in your will to support the ongoing work of the Association. Nearly a century after Rudolf Steiner shared his vision for the future of farming in his Agricultural Lectures, his impulse is alive and well, manifesting in the inspiring work of the BDA. Your legacy will help ensure the BDA can leave our planet, her soils, plants and animals in a better state for those that follow us.'

Patrick Holden, CBE, Patron of the Biodynamic Association
Founding Director and Chief Executive of the Sustainable Food Trust

Our vision

To ensure biodynamic farming and gardening remains a constant inspiration for the 21st century. Becoming a benefactor means so much and will help ensure all our valuable work prospers practically and spiritually. Like planting an oak tree, it will leave a lasting legacy for our world.

Biodynamic Association

What are the benefits?

In addition supporting the ongoing work of BDA, your legacy can have financial benefits for your family. Its value will be deducted from your estate before inheritance tax.

How do I leave a legacy to the BDA?

Adding a codicil to your existing will is easy. Email Jess at office@biodynamic.org.uk or telephone 01453 759501. Our codicil form is also available from our website at www.biodynamic.org.uk/connect/#giving

Star & Furrow



TOOK ON THIS ROLE AS EDITOR of Star and Furrow just 20 years ago. I then developed the format from the previous smaller A5 size to the current A4 format. That got varied reception from members, mostly because the new format did not line up neatly on the bookshelf with older size! Many more pictures were introduced and there was a picture on the cover for the first time. On the whole BDA members were happy with the change.

As with movies and tv, everything was black and white in former times (and that was only in 2000!). We quickly found the colour button and slowly introduced colour and increased the number of pages per issue. Now we have a full colour issue that is professionally designed with links into more information online.

The feedback from the recent members survey was very helpful. Thank you again to all who responded. It has certainly helped to inform the further development of the magazine.

One question that was not clearly answered concerned producing an electronic version, as is the case with other magazine such as Resurgence and Permaculture magazine. On the one hand such a development would save paper but on the other many people appreciate having a copy lying around to occasionally pick up. We are making a start by posting pdfs of some articles on the BDA website.

This issue has been brought forward from its usual winter slot by three months to October. The main reason for this is to avoid congestion around Christmas and midsummer. We also have the possibility to pick autumn and spring related questions and themes. I hope this development is appreciated by members.

It is always the aim to try to reflect some of the topical issues that the Biodynamic Association is involved with whilst at the same time having some 'meatier' contributions that help to deepen our understanding of biodynamics.

Following on the article on Quality Testing in issue number 130, I am pleased to introduce biodynamic researcher Jens-Otto Andersen and his pioneering work with cucumbers. He will be a keynote speaker at the BDA Conference this autumn where he will speak at great length on the subject of food quality and vitality.

In June several BDA staff attended a one-day conference hosted by the Sustainable Food Trust and the National Farmers Union on Farming and Climate Change. This was a rich, thought provoking event and successfully brought together a range of views including Minette Batters, President of the National Farmers Union and Gail Bradbrook, co-founder of Extinction Rebellion. We were even treated to a special Any Questions session chaired by Jonathan Dimbleby. Patrick Holden reflects on this event and puts it in the wider context of some of the challenges we face today. We are always grateful to Patrick for bringing us this bigger picture.

The Biodynamic Gardening Club (BDGC) is a great success and has attracted a lot of attention. We continue to build on this by bringing both reflective as well as practical articles that will appeal to gardeners.

Another important development is the rolling out of the farm development talks. A modest start was made with these a few years ago. Meanwhile it is proving to be an important support for many farmers on the continent. This is potentially an important cornerstone for farmer support. I urge you to consider Stuart's appeal and get in touch with him to help this system of farm development off the ground in the UK.

Many thanks to the army of proof readers who volunteered to help with this issue. Warm autumnal greetings and looking forward to seeing many of you at the conference.

With Best wishes **Richard Swann**

THE BIODYNAMIC ASSOCIATION (BDA)

The Association exists in order to support, promote and develop the biodynamic approach to farming, gardening and forestry. This unique form of organic growing seeks to improve the nutritional value of food and the sustainability of land by nurturing the vitality of the soil through the practical application of a holistic and spiritual understanding of nature and the human being. Put simply, our aim is greater vitality for people and planet through more biodynamic acres, more biodynamic food and more understanding of biodynamics.

Membership is open to everyone. Our members are interested in working with, developing and learning about biodynamics. Subscription rates are £35 (for up to 2 adults per household) or £20 concessions. Membership income funds in part the work of the Association, so they are directly furthering the aims of the BDA; however there are also further benefits.

Members receive a quarterly newsletter, Star and Furrow twice a year, early booking on training courses and events days. They get involved in organising and supporting biodynamic initiatives through the local group network and there are conferences, the AGM and many other events that they can attend. Many are supported in their own biodynamic practical work through advice from the Association from whom they also source their biodynamic preparations and books.

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The function of Star and Furrow is to encourage the free exchange of ideas and experience among those who work with, or are interested in biodynamic farming, gardening and related subjects. Contributors subscribe to no dogma and are bound by no rules. Their contributions are personal documents, not official utterances by the Association.

Final dates for contributions are 15th February for the spring issue and 15th August for the autumn issue. Copy can either be submitted in a typed printed format or as an electronic text document by e-mail. Please send articles to the editor at the Biodynamic Association Office.

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Cover: **Emily Thomas at Shipton Mill**
making up flower posies ©Richard Swann



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BDA Director's Reflections



by **Gabriel Kaye**

Dear Members, friends,

THANKS TO YOU, and many others, the Biodynamic Association is feeling so alive, so enthusiastic, so generative that it is truly gratifying to be able to work here.

Changes are intrinsic to life, but can we change ourselves to meet what is coming towards us? Can we change enough to be part of healing the Earth?

It seems to me there are big challenges for us all. Habits form so much of ourselves. Habits of thought lie deep within us all and within society, and the vast majority of them are buried in our unconscious or little noticed by ourselves or others. Growing up in the west we find we are deeply affected by industrial attitudes and thinking, they are a part of us. We struggle to separate ourselves from ideas such as: having worked harder to make more money, and gain more luxury, we then feel that we have earned it; that the economy should grow year on year like a plant.... But unlike a plant, the economy brings no ripening, seeding or proper decay, it is just expected to grow endlessly. We are brought up to expect that if we use the right 'input' we will get the right 'outcome'. And whether it is 'right' or not, we are reaping the harvest of our, society's, greed and lack of care worldwide. When do we consider it is enough? How do we find a healthy balance for ourselves, for the planet?

Might our very thoughts affect the climate, and the health of soil, plants, animals and people? Are the effects of untruths related to ash tree illness, as some conversations with elementals have indicated? What else do lies do to us, and the world, at an energetic level? Have we any idea? And all these animals in factory farms, how unhappy they must be not to have love and recognition from humans! We can at least thank them and recognise their gift when we eat the food that comes from them. I am sure that conscious gratitude can be a small step towards remediation.

A world picture of interconnectedness, where my choices, and possibly my thoughts, heal or poison my neighbour's land, near or far, is, I feel, part of the vision of biodynamic practice. Can any of us work day in day out on the land in joy and gratitude, even with low financial return, so that we can all be part of regenerating our planet through our food? Are we happy to prioritise supporting farmers and growers

who grow healthy food by paying more for it? Can we relate to those we live and work with in harmony and gratitude? Do we connect to where we live so our environment can bask in our love? Can we feel our way to regeneration from heart to planet, including all the spirits, elementals, other beings we may meet along our way?

We are all striving in our own ways to bring biodynamics as a force of healing for our planet. Biodynamic produce can be a source of 'enlightened' food that helps clear thinking.

This summer members of the BDA have met many people who are interested in what we are doing. We were part of the Seed Festival at Hawkwood in July, seeding ideas and sharing carrots. We were spreading the word about what biodynamics can do for your garden with our new online Garden Club, we were dispatching preparations and books to help with healing the earth, as well as coping with the heat in our small office. We have been reaching out to organic and biodynamic licensees as we start the work of marketing and coordinating supply-chains of good food for more people. The work is immense, and changing ourselves and the organisation is part of it. Often it is not clear which is the path, yet we travel through each day with purpose and joy in our work. **Thank you for your support.**

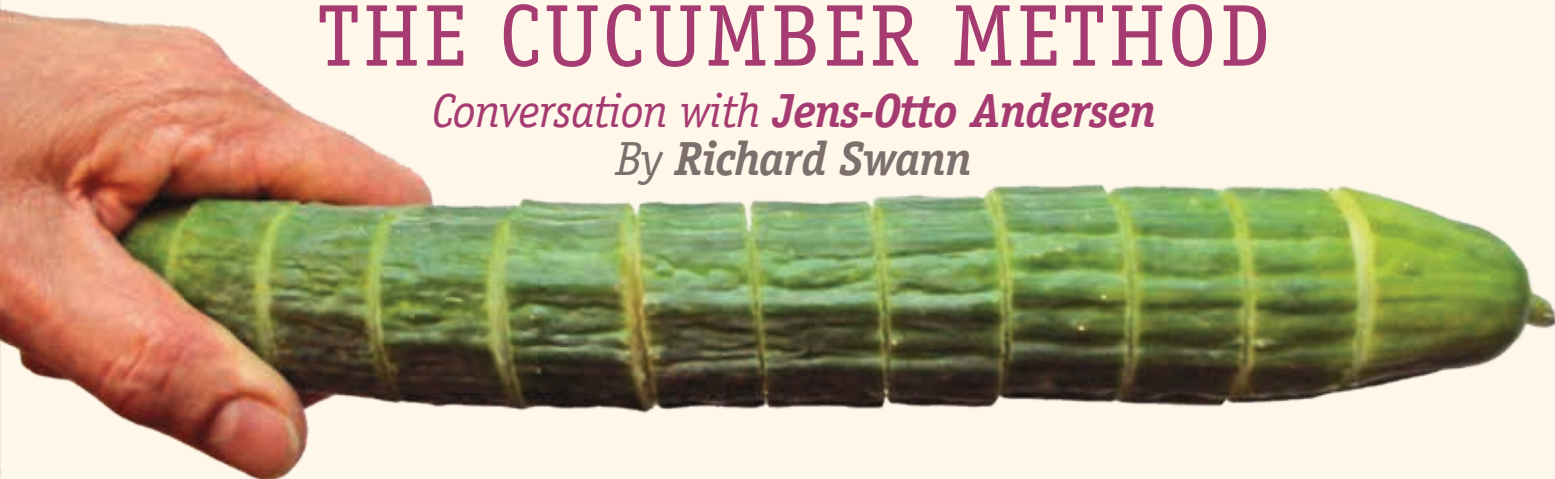
'Be ready bravely and without regret to find fresh impulses that old ties cannot give. In all beginnings an enchantment dwells for guarding us and helping us to live. Serenely let us move to unknown places, let no domestic sentiment detain us, the spirit of the world will not constrain us, but lifts us stage by stage to wider spaces.' (Hermann Hesse)

Advances in Biodynamic Food Quality

THE CUCUMBER METHOD

Conversation with Jens-Otto Andersen

By Richard Swann



FOOD QUALITY is something that we may all have an opinion about! However, when we dig deeper and start to talk about vitality in food, then we may begin to feel out of our depth. Help is at hand! Jens-Otto Andersen is a Danish researcher who has made it his life's task to study and research food quality and vitality. He has a PhD in the subject and has achieved some great insights through his research work.

We are thus very honoured to have Jens-Otto as a keynote speaker at our Biodynamic Association conference in Stourbridge this year.

Jens-Otto first came into contact with biodynamic farming in his home country of Denmark back in the late 1970s. At the time there was a big debate in the country about organic farming. The dominant impression was that the harvests were often lower in organic farming, that plants were frequently attacked by insects and that the animals were not healthy.

On discovering biodynamic farming he found, to his great surprise, that the plants and animals were completely healthy, the soil was alive, and yields were acceptable. In 1978 he started working in a biodynamic garden and the method became clearer. The question of quality rooted in him in a deeper way, and answering this has been his mission ever since.

He went on to study, taking an agronomy degree at university then a PhD in Food Quality. That led him to becoming involved with the European-based Food, Quality and Health Research Group (<https://www.organicfqh.org>) and the sensitive crystallisation method (also known as biocrystallisation).

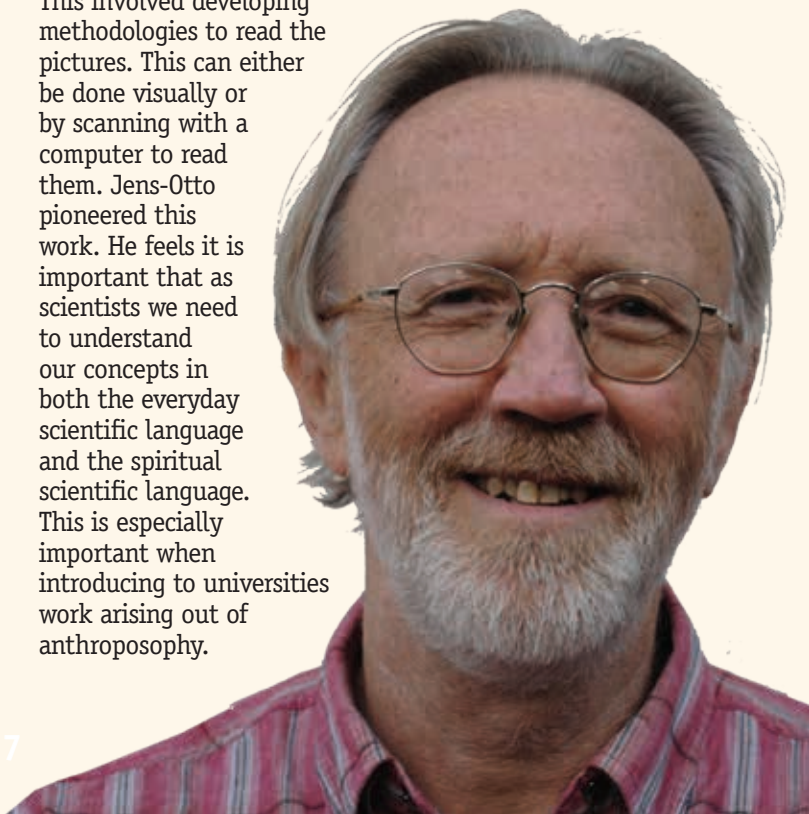
For seven years he worked in Denmark as a Demeter Inspector and as such visited many biodynamic farms. There he was surprised at how tentatively the farmers spoke about food quality. They seemed to have a 'heart' connection to the biodynamic work, but there was not really a language developed around quality issues. He found this disappointing as he felt clear about the importance of quality. He reflects; 'When working with the picture forming methods you are always confronted and provoked by the pictures to understand them. We had a good dialogue in the European research group. During these years in this group I felt I was starting to approach this question of quality in a deep way.'

Jens-Otto then felt the need for a laboratory to provide some sort of 'shelter' to further the work, so he approached an anthroposophically inspired community and asked whether they could hold a lab. This Hertha Living Community, in Denmark (<https://www.hertha.dk/>) had been created for people with all sorts of disabilities, and this proved to be a great asset, not only because of the protected space, but also because of the constant stream of visitors throughout the year – up to 5000 a year. Many of them were invited to visit the laboratory and Jens-Otto was more than happy to discuss his work. He appreciated the very fruitful conversations and questions which people had on food quality. Many had no connection with either research or biodynamics. As he says; 'You understand things much better when someone asks you to explain them.'

At this laboratory, the main research focus was to bring the crystallisation method into natural science as an accepted methodology. This meant not only developing the technical methodology but also documenting the phenomena presented by the picture forming methods of many crops. He and his other European colleagues went on to build a conceptual structure and to scientifically validate the method.

Jens-Otto Andersen

This involved developing methodologies to read the pictures. This can either be done visually or by scanning with a computer to read them. Jens-Otto pioneered this work. He feels it is important that as scientists we need to understand our concepts in both the everyday scientific language and the spiritual scientific language. This is especially important when introducing to universities work arising out of anthroposophy.



Pictures courtesy of Jens-Otto Andersen

After two weeks the healed cucumber can support a weight

For this he gives an example. The second lecture in Rudolf Steiner's Agriculture Course is concerned with the Agricultural Individuality. The third lecture looks at the question of protein. He feels that the concept of the Agricultural Individuality is a fundamental one and can bridge spiritual science with natural science.

The picture forming methods, especially biocrystallisation, can both help one to understand protein, as discussed in Steiner's 3rd lecture, and to understand food quality.

More recently, other picture forming methods have been developed, such as round chromatography. Whilst the biocrystallisation method has been well validated within natural science today, these other methods still need some work to properly validate them from a natural science perspective.

Jens-Otto relates the inspirational conversations he had with biocrystallisation pioneer Magda Engqvist. According to him, she was of the opinion that biocrystallisation reflected the 'protein dynamics' of the crop whereas chromatography reflected the carbohydrate in the sample. Thus, for a fuller understanding of food quality, both approaches would eventually be needed. He cites Prof Jurgen Fritz, biodynamic researcher at Kassel University who uses both methods.

He explains how grateful the biocrystallisation group were for the generous support from the German foundation Software AG-Stiftung (Foundation) which has supported the work for many years. Some years ago, the Stiftung also funded attempts to validate the rising picture method. This work was carried out by at Kassel University using samples from the DOK trial in Switzerland. However it proved difficult to find continued funding for this work in parallel to the biocrystallisation work, so it has been put aside for the moment.

'In society there is the opposite movement, where food quality is being degraded. Deep down it is a spiritual fight. In the biodynamic movement we have the obligation to clearly demonstrate food quality.'

Jens-Otto speaks further about protein as considered at in Steiner's 3rd lecture. There Steiner speaks about the 'five sisters' – Carbon, Nitrogen, Hydrogen, Oxygen and Sulphur. In his description of how they work together, Steiner encourages us to 'follow the sulphur'. What does he mean by that? Has anyone ever tried to do that in a scientific way? Jens-Otto surmises that in doing so we would follow the path of the living organism. He feels it would be important to do that and even to develop new methods of expressing the sulphur activity as a reflection of the protein activity.

Amino acids are the building blocks of protein. There are twenty of them, with nine being essential (Essential Amino Acids, EAA) and eleven non-essential. Yet all are required for our body to be healthy and functional. A study of the EAAs reveal a lot about protein quality. This is a universally accepted analysis within conventional nutritional science. However, some work has been done within biodynamic research on the amount of EAAs in a crop.

Antioxidants (such as can be found in nuts and many fruit and vegetables) are also very valuable in our nutrition. Work is now being carried out to look at the key role that these antioxidants play in the functioning of medicinal plants.

THE VITALITY OF CUCUMBERS

More recently, Jens-Otto has been working on assessing the vitality of cucumbers. He was inspired to carry out this work in 2000 by Peter Segger, organic farmer and founder of Organic Farm Foods in Wales.

The method is quite simple but needs to be carried out under strict scientific conditions. A cucumber is cut into equal 2 cm slices with a slicing apparatus. The slices are carefully re-assembled manually, and the whole fruit is wrapped in cling film. This is then left in a heating cabinet at 24° C for 14 days after which the cucumbers are scored relative to three criteria. It was found that some cucumbers degraded heavily after that time (visual indicators included turning yellow and possibly mouldy), whilst others kept their form and colour, and the slices even grew together again, with a strong bond generating between them (see picture).

Jens-Otto has been collaborating on this cucumber research with colleagues in Poland and Slovenia, and a scientific paper is due out early next year, 2020. He explains that with the biocrystallisation method, often pictures

are taken of samples that are allowed to degrade over several days. The forms in the pictures reflect the breakdown process. With the cucumbers, on the other hand, he speaks of the results being due to a healing process – i.e. the segments glue together again. The suggestion is that a combination of both methods will give a more rounded picture of the sample.

In Slovenia, the biocrystallisation method has been developed into a teaching model and the aim is to do the same with the cucumber method. Jens-Otto feels that it is important to raise public consciousness on food quality: 'In society there is the opposite movement, where food quality is being degraded. Deep down it is a spiritual fight. In the biodynamic movement we have the obligation to clearly demonstrate food quality. The biocrystallisation method is a good method, but the cucumber method is also needed. The biocrystallisation results are always stunning. But we cannot easily bring the results to the public as the research model is too complicated. We thus have the obligation to develop the methods and to bring a teaching model to use in, say, agricultural colleges.' He goes on: 'In the 1920s Rudolf Steiner said that if things go on this way (i.e. degradation of food quality) then in the middle of the century our foods will be just taking space in our stomach. We can see that now. Food has degraded to a degree that very few people have an eye for.'

He thus challenges the biodynamic movement to take up the food quality question more ambitiously. He suggests that it is a social task to point this out to people. Not everyone can have access to a laboratory or the equipment, but he points to a new method that has been developed by the German researcher Uwe Geier, called Empathic Food Testing (EFT).

Using this EFT method, everyone can develop a better sense for food quality and vitality. For example, a concern was raised about the quality of vegetables that were left lying under LED lamps in health food stores. Using this method, a tasting panel discovered that the LED lamps had adversely affected the taste and found that food left under older lamps were much better tasting.

'In the 1920s Rudolf Steiner said that if things go on this way (i.e. degradation of food quality) then in the middle of the century our foods will be just taking space in our stomach.'

Jens-Otto says that by training ourselves to sense this quality, we are recultivating a spiritual sense which we once had, and animals still have as an eating instinct.

So-called nutrient dense foods are increasingly in the public domain and especially in terms of sports and health food products. Studies indicate that organic/biodynamic foods are more nutrient dense than conventional foods, which puts the biodynamic movement in a strong position in terms of enabling global populations to feed themselves healthily, whilst also, of course mitigating environmental challenges..

Note:

Biocrystallisation is a method whereby an extract from a plant (or animal) is crystallised out under specially controlled conditions with copper chloride.

Rising pictures are a chromatography method where plant substance is allowed to rise up a filter paper followed by silver nitrate.

The results of both are patterns that can give an indication of the 'inner quality' of the substance. (For more understanding of the both methods, please see the article on Quality Testing in issue 130 of the Star and Furrow).

Further reading

Andersen, J. (2019). Vitality. [Galten]: Biodynamic Research Association.

Empathic Food Test:

<https://www.wirksensorik.de/en>

Effects of artificial light on food:

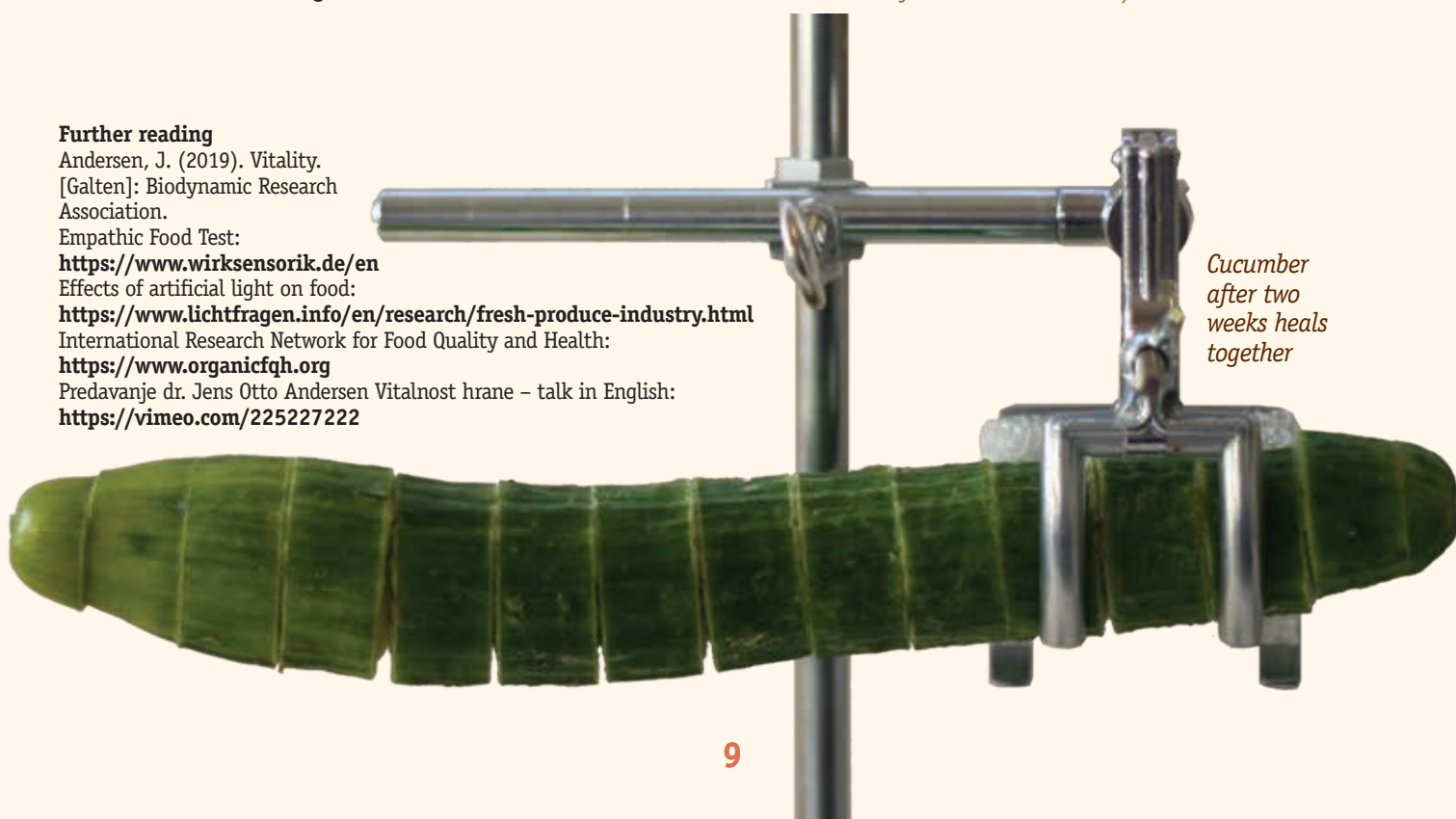
<https://www.lichtfragen.info/en/research/fresh-produce-industry.html>

International Research Network for Food Quality and Health:

<https://www.organicfqh.org>

Predavanje dr. Jens Otto Andersen Vitalnost hrane – talk in English:

<https://vimeo.com/225227222>



Climate, Farming and Food Systems Change

By *Patrick Holden*

COULD THE WIDESCALE ADOPTION of sustainable farming systems in the UK and internationally address climate change and reverse declines in biodiversity? I strongly believe so, but what conditions are needed to make it happen? In June, the Sustainable Food Trust explored these questions at our third Summer conference in partnership with the NFU, kindly hosted by Sir Alan and Jane Parker at their farm in the Cotswolds.

The theme, towards Net Zero Emissions, was inspired by the target of net zero emissions by 2040, set by Minette Batters, President of the National Farmers Union at the 2019 Oxford Farming Conference. Just a few years ago, it would have been impossible to imagine that the President of the NFU would show such leadership. I take my hat off to her for having the courage and foresight to establish this target.

It has already completely changed the conversation within the UK farming community. Before she made the announcement, most farmers were feeling defensive about growing criticisms from the NGO community and others about the negative impact of their farming systems on greenhouse gas emissions and biodiversity. Now, in the front of most producers' minds, there are new questions – what is the route map towards achieving this target, and what changes of farming practice will I have to make and crucially, can I remain profitable while doing so? These themes informed our conference agenda.

We had some wonderful presentations, and these can be viewed and downloaded in film format from the Sustainable Food Trust's website. So rather than summarise them here, I want to consider the barriers to change which need to be overcome if UK farmers can move towards this target.

THE POLLUTER PAYS PRINCIPLE

The theme of the application of the polluter pays principle was addressed in two excellent presentations by Dieter Helm, who pointed out that, until recently, farmers have escaped financial accountability for the damaging impact of their inputs and practices on climate change, biodiversity decline and pollution. This situation, Dieter Helm suggested, is unlikely to pertain for much longer, since the climate change community have woken up to the reality that farming and food production is probably responsible for up to a third of all greenhouse gas emissions, depending on whose data one studies, and critically, it is one of the key areas where the right actions could not only reduce emissions but potentially sequester carbon dioxide from the atmosphere back into the soil.

His message was that we should prepare ourselves for the application of the polluter pays disincentives in farming. I so hope he is right, as I strongly believe its introduction would actually be in the best interests of those farmers who are currently using high levels of chemical fertilisers and pesticides. I say this because in a way you can't blame farmers for applying chemicals if it pays to use them, which will remain the case so long as there is no financial accountability for the damage caused by their use. The only way to get off this treadmill is if the polluter pays disincentives are introduced by governments.

The politics of this are obviously very interesting! If nitrogen and pesticides were taxed, this would almost certainly cause some food prices to rise, even though the apparent cheapness of our food is an illusion. Our 'Hidden Costs of UK Food' report, published in 2017 and updated this year, reveals that if one included the impact of so-called negative externalities - the costs of destruction of natural capital, the

*Patrick Holden
opening the
conference*



greenhouse gas emissions and damage to public health, it would reveal the dishonesty of current food pricing. But even though we are already paying in hidden ways for so-called cheap food, politically, the introduction of polluter pays taxes will be a very high political hurdle for a government to scale, particularly if the leaders of the conventional farming community complained that if they are penalised for their polluting practices and overseas producers are not, it will open the floodgates for cheap imported foods produced to lower standards.

PUBLIC MONEY FOR PUBLIC GOODS

The second need is to reward farming practices which deliver public goods.

The Brexit referendum created an opportunity to achieve this through reframing farming policy. This was grasped by Michael Gove, who correctly recognised the absurdity of the so-called area payments of around £80 per acre, receipt of which all farmers have been eligible if they fill in the right forms and don't break the law. It is now highly likely that these unconditional subsidies, which amount to a social security payment, will be phased out in the next few years, whether or not we stay in the European Union. This is obviously a step in the right direction, but it gives rise to the next challenge, namely in what form should these subsidies be redirected?

STEWARDSHIP SCHEMES

Some may be surprised at the negative view of the Sustainable Food Trust towards these incentives but, in my view at least, their introduction has unintentionally caused massive damage to the environment. I have always believed that truly sustainable food production should be able to coexist with biodiversity, and I am old enough to have observed mixed farming systems during the 1950s, when I had the very good fortune to spend a year in rural Hertfordshire before the chemical era commenced, and mixed farming practice was still the norm. The fields were alive with small mammals, birds, butterflies, wildflowers, whilst at the same time producing respectable yields of grain crops. The key characteristics of those mixed farming systems were crop rotations to build soil fertility, cropping diversity and the non-use of chemical fertiliser and pesticides.

I spent an idyllic year, walking unsupervised in the woods and fields, bird nesting and collecting butterflies - shocking today I know, but their abundance was such that I'm sure my collection habit had little impact on their numbers. All this was to change during the 60s, 70s and 80s, as more and more farmers adopted the practices which are still predominant today - continuous arable cropping, high use of soluble nitrogen phosphate and potash fertilisers to stimulate growth and various concoctions of herbicides, fungicides, and pesticides to suppress the inevitable resultant weeds, diseases and pests.

The conservation organisations quickly noticed the negative impact of these intensive farming practices on biodiversity, but instead of advocating a return to mixed farming, they lobbied for the introduction of stewardship schemes, in the form of a 'deal' between the farmers and the conservation organisations along the following lines - the farmers agree to be paid part of their subsidies to green the edges of their fields in return for being unrestricted in any way as to the use of the rest of their farms.

Although I accept that this was the opposite of what they intended, I believe the stewardship schemes have directly contributed towards the decline of biodiversity in UK farmland. They have separated food production from nature conservation, physically, structurally, financially, in the minds of the farming community and even in the imagination of the public. Worse still, and despite the best intentions of their NGO architects, they have actually directly contributed towards the acceleration of biodiversity decline, as evidenced in the most recent 'State of Nature' report, published just a few weeks ago. This is because however brilliant their design, if they only apply to 5% of the total farmed area, the very best they could achieve was to slightly slow down the decline of biodiversity, because the 95% of the farmland which is excluded, and therefore continued to be farmed intensively, is effectively a biodiversity desert and offsets any gains from the bits round the edges.

And the situation is at serious risk of being perpetuated, since most of the conservation organisations now see the demise of the basic area payments as an opportunity to increase the budget for stewardship schemes. This might



Any Questions team:

(l to r) Prof Mike Lee, Minette Batters,
Jonathan Dimbleby, Patrick Holden,
Tom Watson MP, Richard Benyon MP

sound reasonable on the face of it, but if they are successful, this will mean that the availability of financial incentives to apply truly sustainable farming methods across the whole of the agricultural holding will simply not exist. I am speaking here of what the redirected subsidies should actually be targeted towards, namely rewarding farmers who reduce or eliminate use of chemicals, introduce cropping rotations and other practices to build soil carbon, which practices will remain less profitable options than intensive production costs unless the subsidies are redirected to incentivise truly sustainable farming.

PUBLIC CONFUSION ABOUT SUSTAINABLE AND HEALTHY DIETS

It's clear that unless we can harness the power of informed public opinion to align its future purchasing power to buy food from sustainable farming systems in the products and proportions which the farms involved will actually produce in the region where they live, the necessary changes will probably not happen. At the moment, this is absolutely not the case! I say this because both the climate change and the nutrition communities have joined forces in urging the public to reduce their meat consumption, which sounds perfectly logical on the face of it because we all know that industrial chicken and pork production should end and, if this happened, overall meat consumption will certainly decline. However, unfortunately the 'eat less meat' campaigns, coordinated by the Eating Better Coalition and

others fails to adequately differentiate between the meat and livestock products which are part of the problem and those which are part of the solution. I'm speaking here specifically of grass-fed and mainly grass-fed ruminant meat and dairy products, consumption of which has been falling as a direct consequence of the vegan and vegetarian campaigns.

I spoke at the beginning of this article about the mixed farming systems of the 1950s and 60s, all of which depended on the presence of a fertility-building phase of crop rotations often occupying 40 to 50% of the total rotation period, which was normally grass and forage legumes. Since that time, nearly all the farmers in the east of the United Kingdom have moved to continuous arable monocropping, with consequent dramatic declines in soil organic matter and biodiversity, as mentioned above.

Were these farmers to reintroduce rotational farming, many would also reintroduce cattle and sheep enterprises, since this is the best way to turn the fertility-building phase of the rotation into food that people can eat. More than that, the United Kingdom has many areas of its farmland, notably the West of England, Wales and large tracts of Scotland, which, for climatic and geographical reasons, are unsuitable for growing crops, which means that structurally ruminant meat and livestock products will inevitably form a major part of the production output of a truly sustainable farming system. This failure, by academics in the health, climate change



Lunchtime at Fir Farm

community and even in some of our agricultural research and educational institutions to understand the key importance of grassland and ruminant animals. In truly sustainable farming systems and the way in which their emissions can be offset by soil carbon sequestration may be the single largest factor to hold back a systematic conversion to sustainable agriculture.

During this article I have referred to my frustration at encountering what seem to be misguided policies being advocated by the conservation and nutrition NGOs. I don't doubt the good intent of these organisations or the coalitions that they have created, namely Wildlife and Countryside Link and the Eating Better Coalition, both of which the Sustainable Food Trust joined for a while and then reluctantly left.. However, I do believe it needs to be stated very plainly how much confusion some of the policies these NGOs are causing.

The mission of the Sustainable Food Trust is collaboration, so it's clearly ironic that we find ourselves in a position where we are at odds with not one but two coalitions, the first representing conservationists in the form of Wildlife and Countryside Link, and the second the food and farming/health/NGO community in the form of the Eating Better Coalition.

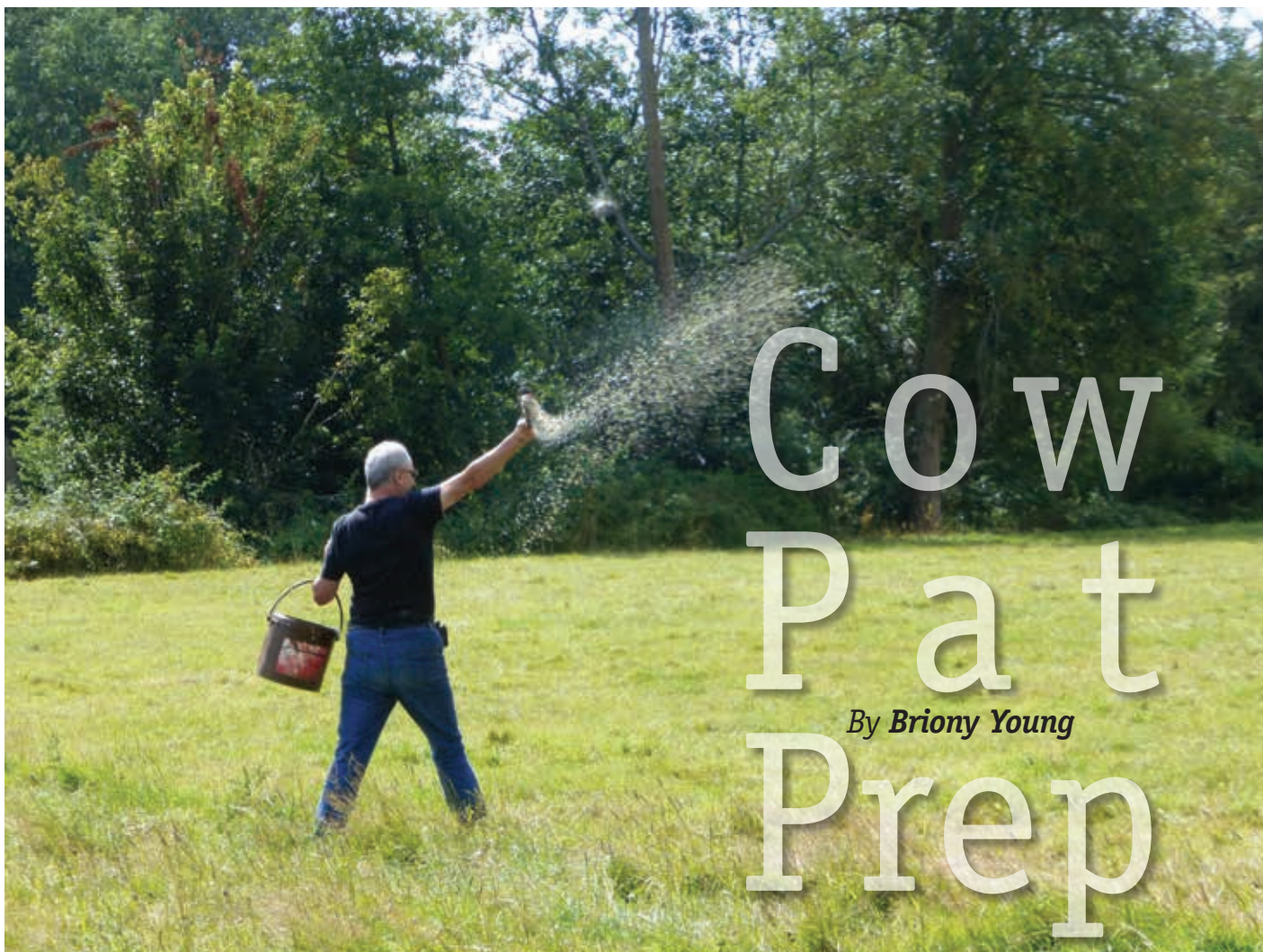
I have been working with many of the organisations that comprise these coalitions for years and count some of them

as friends, so it's particularly strange to find myself having more in common with the farming community than the collective voices of these two communities in relation to the solutions to climate change, biodiversity, and linking farming practice and output with sustainable and healthy diets. I think the underlying problem is the lack of recognition by both these communities of the insights of practitioners when it comes to formulating policy in which farming practice is concerned. Of course, the Sustainable Food Trust wishes to do everything possible to continue to collaborate with the NGO communities and reconcile any differences which may currently be separating us in relation to creating an enabling policy and economic framework for the widescale adoption by UK farmers of sustainable production systems.

To end on a positive note, I passionately believe in the underlying intelligence and wisdom of the UK public, so even though I believe they have been misled and confused by the plethora of messages emerging from the recent reports on agriculture and climate change, I believe they are ready to hear the counter-arguments as represented by the Sustainable Food Trust and others, about the need to integrate food production with nature conservation and align future diets for the sustainable productivity of the farming systems which need to replace the unsustainable ones that we have at the moment. I imagine that most members of the BDA would support this approach, so let's work together on making it happen.



Photo ©Richard Swann



COW PAT PREP (CPP)¹ is a boon to gardeners and farmers alike. It is easy to prepare, exceptionally versatile to use and can promote health in anything from indoor plants, home gardens, field-scale crops and agroforestry to family pets, farm livestock and of course the soil itself!

CPP is essentially cow dung that has transformed into a rich, sweet-smelling humus making it an excellent matrix via which to distribute the positive influences of the *Biodynamic Compost Preparations*. Its regular use can uphold a 'virtuous cycle' both above and below the ground. For example:

- healthy plants are good convertors of the sun's light & warmth (above) into sugars through photosynthesis. Some sugars are shared with the microflora and fauna in the rhizosphere (below) in exchange for micronutrients that the plant requires to stay healthy.
- CPP, especially when used as a ground spray, introduces wide-spectrum beneficial microorganisms to the soil to keep this mutual exchange (above/below) dynamic and positive.
- The presence of the BD Preparations in CPP helps align the living processes of both plant and soil life with the organising Forces of the Cosmos (above) thereby establishing stronger coherence within the vast complexity of their interactions.
- The greater coherence creates more vibrancy in the soil, plants and the beings – whether animal or human - that are nourished by them.

There are many, *many* ways that CPP can be of benefit to the farm or garden. Here are some to try:

To enhance the transformational processes required for humus build-up in soils:

- Add CPP (4:1) to BD Horn Manure Spray Prep in the last 15 minutes of stirring. Strain through a sieve/ladies' tights first if you use a mechanical sprayer. Spray as usual.
- Make BD Compost Prep sets in advance of 'Prepping' your compost heaps – especially useful with long wind rows - by adding one Prep to each golf-sized ball of CPP. Egg-trays hold 6 sets of BD Compost Preps.
- Sprinkle directly onto layers when making compost to kick-start & optimize the process.
- Apply CPP when turning 'green manures' into the soil to expediate a thorough conversion of the raw plant material into stable humus.
- Liberally flick stirred CPP onto pastures 'after the herd' to enhance transformation of dung and regeneration of fodder, especially if using 'mob' or 'strip' grazing methods.
- Crumble directly or flick abundantly onto animal litter before mucking out.
- Add to bran when making bokashi.

Unless otherwise implied, dissolve Cow Pat Prep into water (1:40 dilution) & stir into a vortex frequently changing direction for 15-20 minutes. For best results, apply by flicking with a coarse brush in the late afternoon in a descending moon period.



Spraying CPP on the fields at Tablehurst Farm

To supply plants with nutrients in an available form:

- Regularly apply as a foliar or ground spray or introduce into normal irrigation/watering system (incl. pot plants!)
- Boost crops with additional applications if signs of deficiency are observed.
- Soak seedlings or saplings prior to transplanting.
- Soak seeds & tubers in a thick paste of CPP, shade dry, sow.
- Paint directly on tree trunks or as a component of 'tree-paste' to nourish cambium layer.
- Dissolve some into your favourite 'Compost Tea'.

To encourage vital processes in plants such as the:

- Formation of dynamic root-mycorrhizal associations in newly transplanted seedlings & saplings. Water them in generously with CPP. Crumble a few handfuls of CPP directly into the surrounding soil when repacking it around saplings or before applying mulch.
- Root initiation of cuttings. Soak the rooting tip in CPP.
- Root nodulation and symbiosis with nitrogen-fixing bacteria in legumes e.g. garden peas, field beans, clover leys etc. Water CPP onto sprouts or seedlings.





To promote healing & resilience in plants:

- Apply as thick paste after grafting & coppicing procedures or to wounds left after canker removal & pruning cuts.
- Spray as foliar mist on crops - especially fruit trees, berries and vines - to prevent fungal & pest attack or if you observe signs of stress.
- Add to vase water for longer-lasting cut-flowers.

Pathogens build-up rapidly wherever animals are in a confined space or spend any length of time - especially if their excretions are not well managed.

The huge diversity of beneficial microorganisms present in CPP creates a more favourable environment for animals to thrive in thereby reducing risk of ill-health & disease.

CPP begins a more wholesome process of breakdown of animal waste prior to being added to compost

To prevent pathogen build-up:

- Crumble a handful onto anything that smells (or is prone to smell) of rotting or stagnant organic materials e.g. kitchen-waste caddies, farmyard slurry, stagnant ditches etc.
- Regularly sprinkle CPP directly onto pet litter and spray on surfaces of animal enclosures.
- Apply a 1:20 CPP dilution fortnightly in & around poultry houses and to bedding litter in barns where livestock overwinter.
- Apply liberally in farrowing houses/lambing areas or any areas where birthing fluids need to breakdown more safely.

...and finally, though unproven scientifically, I'm confident that use of CPP mitigates the negative impact of ever-present radiations around us (EMR, phone masts ...) and that we improve our own microbiome as a natural consequence of working with this wonderful substance!

Acknowledgement: *My thanks to Rachel Pomeroy for her generous knowledge-sharing & enthusiasm for CPP.*
www.growbiodynamics.co.nz

¹ First developed in Germany by Maria Thun in the 1960s as 'Barrel Prep'. In the 1990s, Peter Proctor coined the phrase 'Cow Pat Pit Prep' in India, using brick pits to prevent termite damage. The dry version is 'Mausdorf Starter'

The Ripening Process in Plants

Lightening of the stalks, bright gold - yellow maturing wheat variety

By Peter Kunz

Fonds für Kulturpflanzen-Entwicklung

RIPENING AND WAVING in the golden cornfield, tall, strong stalks bearing full, heavy, golden maturing ears: cereals are inseparably connected with human settlement. And firmly embedded in our culture are pictures: the bluish-green sea of the cornfield in early summer; the gradual change to light green; then red lighting up on the stem followed by the yellow and gold tones that ring in high summer and announce the harvest. These pictures are vivid and live on in our songs and poems – and nowadays in advertising too. A culture of bread has arisen along with the culture of cereals. The traditional bread culture of a region is inseparably connected with the varieties and species grown there. Yet what does it look like in the fields? Out there, to meet the demands of the modern market, vast amounts of cereals are cultivated as our present source of food.

A QUALITY INDICATOR FOR OUR DIET

Nobody has noticed, and nobody cares that wheat fields are greening the grey-brown earth in the autumn and through the winter. In the spring, the light green initially darkens, first becoming blue-green, then grey-green. At ripening time the straw changes to grey-yellow, often just to grey, and sometimes even to an unsightly grey-black – a veritable non-colour. Does our bread come from this, even though it has had all sorts of treatments such as growth regulators and fungicides? Vanished are the golden colours that can be seen on old pictures and in advertisements, and which are sung about in our harvest festival songs.

Times have changed. Agriculture has become something other. Even the wheat has changed through breeding. For over a hundred years it has become shorter and shorter, whilst at the same time the yield has increased. That was a justified goal, but it has side-effects. The change in the architecture and physiology of cereal varieties has unforeseen

consequences. Shorter plants are more prone to fungal diseases. These spread to the ears endangering yield through highly poisonous and carcinogenic toxins that can find their way into our food. On account of the fact that the grains ripen closer to the ground and near the leaves, they taste more like grass. If the colours are missing, the taste is also lacking – just as with an unripe apple. Cereals too need maturation. It's just not as obvious as it is with other fruit. But it is no less important for the health of the plant and for the wholesomeness of the product. It is true that, through the skills of the baker, something can still be retrieved and improved in a longer dough process. But unless the wheat has already been properly ripened in the field, bakers will no longer be able to arrive at a really excellent bread.

WHAT IS RIPENING?

With fruit such as apples, the senses help us decide – we can actually taste ripeness. The ripening of a hard, green apple is not just a matter of it becoming sweet; it acquires a whole bouquet, an assortment of aromas characteristic of the variety, and typical of where it was grown. The texture and taste of the fruit's flesh gets pleasanter. And not least, a ripe fruit agrees with us better than an unripe one. Each fruit has its optimal ripeness for consumption. Ripeness is clearly recognisable as a fresh, frequently slightly brightened coloration together with a corresponding aroma profile. This is followed by spoiling. The fruit's structure disintegrates, taste and smell tend to one-sidedness and unpleasantness, eventually becoming intolerable. The colours once again approach the colours of the earth, i.e. those colours out of which the green plant grew originally. This applies to all cultivated plants. In fact the special, prominent feature of a cultivated plant, one that distinguishes it from the wild plant, is a more pronounced development and species-specific ripening of one of its organs.



WHAT HAPPENS DURING THE RIPENING OF CEREALS?

Cereals' growth happens in three distinct developmental phases. Before winter, the germinating plant concentrates above all on developing its roots. Whereas above ground only a few leaves appear, wherever the soil structure and conditions of light and warmth allow the root already reaches to a depth of 30 to 50 cm. For almost six months the entire growth of cereals is oriented downwards. At low temperatures, the roots go almost vertically into the depths. Assimilation from the leaves is mainly transported downwards; there not only does it serve root development, but also a significant proportion is exuded into the surroundings of the roots. This involves a broad palette of substances: carbon dioxide and chelating agents influence the solubility of minerals; carbohydrates and amino acids 'nourish' the soil micro-organisms; and coumarin derivatives, phenolics, glycosides, alkaloids, vitamins, etheric oils and ethylene influence their growth and activity. Through all this the plant controls the soil life in the region of its roots. The plant enlivens and forms the soil. In the region of its roots, it builds up a potential available for its further development.

BIOMASS FORMATION IN SPRING AND EARLY SUMMER

In early spring, new leaves and tillers (shoots springing from the bottom of the original stalk) are formed again. Each tiller forms a new generation of roots which increasingly spread horizontally with rising soil temperatures. In the still short tillers the leaf, stalk and ear are pre-structured in miniature before they turn upwards and grow in length. At this stage of development, during which the field looks no different from a green meadow, the whole plant that is later to appear is already completely formed. Only cereals show such a developmental dynamic. Within a brief period over the following weeks the plants' stems grow in length. The stand grows tall and the ears are thrust out of the stalks. The completely inconspicuous flowers that briefly appear on

the ears conclude the growth. Until this moment the wheat plants have not yet produced anything edible for humans, but have produced straw or roughage for animals that are especially adapted to digesting cellulose and lignified plant parts. Nevertheless, this biomass provides a valuable basis for the later swelling of the grains. And what remains on the ground as straw after the harvest is important for soil fertility, because it comes back to the field in a 'refined' form as livestock fodder and bedding together with their dung, and revitalises the soil anew.

REVERSAL OF METABOLISM

At the time of flowering, grain formation and swelling begin. During the last six weeks of the vegetation cycle the physiology of a cereal plant is totally redirected to this. Previously, the assimilate was transported downwards into the roots and to the new leaves. Now the developing grains trigger a remobilization of assimilate, proteins and minerals accumulated in the leaves, stalk and roots. The metabolism is literally turned upside down. In healthy plants, this process proceeds slowly and steadily. But in diseased and weak plants it is chaotic or even interrupted prematurely. As a result, decomposing fungi spread wherever they can find a suitable medium to grow. In healthy plants the maturation process goes ahead in an orderly and slow manner. The leaves become lighter coloured from the tips, initially turning light green, then yellow, before they dry out. The stalks too become lighter in colour from the bottom upwards and can turn really translucent, whereby their colours brighten. As with broad-leaved trees in autumn, colour nuances appear in all shades from bright yellow to deep red. Thus, in their own way, cereal plants exhibit a flowering and ripening process; it is an expression immediately visible to the eye of a successful and balanced translocation from the green plant into the grain. The transformation and re-deposition process is responsible for what minerals arrive in the grain



and what can be formed there. Depending on conditions in the surroundings – temperature and water supply are above all decisive for that – and the predispositions of the variety, in the grain are produced structure-forming gluten proteins and starch compounds for dough development and the baking process, as well as a variety of aromatics and compounds influencing palatability. Thus, in the lower part of the plant, ripening means orderly breakdown, and, at the next higher level, equally orderly build-up of the fruit and food substance.

CONVENTIONAL BREEDING

To get high yields with cereals, plant stems are shortened to improve their stability. This is done either with the use of growth regulators that affect hormone metabolism, or genetically with so-called short straw genes that are based on a hormone receptor defect, or with a combination of both methods. As a result of shortening, the plants lack the required biomass that supplies the vitality necessary for ripening. In conventional farming this is provided by constantly oversupplying the plants with mineral nitrogen fertiliser. This indeed strongly stimulates growth in the first and second developmental phase, but the vitality remains 'stuck' at this vegetative level and hinders the ripening process. Conventional breeding has as its goal the stay-green trait. This is found in varieties that are intended to remain green for as long as possible. We can also describe this goal as a prevention of ripening. Prolonging the duration of assimilation in this way actually produces higher yields. However, the still green field of bread wheat has to be sprayed with glyphosate at an ever increasing frequency so that the thresher does not get blocked. Monsanto and co are looking forward to increasing sales. This trend is supported and intensified by the ever higher yield performance driven by the market, as well as by the 'quality criteria' prescribed by grain dealers, and it is visible in the non-colours in the

fields. Besides the polluting farming, the shortened and over fertilised plants waste a not insignificant part of their resources: a large part of the fertiliser nitrogen remains behind unused in the straw, or it is leached out

BIODYNAMIC PLANT BREEDING: A HOLISTIC APPROACH EMBEDDED IN THE ENVIRONMENT

The biodynamic plant breeder's plants should grow in close association with the site and exploit its resources without tending to one-sidedness or becoming diseased. Its varieties mostly show a stronger leaf and biomass development, and are not dependent on nitrogen fertilisers to produce the high gluten content preferred by the processors. The stalks are longer and the ears, which ripen at a greater distance from the leaves, are consequently healthier. Finally the aforementioned ripening process is also taken into consideration as an essential characteristic for all cultivated plants. This is because it leads not only to an improved quality of the grains, but also to stable and good yields. Biodynamically bred cereal varieties are becoming increasingly popular. In Switzerland, almost 70% of organic wheat is grown with varieties from our cereal breeding. In southern Germany about half the bread wheat comes from biodynamically bred varieties. It is precisely that these varieties are reliable in difficult years, such as 2016 with its wet summer and 2018 with its hot summer, that confirms the high relevance of architecture, growth dynamics and ripening processes.

Our cultivated plants require a new aesthetics as a model: the beauty of the plants in their architecture and in their vivid expression is in no way a luxury, but central to developing quality and creating food security. Against a background of soaring diet-related health costs, it also makes economic sense to support and promote this holistic kind of plant breeding.

BREAD-MAKING AS THE COMPLETION OF THE RIPENING PROCESS

Well-matured grain has a dormancy. Grain harvested at the right time is therefore storable for a very long time without losing its nutritional value. The one-sidednesses occur before and after, and certain culture techniques deliberately make use of these, eg. sprouted grain and malt, as well as Grünkern (green spelt, green grains). In the case of Grünkern, dried unripe and then kilned, the seed has not yet become dormant. Grünkern is therefore powerful, but not nourishing in the fullest sense. With malt, which is produced by longer germination, the shoot grows again. The malt grain not only remobilizes sweetness from carbohydrates, but also produces new aromas. Its germination and digestive enzyme inhibitory substances are inactivated and the breakdown of proteins starts. This is partly connected with an increase in its valuable amino acids.

When preparing dough, the addition of water to the flour starts a transformation process that is related to the process of germination. Because the cereal grain represents a highly concentrated food, after milling and wetting it needs sufficient time for the digestion processes. Whereas the seedling bears within itself its developmental direction towards a new plant, and can control this development itself, the process of dough preparation is controlled from outside by the temperature or the addition of sour dough or yeast. Without sourdough or yeast, a change starts that can very easily end in chaos, i.e. in a butyric or acetic

acid fermentation resulting in an unpalatable bread. In dough processing, bakers even speak of a ripening process that, like the ripening of the cereal plant in the field, is connected with decomposition and regeneration, and takes time. If the process is carried out too quickly, one-sidedly or incompletely, not only does the taste and aroma suffer, but also the wholesomeness. If the ripening process succeeds, a well structured, richly aromatic, wholesome bread is produced that retains its shape.

What is presented here is today being rediscovered by bakers and by many consumers. Even in large-scale industrial production attempts are being made to take this into account, at least to some extent. This is always connected with greater investment, and above all it takes more time. And nowadays time is money! Therefore at the same time there are those following a trend in the opposite direction: quicker, ever shorter processes, together with the addition of artificial aids and fragrances that lead to results hardly distinguishable by consumers in the shops. However, the determinant of quality is the ripening process that takes place between the breeding and the bakery. And consumers have it in their hands: with their purchasing decisions they can control what food is produced and how it is produced. It is not enough to make a conclusive judgement about quality immediately after your first sensorial impression. A holistic judgement results only against the background of a healthy, beautifully grown and ripened field of grain, as the result of a sustainable, carefully managed agriculture.



Bread making - the completion of the ripening process



NOURISHMENT VIA THE SENSES AND THE STOMACH

Colour, aroma, taste and touch appeal to the senses, directly preparing the process of digestion and stimulating it to action. Whereas the germination of the seedling itself controls the accompanying breakdown of substances, and in grain formation and ripening in the ear the developing grain itself initiates and guides the breakdown in the green plant, in the case of human digestion this task of initiation and control to a large extent falls to sensory impressions and pleasurable experiences. When eating, the more powerful and differentiated the sensory stimulus, the more restful and complete is the ensuing digestion. The wholesomeness and palatability is also directly connected with it, despite our highly individual preferences and sensibilities. These are essential steps that teach us to approach bread or another food attentively before we consume it and digest it. Questions come before eating: what is it, and what does it look like? What is in it and how is it prepared? How appealing are the colours and the aroma? What taste and oral experiences are awakened? When eating, attention is directed wholly to the concrete encounter. What does it really taste like and what does it feel like? Are my expectations fulfilled? What was unexpected? And a few hours after eating, how did it agree with me? Do I feel strengthened and enlivened, or rather a heaviness? From breeding to loaf the ripening process features in all these questions.

The senses are part of eating, so we need them! But they carefully and prudently enrich our experience and deepen our understanding of and responsibility for the provenance and significance of food as the basis of our life. That too may be described as a ripening process.

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Nature Spirits & Humans and ways of working with them

A CONFERENCE 'Humans and Nature Spirits' was held at Eastwood Hall Hotel, near Nottingham in May. It was organised by Stephen Roberts (obeying an inner instruction), with a dedicated team, sponsored from Weleda and Biodynamic Association.

People (152) and spirits gathered from around the world to celebrate that the time has come for Humans to accept their responsibility to co-create with the Elementals and Nature Spirits.

Marko Pogacnik, renowned Slovenian UNESCO artist for peace, and esteemed seer, gave the opening address. He pointed out that we were gathering within the 'aura of Sherwood Forest', a meeting point for worlds to connect and harmonise: the conference could help in recreating a bond with nature spirits.

Marko said this would help 'build up a new pattern of cooperation and togetherness'. He emphasized our opportunity for the co-operation of all beings; to learn to perceive and communicate with subtle worlds; and work towards a new Age of Peace, friendship and collaboration among different realms.

Tanis Helliwell left a job in the corporate world to go to a remote cottage in Co Mayo, Ireland. She was surprised to discover that she had moved in with a leprechaun family. She never looked back. In her keynote address, Nature Spirits Are Real, she showed us photos of tiny beings of light (including exquisite images of fairies).

Time was a recurrent theme during the weekend; Tanis drew attention to how the conventional three-dimensional view is shaking apart as we are drawn into higher frequencies. We are 'caught' between the old 3D view and the etheric and astral dimensions. The new reality is a way of being and doing simultaneously. If we open to the flow of change we will find time sufficient for what needs to be done. We've learnt not to see, but now is the time to start seeing again. The Nature Spirits really want this from us – they are longing to co-operate.

Susan Raven's gentle precision weaves knowledge from cutting edge new physics with her insights as a long-term practitioner of Rudolf Steiner's work. She opened with a meditation, inviting us to look around inside our head and clear it, letting the clutter and obscurations drop into the Earth: 'Please accept these uneasy offerings and

transform them with your grace and return them to me as useful thoughts and deeds.'

When Susan asked how she could prepare best for the Conference, she was (to her surprise) directed to go to a landfill site, which she accessed, sketchbook in hand, under the guise of being a 'student of industrial art'. As she sat above the mountain of rubbish, she extended her consciousness with the thought 'I love you' to the nature spirits and elementals bound there. She saw the beings in the detritus were so shocked to experience a human being loving them that they revealed to her a sleeping Goddess of the Rubbish. Susan asked her, 'What are you?'

'Mournful awaiting,' came the response, *'my self lies lamenting on the ground – raise it.'*

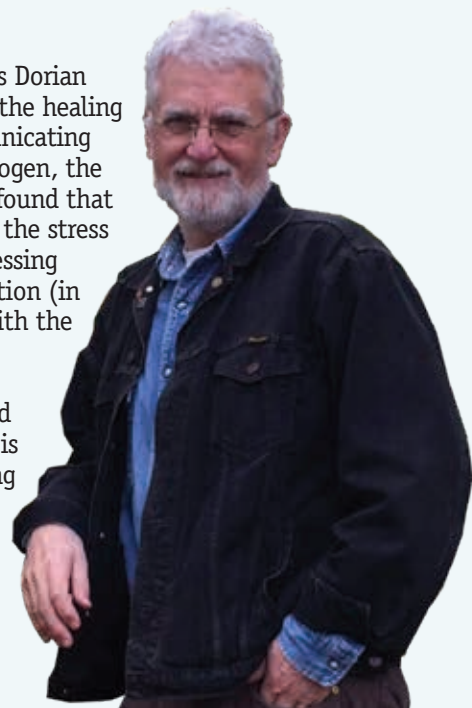
'What are you to humans?' Susan continued.

'A chronic epidemic of self-sabotage,' came the tragic reply. The Goddess revealed the urgent evolutionary necessity for humans to raise a sense of worthiness from within.

Rudolf Steiner said that during these times certain Nature Spirits are retreating and we humans need to take over. Susan said we should take heart, 'Create your own Reality'; ideas that thoughts create things are becoming accepted. She keeps up with the new physics and pointed out that people who would be averse to talking about gnomes might be interested if you mentioned sub-quantum kinetics or an etheron particle! In fact, it would be accurate to compare gnomes to 'gravitons'.

With a group that includes Dorian Schmidt, Susan works for the healing of tree diseases by communicating with the fungus, the pathogen, the disease itself. They have found that these diseases result from the stress caused to trees from processing human attitudes and emotion (in the case of Ash – lying; with the Oak – sorrow).

Karsten Massei emphasized how important each of us is for the Earth as we all bring something unique. The Elementals are masters



of time, rhythm and speed, Karsten explained; 'many of our social problems are problems of speed,' moreover society and groups need to find the right speed. 'If I can find the right speed for myself, I am in harmony with Elementals.' Secondly, it is crucial to be sensitive to the speed(s) at which things need to happen: 'If I proceed at the right speed, the future will come to meet me.... The Elementals are dependent on us finding the right speed.'

According to Karsten, the Elementals have two key tasks for us: 1) to really care for ourselves / our bodies, and 2) to protect our destiny. These are the questions we need to ask: Who am I? What should I be doing? What is my task? We can discuss all this with the Elementals, Karsten said. They love these kinds of questions! If a human being can connect with his/her original impulse, this helps the Elementals too. They are longing to see what humans are creating together socially; in observing us in this way, they are learning to develop their own freedom.

The crucial question is 'How do we make a decision together?' The important step is meditation. 'What occurs between the question and me?' Karsten asked. Having asked the question and meditated together, it is necessary then to go away and notice what occurs in the meantime. When the group reconvenes, share what has been noticed/ happened. Then, it will be possible to reach a trustworthy solution.

Julie Bowman, founder of Lotus Holistic Essences gave her talk 'Elemental Gifts from the Sea' with pictures of a colourful array of seaweeds found in parts of the UK, Ireland and the Canary Islands. 'Essences are about a voyage of self-discovery... I talk on behalf of that elemental world and I honour them, and they support me.' Julie's Lotus Holistic range includes a combination of plant, flower, gem and seaweed essences used to enhance the vitality of the environment.

Workshops took place on Saturday afternoon, some in the grounds:

■ Marko Pogacnik is adept at recognising the geomantic significance of landscapes. One of the functions of his work is to restore our energy systems to the full range of functioning, in harmony with that of the planet. We practised, among other things, walking slowly through a grove of Yews, while connecting to chakra points below our feet with points of red, and then with points of white above the crown; linking Earth and Cosmos as we walked.

■ Tanis Helliwell invited each of her group to choose an Angel card. She taught a meditation to release blockages, she led the group in finding an Elemental who wanted to work with each one outdoors under a tree.

■ Glennie Kindred led 'Walking with Trees', beginning with a Copper Beech and a Hornbeam. She had brought each of her workshop participants a medallion fashioned from wood.

Some in Weleda gardens: -

■ Susan Raven introduced the group to the value of ritual, she led them in the performance of a simple ritual to assist the nature spirits and elementals.

■ Karsten Massei spoke to the High

Elementals and said they had been waiting for those who had eyes to see. Everyone worked alone, Karsten told how a Water Being had shown him the 'landscape of his own soul' through colour. One Elemental (of a Hawthorn) was related to the mission of the Weleda field.

■ Claire Hattersley and Michael Bate led a workshop entitled 'How to Attract Nature Spirits into your Garden'; introducing the principles of biodynamics, and showing how to prepare Horn Manure 500 and Horn Silica 501 for use in the garden.

Marko Pogacnik's closing talk was 'The Human Being's Elemental Self and our Co-Creative Role in the Earth's Evolution'. He addressed us as '*My dear Elemental Beings and Nature Spirits*,' pointing out that each of us (like every organism, tree and even car) has its own Elemental being which moves in the watery and energetic dimension of the body. '*We are here because we are interested in the development of the universe, of Earth and cosmos. Seeking connection to the elemental world is an illusion because human beings are already part of it*

'We come now to the point where humans and the elemental world make concordance,' Marko told us joyfully. '*We are building a new civilisation: Gaia Culture. This is the basis for a new system, where love is recognised as the ordering principle and a vertical (hierarchical) connection is replaced with a horizontal one.'*

We need to stop investing money in irrelevant environmental adjustments and turn our attention to changing our consciousness and attitude. One of his significant contributions has been his Language of Cosmograms – the sacred geometry that he carves into stone structures and which are placed at specific points on the Earth. These cosmograms feature number and symbolic figures which can be recognised by beings from other dimensions. The task is to receive pure vibration. Going beyond the limits of the senses, we enter a world of images, colour and sounds, allowing access to the multidimensional.

'We are entering a Paradise ... we are multiplying Gaia's cosmos and beauty.' Human beings have the unique ability, developed over ten million years, to connect all twelve dimensions: this is our task and responsibility.

Groups working together will allow Gaia to transform without cataclysm. '*As a community of equals, we will be able to master the enormous challenges coming*', Marko affirmed. '*"This conference has a special importance for the elemental world."*

The next conference is planned for 2021 - <https://www.naturespiritsconference.com>

Thank you to Stephen Roberts and Caroline Sherwood for help with writing about this event.





Biodynamic Gardening Club

By *Jessica Standing*

SINCE ITS LAUNCH IN MAY 2019, the biodynamic gardening club has put down strong roots and continues to flourish, attracting new members on a regular basis. Alongside the publication of 2 seasonal newsletters for club members and our dynamic Facebook group we have also produced 3 eye-catching flyers. If you know of any events / shops/ gardening clubs / notice boards or groups who might have some to distribute, then do contact the BDA Office and we will happily send you some.

We are also delighted to announce that renowned nutritionist and founder of Green Cuisine, Daphne Lambert www.greencuisinetrust.org has joined Weleda and Waltham Place as one of our official supporters. We also welcome Paul Rushton of This Conscious Life and author of Sattva, reviewed on p 44, a biodynamic enthusiast and gardener, who is regularly posting inspirational posts regularly on Instagram – not to be missed!

■ Being in tune with Nature, the Cosmos, and our feelings, and cultivating a gentle way to deepen our spiritual connections and live in harmony with our gardens, is a great way to achieve both.

- Experience... the joy of gardening biodynamically
- Grow... delicious food brimming with health and vitality
- Create... your own mini haven of biodiversity
- Learn... how to make small differences that count
- Achieve... more balance and harmony
- Connect... with like-minded enthusiasts

WHAT THE CLUB OFFERS

- Quarterly seasonal online e-newsletter.
- Members-only Facebook page where members can share experience, tips, advice.
- Dedicated members website area, and online resource library.
- Interactive webinars with experts in their field.
- Member events.
- Regular offers.



MEMBERSHIP

The great news is all existing BDA Members can join the BDGC for FREE - our way of saying thanks for all your great support - simply contact Jess at the BDA Office to be part of our growing community.

Together with our partners, Weleda and Waltham Place Estate our aim is to empower people to nurture truly planet-friendly plots, make a lasting difference for the Earth, and grow great food! www.biodynamic.org.uk/garden/#bd-garden-club

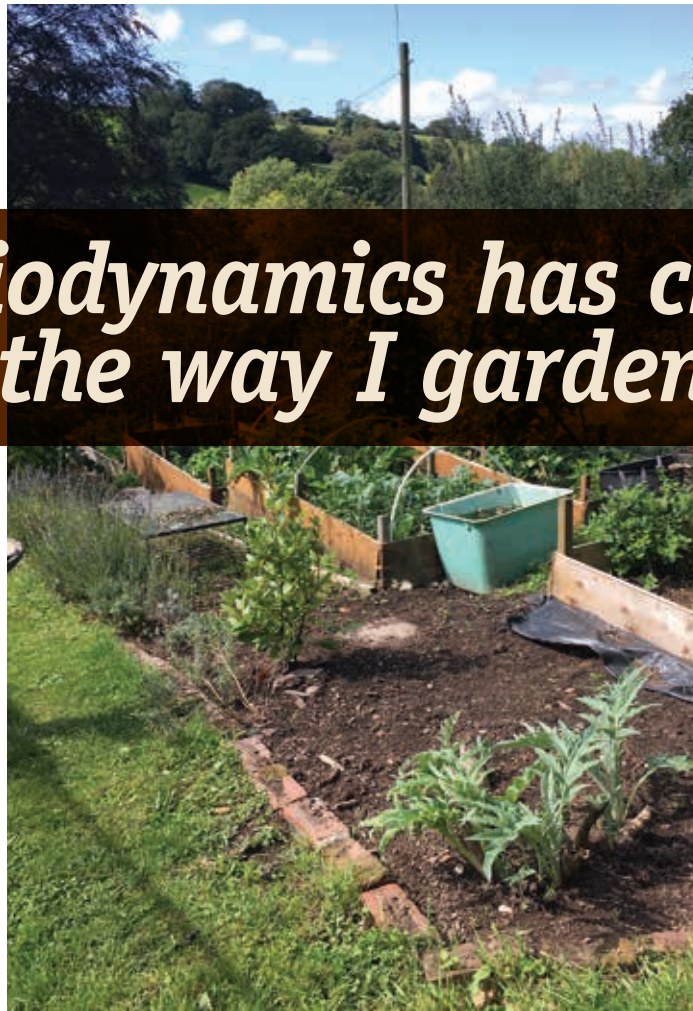
One of our active biodynamic club gardening members Charles Mitchell shares his biodynamic garden know how and journey, focusing on this time of the year and leading into winter.

How biodynamics has changed the way I garden

THE END OF SUMMER and the start of autumn are a good time to reflect on the garden, what worked and plan for the future. Not that sowing stops; by the end of September I will have sown broad bean 'Aquadulce' which is good to overwinter. I have done this for many years, but am still amazed at how they survive frost, snow and cold temperatures remarkably unscathed.

It means that we get a crop a few weeks earlier than a spring sowing. In the spring I sow another variety 'Witkiem' in any gaps that have occurred over winter, plus a few extra rows. I always sow in rows, I have tried more scattered sowing, but rows work for me as I inter-crop some with vegetables. Two of those are onions and garlic. Despite the failure of the garlic this year due to disease, I will try again in a raised bed as far away as possible from this year's and will then interplant the onions and garlic with rows of carrot seeds in the spring. I was told many years ago that this kept away carrot fly, and it works for me.

The winter is a good time to browse seed catalogues. I buy most of my vegetable and herb seeds from the Seed Co-op who produce open-pollinated, biodynamic or organic seeds. (I should state I do own some shares in the Seed Coop which is a Community Benefit Society). Like many gardeners I have a weakness for buying seeds. Apart from the Seed Coop I also buy from the Real Seed Company in Pembrokeshire which is also an open-pollinated supplier and they have some rare seeds (I grew 'Aztec' broccoli this year.) They are a good source of the unusual. I also buy seeds when I am abroad, a bad habit probably, but when you walk into the Time Out Market in Lisbon and are faced with a rack of Demeter labelled seeds, what can you do? But it does bring back memories when I sow and hopefully crop them. Normally all is good, though the Greek basil purchased in Greece, that I hoped would form a nice round shape, did not.



By Charles Mitchell

I watched Monty Waldin's series on his adventure to set up a biodynamic vineyard. It made sense; I got the idea of looking after the soil. We were already pretty much organic, but then I used the 500 and 501 preparations, although with limited knowledge.

This year I attended a biodynamic course at Coleg Plas Dwbl in Pembrokeshire which was organised by the Biodynamic Association. This made everything I had read (and I have still not finished Steiner's Agricultural lectures - it is not a light read) begin to make sense. Over the years that I had gardened and grown crops, I saw the soil as just something I used, added some manure to, and all would be fine.

I am now far more focussed on the soil as the living place that needs nurturing and working in tune with nature and the cosmos.

On the course, Laura initially took us out to dig a hole, look at the soil and see the structure. Was it smooth or rough and could we see worm droppings? (we could) We were then sent out to sit and feel the "Spirit of the Place" which is a concept based on the writings of Goethe. This is one thing I have taken on board; I now spend 5-10 minutes sitting at the top of my garden, just absorbing it.

Composting was another subject covered during the course; building a heap with the preparations and making the Cow Pat Pit preparation. This Autumn I will be digging a →

Biodynamic gardening has changed the way I garden.



I am now far more focussed on the soil as the living place that needs nurturing and working in tune with nature and the cosmos.

hole lined with bricks, divided in two so the mixture can be moved from one side to the other. The mix is fresh cow pats, baked and crushed eggshells and volcanic dust mixed together. After 4 weeks move to the other side (or you could just turn in a single chamber). After a further four weeks it is ready to use, diluted in water. 'Gardening for Life' by Maria Thun has more information on composting.

through the soil. I have also discovered 'Niwake' who do some nice tools from Japan.

Over the last 10 years I think I have slowly evolved the idea of gardening for our space. Catching rainwater was a major breakthrough when I worked out that using panels over a structure could feed water into tanks (which I got from a builder friend who was chucking them out.) I then noticed

I use both the App and the paper versions of the Maria Thun calendar, but as I was told on the course, I do not follow it strictly. Due to work or travel I cannot always plant on the right day according to Root/Flower/Leaf/Fruit, but I do avoid 'Generally Unfavourable' times. Storage crops like onions I do lift on the suggested date. This year I am going to spray seeds with 501 preparation before sowing as it is meant to strengthen plants against fungus.

Autumn task's always mentions cleaning tools. I sort of do, but since I use them all the time my main task is sharpening things. Over the years I have been given a few Implementations Bronze tools. They are the only ones I now use, and they are meant to deter slugs, but I also like them for their sharpness



bees were getting trapped in the water, so I put corks in bags as a float. I have been looking for old cattle troughs - back in the 1960s every field had them, often unused and full of newts. I could not find them, so I just bought a new one. They are far easier to use than a water butt as you just dip in.

Projects for this Autumn are the digging of a small pond and extending the wildflower beds. The first wildflower bed I made (we have lawn and we agreed to make a corner into wildflower bed) has worked amazingly, it is full of insect activity. I am going to plant another fruit tree as I try and add one a year for environmental reasons as much as for the fruit.

Biodynamic gardening has changed the way I garden. I

Gardening must be enjoyable, and I truly think using a biodynamic approach has made me appreciate the garden in a way I had not before.



Planting by the moon and planets and fitting in with the rhythms of nature is not new, we just forgot how to do it in the post-industrial revolution world.

feel more involved in the space, though I do also spend some time listening to cricket while looking at the veg beds and thinking about what to do next. The Biodynamic Gardening club, which I joined when it launched, is useful to get ideas from other members regarding issues such as getting rid of cabbage caterpillars and so on. Recently members have been uploading pictures of their gardens, inducing some garden envy!

Gardening must be enjoyable, and I truly think using a biodynamic approach has made me appreciate the garden in a way I had not before. On the reflection of the year the pear results, and apples, have been better due to spraying with valerian earlier in the year when frosts threatened. Crops seem to have been better generally; the raspberries keep coming and the crops have been better than last year. I have had a few crop failures. Peas refused to germinate when direct sown this year and next year I am going to use root trainers. I have discovered some that are made of rubber rather than plastic. I used the 500 preparation once before sowing in the spring and 501 twice. I enjoy getting up to stir the Horn Silica Preparation at 6.00 in

the morning. I tend not to wake up that early, but there is something wonderful about sitting in the early light stirring the bucket for an hour.

Hopefully more and more people will adopt biodynamics, it does not have to be followed as rigorously as initial reading might suggest. It is, after all, about looking after the soil, the crops will then flourish as will the wildlife. If

the Association do more courses next year, I would highly recommend them. The course I attended was the best gardening learning - experience I have had. Having grown crops for 50 years on and off I thought I knew a bit. But the course opened me up to new ideas and methods, although if you look back 300 years a lot of these methods were normal then. Planting by the moon and planets and fitting in with the rhythms of nature is not new, we just forgot how to do it in the post-industrial revolution world.



Charles's top tip for saving water in the garden – he won the prize in our BDGC competition for how gardeners can make a difference to climate change



Shipton Mill Flowers

By Richard Swann

Unless otherwise stated photos ©Richard Swann



Photo courtesy Shipton Mill



'Biodynamics imbues how we work in the garden'

ON A VERY WARM bee buzzing day in July I had the pleasure to visit the biodynamic gardens at Shipton Mill in Gloucestershire. We usually associate Shipton Mill with flour, which is produced at their top-quality mill. However, this time the focus was on Shipton Mill flowers that were being grown in the beautiful gardens that surround the mill.

The mill and its gardens are at the end of a dusty unsignposted road between Tetbury and Malmesbury. At the end of the road is the very productive mill, owned by John Lister and his family. John took on the derelict mill in 1979 and the landscaping of the grounds followed in the 1980s. The gardens have always been managed biodynamically.

The picturesque walled in garden was already there, with a greenhouse being added around 10 years ago. Added to that a vegetable garden was created with the produce being made available for the mill staff, family and friends.

Emily Thomas, the current gardener took over the garden in 2015, which she manages with the help of Debbie Southerington. They not only grow vegetables, but also a few herbs and large range of colourful flowers. The latter are bunched up into beautiful posies and sold at 'Haberdashery Twist' shop in nearby Stroud.

I visited as she was bunching up the flowers. Emily told me that she had not always been a gardener. She used to work at the National Theatre in London and then took a career change. This involved a period wwoofing on a biodynamic farm in Portugal. Biodynamics intrigued her, so she enrolled on the biodynamic course at Emerson and subsequently worked at Ruskin Mill for a year. After a period of freelance gardening, she arrived at Shipton Mill four years ago.

Flower picking starts in the cool of the early morning when the flowers are selected,

cut and put into water to condition for a few hours in the heat of the day. She makes up the posies in the afternoon and then takes them to the shop in the late afternoon for sale the next morning. She says 'I love the creative aspect, working with colour and form. Each posy is different.'

The flower picking season is short, starting in June and going through to September. However, Emily is also experimenting with Christmas wreaths and other floral projects.

The quiet garden is a small paradise with a stream running through. The warm weather brought out the butterflies, which were sunning themselves on the flowers. As I became aware on the visit, the gardens also have their own microclimate. With the river this can be quite cool and damp with the soil taking a long time to warm up in the spring. It is also in a frost pocket and thus needs careful management. Emily says that equisetum preparation is of great help there, of which there is an abundance growing close by.

Emily explains that 'Biodynamics imbues how we work in the garden'. A substantial biodynamic compost system helps feed the garden. Organic manure is sourced locally which, combined with the green waste from the garden, makes a fertile mix. The biodynamic spray preparations are used with the silica preparation being especially important for the flowers.

So, if you are ever in Stroud on a summer visit, do look out for the very colourful posies outside Haberdashery Twist at the top of the High Street, and try to imagine the paradise in which they were grown.



*'I love the creative aspect,
working with colour and form.
Each posy is different.'*



Welcome to Monte do Campo An Exemplary Biodynamic Farm Organism in Portugal

By *Tadeu Caldas*
International BD Advisor



LOCATED IN ALENTEJO, near the historical town of Elvas, at the border between Portugal and Spain, Monte do Campo is a gem of a farm. Pablo Casallo Montecón, an experienced and dedicated biodynamic farmer, owns and manages the 120 hectares of irrigated fields. Certified Demeter for the last 3 years, but under organic management for the last 10 years, Pablo does not cut corners in his full dedication to biodynamic strategies of soil fertility management and the maintenance of a biodiverse, mixed biodynamic farm organism.

While many organic and even biodynamic farms in the Iberian Peninsula cultivate almost 100% of the available land and buy most of the soil fertility inputs, Pablo has developed, over the years, a rich and diverse organism with pragmatic rotations that includes not only highly productive vegetables, but also non-commercial soil fertility building grass-legume mixtures for hay and green manure and temporary sown pastures grazed by his beautiful breed of traditional Portuguese long-horned cows, as well as sheep. High quality compost is made carefully as part of the soil fertility strategy using cow dung, crop residues and the straw of wheat or barley planted exclusively for the purpose. Wildflowers are planted annually to attract and provide food for bees, that in their turn pollinate crops and produce delicious honey. The boundaries of the farm have been planted with a diversity of flowering trees and shrubs to host birds and beneficial insects and create a multi-purpose 'skin' around the previously exposed fields. Ducks and water birds enjoy the water reservoir feeding the irrigation pivots and a large assembly of solar panels contribute towards the energy needs of the irrigation system. Pests that before affected the crops are no longer a big problem resulting from all the healthy measures implemented.

All biodynamic preparations are made yearly at the farm, stored carefully and used in a systematic and rhythmical way throughout the year. Results are visible. Farm workers are testimony of the impact of these on the soil and plants. The soil, previously very poor in organic matter and nutrients is slowly improving and resulting in plentiful harvests. High quality broccoli, sweet corn, spinach, green beans and potatoes are sold to be processed and frozen for the market, tomato is sold for tomato paste and other applications, and melons and watermelons are sold for the fresh organic and Demeter markets in Central Europe.

Dedicated to support the development of biodynamic agriculture in the Iberian Peninsula, Pablo has also started contributing to the efforts of the local seed company 'Sementes Vivas' in producing biodynamic certified seeds for farmers in Portugal and Spain.

In short, Monte do Campo is a biodynamic star shining bright in the Iberian landscape. The farm is always in the search of new clients for its produce and would welcome visitors. The gently rolling landscape, biodynamic measures, healthy and productive crops and charming cows are worth a visit for consumers, and traders, as well as farmers wanting to experience a serious biodynamic initiative.

The author of this article is proud to have supported this initiative to become Demeter certified, and to be helping with the marketing of its top quality produce.

Web: www.montedocampo.pt

For group visits or trade questions contact:

Pablo Casallo: pcasallo@me.com

Tadeu Caldas: tspc1@me.com







Biodynamic Agricultural College

THE BIODYNAMIC AGRICULTURAL COLLEGE has since 2010 been delivering a two-year work-based training that is certified by Crossfields Institute as a diploma in biodynamic farming and gardening.

There follow three extracts from statements made by a prospective, a current and a past student.

Prospective student:

'I would like to have the possibility in my future to live in an eco-village/community where I can work the soil and cultivate whilst respecting the environment through an eco-sustainable agriculture.'

I'm really intrigued by the opportunity to get to know in depth what biodynamic agriculture means, not only in a theoretical way, but also in practice. Learning how to preserve a healthy environment. Getting to know people who have been in the business for a long time and take them as example. Meeting new people who share the desire to live in an eco-sustainable way, in harmony with nature, and form new bonds with them. Being able to recognize my skills, work on them and develop new ones.'

I find it really fascinating to consider mankind as part of nature and not against it. A lifestyle not based on consumerism and resources exploitation.'

I also find the approach very interesting that is not only scientific, but also spiritual. We are connected to the universe. An agriculture that aims at safeguarding biodiversity and helping nature, supporting it in the process of evolving. All this working alongside biological and cosmic rhythms.' **A.B.**

During the training:

'When I just started the training, I had no experience of taking care of livestock. Despite the lack of experience, I had a desire or maybe better said; curiosity, about livestock and how to take care and manage them. In the past 9 months of my training I've made quite a progress.'

Working with animals gives my joy. I knew I was interested but I didn't know before that it would make me as happy as it does. It gives me a feeling of satisfaction. Also, the big responsibility you have when taking care of livestock, living creatures, is something I like to take on.'

My physical body has changed in the past few months. I have developed more strength and muscles. Friends I hadn't seen since I started the training confirmed that, they saw me changed. My body has become a bit more solid. I feel more secure on the earth. Being more 'in' my body. Working in the rhythm of the seasons, adapting to all sorts of weather has made me stronger and a bit tougher as well. I also feel resilient, both physically as mentally. I take life more as it comes. So, I believe that my work as a farmer has a positive influence on my personal life. **J. L.-H.**

Ex-student's feedback:

'The BDAC training enveloped so many branches of my life with one shot. The way it is set up with the program and the different places we visit gives the opportunity for a rich variety of experiences. Being long term on one place throughout the year and then having the chance to travel for the block courses brought excitement in my daily routine. It helped me look forward to them, also because of being able to see my college students and the curiosity of what they have been doing in those periods of time.'

The training has changed me in a way that I've never imagined, it brought Anthroposophy to me and imbued it in my soul in a silent way. Being able to practice Anthroposophical ideas in the will through Biodynamics made it alive in many domains. It allows me to view the organic world through the lens of Goethean observation, to treat my health with more understanding by seeing how soil is grown, then plants from the soil after the animal realm and the human. It allowed me to see the link of a whole system of complicated beings living in a synergy.'

I would recommend the training to anyone person, by that I mean If you want

to be a lawyer, a broker, an actor, a jazz piano player, a teacher, it doesn't matter this training will have its own attitude towards you and will find a way of engaging with your passion in a pictorial and holistic way. It can bring inspiration for the will and impulses and light for living thoughts.'

The reason why I did the biodynamic instead of a conventional practice or any other is that I saw the holistic attitude towards the natural world within Biodynamics. It works with forces beyond the physical, and yes other practices may do as well, but Biodynamics ought to do that consciously and through the intention to send impulses to a variety of beings in the Spiritual world which he (the gardener/farmer) has a relationship with.' **T.N.**



Biodynamic Farm development workshops

Would you be interested in participating in biodynamic farm development workshops?

By Stuart Cragg

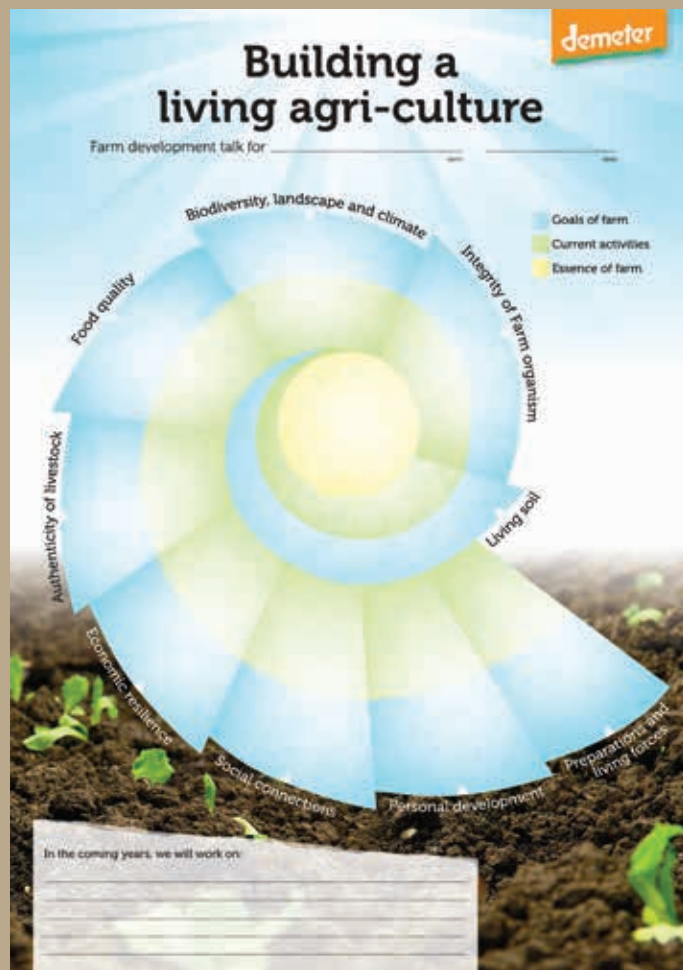
THE IDEA of development is inherent in anthroposophy as well as in biodynamics.

Biodynamic agriculture is not a recipe that once looked up or copied down can be implemented, even though the Demeter standards set a framework for orientation and certification.

Biodynamics actually is asking for more. It is asking us to build an individual farm organism in space and time. Biodynamic agriculture is not only about cultivating the land, but really about the development of humans and the earth.

There are different means to foster this. One possibility is to use Farm development workshops to explore topics, ask questions, enable reflection, set a stage for new ideas and answers to come in or to emerge. They can also help to develop individuals, farms, and have the possibility to support new social culture and the development of biodynamics in the future.

Farm development workshops can positively contribute to Demeter quality development.



They have been practised for years in some countries by Demeter organisations together with biodynamic organisations and positive feedback from farmers demonstrates that they feel appreciated and supported through their involvement in such workshops.

Our intention is to establish regional groups of biodynamic farms who would like to work together by running simple workshops on their farm.

Using the format in the poster developed by Demeter international, the groups could enter into a discussion based on the farm organism.

The aim of the workshops is to develop a peer community who are able to share observations on the essence of the farm, help support the farmer in their biodynamic practice and identify future needs and goals.

If you want to participate in farm development workshops, host an event or even feel you could help develop these events in collaboration with the Biodynamic Association, please get in touch with me: stuartcragg@biodynamic.org.uk or call 01453 766296



Alex Sergei de Podolinsky

13th July 1925 - 30th June 2019

*With perception,
vibrant energy and creativity,
he gifted knowledge to the world.*

ALEX PODOLINSKY
passed away peacefully just shy of his 94th birthday. He lived at home on his farm in Powelltown, Victoria, until the end of his life. Alex was born in Germany. His father was a Russian Count from an ancient Russian noble family. His mother was German.



As a very young child Alex had a dream of a land with a giant sun. He believed that land to be his beloved adopted Australia. Alex loved this land of the sun and incredibly, uniquely, he witnessed every single sunrise and sunset for his entire adult life.

Alex was dynamic, vibrantly creative, artistic, actively perceptive and he gifted his

Together with his twin sister Alika, Alex attended boarding school from the age of 5. The schools were in England, France, Switzerland and he completed his secondary school at Salem College in Bavaria. The twins would spend time at home in Heidelberg in the holidays but due to unfortunate circumstances Alex seldom saw his father after the age of 5. It was his mother and Godmother who introduced him to Anthroposophy and the works of Rudolf Steiner.

Alex attended university where he gained a degree in Graphology (the study of handwriting) but he often sat at the back of the class sneakily reading Rudolf Steiner.

At the age of 14 World War Two erupted. When Alex became of age, he was forced to join the German Army. As he was so fluent in French he was sent to France as a spy. There he was under suspicion and was poisoned but he was able to escape to a hospital in Germany. The hospital was bombed, Alex was badly injured, but managed to drag himself home to his mother's house and was then considered unfit for the remainder of the war. This allowed him to indulge in his passion and employment which was playing the flute. A child prodigy, Alex was already performing solo concerts all over Europe by the time he was 14.

Alex married Katherin Siemers after the war and together they emigrated to Australia in 1949 and subsequently had 7 children. Alex was stateless and as a young man life in Europe was becoming increasingly unsafe due to his Russian heritage. He was indeed a political refugee. It was a proud and happy day when he was nationalised as an Australian citizen.

knowledge to the world. He was emotionally deep with an astonishing intellect. When giving lectures the intensity of his concentration was obvious. He didn't speak with abstract concepts. He created living pictures through his words. He would find the most exact, moral and true way of characterising his subject--devoid of exaggeration and ambiguity.

Although an untrained architect, amongst numerous achievements, Alex designed a number of important buildings. These included the earlier buildings of the Melbourne Rudolf Steiner School in Warranwood, the Wandin Curative Home, Ghilgai Steiner School, the Canberra Steiner School and many private houses. Not only was Alex designing these buildings, he was also instrumental in establishing the Warranwood Steiner School, Ghilgai SS and Wandin Curative Home, and provided teacher training and long term mentorship. His buildings have a balance between shape, proportion, structure and harmony. He saw "Acoustics as the soul of the building" – how people experienced themselves and being made to feel awake. His designs were often influenced by many European buildings including Chartres Cathedral in France.

Alex was gifted in many areas of HUMAN endeavour but chose as his main focus the development of the Australian Demeter Biodynamic method. With help from the pioneering Australian farmers, he took the original impulse of Rudolph Steiner and developed a practical Biodynamic method based on quality and results, rather than just an anthroposophical belief that Biodynamics works simply because it came from Steiner. Alex worked for results that presented to farmers an

objective reality of what quality preparations and practical approach could achieve. His development of prepared 500 was a major step in bringing the influence of the preparations to large farms.

He forged on undaunted in the face of scepticism and outright opposition from the agricultural establishment. His impulse saw the development of mechanical stirrers and practical spraying equipment suitable for broad acre use.

During the late 1950s and early 1960s he founded the Bio Dynamic Agricultural Association of Australia, The Bio Dynamic Research Institute and registered the Demeter Trademark.

Around this time he began testing and recording the increasing organic matter levels of his soil. He spoke extensively of the importance of this work for both the health of the soil and the climate. His unique description of plant metabolism clearly and simply explained the need to feed plants from humus rather than with water soluble salts. For decades he travelled extensively throughout Australia voluntarily mentoring farmers.

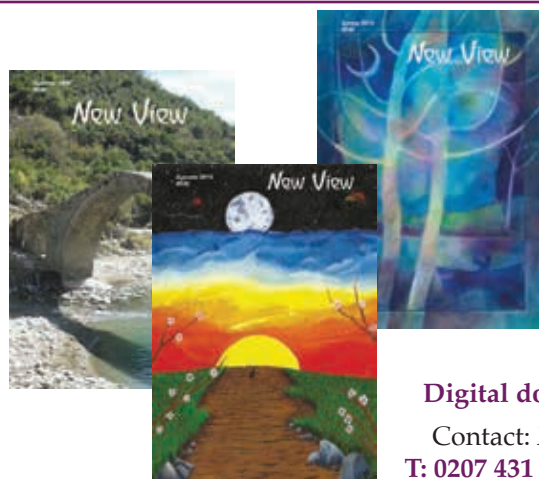
Alex also took the method back to Europe and established new pioneers of the method in different European countries, finding the appropriate farmers to work with in developing the method there, and finding the right people in Europe to make quality preparations. While not getting to visit Asia, Alex and his work are having a major impact on soils in many Asian countries.

He taught us well and many farmers around the world are dedicated to continuing Alex's work in developing and teaching the practicality, reality, integrity and quality of the Australian Demeter Method across the globe.

With perception, vibrant energy and creativity, he gifted knowledge to the world.

The Podolinsky Family
Biodynamic Agricultural Association of Australia
Biodynamic Research Institute
Biodynamic Growers Australia

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Our Green and Pleasant Land

By *Gabriel Kaye, Director BDLT*

THE BIODYNAMIC LAND TRUST mission is to secure land for biodynamic organic farming and growing. This is vitally needed.

Cheap food is polluting our countryside and ourselves. Research shows that when we eat organic/biodynamic food as part of a healthy lifestyle our risk of cancer and other serious illness falls by 24%¹. Why is this not surprising? Food that is grown in healthy soil without chemicals has to be healthier. Farms that do not use chemical fertilisers, herbicides or pesticides are healthier for our environment, so everybody wins.

We can stop the vicious circle of paying thrice for our 'cheap' food: once when we buy it, and then when we pay taxes (that subsidise farm chemicals and cheap diesel), thirdly we pay for cleaning up the environment. Not to mention when we pay with our health, and our taxes support the NHS to deal with our national lack of health. Cheap food is not really cheap if you count the cost² to ourselves and to the planet. We can opt for healthy chemical-free food, abundant nature and clean water.

'Cheap land' is not available anymore, as land, like wheat, has become a 'commodity': a place to invest large amounts of money to keep it 'safe', and probably get an above-inflation return on it after five, ten or twenty years. Maybe Brexit will change this?

Some countries, such as France, protect the price of agricultural land, keeping it more affordable. The way things are in the UK at present, if you buy farmland it is likely to take you 100 years to pay it off (taking a repayment rate of 'standard farm rents'). What farmer can manage that sort of capital investment? Especially with fluctuating 'profits' which are dependent on matters external to the farm, such as the stock market, bank rates, WTO rules, and the weather.



There are ways to secure land, such as renting or sub-letting, and even garden-sharing can work. Biodynamic farming grows real food for real people on real land. It makes for living soil and increased biodiversity. An allotment of 80x100 feet will provide veg and some fruit for a small family, but with two acres a good grower can make a living providing enough vegetables for a number of families. Ten acres gives a viable smallholding for growing veg and fruit, with some animals (goats for milk or chickens for eggs or a few sheep for wool and meat) to feed your family³ and make a living selling to the community.

Yet where are the people wanting to farm? As a start as two to ten acres are usually findable to rent, we may be able to help. However, taking the step to becoming a grower or smallholder, being outdoors in nature, growing great food and communing with animals can take a leap of faith and may need a supporting community.

CSAs (community supported agriculture)⁴ are a tried and tested model that developed from looking at farming inspired by the principles of the social balancing of freedom, equality and fraternity⁵. In France CSAs are really taking off, and it could be the same here. Gather a small community of about 50 families, demonstrate that investing in a green and healthy future by monthly subscription is a successful way to build a better world, that you soon get a weekly veg box as well. What is not to like? It can be done with eggs: Lynbreck Croft, in the Cairngorms, has an egg share scheme; and milk, Stroud Micro Dairy uses subscriptions for its products.

Do you wish you could make a difference towards a greener land for healthier food? The BD Land Trust offers a way forward. We are working to secure more land for community-connected biodynamic farms and support initiatives. We need more staff hours to develop this mission and continue to be active and responsive.

Please help us if you feel able to. You can join our monthly/annual giving scheme via our website or by contacting us to support this vital work. Thank you.



¹ Organic food benefits: <https://www.nhs.uk/news/cancer/eating-organic-food-linked-lower-cancer-risk> see research paper on that page for more detail

² True Cost Accounting: <https://sustainablefoodtrust.org/key-issues/true-cost-accounting>

³ It is interesting to note that the majority of farmers do not eat what they grow

⁴ The UK CSA Network: <https://communitysupportedagriculture.org.uk/help-advice/resources>. CSA international <https://urgenci.net/csa4europe/european-handbook-on-csa>

⁵ (Rudolf Steiner described how each of these vital principles needs to be understood, so that they do not, in practice, conflict with each other – threefold social order.)

Seeding Future Biodynamic Growth

By Paul Rainger

THE BIODYNAMIC ASSOCIATION was out and about at various events over the summer generating new interest in biodynamic food, farming and gardening

The Association has been a big part of Gloucestershire's Seed Festival in recent years, and this July's event was no exception. The Seed Festival brings together people from across the UK to plant big ideas for protecting our environment and to explore our own personal connection to the earth and the challenges of environmental change.

The BDA's contributions to this year's festival provided some of the most practical, and certainly tastiest, activities.

Enthusiastic smallholders gathered for a tour of the Biodynamic Land Trust's adjacent Oakbrook Farm, led by Stroud Micro Dairy, to learn more at first had about small scale sustainable farming in practice.

While Association Director, Gabriel Kaye, explained the important role of animals for soil fertility on a sustainable farm, in discussion with the Vegan Society.

'Industrial farming, the way it treats animals and soil, is an abomination' she said, 'but studies show smaller mixed farming, taking out the chemicals and looking after the soil, can produce healthy food to feed the planet.'

'And we can make that healthy food more affordable for consumers too. Because currently we are all paying three times for our food. Once when we buy it, and then twice more through our taxes to pay for the subsidies to grow it, and for the environmental clean up. By subsidising agriculture in a different way, to produce healthy organic food, and to make the polluter pay, we could bring the real cost for the consumer down.'

The taste of healthy biodynamic food was front and centre of the biodynamic gardening talk, with a 'taste it for yourself session' looking at growing your own, as well as gardening biodynamically.



Marina O'Connell explained why her garden starts with the soil, passing round samples of the dead soil she inherited at Huxhams Cross Farm from industrial farming, alongside samples of the soil just three years later, full of life again, after being restored through biodynamic conversion.

'The first lesson of soil science' Marina explained 'is that as soon as you apply chemical fertiliser it starts to kill off the natural bacteria and fungi in the soil. Instead in biodynamic organic systems you want to maintain a living soil, because that stores more carbon, holds more water, and is richer in nutrients.'

As people passed round samples of biodynamic fruit and vegetables to taste for themselves, Marina went on to explain that food grown in a living soil is healthier and has more vitality OR is full of vitality.

'Studies have shown the mineral content of fruit and vegetables produced using industrial chemical fertiliser has fallen by about 50% over the last 50 years' she added. 'But biodynamic produce retains complex minerals from the living soil, giving it much richer flavours and freshness.'

And tasting was certainly believing, in what must have easily been the tastiest event of the Festival!

Despite limited resources, the BDA staff are always keen to hear of events around the country we could attend, or speak at, to help promote biodynamics, even if we can't always attend them all. If you know of a local event in your region you think we should consider, please email details to Paul Rainger, the Association's Director of Communications – prainger@biodynamic.org.uk



Seeing is believing. The dead soil (left) at Huxhams Cross Farm from industrial farming, alongside the living soil today (right) after biodynamic conversion!



The Seed Co-operative did a brisk trade in biodynamic and organic seeds from the shared BDA Festival stand.



Kees from Stroud Micro Dairy giving Festival goers tour of the Biodynamic Land Trust's Oakbrook Farm.

A Roadmap to less and better Meat and Dairy

By Paul Rainger

EARLIER THIS YEAR The *Biodynamic Association* joined over 60 organisations that make up the *Eating Better Alliance*. The organisations involved are passionate about health, environment, farming, animal welfare and social justice.

Eating Better is working to stimulate a 50% reduction in meat and dairy consumption in the UK by 2030, and for a transition to 'better' meat and dairy as standard. The Biodynamic Association joining the Eating Better Alliance was a natural step.

The case for action for less and better meat and dairy is well evidenced. Public awareness of livestock's environmental impact is growing. A 2019 YouGov Survey commissioned by Eating Better showed that understanding had grown by 23% since 2017. The 2019 survey also found that 48% of people in the UK are willing or already committed to cutting down or cutting out meat.

The intensification of meat and dairy production to service our consumption is not sustainable. Milk production per cow has doubled over the last 40 years but at the expense of animal welfare, with cows typically worn out after just three lactations. 95% of chickens reared for meat in the UK are kept indoors - in large scale, automated factory units which can hold hundreds of thousands of birds. At Red Tractor farms you can cram 38kg of chickens into a square metre (against 39kg by law), the equivalent of about 20 chickens per square metre.

With limited support from Government, and a food system geared towards intensification, it isn't always easy for people to make good food choices. The Eating Better alliance are clear that this is a complex challenge which no one can

achieve on their own. In July 2019 Eating Better launched the 'Better by half: roadmap', setting out 24 actions across 5 sectors that if taken would make less and better meat and dairy a reality.

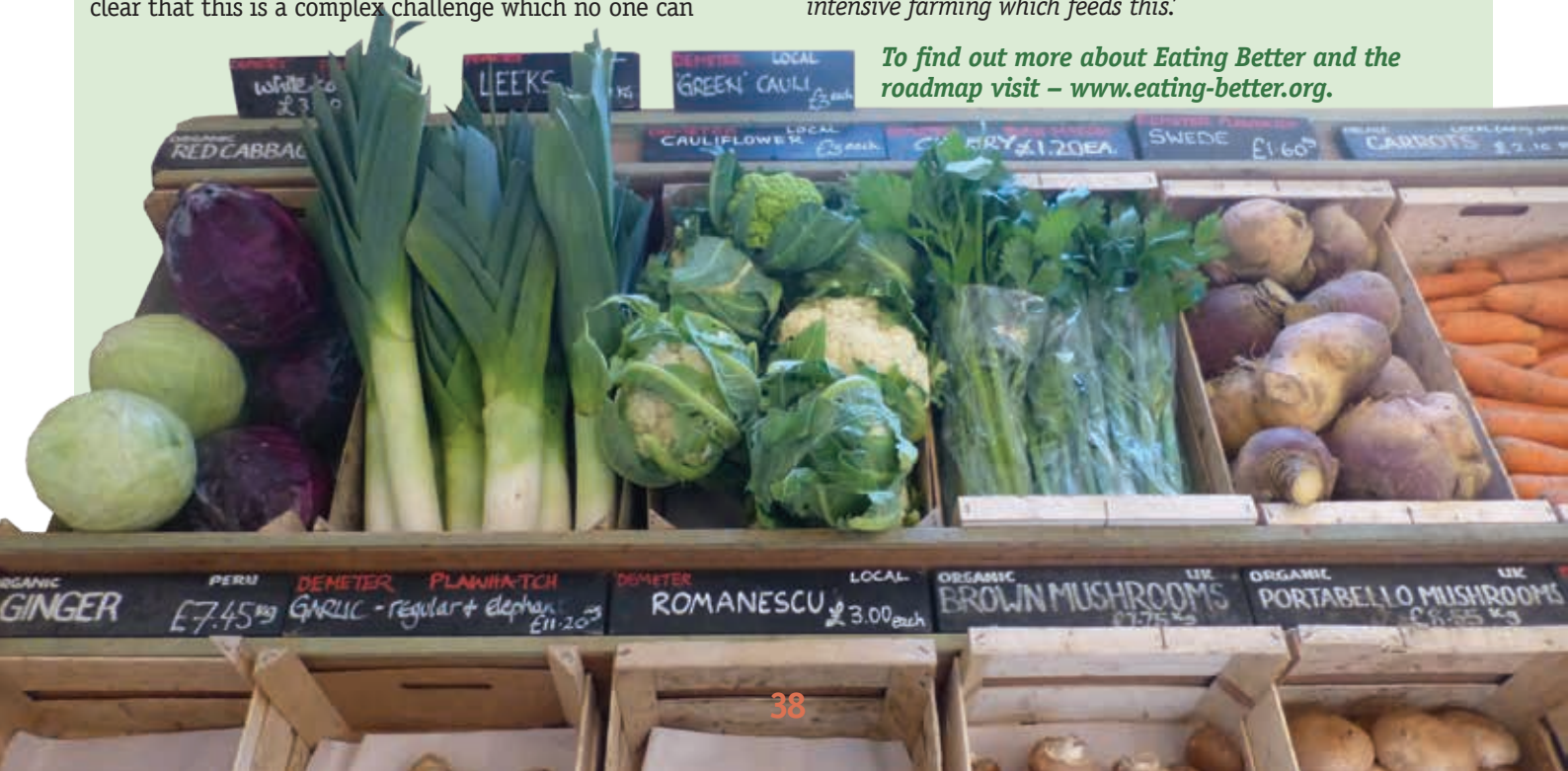
Eating Better are keen that a move to less and better meat and dairy isn't just seen as desirable but also achievable. For each action there are examples of where the action is already taking place. Eating Better see the type of farming carried out by biodynamic farmers as part of the solution and are keen to support it and encourage other farmers and growers to learn from this.

Mark Breen of Eating Better told Star and Furrow 'Eating Better are keen to encourage regenerative agriculture such as that carried out by biodynamic farmers and growers. We understand the positive impact this has for soil, plants, insects, animals, farmers and communities.'

'The Better by half: roadmap' is there to support a move to a food environment where people are able to make food choices that are good for them and the environment. The 24 actions across 5 sectors we have set out will help people to eat more vegetables, wholegrains, nuts, seeds, fruit, pulses and less and better meat and dairy. It is not about telling people what they can and can't eat, but about moving to a better-balanced food and farming system.'

'We are keen to promote naturally extensive approaches where animal agriculture is part of mixed farm systems. We think that Government, retailers and investors all have a role in supporting this. At a time when we are facing both a climate and biodiversity crisis, biodynamic farming methods are an antidote to the over consumption of meat and dairy and the intensive farming which feeds this.'

To find out more about Eating Better and the roadmap visit – www.eating-better.org.



Garden Minestrone

This is a true gardener's soup to enjoy from mid-August through to October. Made from whatever vegetables are at hand, plus tomatoes and flavourings such as garlic, bay and fresh herbs, its success depends on nothing more than freshly picked produce.

There is no set recipe for minestrone. Follow the general method, and it soon becomes instinctive, and always turns out well.

GARDEN INGREDIENTS: serves 4

500g fresh Borlotti beans or 200g dried and soaked overnight

1 onion, diced

1 stick of celery, diced

2 medium potatoes, washed and diced

2 medium carrots, washed and diced

1 garlic clove, chopped

1 large courgette, quartered and sliced

1 large tomato, diced

A handful of baby spinach or Swiss chard, washed and shredded

Fresh herbs e.g. basil, parsley, oregano, sage, thyme

To finish: Freshly chopped parsley (optional), extra olive oil

FROM YOUR KITCHEN:

1 bay leaf – use fresh if you have a bay tree

Parmesan (optional)

3 tbsp extra virgin organic olive oil

Sea salt & freshly ground pepper to taste

DIRECTIONS:

1. Soak the dried Borlotti beans overnight for 12 hours in water. Drain the beans. Cook the beans in 1 litre of fresh water with the bay leaf until tender – check after 25 minutes for fresh or 50 - 60 minutes for dried. Discard the bay leaf and set the beans aside in their cooking water.

2. In a large heavy based pan, sweat the onion, celery, potato, carrot and garlic in olive oil on a low heat with the lid ajar for 15 - 20 minutes to partially soften.

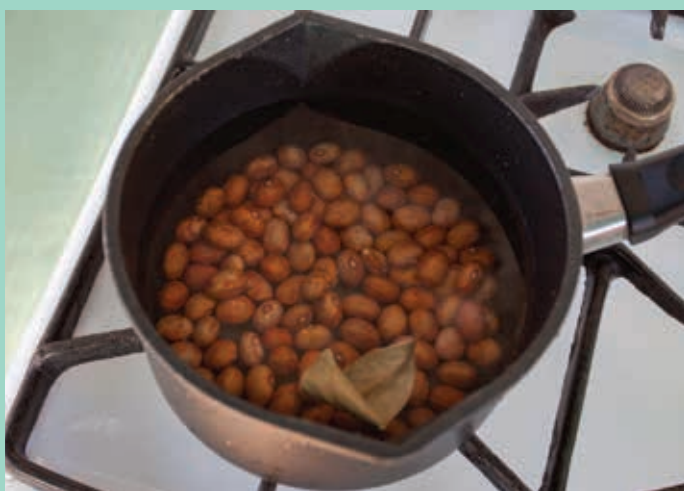
3. Add the courgette, stir and cook for 5 minutes, then add the cooked beans and their cooking water.

4. Bring to the boil, turn down the heat to a simmer, and add the diced tomato, seasoning with salt and pepper to taste. Next add a handful of spinach or Swiss chard and a sprig of herbs of your choice.

5. Simmer for a few minutes until the greens have wilted and all the vegetables are cooked. Finish with chopped parsley if using, and ladle into bowls, drizzling some extra virgin olive oil on top.

6. The soup is best after a few minutes' 'rest' and not too hot, so that you can taste the flavours. Have a wedge of Parmesan if using and grater on the table, and extra olive oil for everyone to share. →





COOK'S NOTES:

■ Exact quantities are not that important. Aim for a balance of vegetables by volume – best judged by eye – that 'like' each other, whose flavours blend together well, and judicious use of seasoning and herbs, so taste the soup as it progresses and adjust to your liking.

■ You can substitute Borlotti with home grown runner beans / French beans that have gone to seed that you don't want to keep to sow the following year. Green beans, broad beans and fresh peas can also be added. Add older, tougher ones at the beginning of cooking.

■ As Autumn progresses, change the character e.g. with corn on the cob – slice the kernels off with a knife; with cauliflower or other greens such as kale and shredded cabbage.

■ Extra tomatoes, a little left-over tomato sauce, or tomato puree can also be added.

■ For a meaty version, add some neatly diced organic bacon in step 2.

■ Keep it fresh and avoid over cooking the vegetables. Slicing / dicing / shredding hard or soft vegetables to different sizes helps ensure all the ingredients finish cooking at the same time and the minestrone maintains texture and identity of flavours.

■ Pesto is a brilliant with this soup and takes it to a different level of piquancy. Have a small bowl at the table – 1 - 2 tsp. per serving is about right (you will not need Parmesan).

NUTRITION AND WELL-BEING:

Borlotti beans are both deliciously creamy and extremely nutritious, being a valuable source of protein (19%) containing all 9 essential amino acids, and gut friendly fibre and slow release carbohydrates (low GI).

Garden minestrone is wellbeing in a bowl. They pack a nutrient dense punch, satisfy the body's hunger, and are rehydrating – important for mood, recharging your metabolism, boosting your immune system and the key to good health. Make them part of your life and enjoy!

GARDENING NOTES:

Fresh Borlotti beans can be picked from late summer, when the beans start to swell.

TIP: If you want to dry the beans for the winter store cupboard, leave them to mature on the plants until the skins are papery: You will know they are ripe because they gradually change in colour from pale to their characteristic mottled burgundy appearance. Pop open the pods and leave the beans to dry on a tray indoors for one to two weeks before storing in a cool, dry place.

*Credits –
Recipe: Julie Moore and Lynda Brown
Photos: Lee Parish*



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**FARMACY KITCHEN
COOKBOOK: PLANT
BASED RECIPES FOR
CONSCIOUS LIVING**
By Camilla Fayed

Published by:
Octopus books,
RRP £25,
available from the
Farmacy website shop,
www.farmacylondon.com

Reviewed by
Jessica Standing
(BDA Office Manager)

**‘Nature knows best
when it comes to food,
health and balance. Our
approach is to create food
that is delicious, good for
the body and the Earth’ –
Farmacy Philosophy**

I have always loved cooking; cossetting friends and family with my latest dishes, and must confess to owning a vast collection of well-thumbed cook books.

These books get rotated from kitchen to garage bookshelf depending on which one is my current ‘flavour of the month’.

The Farmacy Kitchen Cookbook has not moved one inch from my kitchen.

Why? Because its pages are filled with delicious, health giving recipes, that jump off the page and make you just want to cook, eat and enjoy them, time and time again.

I love that this book filled me with a strong desire to create interesting, good tasting food, naturally high in nutrients and that it does not feel preachy or overbearing about its plant based ethos.

The focus is on health, balance and conscious eating and choice – which of course includes a commitment to organic and biodynamic produce and ingredients.

It is a book that will appeal to a wide range of cooks – from beginners to the experienced – another reason why I like it so much.

It skilfully meets the needs of the ‘novice’ and covers the basics such as making nut milks / sprouting / store cupboard essentials, in a genuinely fresh way, moves into broths, sauces and jams, and then gives you a delight of recipes in the following sections: Breakfast, Dips and Appetizers, Soups and Salads, ‘Earth bowls’, Mains and Desserts.

It ends with a welcome and inspiring selection of natural recipes for home and beauty; including natural toothpaste and Love Earth Home Cleaner.

Each recipe begins with useful and interesting nutritional information as well as helpfully being identified as gluten free, nut free or vegan.

The photos are exquisite, and for me, good pictures are an essential part of any good cookbook; firstly, to whet my appetite and secondly to see what the finished dish should / could look like. The Farmacy Kitchen Cookbook scores every time.

It also impressed me with its originality; sure, there are some classics included and some with a clever Farmacy twist – but the majority of recipes were actually dishes that I had not cooked before – joy!

Plus, it gets top marks for using ingredients that are in the usual range of my pantry – there is nothing more irritating than having to buy up half of my local whole food shop in order to be able to cook dinner.

Tonight, I will be having Wild Teff Wraps with Mushroom Filling, which includes the intriguingly named ‘Philosophers Sauce’ – Farmacy’s take on classic Asian fish sauce, followed by Foragers Pie and ending with Matcha Lime Avocado Cakes. Anyone want to come round for dinner?

Notes:

The Farmacy Restaurant
74-76 Westbourne Grove,
London W2 5SH

Opening hours
Monday – Friday 8am -11.30am
12pm - 5pm / 5.30pm - 10pm

Biodynamic produce* grown by Dorothea Leber, in a garden in Kent, is delivered fresh every day to the restaurant.

* in Demeter Conversion

**SATTVA, THE AYURVEDIC
WAY TO LIVE WELL**
By Emine & Paul Rushton

Published by:
Hay House £14.99

Reviewed
by *Lynda Brown*

There are 2 special reasons for writing this book review. First, I doubt whether you’ll read a more gentle, thoughtful book, one that is the perfect “mind-full” antidote to modern life and the challenges that we collectively face every day; and secondly, though not explicitly a biodynamic book, the sentiments expressed and the reverence shown, especially for nature and the wider cosmic, energetic and spiritual forces that go beyond the physical and mental, are infused on every page – like dipping a cloth (gently) into saffron.

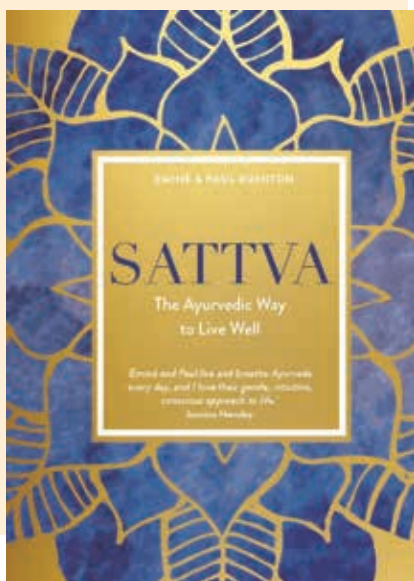
There is a third reason for bringing this book to the attention of Star & Furrow readers. The authors, Emine & Paul Rushton, who run their own website, This Conscious Life <https://thisconsciouslife.co>, work closely with Weleda, garden biodynamically, and wrote Weleda’s Year in the Garden. Paul, a member of our new biodynamic online garden club, has recently become a regular contributor to BDA’s Instagram, and is already scoring a hit with his beautifully crafted posts. Much of what the authors express - often poetically - especially in terms of their approach to nature, natural rhythms, food, health, nutrition, cooking, seasonality, and the bigger issues of how to begin to lead a more sustainable life, chimes exactly with the garden club, too.



Sattva, described on the back cover as a 'celebration of ancient, holistic wisdom for intuitive modern living' is exactly that. Divided into 7 chapters: Unity, Harmony, Purity, Vitality, Clarity, Gentleness and Serenity, it looks forwards not backwards, and takes the reader on a journey through Vedic teachings and how to incorporate them into everyday life. It proves to be a fascinating journey towards better wellbeing in the broadest sense, one I'm sure members of the BDA will resonate and appreciate. I especially like that 2 pages on biodynamic food & farming, pp 181-2, are included under the heading 'Reconnecting with our Food' and comes in the chapter on gentleness.

Sattva is a simple but profound concept. The book has been by my bedside for a couple of months now, and I find myself dipping into it every night to literally bring me back to conscious living. As it also says on the back cover, *'Sattva has the power to help move from chaos into consciousness. Let it remind you of your natural state of being.'* I'm trying....

Lynda Brown, manager
Biodynamic Garden Club. For more information about our Garden Club and how to join, see p000



VITALITY - FROM SOIL TO STOMACH By Jens-Otto Andersen

**Published by:
The Biodynamic
Research Association
DK; 2019
RRP: £10.51 from Amazon**

**Reviewed by
Richard Swann**

**As written about on
page 7 of this issue,
Jens-Otto Andersen is
a scientific researcher
who specialises in food
quality. It is his passion
and life's task. This book
summarises much of
the work he has been
engaged with.**

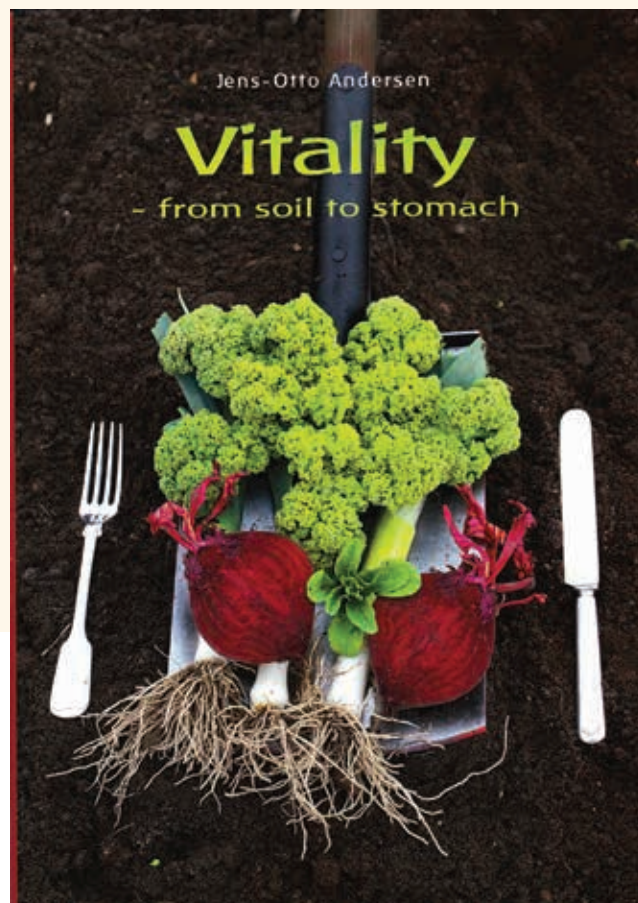
The book examines the concept of vitality from several aspects but lying behind it all is biodynamic agriculture which he has been involved with for several decades. He very strongly questions the current reductionist approach to food and farming and appeals for a more holistic attitude.

Jens-Otto examines our current attitudes to food quality and puts forward the thesis that food is more than nutrients. He traces it back to the evolution of folk medicine using herbs. He also introduces the importance of secondary compounds in food (such as the many active ingredients found in medicinal plants).

He challenges many of the current developments in agriculture and horticulture. For example, the use of anti-biotics for treating animals is particularly worrying as their use can lead to anti-biotic resistance in us when we consume animal products. Some people may laud the rapid increase in hydroponics and so-called vertical farming - where plants are grown using water soluble nutrients. However, doing so disconnects plants from the earth and the creation of a healthy humus rich soil. He also hints at possible food quality issues there.

Quite some space is devoted to the research areas he works in as a researcher, such as biocrystallisation and the cucumber method. All in all, I found it to be a very worthwhile read. As he told me the original

was in Danish and his funders urged him to get out an English version. That he has done by his own hand (i.e. not translated direct from Danish). In some places this can lead to some unclarities, but overall the message comes through. It is also published as a Book on Demand. This makes for a very expensive copy, but as can be seen above, you can buy it from Amazon for a more modest price.





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07975 793 193

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William Keyah

By Joan Brinch

THIS IS A STORY I want to share because it is about Time and the timing in our affairs.

It was in 1984 that the Africa Department of Misereor, a German donor organisation, asked Matthias Guepin and myself to host a three-week workshop on organic sustainable agriculture at Emerson College. The participants were ten men from countries in Africa and ten men, German, working for Misereor in countries in Africa.

The following Easter, 1985, Regina Radke, one of the colleagues from Misereor, came to Emerson to visit. Sitting on the steps in front of Pixton, she asked the Question: "why don't you come with me to Kenya this summer?" Apart from my experience of our Emerson workshop, I knew nothing at all about Africa or Kenya. I stared into the distance and within three minutes I heard myself saying, "yes, why not."

In July we met up in Nairobi. Regina was to visit various Missions for the Misereor Agriculture Department. I accompanied her every day.

Within ten days we were in Nakuru to meet with their agriculture team. We all sat in the patio of the Midland Hotel for lunch, a warm, sunny day. By the end of that afternoon we had begun plans for a national workshop on Sustainable Agriculture to be held the following summer 1986.

I returned to Forest Row to present this news to Matthias. In November he and I went to Kenya to prepare land. We were given two acres at Baraka Agricultural College in the highlands of Nakuru Diocese. The following June we went out again to finalize everything for the workshop. We stayed for seven years.

Now I will let William Keyah speak in his email to me just as he wrote it.

Date: Mon, 8 July 2019.

Dear Joan,

I write this email with great hope that it will find you well and all your loved ones. Helen, the children and I are all well.

I just wanted to update you on the happenings on Sustainable Agriculture. Almost 30 years ago, you and Matthias (RIP), John Njoroge and I and many others planned, organized and saw the implementation of the Sustainable Agriculture Workshop in Baraka in August 1986. One of the resolutions of the workshop was to set up a "Sustainable Agriculture Council of Kenya". Whereas this did not materialize at the time, I am happy to let you know that last week on the 3rd of July 2019, we submitted to the Kenya National Development Occupational Standards (OS) and Curriculum in Sustainable Agriculture for Rural Development (SARD) for accreditation as a national education and training curriculum. I am so happy and thankful to God for this milestone. At long last your passion and efforts in promoting sustainable agriculture and for all those who did the same but are not now on this earth of the living - it is congratulations for the foresight. We were 30 years ahead of the rest.

Once the accreditation process is through, we will be officially launching the curriculum in September 2019. I will keep you posted.

Thanks for the foresighted thought. It has been plentiful in yields.

*God bless you,
William.*



Our first meeting, William and mine, was a recognition. I sent him Pfeiffer's The Earths Face. It was "familiar" to him.

The BDA Marketing Adventure

By *Nina de Winter*

The newest addition to the team, Nina joined the Biodynamic Association in June 2019 as the Marketing & Supply Chain Manager for BDA Organic and Demeter. She has a diverse range of commercial experience in marketing, business development, hospitality, product development and is a passionate enthusiast about all elements of quality food production and supply systems. Nina is working on developing the supply chain for the BDA's Demeter and Organic licensees, while raising awareness and demand for more Biodynamic produce and products. Here she tells us a little more about the strategy and approach she will be working on in the coming months.

FIRST STEPS

I'd like to begin by saying what a privilege it is to be working at the Biodynamic Association, to be in the position where I can put my skills to good use, by helping this wonderful movement move from strength to strength in such an exciting time.

We are living in rapidly changing times, where it seems more and more people are awakening from the apathy that consumer culture has bred over several decades, to a state of increased consciousness about our actions and the consequences thereof. This is evident in the momentum gained in the organic and vegan sectors, the increased debate and protest around the climate crises, and the small but collectively significant changes consumers are making with their ££'s, backing companies with sustainable credentials.

There seems to be a window of opportunity here to harness that awakening and to gain more and more supporters for the biodynamic movement as a whole. With this sense of urgency in mind, I spent the first month in this role, on trying to understand the needs and challenges faced by our producers, processors and traders in the current market. I also tried to immerse myself in the philosophy and approaches of biodynamics while trying to formulate a clear strategy for moving marketing efforts forward and identifying where the opportunities for developing alternative supply chains are.



This is by no means a completed exercise and will continue to develop over time. Thus far, I have been able to identify five clear priorities that will form the basis of tactical actions taken over the coming months.

CLEAR PRIORITIES

As part of the Biodynamic Association's long term vision and strategy, increasing marketing efforts has resulted in the identification of the following five strategic outcomes.

- Increase awareness and understanding of biodynamics
- Create a greater demand for biodynamic produce and products
- Engage with and stimulate an alternative supply-chain that gives value to all parts, particularly producers
- Support new and existing licensees
- Engage in public debate and be part of the sustainability conversation

These priorities will follow and build on one another, but also develop simultaneously. It is going to take a lot of work and harnessing the resources within this network, but if successful, it will result in a healthy and robust supply chain and widespread availability of biodynamic produce.

MOVEMENT AND NETWORK

The marketing arm of Demeter International have identified key areas where we need to be engaged with this global conversation, and have a clear position as a biodynamic movement, namely

- Climate change
- Social responsibility standards
- Veganism

Alongside the development of these, Demeter International will also be supporting marketing efforts with a new series of materials and website templates.

In the next issue of *Star & Furrow*, I will share more details of the tactical actions and inputs that flow from these developments and the strategic priorities. However, the success of the outcomes will also depend on the support and engagement of the whole movement and I hope to draw on the wealth of experience contained in it.

With that in mind, I hope that anyone who would like to make suggestions, help out with feedback or even share ideas and insights will get in touch with me in the coming months. It is an exciting moment to be involved with developing the biodynamic movement and I look forward to hearing from you.

Nina de Winter

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For many years, the situation had been such that council members took on day-to-day functions and tasks in order to support our Office Manager, Jess, and a series of paid and unpaid Directors, in maintaining the organisation. Now, hard work and providence have led to us being in the position this year where we have the strongest staff team ever, and a diverse Council that is consequently freed-up to attend to its strategic governance and financial functions.

The end of 2018/early 2019 saw several staff changes, with Gabriel Kaye's fixed term position as Interim Operations Manager coming to an end, Tarry Bolger moving on from BD Certification to head up Demeter USA, and Philipp Grunewald departing from his role as Communications Executive. At the same time, we received three generous legacies totalling £42,000. These, along with the existing Generation Income Foundation fund (GIF) grant, gave us the freedom to rethink our staffing strategy and create two part-time positions of Executive Director and Director of Fundraising and Communications, both with a hands-on remit. This calculated risk was taken in consultation with our Honorary Treasurer, council member Anette Drevson, and it maintains our necessary charitable reserves whilst enabling us to escalate our biodynamic remit at this crucial moment in our nation's food and farming history.

Following a competitive recruitment process, these posts were filled by Gabriel Kaye and Paul Rainger respectively. Having a dedicated fundraiser enables us to not only develop new projects but also, crucially, to cover existing activities and services that run on a shoestring. This enlarged executive team enables us to work toward developing a more self-supporting structure so that Council members are able to relinquish certain functions to staff, such as the management of human resources, and staff have the time to put in place more efficient processes such as a new membership database.

Concurrently, Tarry's post of Certification Manager has been ably filled by Stuart Cragg, who joins BD Certification from years as Farm Manager of Ruskin Mill's Gables Farm. In June this year we appointed Nina de Winter to the new part-time post of BDA & Demeter Marketing Manager, enabled by specific funds paid by licensees. Nina has a background in food and marketing and has hit the ground running.

Another important development this year has been a strategic plan for the Association that commenced in the summer of 2018 with a Visioning process, through using the anthroposophically-based methodology 'Ways to Quality'. With participation by BDA members, staff and council, we reaffirmed our overall vision, purpose, aims and objectives, and set out a series of aspirational strategies. These were refined over several subsequent meetings into a 5 Year Strategic Plan for 2019-2024. This Plan provides the framework for the organisation's annual plans and budgets, as well as for fundraising activities. It enables the Whole Movement of Biodynamic organisations to combine forces over areas of common interest. The rest of this report is set out under the five new overarching Strategies of the BDA.

ANNUAL REPORT

Summary 2018-2019

By *Gabriel Kaye, Executive Director,*
and *Julia Wright, Chair of Council*



STRATEGY 1 MAKING BIODYNAMICS MORE ACCESSIBLE TO MORE PEOPLE, TOWARD THE BDA'S 100 YEAR ANNIVERSARY IN 2024

The BDA partnered with the Ruskin Mill Trust (RMT) on piloting Step-by-Step Gardening courses at five RMT centres in 2018 and, owing to oversubscription, six in 2019. Waltham Place in Berkshire is also providing excellent gardening courses, Huxhams Cross Farm in Devon and Lauriston Farm in Essex are providing more general introductions to biodynamic farming over a number of days. Open Biodynamic Garden Days were also successfully launched last year in seven gardens across the UK and repeated this year.



STRATEGY 2 ENGAGING AND SUSTAINING NEW AND EXISTING BIODYNAMIC SUPPORTERS

Membership income and members' extra donations continue to make a significant impact on our income. The number of members has stabilised at about 890, so new categories and forms of membership are being explored, as well as other means of engagement. Membership subscriptions totalled £28,906, with an additional £50,644 of donations, the majority of which came from three separate legacies. Donations of £725 came in specifically for the Seed Cooperative, and these help to secure their land for the long term. As well as direct funding, sponsorship is also of great help, for example for running events and courses, and printing our newsletter.

*BDA stands at summer festivals -
Seed Festival/Anthroposophical Society Summer Conference*



Dave Wright, grower, with vegetables from Huxhams Cross

'Oakbrook Farm walk and talk - Seed Festival' (both photos by Paul Rainger)



Many activities fall under more than one strategy, exemplified by the initiation of the Biodynamic Gardening Club which simultaneously addresses strategies 1, 2 and 3. The Club, launched in June 2019 in partnership with Weleda and Waltham Place Estate, aims to enable people to engage with a biodynamic approach to food growing in restorative and regenerative ways. The goal is to reach 800 members by 2021. For £15 a year, it offers a quarterly online e-newsletter, a members-only Facebook page for sharing experiences, tips and advice, a dedicated members' website area and online resource library, interactive webinars with experts and members' events.

The BDA continued to produce its quality twice-yearly magazine *Star and Furrow*, quarterly newsletters and e-newsletter *Biodynamic Buzz*. The BDA also had articles in the *Anthroposophical News*, *New View* magazine, and the *Sustainable Food Trust* website, with articles about biodynamics in both the *Permaculture* and *Smallholding* Magazines.

STRATEGY 3 EXPANDING AND STRENGTHENING THE BIODYNAMIC FOOD NETWORK FROM PRODUCER TO CONSUMER

The sale and distribution of biodynamic preparations and books increased to reach a turnover of £26,714 (the previous year's figure was £21,834), this only being possible because of the dedicated work of the preparations group and to the tireless work of Ian Bailey who gifts his time to pack and dispatch.

The BDA has promoted and partnered with the Biodynamic Agricultural College (BDAC) on its work-based learning diploma and online courses, the diploma being the only Level 3 qualification in alternative, sustainable agriculture the UK.

With regard to Certification, numbers fell slightly from 277 to 264 licensees, owing mainly to the discontinuing of certification of ritual livestock slaughter without stunning, as well as to removing licensees who had been 'on hold' for some time. BD Certification is, in partnership with other organic certifiers, developing ways to enable dual certification for interested organic businesses, with a Demeter 'add on' to their organic certification.

STRATEGY 4 CONSOLIDATING THE BIODYNAMIC MOVEMENT'S POSITION AS A PIONEER, PARTNER AND INFLUENCER

The BDA has been working with the English Organic Forum to develop an action plan for a more sustainable and organic future for agriculture, as well as with the Land Workers' Alliance to develop a proposal for a number of Defra-recognised agroecological test farms to inform the new Agricultural Bill being put through parliament. Meanwhile BD Certification continues to work with DEFRA and the UK Organic Certification bodies.

Significant events that the Association has participated in comprise the Sustainable Food Trust's Conference on the future of UK Farming, the 2018 AGM of the Anthroposophical Society, the Abergavenny Food Festival, the Oxford Real Farming

Conference, Hawkwood College's Seed Festival, and internationally the annual World Biodynamic Agriculture Conference and the First International Biodynamic Research Conference, both held in Dornach, Switzerland. BD Certification participated in Demeter International's annual assembly in the Netherlands, where motions and standards were voted on.

The BDA commenced a new research project to explore the unique viability and sustainability of biodynamic farms, as well as their social and spiritual attributes through four farm case studies, collaborating with Coventry University's Centre for Agroecology, Water and Resilience and the Royal Agricultural University at Cirencester, and using the Organic Research Centre's assessment tool to gather farm data. This was made possible due to a £5000 grant from the Anthroposophical Society GB.



Biodynamic Association

Plans for 2019-2020

We have a lot to look forward to and work towards, especially with our increased staff team. Our new Strategic Plan will be used to drill down into annual plans and budgeting. We have several funding bids in preparation. Our Gardening Club is starting to bear fruit and over this next year we will be monitoring its growth. After a two year hiatus, our next BDA conference is organised for this October 2019, again generously hosted by Ruskin Mill at their Glasshouse College in Stourbridge. We have an exciting line up of national and international speakers, and the AGM will be held at the same time.

With the new marketing initiative, a number of gatherings of consumers, producers, processors and traders will take place around the country. We expect to present the results of our Farm Case Study Research Project at the Oxford Real Farming Conference in January 2020, and will be participating in the World BD Agricultural Conference in Dornach in February 2020, as well as a gathering in Sept 2020 in preparation for the second International BD Research Conference. We are also sowing the seeds for a forum for young BD farmers and growers.

Clearly this coming year heralds critical changes for the UK's food and farming sector; we aim to contribute clear and strong messages into the debate from the biodynamic perspective. Relevant issues such as climate change, species extinction, and veganism are key debates and subject to research. We are working with the whole BD movement to present perspectives on these and other issues.

Acknowledgements

Our heartfelt thanks go out to all those who have supported our work over the year. To all members who made donations, the estates of M Langford, Patrick Garton and Gilbert Childs for their forethought and support, the donors to the Seed Cooperative, the Newton Dee Camphill Community and Lots Road Auctioneers and the donation from the closed Severn Valley Biodynamic Land Training. Also to our sponsors Lady Cawdor, Waltham Place, Mr and Mrs Oppenheimer, Dewcross Centre for Moral Technology, Ruskin Mill Trust and Aonghus Gordon for their loyal and ongoing support.

Our thanks also go to outgoing Trustees Joe Couling, Benedict Bowmaker, Anette Drevson and Peter Brown. Especially to Peter for his long years of dedicated work and support of the BDA as both trustee and director. We also thank all our trustees and staff for their dedication and offers of time and energy, and to Chris Stockdale for his five years as chair of Council.

We thank our patron Patrick Holden for his ongoing support and all the work he does for sustainable and biodynamic food and farming.

2019 is a particularly special year as it marks the 20th anniversary of Jess's arrival at the BDA office. Coming from a BCS in Occupational Therapy at Canterbury, Jess took on to carry the administration and soul of the BDA. Having such a long standing and motivated keeper at the heart of the BDA is invaluable, both for the institutional memory that she holds (so that we don't for example, re-invent the wheel), and also for the friends and partnerships that she has excelled at building and maintaining over the years. We thank you Jess. We also thank Richard Swann for his 20 years working with the BDA and holding and developing the Star and Furrow.



*SFT
conference
July 2019,
Minette
Batters, NFU*

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STRATEGY 5 NURTURING AND SUSTAINING THE BIODYNAMIC ORGANISATIONAL NETWORK AND ITS PEOPLE IN THE UK

In October 2018, the BDA held its AGM to celebrate 90 years of biodynamic history in the UK, at Aura Soma, Lincolnshire, which was well attended with some fifty members, trustees and staff. On the home front, the consolidation of the BDA and BD Certification offices and services, both reduced costs and gave space for the Biodynamic Land Trust.

Securing funding and good financial management is a crucial part of our strategy. DEFRA continued to provide funds to support the reporting required by organic certification bodies, as did its counterpart DAFM in Ireland. These funds totalled £30,433. We are monitoring the uncertain future of DEFRA funding as well as the risk to our right to certify in the Republic of Ireland. The BDA received interest of £8,910 from the Grange Kirkcaldy Fund endowment legacy and other savings.

Overall, 2018-19 was an exceptional financial year for the BDA: the projected budget was showing a significant shortfall but this was countered by both the incoming legacies and donations, and action taken to reduce offices costs. This, and income saved from posts being vacant for some weeks as well as the new marketing contribution, meant an overall net surplus of £55,000 which gives the organisation some financial security.

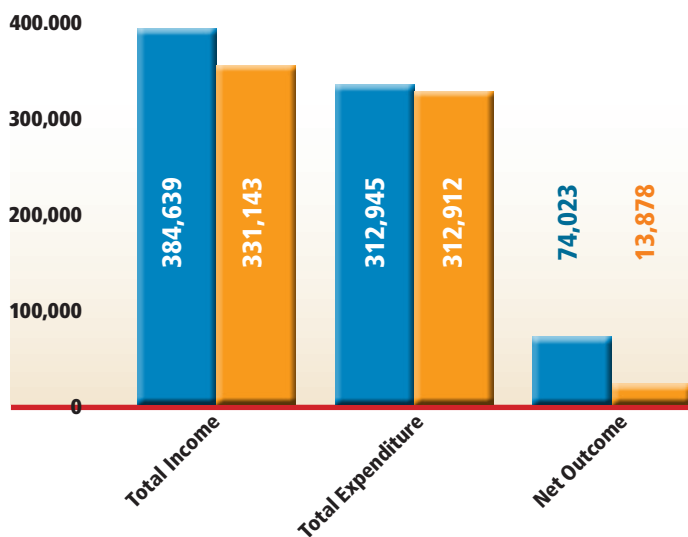
Of our Council of 12 trustees several took on new roles: Anette Drevson took on the role of treasurer, Joe Couling - Vice Chair, and Andre Tranquilini - representing the BDA on the Seed Cooperative board. The role of Chair passed to Julia Wright. Amongst other issues, Council developed new policies and compliances for GDPR (the EU General Data Protection Regulation).

SOME FIGURES AND ILLUSTRATION OF THE FINANCES:

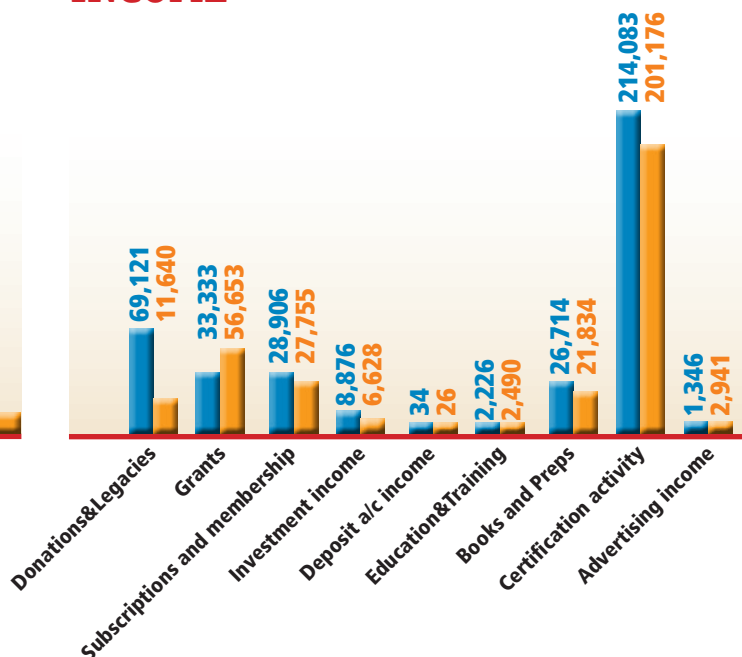
Blue figures = 2018-19

Orange = 2017-18

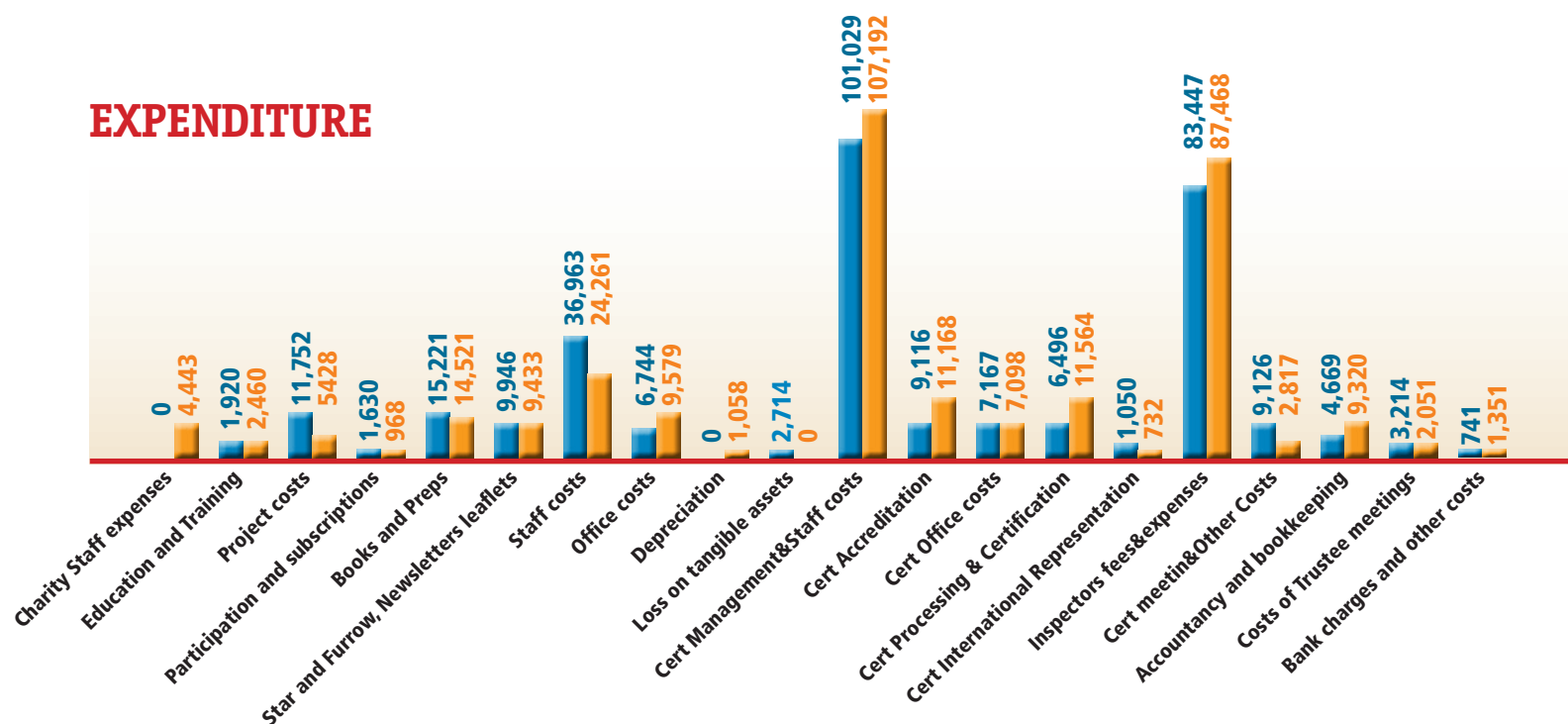
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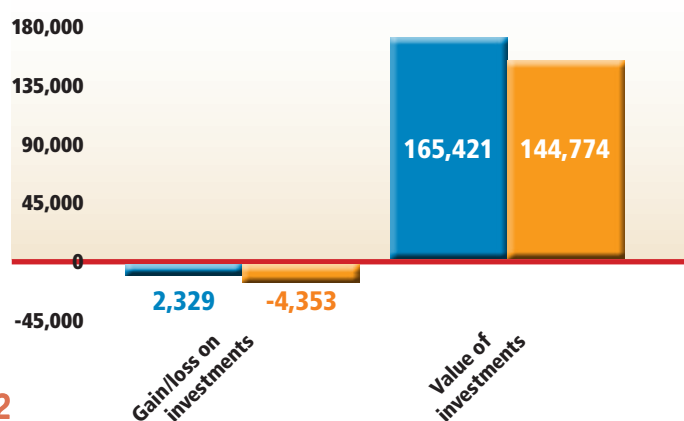
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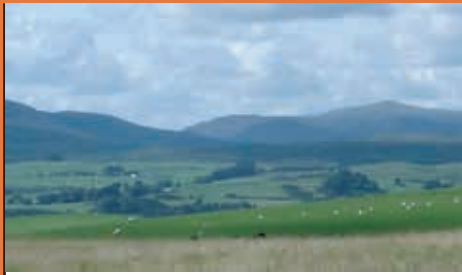
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With contributions from Thea-Maria Carlson, Jean-Michel Florin, Anna-Cecilia Gruenn, Constanza Kaliks, Dan McKanaan, Ute Kirchgaesser, Christof Klemmer, Andre Leu, Dorian Schmidt, Hans-Christian Zehnter, etc.