Team GB at the 1st International Conference on Biodynamic Research

*By **Dr Julia Wright***

THE ANNUAL BIODYNAMIC AGRICULTURE CONFERENCE held at the Goetheanum, Switzerland, is a mainstay of the biodynamic year, and it is here that, traditionally, research issues are discussed amongst the more practical farming sessions of this inward-facing event.

This intermix of practical with research sessions goes to the core of the biodynamic movement. Steiner had, from the beginning, been a staunch advocate of applied research. He had stressed that participants of his agricultural lecture course should not just take his word: 'the lectures should be considered first of all as hints, which for the present should not be spoken of outside this circle, but looked upon as the foundation for experiments and thus gradually brought into a form suitable for publication'. This was important for three reasons: firstly so that each farmer experiment and explore for him/herself the teachings rather than simply accept them as doctrine, secondly so as to innovate and develop the teachings further than Steiner himself was able to do, and thirdly because nothing was more convincing in terms of broadscale uptake than one farmer learning from the experiences of another.

At the same time, Steiner encouraged the Section for Natural Science at the Goetheanum to coordinate experiments, as well as to guide and work with the newly formed Experimental Circle that was described as a farmers' association. By 1929, Experimental Circles of farmers had spread to the UK as well as to most other countries of Europe, as well as Australia, and parts of the United States and Africa. This then could be seen as the first instance in modern agriculture of farmer-led or participatory research, as opposed to the laboratory and on-station research model favoured by the industrial agricultural sector.

This year however, the Section for Agriculture, along with its scientific partners the Research Institute of Organic Agriculture (FiBL), Switzerland, the University of Kassel/ Witzenhausen, Germany, and the Biodynamic Research Ring (Forschungsring) Germany, with the active support of Demeter International, upped its game by organising the 1st International Conference on Biodynamic Research, over four mainly sunny days from 5th to 8th September 2018. Titled 'Evolving Agriculture and Food, opening up Biodynamic Research', the conference adopted a transdisciplinary perspective with the aim of attracting researchers from outside the biodynamic movement who were working on complementary issues and approaches. This strategy paid off: of the approximately 180 conference participants from 26 countries, approximately one quarter came from outside the movement. In addition, one third were farmers, and 40% were female.

The programme was uniquely biodynamic and, as with the annual agricultural conference, arguably more creative than contemporary agroecological and organic research conferences, with daily plenary keynote speeches followed by parallel sessions, then experiential sessions to encourage physical movement, followed by focussed workshops and poster sessions. Long breaks and lunches enabled networking and sharing, and other activities included a cultural evening of a musical eurythmy performance, and a farm tour.

A World Café on Day 1 set the agenda by enabling all participants to contribute to defining a research strategy for biodynamic agriculture, and this work was continued in subsequent workshops over the conference. Key research priorities arising included more work on the biodynamic preparations, evidencing the nutritional benefits of biodynamic food, developing holistic and appropriate research methods, and interfacing with the agroecological movement.

Given that Great Britain has only approximately 100 biodynamic farmers (compared with, for example, Germany's 1,400), one might assume a rather insignificant presence. So we can report that, relatively, Team GB's ten participants punched well above their weight. In the ring, we almost swept the floor in one particular session with Jonathan Code (Director, International Programme, Crossfields Institute) chairing on 'Meta-reflection on the research field', and three of the four presenters being: Mark Moodie (founder of Considera, and BD potentised preparation supplier), presenting his thoughts on collating biodynamic research, Dr Saskia von Diest (Postdoctoral Research Fellow, Coventry University) discussing farmer intuition, and Dr Julia Wright (Senior Research Fellow, Coventry University) arguing for the biodynamic movement to 'come out' about its philosophy of the non-material world.

In another session, Julia chaired 'Exploring the

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Edges of Biodynamic Research' that featured presentations from Jonathan on exploring the cultural landscape of BD research, and Janus Bojesen Jensen (Doctoral Researcher, Coventry University) discussing the effects of meditation on regenerative agriculture. Richard Swann gave a presentation based on his MA research project on the quality and vitality of BD products, and he also chaired the session on New Research Methods. A colleague from the UK, Melissa Roussopoulos (Independent Constellations Expert) ran two workshops on the use of nature constellations to communicate with nature, whilst stalwart translator Bernard Jarman supported the plenary speeches. Finally, Briony Young (trainer in BD preparations), Richard and Julia participated in the workshops that were developing the emerging research agenda, and wise council was also provided by Aonghus Gordon of Ruskin Mill Trust.

Several 'next steps' were seeded, including the development of an international collaborative project to establish an open–access database of all peer-reviewed biodynamic research articles, with the BDA and Mark Moodie contributing their works to date. What stood out was the buoyant mood of participants; whilst all were clear about research gaps, they were also enthused to collaborate, and were positive that together they would find the funding to support this work. The next Biodynamic Research Conference was scheduled to coincide with the forthcoming Organic Research Congress in Rennes, France, September 2020.

***Dr Julia Wright** is Chair of the Biodynamic Association Council and Researcher at the Centre for Agroecology, Water and Resilience at Coventry University*

Considera

By Mark Moodie

ALMOST 100 YEARS OF BIODYNAMIC AGRICULTURE has generated an extensive and thus unwieldy literature. Initially I was interested to extract any practical guidance I could find in all those books and magazines in such a way that I could access the relevant information whenever I needed it. That intention manifested in public as the Considera databases at www.considera.org. These are now 14 years old.

Whilst the star-planting and peppering sections have been moth-balled due to lack of external involvement, the work with preparations has grown. This online database is called a materia medica in deference to the tradition of the homoeopaths and other healers.

The Considera project has been presented for the (open-minded) sceptical scientist because that is Western culture's default approach. This requires one to state assumptions, offer a literature survey, and then present the practical findings. For the grower who simply wants to try a fundamental and non-toxic approach to solving specific issues on their land the latter will be most useful.

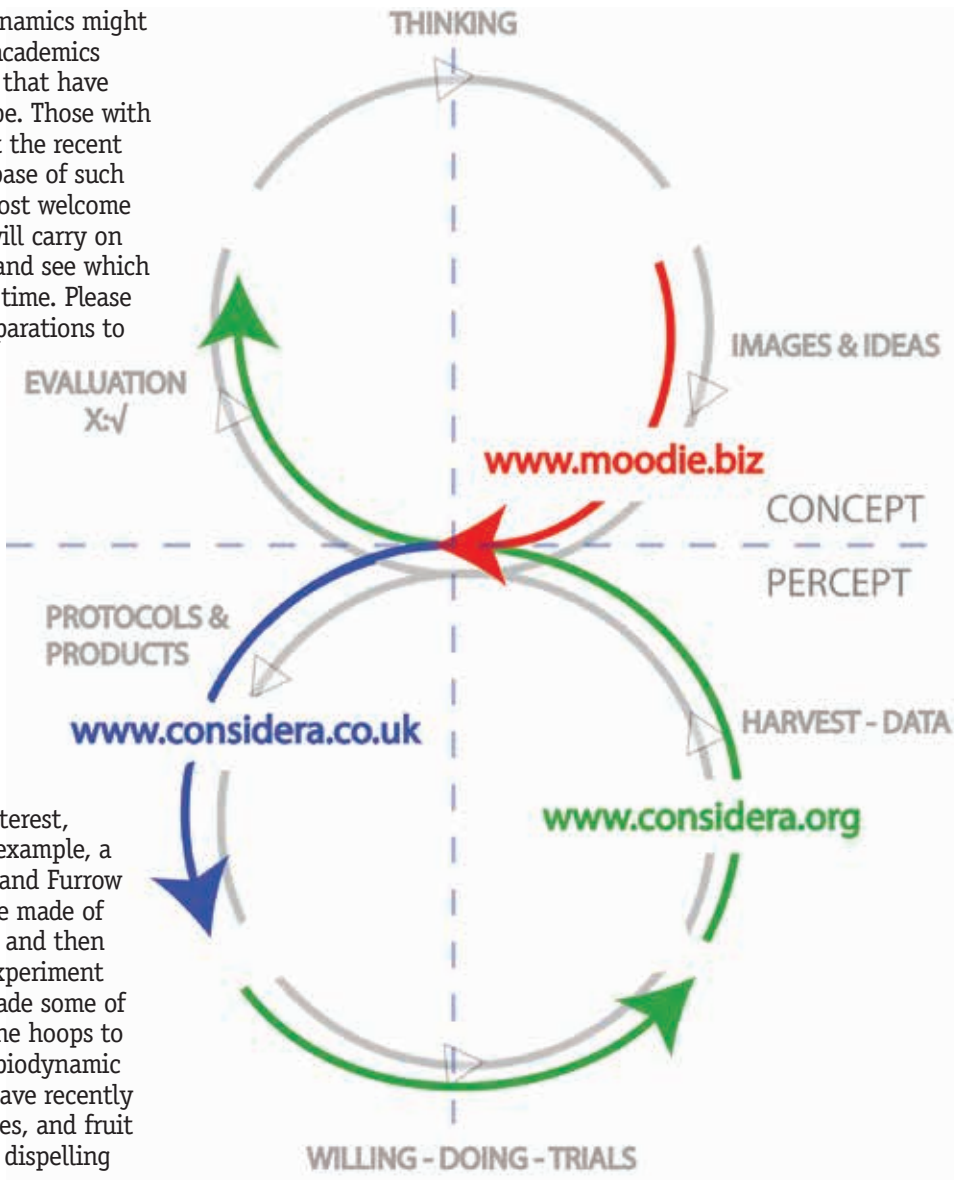
Some of the information in the site has come from formal research projects and has had academic peer review. This is of particular interest to those who hope that biodynamics might find respect in academic scientific circles. Until academics release themselves from the Kantian restrictions that have underpinned their academies this is our best hope. Those with the energy to pursue this link met in Dornach at the recent research conference and intend to create a database of such peer-reviewed biodynamic literature. They are most welcome to mine the Considera site. However, Considera will carry on accumulating experiences from a wider horizon and see which parts of that common wealth survive the test of time. Please feel free to add your own experiences of the preparations to the existing collection.

A second initiative has worked both within but also beyond the borders of what one might call classical biodynamics. This includes, for example, using the field sprays and compost preparations outside of the heaps in various combinations and potencies to try and address specific issues. These pre-prepared preparations are aimed at the growers who may not speak biodynamics and so are certain not to ask for something to bring 'a proper behaviour towards phosphorous substances' or the like. However they may say that they need to deal with blackfly or frost and so forth and wonder if the biodynamic approach can assist them.

This initiative has provoked caution and interest, and occasionally active antagonism such as, for example, a poorly-informed, verbose and tactless 2011 Star and Furrow article. One wonders what that writer would have made of those who have dared to study Dr Steiner's work and then given themselves permission to go off piste to experiment with entirely new preparations. Considera has made some of these preparations available and gone through the hoops to make them officially acceptable on organic and biodynamic holdings without threatening certification. We have recently been trying preparations specifically for fruit trees, and fruit bushes. Others have followed up early success in dispelling vermin. One combination supports bee health, another assists ripening in dull late summers, whilst yet another is designed for drought. There are a great many preparations for the great many issues that face growers all the time. If you want to try them, we can get them to you.

The Third allied initiative has been the exploration of biodynamic theory. To some extent these could be called footnotes to Dr Steiner, but part addresses issues Dr Steiner did not mention directly and might deserve a more creative label. These debates and studies have emerged as translations and publications.

At the recent research conference at Dornach I found myself drawn to those researchers who maintained their foothold in practice. I came away convinced that research and practice are twins and one without the other will not thrive. Research can float off into unrequested abstractions, and the experimental circle can fail to go through the steps that could bottom out their forays into new territory. There's a lemniscatory teamwork just waiting to be recognised and treasured. I hope Considera has held that form and I welcome Dornach's latest attempt to do the same.



The emerging research field of intuitive farming and the role of biodynamics

By ***Saskia von Diest***

INTRODUCTION

Intuition is rarely associated with farm management in agricultural research. But in the last fifteen years, a small but growing number of scientific studies have acknowledged that many farmers rely on their intuition when making practical decisions, often in preference to formalised or computer-based decision support tools developed through mainstream research.

The authors of these articles all agree that farmers should be supported in actively developing their intuitive ability. However, few research attempts have been made towards doing so to date. This could be because intuition presents a major challenge for scientists to understand in terms of its mechanism, and there is no consensus on what it is or how it works. But despite this, many farmers already use intuition, so finding ways to help them develop this ability could be very helpful for modern agriculture.

DEFINING AND TRAINING INTUITION

Perhaps the most apt definition of intuition is "knowing without knowing how you know". And while the precise mechanism is not yet known, there is a tendency in scientific literature to describe intuition as immediate, accurate and a sub-conscious, pervasive part of all decisions, and, therefore, highly useful, provided the decision-maker is attuned to it.

Some scientific studies have found that intuition also plays a significant role in innovative problem solving. Knowing how to leverage such a skill could empower farmers to come up with customised solutions for problems that they face on a daily basis and appropriately manage their dynamic, complex agro-ecosystems. It can also prove useful to farmers in adapting to local environmental changes, which may be accelerating faster than science can keep up with in adjusting decision support tools to meet farmers' needs.

Like scientists, farmers may not agree on how intuition is defined, be it gut feel, instinct, a refined sense of observation, or years of experience. But, unlike scientists, most farmers do agree that employing it is central in their decision-making process. Based on the studies that have been published to date, farmers consciously using intuition in their decision-making report benefits such as:

- lower inputs (e.g. water, fertilizer, vet costs, time used for making decisions)
- improved outputs (e.g. feed conversion in animal production, longer product shelf-life, higher yield)
- greater profit margins
- improved farm health and reduced negative environmental impact
- improved personal well-being (e.g. feeling healthier, more satisfied with their decisions and more in harmony with nature)

One thing that farmers who use intuition do agree on is that it can be developed by anyone, and that intuition is closely tied to experience, i.e. a farmer could learn the theory about intuition in a classroom, but he/she needs to train using his/her intuition on a farm.

There is no scientific consensus about what the best way is to train intuition, although various models have been created and methods developed to facilitate a state of mind that is conducive to intuitive thinking. Training can take a relatively short or long time, depending on how much effort and time is put into honing this skill. And confidence in intuitive thinking can be improved by training in groups.

Interestingly, some articles say that it seems as though intuition arises more often when one is not actively trying to be intuitive! But one still needs to know what intuition feels like to recognise it. Practices such as meditation, mindfulness, journaling, dancing or other movement practices that help develop interoception (internal body awareness) have been found to help in relaxing the logical mind and raising intuitive awareness.

INTUITION IN BIODYNAMIC AGRICULTURE

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A POTENTIAL RESEARCH COLLABORATION?

Farmers already operate intuitively to some degree, so any research that offers support in advancing this ability is valuable. As Steiner's works offer a sophisticated basis for fine-tuning intuition, there could be benefits from biodynamics and mainstream agricultural research to engage in collaborative exploration into intuitive farming.

Biodynamics is already practiced in at least 47 countries, with a growing number of associations and members. Since peer feedback plays an important role in training intuition, this network allows farmers access to other farmers who may share similar goals in developing intuition and other subtle abilities, in line with biodynamic principles. This kind of research could also contribute to changing the perspective of conventional farmers, mainstream agricultural researchers and policy-makers towards biodynamics, which may help in growing the awareness and practice of biodynamics.

If given more focused attention, intuitive farming could help reinvigorate agricultural research, and guide the industry towards more efficient, customised and coherent farm practices, with biodynamics helping to lead the way.

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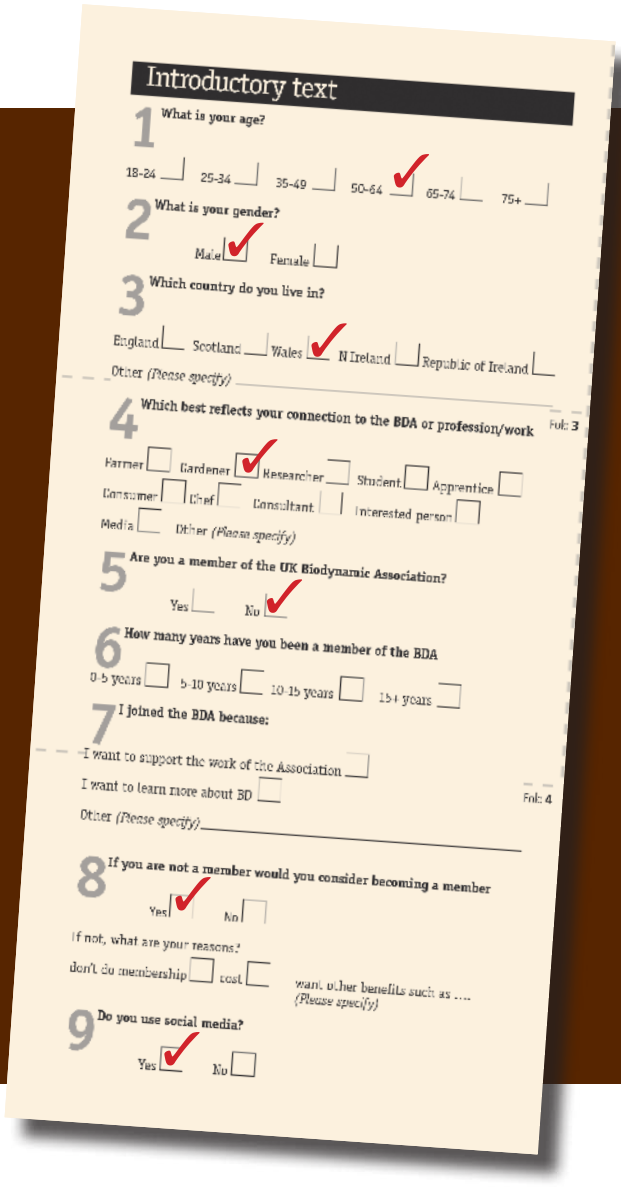


A BIG THANK YOU

To all of you who took the time to fill in the survey in the last issue. 86 people responded (which is around 10% of the membership), either online or using the paper copy. We realise there were a lot of questions, so a special thanks for your endurance and patience.

It has taken a while to collate the results and work will now start to analyse them. We very much appreciate the honest comments and suggestions as they will help us grow the BDA and Star and Furrow. A considered presentation of the results will be published in the next issue of Star and Furrow.

Some of you included your name and address to be included in a prize draw. This was made at the BDA AGM at Aura Soma in October. We are please to announce the prize winner as **Leslie Kinsey**. Congratulations!

Perceiving Quality through picture forming methods

Bruno Follador helping a group to understand 'chromas'

Picture courtesy Richard Swann

by ***Richard Swann***

As Julia Wright points out in her summary of the 1st Biodynamic Research conference, two of the research priorities that need more work are evidencing the nutritional benefits of biodynamic food and developing holistic and appropriate research methods. The biodynamic movement is in a particularly good position here, as much work has been carried out over the years and several holistic methods have been established. An attempt will be made in this article to understand a couple of these approaches and what they indicate.

FOOD QUALITY

What makes for good quality in food? It is a term that has intrigued me for many years. The grower wants to grow the best quality produce. A processor wants to make the best quality product. The discerning shopper wants to buy the best quality food. How do they evaluate it?

Most of the time it is through the senses. What does the product look like? With the apple, is it shiny or dull? Are there any blemishes or bad bits? Is it firm? Does it look fresh? The consumer does not always have the possibility to check the keeping quality. Many other factors play in; the consumer's experience, and trust for the grower.

Digging deeper we come to the nutritional qualities. What vitamins, minerals and proteins are present? What health benefits do these have? There has been a lot of press with the government introducing labelling requirements with respect to sugar, fat and salt content. Are there any heavy metals, pesticide or herbicide residues present? These are of great interest to the discerning shopper who sees the best quality fruit and vegetables as being free from pollutants and so looks for organic or biodynamic produce.

Another aspect has also been considered. This is the so-called vitality or living quality. This is not so easy to quantify in terms of single components. How do we define the living quality of a fruit or vegetable? The keeping quality possibly leads to an understanding of this. For example, a research project in Sweden found that biodynamic/organic potatoes stored better over winter than non organic potatoes and did not have as many storage losses.

How does the way the produce is grown affect their vitality? Again, how do we evaluate it? Can it be shown that organic/biodynamic food is of better quality? What are these qualitative differences and which methods best show this?

HOLISTIC METHODS FOR EVALUATING QUALITY

There are several methods in use to evaluate food quality. The three most well-known ones are:

1. Sensitive crystallisation using copper chloride
2. Capillary dynamolysis or rising picture method
3. Round filter chromatograms

SENSITIVE CRYSTALLISATION

As you read this article, in the depths of winter, we are most probably having some frost. On such a day we will often see ice flowers on the windscreen of the car, greenhouse or even house window.

Early last century, biodynamic pioneer Dr Ehrenfried Pfeiffer was observing these flowers in shop windows in Basle, Switzerland and he noted the differences between the ways the ice crystals formed. This inspired him to develop the so called sensitive crystallisation method and with it he showed the difference in the blood between healthy and sick people to an 82% accuracy. For this he was awarded an honorary

Picture courtesy 'Lebendige Erde'

doctorate at Hahnemann Hospital and Medical College in Philadelphia, USA.

The method that was developed uses copper chloride as a means to see these patterns. Copper chloride forms blue green crystals when dissolved in water and allowed to evaporate. It was discovered by Pfeiffer that this became a good substance to try to reveal the living qualities of substances.

If copper chloride is dissolved in water and then allowed to crystallise out by itself, it produces a mass of small crystals in an unstructured way.

However if it is allowed to crystallise out with the addition of a small amount of living substance (such as blood or vegetable juice), then quite a different picture results. Compared to the less structured picture produced by copper chloride alone, complex flowery patterns are produced. These can be 'interpreted' as an indicator of the inner quality or vitality of the organic substance.

In order to achieve this, the crystallisation has to be done under very strict vibration free conditions to allow the crystals to form slowly. This can take up to 12 hours.

This was further developed into a method for evaluating the inner quality of agricultural products and soil. However first of all the methodology had to be established. One aspect of this was the study of the crystal pictures of a substance that had been allowed to degrade over a period of time. By doing so we can see the sort of pictures that are produced once life has left a living substance. Outwardly we can quite clearly see this when spinach leaves are harvested and then left to one side. They wilt, slowly start to decompose and eventually rot way. They lose their form and vitality.

The crystallisation method can show this is in a more sensitive way so that finer changes can be seen. These can manifest as a tendency to towards, for example, more chaotic crystal forms.

Several researchers have used this method as an evaluation tool. This can be seen clearly when comparing champagne made from conventionally grown grapes with champagne made from biodynamic grapes.

Another researcher, Dr Ursula Balzer Graf looked at milk processing and the type of picture structure that resulted. Milk was sampled from raw to highly pasteurised and various stages in between. Her results showed that she could rank the pictures according to their structure as well as to how they compared to pictures from ageing milk. The crystal formations for the pasteurised milk showed a tendency to ageing whilst the raw milk was 'more harmonious'.

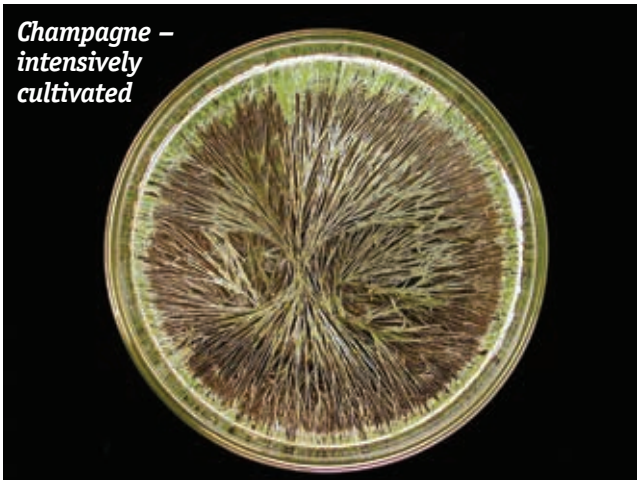
The methodology has been well worked out over the past 80 or so years by several scientists. At the aforementioned research conference we were introduced to the work of Dr Jurgen Fritz at Kassel University in Germany. He and his colleagues have been using the method on several projects, notably the so called DOK trial in Switzerland.

In his workshop he helped us read pictures using a two prong approach. First he asked us to look at the pictures and then try to logically analyse what was happening – e.g. some crystals deviated, some turned back on themselves. This is akin to a quantitative approach. Then we were encouraged to look qualitatively at the pictures. How did the crystal forms flow? If I could shrink myself and travel along the crystals, how would the journey be travelling from the edge to the centre? He even suggested that this approach could be applied to observing nature and daily life.

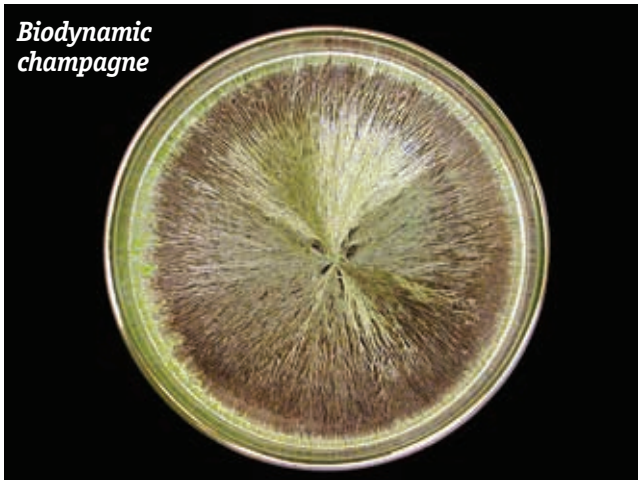
This visual evaluation requires the researcher to develop an 'eye' for what is harmonious and what is not, and then give a value judgement based on that. The positive aspect of this approach is that that he or she is able to sense the subtleties and nuances within the pictures. The challenge is reproducibility as each picture is individual and can be quite different.

When crystallisations are set out, there are usually three or four repetitions of the same sample. This is to find a representative picture for that sample. However, each of the pictures are not identical, so the researcher has to make a judgement as to what is representative. Again, this requires training and an eye for what is typical. The positive side is that the researcher can pick out what is representative and discard anomalies. On the other hand, he or she may miss a small vital aspect through it not being 'typical'.

Jens Otto Anderson in Denmark developed a computer analytical method for assessing the pictures. The pictures are scanned and analysed for textural analysis. Successful initial work was carried out on a carrot degradation series similar to what is described above in order to ascertain whether the method could create a classification series.



Champagne – intensively cultivated



Biodynamic champagne

Pictures courtesy of Floris Books

CHROMATOGRAPHY

Another method was developed by Lili Kolisko in the 1920s. She was also a biodynamic pioneer who worked together with Rudolf Steiner, but spent the last years of her life in the UK. She produced a ground breaking book 'Agriculture of Tomorrow' which includes a lot of chromatography pictures and describes how she used them to evaluate the quality of the biodynamic preparations. Much of her original material has unfortunately been lost.

Simply put, if you take some blotting paper or kitchen roll and dip in, say, juice, you will notice that the paper soaks up the juice. With chromatography it was discovered that different components within a substance could be separated out. This has become a useful analytical method in science.

As with the crystallisation, chromatography has also been developed to demonstrate the living qualities of plant substances. There are two such methods:

RISING PICTURES

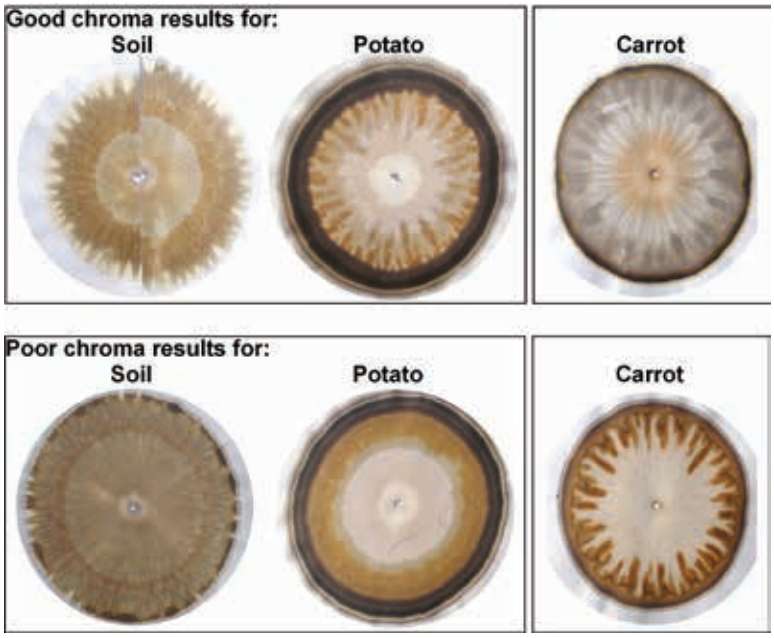
An extract from a plant is put into a specially shaped dish and filter paper is stood in it so that the extract is allowed to be soaked up. This is left to dry and then silver nitrate solution is allowed to rise in the same way. The result, a pattern that looks like curtains!

The pictures are much more fluid than the crystallisation pictures and a trained eye is required. The general approach for reading them is similar.

Before using as a method of evaluation, it is important to establish the methodology. As with crystallisation, it is of great help to follow the way the pictures reflect the decomposition process.

These pics were not on Dropbox - so I left this space!

Grape juice concentration series



Picture courtesy of Matt Adams

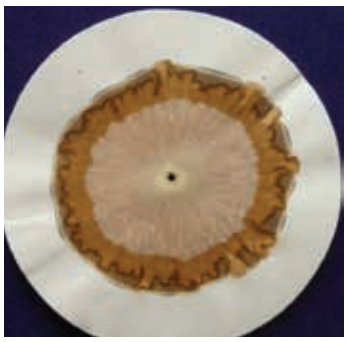
ROUND FILTER CHROMATOGRAPHY OR 'CHROMAS'

So called chromas are a variation on the rising picture. These were also developed by Pfeiffer to evaluate soil and compost quality, but also food quality. Round filter papers are used and the liquid organic substance is first allowed to radiate out from the centre. Once dry, this is followed by silver nitrate solution.

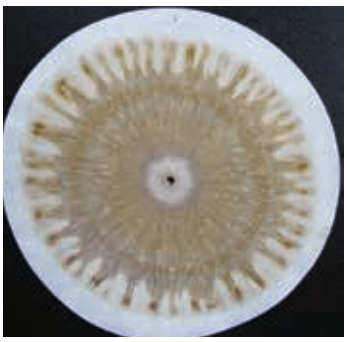
These are proving to be a popular method of qualitative evaluation of soils as the equipment required is very simple and easy to obtain. They can be done in the kitchen or on the farm. This method is proving very popular within permaculture and regenerative agriculture circles in As with crystallisation, it is of great help to follow the way the pictures reflect the decomposition process.

Here are some examples from research carried out by Matt Adams.

Bruno Follador uses this method extensively to look at compost quality. The compost is extracted and the juice is allowed to spread on the paper. Once dry this is followed by silver nitrate. Here are a couple of pictures showing the difference between anaerobic compost and healthy compost.



Anaerobic compost



Healthy compost

Pictures courtesy of Bruno Follador

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The turnaround in nutrition

*By **Dr Jasmin Peschke***

At the Research Conference Dr Jasmin Peschke spoke about how we need to rethink and reappraise our attitude towards food and nutrition.

IN 1921 ITA WEGMAN, the doctor who developed anthroposophical medicine with Rudolf Steiner, founded the first anthroposophical hospital in Switzerland. She began to use mistletoe for cancer patients. Some years later, a specialized hospital for anthroposophical cancer treatment using mistletoe and a holistic therapeutical approach was built up. In this hospital nutrition played a key role. The management decided not to save money with the patients' nutrition, which is really quite extraordinary considering the conditions that we have today.

The kitchen hospital's chef accompanied the patients with training and advice. The first task he gave them was to answer three questions: What do you eat? How does it taste? How do you digest and tolerate what you have eaten? He experienced that this was the first step for the patients on the way to become healthy.

Today this method would be called "mindful eating". Nutrition psychologists and nutrition therapists use the method as a sustainable way to reduce weight in obesity programmes. This "mindful eating" enables one to perceive different food and tastes and how they are tolerated by the organism. The effect is an enhanced feeling of self-connectedness. This means that you listen to your inner signals which in turn tell you what is good for you to eat – because what tastes good and what is pleasant can be digested and tolerated. This can also be called "somatic intelligence". Connectedness thus enhances somatic intelligence. Perceiving the body and its signals is a key for health. It is important to learn that we don't have to fulfil expectations on what to eat and what is healthy, but we have to have what we ourselves need. The body does not have to function like a machine and eating does not replace an emotional satisfaction. The consumer should thus not be the victim of publicity and trends.

Considering that 40 million people are killed each year by non-communicable, nutrition related diseases (e.g. diabetes, cardiovascular diseases etc.) this approach seems worth practising. In addition, one third of the world's population suffers from malnutrition, which can either be too little or too much food. The effects are either underweight and hunger or overweight and obesity. In 2017, 821 million people suffered from hunger, with the number steadily increasing each year. That is why the FAO announced the theme of the World Food Day 2018 as 'Zero hunger by 2030 is possible'. Taking into account that so many people are concerned with nutrition – whether too much or too little - it is obvious that this is a remarkable economic factor. So the food industry steps in and defines food quality and what is healthy food. We are tempted to pass the responsibility for a healthy development of our body, soul and spirit to industry.

In our society daily nutrition is characterised by many new, steadily changing dietary trends such as clean eating, which means choosing unprocessed, freshly cooked food without additives, colours and aromas. Vegan diet has become very well-known and many new products such as, for example, lentil noodles and almond drinks can be purchased. To buy ethically justifiable food is discussed in journals and street food has become common. Having a meal once a day together in the family is no longer a habit. A diet free from gluten, salt or dairy is often more a means to express one's own individuality than a real medicinal concern. Allergies and intolerances tell more about the fear of the food than of intolerable constituents or the quality of the food.

At the same time new products are introduced at short intervals such as green smoothies, edible insects or black sandwiches. The latter are coloured with coconut shell coal and have no dietary purpose but are intended to make people curious about consuming something special. Insects are advertised as an environmentally friendly and climate neutrally produced source of protein.

We can question whether superfoods like Chia, Goji, Matcha, Moringa are really 'super'. Coconut oil, for example, was said to be good for the health, against inflammation, cancer etc. but now you can read in the papers a headline stating that coconut oil is poisonous. Both are exaggerations. We can say that the effects of the superfoods and secondary nutrients are unclear. An investigation on Goji berries showed for example that the claimed effects cannot be proven. The latest news from today are out tomorrow!

With so many new diets and products the confusion increases on what is really needed and what is healthy and good food. This lack of orientation leads to uncertainty. As a consequence, scientific comments and advice on food as well as recipes are invited. Consumers believe more in advertising than in themselves. Self-proclaimed experts suddenly become authorities. This is a sign that a clearly arranged, transparent structure of life with comprehensible values is required.

Another thing that can be observed is that the values consumers have do not lead to subsequent action. The German nutrition report of 2016 published a survey with 1000 consumers who were asked about animal husbandry: 70% expect animal welfare to be the main task for farmers before mentioning food quality. And 90% would pay more for meat of happy animals, but the demand for low price meat is still increasing.

To put it drastically: meat from mass production regardless of the animals' welfare just because of low prices is still a reality.

Daily cooking it is also getting less popular, although more and more cookbooks are on market, to name one more contradiction.

We can conclude that there are many inconsistencies. In addition, a fragmentation in society can be observed because relations are not reliable any more and it might not be true that a strawberry yoghurt contains real strawberries.

What we really need is our own, inner judge and creativity for realising our daily diet. How can we develop this inner judge?

Albert Einstein, the famous physicist, says: "The significant problems we have cannot be solved at the same level of thinking with which we created them."

That means we need a turnaround in nutrition. This turnaround begins with the three questions as a means to develop the sense to know what we need and what is good or not good for us. This is an easy way for everyone to start with the turnaround and to start with being independent of the food industry.

Subsequently conscious living is realised because it is the individual who decides on his own values, and it is up to the individual to take care on what to eat and what to do out of a mindful attitude. And it is the individual to develop an inner certainty of what the need is and what his own values are because he is connected to himself. The individual is the sculptor of his own life, his diet and as consequence of the environment he lives in. Because through what the consumer buys and eats he shapes the world. The consumer is the co-producer and he decides at the cash desk how our world looks like. That means in concrete terms: food quality is a question for society, not a technical or economic question. This is meaningful, satisfactory and a source of health for the individual.

This is the approach of salutogenesis that Antonovsky already introduced in the 1970s. It means that we look at what keeps us healthy and that we feel coherence as a source of health. That leads to an understanding of the connections and relations in life, to a conviction to be able to design our own life and to the belief in the sense of life. This attitude is also named as resilience, to be able to deal with what comes towards us and not becoming ill from it.

The implications of applying the three questions as a first step to healthy food and a healthy life are that perceiving food really consciously leads to an interest in where it comes from and how the biography of it looks like. In concrete terms it means that we want to meet food, meeting not only consuming food because we eat food, not nutrients. Thus connections that are urgently needed are realized and the consumers start being co-producers. The mindful attitude leads in addition to a better appreciation of the food chain elements and to humanity in economics. Economy should be driven by understanding and brotherhood not by egoism and profit maximization.

Consumers are no longer the victims of the food industry but are taking responsibility for their own diet, for the environment and thus contribute to a healthy world by a healthy, sensually pleasant, sustainable diet.

The diet of the future is a mainly plant based diet with biodynamic/organic, regional, seasonal and fair produced food with a low grade of processing. This has a positive effect on life and environment. That means maintaining the environment, unpolluted water, animal welfare and fair economic relations as the main pillars of health.

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