

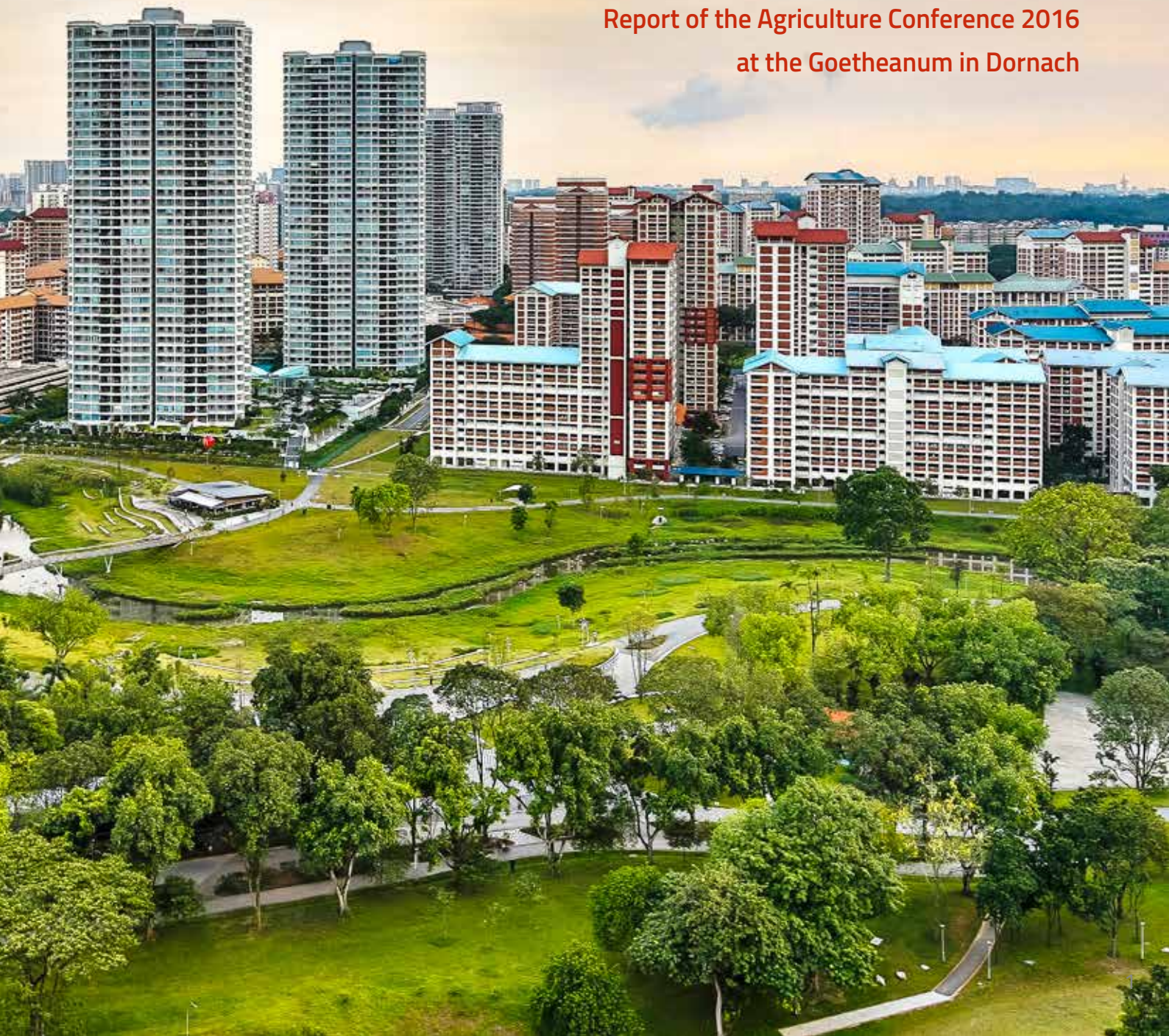


**Freie Hochschule  
für Geisteswissenschaft**

Sektion für Landwirtschaft  
Section for Agriculture  
Section d'Agriculture  
Sección de Agricultura

# Our Earth – a Global Garden?

Report of the Agriculture Conference 2016  
at the Goetheanum in Dornach





# Gardens for the future – a future vision

Jean-Michel Florin

Our world is changing rapidly. There is growing insecurity and more and more people feel excluded. Homelessness is a sign of the times. ‚Where is my home?’ is becoming an acute question for ever more people. This refers not only to a house in which to live, but to a place, a location and a context for life on the earth.

## A new longing for the earth

Back in the last century many people were living with the expectation that in the 21st century we would be celebrating the great triumph of technology and that we would be living in fully air-conditioned towns and houses. Human beings would live without need of the soil and nourish themselves on pills. That was also the goal of industrial agriculture – growing crops without soil, keeping livestock without land. Today however the negative consequences of this ‚emancipation’ from nature are becoming apparent – for people (especially children) but also for plants and animals.

But now with the arrival of the 21st century there is a new longing to re-connect with the earth and with nature. It is not enough to look at beautiful nature films; there is a growing need to be actively engaged and working with nature. It is not only about wanting to grow food. It is above all about putting one’s feet on the earth again. We are feeling more and more strongly that nature is part of us and that without her we cannot develop and become worthy human beings.

## The garden as a place of ritual

From its very beginning the garden has been a place where through their physical and sensory engagement, human beings can work and develop themselves and find a meaningful, supportive and to some degree peaceful relationship with nature. The garden has simultaneously been a place where human

beings have sought to develop nature – plant breeding and the domestication of animals etc.

How can a deepened understanding of the garden’s origin help us to establish new gardens of the future that will enable everyone once again, to find their place on the earth? Some initial responses to this question were given during the 2016 agriculture conference. Some of these are reported on in these Proceedings. Due to the limitations of space, we have not been able to include all the stimulating lectures and experiential sketches that were shared. You will however find additional reports and articles about the conference (see ‘kaleidoscope’ boxes throughout the report) on the website of the Section for Agriculture: [www.sektion-landwirtschaft.org/Landwirtschaftliche-Tagung-2016.8075.0.html](http://www.sektion-landwirtschaft.org/Landwirtschaftliche-Tagung-2016.8075.0.html).

## The town as an agricultural organism

A huge challenge was presented to the biodynamic movement at the end of the conference: Is it possible to consider our towns and conurbations as large gardens or even agricultural organisms? How could something like this be realised?

The internationally acclaimed landscape architect and town planner Herbert Dreiseitl called for the re-establishment of green areas in our towns and cities so as to ground our ever more abstract urban life-style. Given the fact that more than half of the world’s population now lives in towns, it is a very current and profoundly relevant suggestion. The Urban Agriculture Network Basel (UANB) – our local partner to the conference, is blazing an exemplary trail in that direction. Everyone can become creatively engaged ... where there’s a will, there’s a way!<sup>1</sup>

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1 <http://urbanagriculturebasel.ch>

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## From Seed to Plate

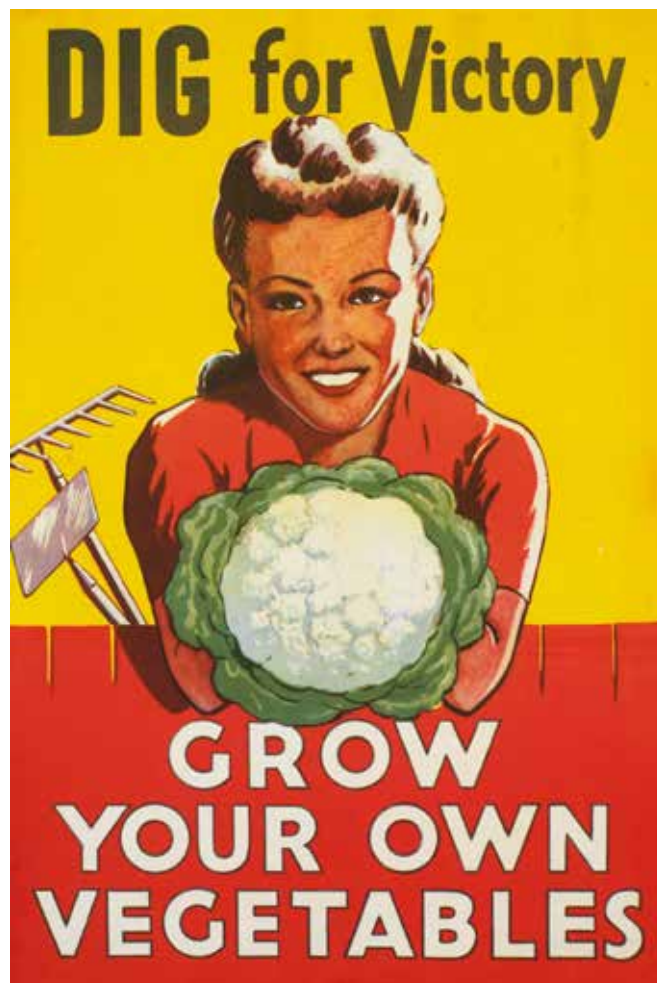
Marie-Monique Robin

It is all too often forgotten that what we eat comes from a seed sown on a field by a farmer somewhere in the world. We also frequently forget in this globalised world, that what we feed ourselves on affects not only our health but also the quality of the water, air and soil. How and what we eat influences the climate and the natural resource base, it determines the kind of landscape we live in, which social connections are strengthened or weakened and it even affects local employment conditions.

Agriculture is at a turning point today. In 2008 a six hundred page report was published by IAASTD (International Assessment of Agricultural Knowledge, Science and Technology for Development).<sup>1</sup> Hans Rudolf Herren, the president of the Millennium Institute in Washington and one of the main authors of this report, emphasised how a fundamental change in direction on the part of modern agriculture is urgently needed, if we are to meet the challenges which threaten world security and food sovereignty – climate change, biodiversity loss, management of water resources, soils, energy sources, as well as the financial, social, economic and health challenges. A solution to these crises can be found through agriculture – so long as something is changed! We are after all only too aware that modern agri-business only increases the problem.

### Global warming

Modern intensive agriculture emits 14% of all greenhouse gases – through pesticides and chemical fertilizers (made using fossil fuels), mechanisation, and long distance transportation etc. A further 19% comes about through deforestation and the subsequent planting of monocultures – GM soya to supply intensive livestock units or GM grains to produce biodiesel. Livestock itself contributes a massive 18% of the CO<sub>2</sub> emissions. There has never been such a rapid increase in atmospheric carbon dioxide as has occurred over the last decade – 3% on average each year! This means three times more than during previous decades. We are facing the worst case scenario described by the IPCC (Intergovernmental Panel on Climate Change).



A British Government poster during the second world war.

### Use of resources

Agriculture uses 70% of the water used in the world today. This is largely due to the irrigation techniques used in industrial agriculture. There are conflicts all over the world connected with the distribution of water resources. 25% of the soils cultivated for monocultures as part of the so-called 'green revolution', are now degraded if not completely destroyed.

The cheap food economy promoted by conventional agriculture, is only possible with the help of subsidies that are promised to farmers in the north without any consideration for the external costs that arise from this form of agriculture – costs relating to water, air and soil pollution, the decline in biodiversity, the leaching of soil nutrients and even the health of farmers and consumers and those living close to sprayed farmland. A study published by the European Parliament in 2009 showed that 26 billion Euros could be saved by banning carcinogenic pesticides in Europe. In 1992 David Pimentel from Cornell University calculated that the health and environmental costs of pesticide use amounted to 10 billion dollars in the USA alone. In my film and book 'Our

Daily Poison» I have shown that numerous peer reviewed scientific studies have confirmed the serious consequences of pesticide use on reproduction, hormone balance, the endocrine and neurological system and as a cause of cancer, Parkinson's and Alzheimer's disease. Parkinson's has recently been recognised in France as an occupational disease by the Social Security Department.

## Exodus

The introduction of the agri-business model has produced a massive rural exodus – in both north and south – resulting since 2008 in half of the world's population now living in towns. These towns have on average no more than three days supply of food. When I was born – on a farm in France – in 1960 there were 1.8 million farms; in 1990 there were only one million and today there are less than half a million farms. Meat consumption has increased enormously since the beginning of the 20th century. It began in the northern countries with the consumption of meat rising from 20 Kg to 80Kg per person per year. We can observe a similar trend and changes in eating habits in developing countries like China and India. According to FAO predictions the production of meat will need to double by 2050, which would mean an increase from the 229 million tons being produced today to around 465 million tons. It has also been estimated that to produce one beef calorie four plant calories are needed. 40% of the world's cereal harvest is used to feed animals in intensive farming units. Meat production requires enormous amounts of water – far more than is needed to grow vegetables. It is estimated that a person eating meat needs 4,000 litres of water per day compared with 1,500 litres for a vegetarian. A meal composed of meat and dairy products is equivalent in terms of greenhouse gas emissions to a 4,758 km car journey as opposed 629 km for a vegetarian meal.

## Organic agriculture as a solution

This listing of the dire effects of agri-business is far from complete. Luckily we know what needs to be done in order to meet the coming challenges, as I have demonstrated in my film and book «Crops of the Future»: We need to replace conventional agriculture everywhere with organic farming. That is the solution for farmers, city dwellers, consumers and the whole planet. An organic farm is defined as one that requires no external inputs. Instead it lives from the synergy of the complementary and diverse elements of which it is constituted – trees, plants, animals and the farmer himself who can be seen as the farm's orchestral conductor. Instead of being dependent on inputs, organic agriculture is process based and there are no monocultures.

Large-scale industrial farms have an energy efficiency of around two or maximum three calories! This means that three calories are gained for each calorie invested. A typical small-holding gains between fifteen and twenty calories! Its use of energy is far more effective and efficient.

## Urban agriculture

Organic agriculture should be introduced in a big way not only in rural areas but also in urban ones. I have dedicated a chapter of my documentary film and book «Good Old Growth» to urban agriculture. The historical roots of urban farming are to be found in 19th century Paris. Reading an interesting study by the British agronomist Gerald Stanhill, I came across the word «Maraîcher», effectively 'market gardener' but which etymologically links with the French «les marais» –meaning swamp. This is where the well known district «Quartier du Marais» on the right hand bank of the Seine gets its name from. During the Middle Ages the Parisian swamps were drained producing some very fertile soils. These were then developed by the Maraîchers to grow vegetables and fruit. Up until the end of the 19th century around 8,500 Maraîchers were farming 1,400 ha of land in the middle of the French capital. Each year more than 100,000 tons of high quality produce was grown for the two million inhabitants of Paris. The skills of the Jardiniers du Marais were also highly valued by the Royal Family! The Maraîchers developed some unusual techniques: To fertilize their soil they made use of the dung produced by 100,000 horses that were being used at that time to drive the Paris coaches. It amounted to more than a million tons a year. Each one of the 1,800 gardens was surrounded by a two metre high wall that served to collect and store warmth during the day and release it for the vegetables at night. The combination of this micro-climate and the horse manure enabled the Maraîchers to have six to eight harvests a year! A garden plot of 0.78 ha could support a family of five. The organic production system of the Maraîchers was so efficient that Louis XIV requested his gardener Jean-Baptiste de La Quintinie, to create something similar in his garden at Versailles so that he could grow pine-apples (under glass) and eat figs – his favourite fruit – and that already in June!

The arrival of the motor car brought an end to the Maraîchers. This occurred throughout the western world according to Joe Nasr, the author of the book «Carrot City». With the arrival of the car the city lost the capacity to feed its population and made it vulnerable, particularly in times of war.

## Doctor Carrot and Potato Pete

It was during the second world war that there was a revived interest in urban agriculture especially in Great Britain which was at that time importing more than 65% of its food from Canada and the United States. Fearing a sea blockade the British Government introduced rationing as soon as the war started and simultaneously launched the national 'Dig for Victory' campaign.

Lord Woolton the Minister responsible for food at the time promoted the campaign using very innovative (at that time) propaganda tools like radio broadcasts, flyers and posters and had them affixed to every possible wall, in public places, churches and in shops. The poster shows a smiling woman with a wonderful cauliflower in her hands and the words





Doctor Carrot and Potato Pete  
(A British Government poster during the second world war)

‘Grow Your Own Vegetables’. Committees for the so-called ‘victory gardens’ were set up in 476 districts across the United Kingdom in order to teach His Majesty’s subjects how to garden. Throughout the country lawns, golf courses, sports fields as well as public parks were rededicated to the growing of carrots and potatoes, the two main vegetables of the campaign. ‘Doctor Carrot’ and ‘Potato Pete’ became mascots in British schools who sang about the importance of growing local food. Everywhere throughout the land people started keeping chickens and rabbits! The result was phenomenal. The area of cultivated ground grew from 12.9 million ha in 1939 to 19.8 million ha less than five years later and the production of food increased by 91%. By the end of the war food imports had been halved and Great Britain was now able to feed its population for more than 160 days in the year as compared to the previous 120 days – and the British people had never been so healthy! Child mortality and heart disease declined drastically thanks to the improved diet (more fresh vegetables, less meat) and the more healthy lifestyle (increased physical activity).

## Urban Agriculture to counter alienation

After the second world war the consumer society began to develop and with it intensive agriculture. This meant the end of supporting oneself and growing food at home. Vegetable and kitchen gardens were replaced by lawns, green suburbs by food deserts and fast food restaurants that supplied ‘junk food’ – and no vegetables were being grown for miles around. The next step in this collective alienation process was the so-called globalisation whereby each citizen was made dependent on the supermarket for his/her daily needs. Every food calorie made available through a supermarket today requires seven calories of energy to produce and transport it. Each item of food offered in European supermarkets travels on average around 2,400 km before it is sold and around 4,000 km in north America. This crazy system has generated an outrageous situation – more than 900 million people across the world are starving or suffering from malnutrition while at the same time 1.4 million people are overweight or suffering from obesity! To counter all this a powerful citizens movement is taking root. It is estimated that around 800 million people are practising urban agriculture primarily in the south but also in some northern cities. It is not just a passing fad but a much deeper engagement by people that should be taken seriously. A study carried out by the University of Toronto in 2010 showed that this mega city of six million inhabitants could produce at least 10% and probably 30% of its own fruit, vegetable and small animals if the city were to simply dedicate 2,317 ha of its land and 25% of its roof space to urban agriculture. Another study produced by the University of Ohio demonstrated that Cleveland with a population of 400,000 could be completely self-sufficient in food (also with fruit, vegetables and small animals). A third study revealed that Detroit (population of 700,000) could create employment for 4,700 people and an annual income of 20 million dollars if it were to produce 20% of its fresh food requirements locally. The potential for urban agriculture is huge. Our earth has the means to become a global garden



**Marie-Monique Robin** (France) is a documentary film maker on political and ecological topics; she is known mainly through her film “The world according to Monsanto”.

<sup>1</sup> The World Agriculture Report was commissioned by the World Bank, carried out by 400 international scientists and adopted by 58 countries in 2008 in Johannesburg.



The garden in ancient Egypt  
(The garden of Nebamun, Mural from  
his grave in Thebes, 1400 BC)

## Our earth, a global garden?

Jean-Michel Florin

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

Let us try and understand the term 'garden'. A garden usually brings together things like food, beauty and relaxation. There is no garden without a gardener. The four kingdoms of nature are always included in the concept of a garden and the human being's role within it is of central significance. This is true even when human input is deliberately limited – such as in a 'wild garden'. In this case the human being is intensively involved with the processes of nature. It is a principle underlying every garden. Each one is unique even if it appears to have been copied from a catalogue. It is unique because it reveals something of the gardener's individuality! A glance into a suburban garden will tell a lot – and not only about the owner's preferences in garden design.

### We are living in the Anthropocene

The earth, which not so very long ago was considered largely wild and untouched, is today being worked, exploited and

influenced by human beings in every last corner. For the first time in history mankind has a greater influence on the state of the planet than the processes of nature. The human being has now become the main geological force: Since about the end of the second world war we have been living in the Anthropocene geological age. This also means that the earth has become our responsibility. Unfortunately however we are a long way from accepting this and treating it as a beautiful and living garden.

### The whole earth as a garden

It had long been thought that the tropical rainforests are an example of untouched nature. More and more has been discovered over the last decades however that indicates how these unique forests have always been and still are the creation of 'subtle gardening activity' – the Amazon rain forest continues to be cultivated by the indigenous Kayapos people.<sup>1</sup> They clear small patches of forest and for a short period of time use them as gardens to produce a great variety of plants. After a while they move on and choose a new patch to cultivate, leaving the previous area to grow back into a forest. These people never sought to conquer nature. Indeed there never was any distinction between 'culture and nature'.





The Cloister garden of the Middle Ages (hortus conclusus)  
(Master of the Oberrheinischen Schule, ca. 1410)



The Baroque garden: Castle of Versailles (Pierre Patel, 1260x913 cm, 1668)

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

In that early period gardens were places of ritual sacrament, places in which the divine world could be revealed to mankind. They were places conceived according to divine cosmic laws. They were often surrounded by a wall as protection against the desert and to secure moisture and shade – all this was a pre-condition for making the growing of a wide range of ‘plants’, including human qualities, possible.

The term ‘cosmic’ from the Greek, originally meant the order which permeates the world and the beauty which arises out of the harmony of this order (‘cosmetic’ also has this root). Socrates spoke of how heaven and earth, the Gods and human beings are connected through friendship, by respecting this order, keeping things in proportion and through justice. This is why the world is referred to as ‘cosmos’ and not ‘chaos’ (meaning disorder). For our actions in the world to make sense, this order needs to be understood.

The human being exists between the cosmos and the earth. The earthly connection is experienced through gravity. We notice in sitting on a chair for instance that it exerts pressure. Standing up we feel a force pulling us downwards and without which we would float away.

Looking upwards we can experience the blue sky by day and the starry heavens by night. During the day there is a single focus, at night there are countless relationships between points of light. The daytime sky has no distance, it reaches down to us. It is there amongst all the objects in our surroundings. And yet there in the sky there is nothing material. The sky, the cosmos is only an image.

In ancient Egypt the garden was also an image of this divine cosmos. Every garden was developed around a holy pool rep-

resenting the primeval ocean of life. Each plant was an image of a divine being – the date palm for instance was an expression of the sun God Re. The divine world was experienced in this way out in nature. The separation between the inner and outer worlds was not as pronounced as it is today.

### Landscape as the garden of God

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

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

### The garden as an image of heaven

During the Middle Ages the sacred garden reappeared, at first in the Islamic world where the divine cosmos was expressed in the highly structured gardens. It was a place of inner contemplation and prayer. The human being no longer sought the divine among the plants of the garden but in himself. Nature with her plants and animals, is God’s creation. The quest now

turned inward and nature became a reflection of the soul. The pool of water as a symbol for life was once again at the centre of the garden. The garden was an image of paradise on earth. It was a similar situation in the 'Hortus Conclusus' of the European Middle Ages. The Cloister garden was enclosed and protected. It was the place where the human being, once expelled from paradise, could prepare himself for an eventual return to God. Here too the garden was an image of the human soul. The various plant families symbolised different human soul attitudes. Within the Cloister garden one could seek knowledge of the self and of the divine, protected from the wilderness of nature. It was a place for caring and nourishing the soul.

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

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

The discovery of landscape in European art played a strong role in the development of European gardens. According to Joachim Ritter, landscape is 'nature made aesthetically contemporary in the eyes of a sensitive observer'.<sup>2</sup> Put another way, landscape is the sense-perceptible and supersensory experience of nature's order. If I look at a beautiful landscape, I perceive it first of all as a whole by breaking it down into its various parts (trees, rocks, river, houses). What makes it a landscape however is the unity bringing together all these individual parts. Or again, it is a personal experience that enables me to see the landscape as a whole (as a cosmos). Inspiration is no longer sourced in divine law as it was in ancient times or during the Middle Ages. Instead it arises from the direct experience of individual human beings in the landscape. A characteristic of this landscape garden impulse is the dissolution of boundaries. In contrast to all earlier forms of garden that were separated from the world around it by high walls or fences, the landscape garden seeks a connection to the surrounding nature. It would ideally like to encompass the entire landscape.

## The diversity of gardens

From the mid 19th century and on into the 20th, the story of garden development becomes ever more diverse. A number of gardening personalities such as Gertrude Jekyll (1843–1932), William Robinson (1838–1935) and of course Rudolf Steiner (1861–1925) could be mentioned who sought to give the garden a spiritual dimension. «A garden should be full of life – its living quality based not on beautiful forms and colours alone but whose breath is permeated by the divine», said garden philosopher, Jeremy Naydler.<sup>3</sup>

Claude Monet the famous painter and passionate gardener always sought the spiritual (Genius loci) in his pictures. He wanted to grasp the cosmic context of light: «To catch the moment with the steady all encompassing light».<sup>4</sup> In his personal journey as an artist Monet moves steadily away from 'perspective distance' (a separation from the object) to become more actively engaged with nature. In his painting entitled 'The Japanese Bridge' produced in his later years, the concept of distance is no longer valid. It is only strength, being and relationship – without any perspective. It is an anticipation of the step we can take today – of no longer simply observing things from outside and seeking to dominate them but of once again entering into a relationship with nature in our thoughts, feelings and intentions.

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

## What routes are open to us?

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

2. The three qualities underlying all design work from Plato till the end of the Middle Ages need to be rediscovered today in a new way:

- Truth – The world needs 'purpose', it must be productive and efficient otherwise it is only 'a fine semblance'. Sober scientific clarity is a help here.

- Goodness – today we might say 'ethics'. Goodness concerns the way we live, cooperate and ultimately love one another.

- Beauty – The Franco-Chinese author François Cheng writes something very interesting in his book 'Five Meditations on Beauty': 'The world needs truth and goodness in order to survive. But why do we need beauty? Indeed why is the world beautiful? It is a riddle. The world could exist without being beautiful. There needs to be beauty in the world however so that we can experience something of the higher, the cosmic, the sacred'. This is why gardens were always beautiful.

What is beauty? Something is beautiful when it is able to radiate out and outwardly express the spirit living within it. This





Claude Monet: The Japanese bridge (1925)

is the cosmic quality of beauty. Rudolf Steiner describes it in the following way: 'A space where forces appear to approach the earth from all parts of the cosmos and sculpt the forms present on the earth's surface from outside'. Because a being is given form from the periphery of universal space something is expressed within it and this, in the original meaning of the word, is beauty. Beauty is in fact how the cosmos expresses itself in an earthling<sup>5</sup> It is no longer the divine order which determines the beauty of the world 'from above'; far more important is what streams out from the specific place (Genius loci) and from each plant and animal. This means for example that an understanding for the place, the garden or the farm is needed before any new design can be countenanced.

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



**Jean-Michel Florin** (France): Co-leader of the Section for Agriculture at the Goetheanum; Coordinator of the biodynamic association of France.

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- 1 See Andreas Suchantke: *Partnerschaft mit der Natur*, Stuttgart 1993.
  - 2 Joachim Ritter: *Landschaft – Zur Funktion des Ästhetischen in der modernen Gesellschaft*, München 1990.
  - 3 Jeremy Naydler: *Der Garten als spiritueller Ort*, p. 118, Stuttgart 2011.
  - 4 Daniel Wildenstein: *Monet oder der Triumph des Impressionismus*, Köln 1996
  - 5 Rudolf Steiner: *Anthroposophy and the Visual Arts*. Lecture held in The Hague on 9th April 1922.



# The archetypal garden

Christine Gruwez



Garden tapestry showing the 'Chahar Bagh' (classic Persian garden): a spring, flowing water, the fourfold division, a surrounding wall (undated)

European agriculture has its origins in the civilization of ancient Persia. Arable cropping and livestock breeding came about through the inspiration and teachings of Zarathustra – the leading spirit of ancient Persia. There too is found the archetypal image of the garden, the garden of paradise. It is an image that remains as valid today and for the future as it was in the past. It is an archetype for our humanity.

Zarathustra, the great initiate of Ancient Persia is the originator of this image. The richness of Iranian culture right up to the present day can be traced back to him. At the time of Zarathustra culture and cultic ritual was one and the same, and a correct reading of our times points once more to a new union of the two

## Pairi-Daiza

To say 'Garden of Paradise' is actually to say the same thing twice. 'Pairi-Daiza' is an old Persian, Avestan word meaning 'garden'. Such a garden was a contained space. It was surrounded by a rectangular wall made of clay bricks. In the centre of the garden was a spring. This spring had to flow so that sounds and tones could be heard. Without flowing water it could not be classed as a garden. The water flowed out from the spring in four directions (in the form of a cross), creating the four distinct planting areas – the 'Chahar Bagh' (or 'four gardens') – of the classic Persian garden.

Building a wall of this kind in the middle of a wild landscape led to something quite significant. What had previously been an extensive yet undetermined unity was now divided into an inner and an outer space. The inner space became a distinct and sacred space, a place for ritual and a place of peace, it was enclosed.

What took place in the garden in this place of sacrament, was a transformation of the essence of substance. The entire en-

closed space and everything within it was changed, it was raised to a higher level – one of 'relationships'. It was through this living relationship that it could become a place of peace. Outside the walls lay the desert – a place where this relationship did not exist.

Such relationships are of a higher order than the individual parts on their own. In so far as something is brought into a state of relationship it is simultaneously raised and ennobled. This was and always will be the mission of a sacrament – the raising and ennobling of material substance in each and every creation of nature.

## Chwarena

The substance that was transformed in this ritual manifested itself as 'Chwarena' or 'Xwarna'. This word may be translated as the 'glory of God'. The concept is also connected with the long expected arrival of the saviour, 'the great Xwar-na-giving being of light'. Xwarna was a healing substance. It was this substance of 'relationship' that was being continually renewed by the sacrament and simultaneously inaugurated human healing work, which brought about this peace. It was however not only human beings who were healed. The sacrament of the ascent into the sphere of relationship also brought joy to nature. Human beings could experience the joy felt by nature in this place of peace in the paradise garden. There was no feeling of loss or yearning at that time connected with this image of paradise. For nothing had been lost.

Markus Osterrieder referred in his essay on "Penetrating the Earth with Light", to the priestly task of human beings in relation to agriculture – 'Ploughing brings light into the earth and in reply, the earth brings about a transformation of light which gives rise to new life'.<sup>1</sup>



## Asha

The garden was also the place of truth. If the right relationship – known as Asha – is cultivated one is living in a reality of truth. Where these relationships are allowed to wither, the context of life is one of lies, of untruth.

In Ancient Persia the three categories of Plato – Goodness, Truth, Beauty – were not yet separated. Goodness and truth were still one and they were permeated by the radiance of beauty. Raising things into a higher relationship makes the earth radiant, it is glorified and bathed in beauty. The rituals ascended from the earth to the cosmos as incense and then descended once more to make the things of earth transparent and radiant.

Against this background let us consider the words spoken by Ahura Mazdao to Zarathustra in the Videvdad (one of the holy books of the Avesta):

Ahura Mazdao said to Spitama Zarathustra:

«I, did not randomly choose a pleasant and available site, oh Spitaman Zarathustra, to create a place of peace.»

«O Creator of the world, Asa the Noble! Who will satisfy [...] the earth here?»

Then said Ahura Mazdao: «Truly, oh Spitaman Zarathustra, by bringing water to the desert in places where cereals and grasses can be sown, grasses with edible fruits.» [...]

«O Creator of the world, Asa the Noble! What lies at the heart of Ahura Mazdao's religion?»

Then said Ahura Mazdao: «Dedication to the cultivation of cereals, oh Spitaman Zarathustra! Whoever sows the seeds of cereals builds Asha (the order of truth), takes the religion forward!»

## Kaleidoscope



**Said Maatoug** Leader of the development of biodynamic farming at Hazoua in Tunisia ([www.ecohazoua.org](http://www.ecohazoua.org)), demonstrating the healing effect of the biodynamic preparations on the tunisian oasis "with the Demeter label we can do that..."



By developing a gardening culture the garden became a place for justice and truth, a place of relationship. It was a place for the enhancement, the trans-substantiation of material objects and living creatures in terms of their essential nature.

## Transfiguration

With the Manicheanism of the Christian era this ennobling process becomes a transfiguration of earthly substance as such. Not only was the given substance lifted and brought into its original true context and thereby ennobled, a complete renewal of its substance also took place. The ritual used in the early Manichean communities had the purpose of bringing the light which had sacrificed itself in each created thing – in plant, animal and mineral – into a new, living and now earth-connected relationship. The dark earth can then gradually change into an earth of light. It is a transfiguration through the fact that the light has passed through the deepest darkness. By caring for nature and cultivating food crops the human being is contributing towards this transformation.

Islam adopted this garden culture and developed it further spreading it throughout the Islamic world and from there into Europe. There are over 130 places in the Koran where the garden of paradise is referred to. Once again the spring provides the living centre from which the four streams of paradise flow as water, wine, milk and honey. Reference is now made of course to the loss of the original God-created Paradise. But in so far as human beings work on the earth and create gardens, they are connecting the earthly image of paradise with its primeval archetype. This is why Islamic mysticism speaks of the 'Garden of Return'. It is the place where the scent of roses stream and the mystery of God's unity is revealed within the inner garden of the heart – and that only the nightingale is able to understand and sing of its mystery.

The garden symbolises the promise that humanity will one day find its way back to the archetypal garden. If agriculture can find, if human beings are able to find the sacred, ennobling world of the garden once more, we will be treading the ever renewing path towards the garden of the human heart.



**Christine Gruwez** (Belgium): Specialist in philosophy, ancient philology and Iranian studies; Waldorf teacher.

<sup>1</sup> Markus Osterrider: Die Durchlichtung der Erde. Report of the Agriculture Conference 2010: Christian impulses in Agriculture. Individual development motives for Man and Earth, pp. 94-106.



## Man in his Macrocosmic Nature

Thomas Lüthi's reflections on the Michael Letter of this name by Rudolf Steiner<sup>1</sup>

### The physical world

Here on earth we have a physical body. Through it, we can meet and get to know the world. There are plenty of reasons for being amazed, about how wise this body is and how many good and bad things we can do with it in the world. We can use the same hand to grasp something tightly, hold it loosely or touch it softly and gently. We are placed fully in this physical world through our body and can experience the forces and laws working here. If we pick something up or fall over we feel the reality of gravity. Gravity is invisible to our ordinary senses but we can experience the reality of its existence.

If we look at a small child it is incredible how determined it is to overcome this gravity. It wants to stand upright in the world. Lack of immediate success is no reason for giving up. It tries again and again. The look of satisfaction and unbounded joy of the child when it finally succeeds in standing is indescribable. Something huge and invisible yet very real has been overcome!

How often do adults succeed in working with such intensity later in life, to overcome new and unknown things in other realms?

Our bodies are permeated by almost limitless wisdom. This is a gift; it is not something we have had to work for during this incarnation. It is a gift inherited from earlier stages of evolution. The body is a remarkable instrument for learning about and working with the world around us. It indicates the relationship we have to the physical world. And this physical world is a part of the reality we gaze upon.

There is another aspect of reality belonging to the physical world and this is to be found above us. Even though farmers and gardeners frequently turn their gaze downwards towards the earth, it feels good sometimes to stretch one's back and look upwards. During the day we see the sunlit sky and during the night, if it is clear, a sea of stars. That is something which

cannot be grasped in the same way as our immediate surroundings. We are also not able to reach up to the stars with our body.

### The plant kingdom

The world of plants lives strongly in this relationship between heaven and earth and in such a way that makes visible to our senses what is otherwise invisible. Let us consider the various stages of plant growth: It begins when a seed is placed in the moist, warm earth and starts to germinate. The seed in the soil is like a crystallisation point for the forces of the periphery. The etheric condenses in the seed as it germinates. The cosmic connects itself to the terrestrial.

It is a true wonder to see how the growing tip of the root gives itself over without any hesitation to the forces of gravity, while the shoot grows upwards against the force of gravity with the same degree of certainty. This connection with heaven and earth arises naturally and the spatial orientation follows from it. The plant stretches itself further in the vertical direction during spring and summer. Leaves are formed which to start with have more generalised and simple forms. Then around the stem, leaves begin to develop which in many plant species grow increasingly differentiated. Then as these varied forms develop, the characteristic nature of the plant begins to emerge. Everyone is no doubt familiar with this phenomenon of leaf sequences or metamorphosis of green leaves.

The interesting and even shocking thing about this is that the plant does not continue to develop in this way ad infinitum. That would be mechanical. In many plants, the upward growth comes to an end and a bud is formed. Then one fine sunny morning the tightly folded sepals can no longer restrain themselves and the flower bud opens. Certain beings in nature are aware of this and take it as an invitation to use their wings and visit the flowers. The plant kingdom entertains visits by



representatives of the animal kingdom for their mutual benefit. Insect pollination is for many plants essential and a pre-condition for ensuring the formation of fruits and seeds.

In following the development of a plant in this way, we can experience how the generalised processes of growth evolve and begin to express themselves in ever more species-specific forms realising as they do so certain qualities of the cosmos on the earth. We could also say: Over and above the etheric formative forces, are working those of the formative astral. «The ether is like an ocean in which distant astral forces are streaming towards the earth from all sides.» «We can see how the most manifold forms are developed in the plant world as a result of the astral being released from the etheric and pouring itself out over the plants.» This is how Rudolf Steiner describes the process. The outer process of plant development allows the interworking of the etheric and astral to become visible to our ordinary senses. The former leader of the Natural Science Section at the Goetheanum, Jochen Bockemühl, tirelessly sought – amongst other things – to raise awareness for the world of plants. One of the many exercises he recommended was to observe the same plant species as it grew in different environments.

The world of plants connects heaven and earth in a very obvious and understandable way. The astral and etheric do not, however, penetrate our consciousness in the way physical forces do. We cannot grasp them with our ordinary hands but their activity can be experienced pictorially.

By grasping the activity of the etheric and that of one's own etheric body in an imaginative way a greater sense of belonging can be engendered even with the physically remote world of the stars.

The plant kingdom makes the interaction between these forces that are active in the world, visible to our ordinary senses. The landscape and our gardens are a direct reflection of this activity. The choice of plants used for developing a landscape, their cultivation and the way the garden is laid out allow us to experience these interactions.

## The animal kingdom

Animals do not have the same immediate connection and evolutionary openness towards their surroundings as plants do. For their nourishment animals depend on the physical mineral substances being thoroughly enlivened by the activity of plants. The animal carries something within itself which has to do not only with the here and now but with stages of earth development lying far back in time. It has a highly specialised inner life resulting in very species-specific behavioral traits. Its form is influenced in the first place not by its immediate environment (as has been described above in the case of plants), nor the way it behaves, but through what it has inherited as a species.

I can think for example of the composting site on our farm in Järna (Sweden). Twice a year we make a new compost, try to build it in the right way and then cover it with straw. There is a

wide range of different materials available. This means that the contents of the different compost piles can vary greatly. Some of the piles are made with fresh manure while older ones are simply turned over. It doesn't usually take long – often only a few nights later in the spring time – before we discover that round holes have been bored into the piles containing fresh manure. It is only the heaps made with fresh material that are affected, all the other piles remain untouched and properly covered. A closer inspection reveals the answer to this puzzle. Badgers have been to take their share – and without a great deal of effort on their part.

The amazing thing is that the badgers made very accurate holes with their snouts but only in the composts made from fresh material even though many other piles had been set up nearby at the same time. The badgers knew what they contained and what was going on inside the heaps without first having to check them. This means that although physically outside the heaps, they were effectively inside them with their feelings and sensory capacities. They were part of what was taking place inside the compost heap.

We know that many animals have such a highly developed sensitivity that they are unable to remain outside but enter right into a particular situation. This reflects the highly specialised sense capacities that reside in the soul of the animal and in its group soul. A strongly developed astral nature is imprinted on the animal by each species from the moment it is born. These capacities are deeply rooted and their ability to fly, crawl or run do not require years of effort to learn and practice.

Rudolf Steiner drew attention to the fact that: «Seen spiritually animals do not reveal what is currently living in the astral forces streaming to the earth but what once streamed in during the ancient moon evolution.»

The astral element underlying these capacities is already deeply embedded during the animal's embryonic development and even harks back to an earlier stage of the earth's development. In that previous stage of earth evolution conditions were completely different and physical material substances were not as firm and solid as they are today. What is now hard physical substance was then still malleable. That preceding stage of development was termed Moon evolution by Rudolf Steiner. What once lived outwardly there in nature developed further and became inner impulses and qualities. The inner nature and astrality of today's animals relate back to that time. According to Rudolf Steiner, this still remains in the spiritual world. The impulses and qualities derived from it, however, permeate the animals currently living on the earth. The preserved moon forces manifest themselves through the behaviour of each species: «What is of significance within the animal kingdom for the permeation of the physical and etheric bodies by the astral body, are the astral forces preserved on the earth from the distant past.»

We are confronted here with an evolutionary dimension that is more strongly connected with what has already been than what is yet to come. The sun forces of the present day trans-

mit nothing of the astral to the animals in the way they do so directly with the plants. In the animal kingdom forces are at work that come from the past, from an earlier stage of development that is deeply connected with the moon and the forces of the moon.

### The human kingdom

As human beings, we are also under the influence of preserved moon forces. But the human being on the earth in his physical surroundings is able to develop a consciousness of self. Because of this, we can position ourselves harmoniously between sun and moon. We are able to develop self-consciousness thanks to the hard physical resistance provided by the earth. On the earth it is possible to find the cosmic within the earthly – to either wake up through it or alternatively to lose oneself and fall prey to earth-bound dreaming.

Ego consciousness requires a physical body, a physical vessel. It is here on the earth to which the Christ being has connected himself, that human ego consciousness can develop.

This becomes particularly clear through the activities of gardeners and farmers. This activity involves the continual moving around and carrying of lighter and also heavier items. This physical reality is so dominant that it is easy to remain stuck in it. The special measures used in the biodynamic approach can be readily seen and experienced. But we can ask ourselves to what extent is the biodynamic approach capable of allowing spiritual questions to penetrate the daily working life so that when things are lifted and carried about, it is not only gravity which is experienced but more cosmic aspects as well.

Since the end of the Middle Ages a fundamental change in the way we connect to the earth and the cosmos has come about. In the field of astronomy, for instance, we know that in earlier times our cosmic surroundings and the heavenly bodies were seen as an expression of divine beings. These divine beings determined what happened on earth. Gradually celestial phenomena came to be seen less as the expression of divine beings and more as astronomical mechanisms. The Gods were no longer needed. Not only the earth but the whole universe was seen materialistically. This mechanistic image of the universe has continued to evolve and more latterly opened up the possibility of space travel.

### On the tightrope towards Michael

Mankind's path into the future is a balancing act demanding our highest level of awareness. We can fall on the one hand into a one-sided focus on earthly matter. Then we remain imprisoned within what has been developed over the last few centuries. This provides a good toe hold for Ahriman and we become ever more fixed and hardened.

On the other hand, there is the temptation of wanting to return to an earlier state of consciousness without paying sufficient attention to the resistance that physical materials provide. For it is precisely this which enables us to attain self-conscious-



ness. We need to encounter the earth. Here we are in danger of seeking escape under the influence of Lucifer.

The path into the future is not yet finished. For the future has not yet occurred. We have the possibility and the task as human beings of finding and walking this path. This middle way is not about fleeing the world of the senses but of seeking to combine the spiritual with the sense world.

A challenge such as this can be experienced for instance very clearly in relation to the biodynamic preparations. We can speak about the preparations and study the plants and animal organs in order to understand their relationship. This can go a long way. But it can easily become somewhat abstract too, especially if one focuses on physical concepts rather than trying to experience the processes involved.

If however we make the preparations ourselves with a group of people, we can, for example, get to know the chamomile flowers and bovine intestines or the sweet smelling, well-formed cow pats and the cow horn, in quite a concrete way. What occurs then has not only to do with thoughts contributed from the outside but through the actually doing, one is suddenly part of a whole process. Relationship leads to experience. It has always struck me when filling cow horns by hand in a group, how after a while, a certain mood of silence and concentration develops and as it does so interest and involvement in the process grows and spreads.

There are thus different ways of developing an insight into the spiritual reality. If we take our start from the process of plant observation and then observe the individual leaf sequence of a plant in a very precise way, we can as a next step, begin to free ourselves from the sense impressions and come to a direct





Site and plant traits: shadow pictures of four flowering wall lettuce plants and their leaf sequences in different growing conditions. The two plants on the left grew on a site with much light, the two plants on the right in the shade. The smaller plants grew on a site with less soil nutrients, as compared to the site where the bigger plants grew.

experience of the developmental process that occurs between the various leaf forms. This can then lead further to a direct experience of the plant's etheric activity, its characteristic nature and that of its species, it could even bring about an experience of the plant's archetype. The object is the starting point for Goethean observation but it does not remain there. A path to the spirit can be found by inwardly working on the perceptions. Goethe already pointed to the importance of observing one's own thinking activity. Through it, something becomes apparent which is not present in mere sense perception but nonetheless shares a common lawfulness.

With this example, we are relying on the sense world. We can also, however, start directly from our inner meditative life.

Rudolf Steiner makes us aware of this when referring to the celebration of a new Michael Festival: «Filled with ideas, the soul experiences spirit-light, even when sensory images are only memories in human beings».

The capacity for walking the tightrope into the future depends on our own inner work. This attentiveness and heightened self-awareness enables us to look down on both sides without slipping. This has to do with the core impulse of biodynamic agriculture.

Michael is waiting for us to open our souls and become creatively active. The future is something that needs working on in the same way as the present situation has been worked on. This task is not one for the kingdoms of nature but it is our own human task. It means in fact that new levels of consciousness

need developing. An anthroposophical foundation can be a very useful tool for this.

The stars once spoke to Man  
It is world destiny that they are silent now  
To be aware of this silence  
Can bring pain to earthly Man

But in the deepening silence there grows and ripens  
What human beings speak to the stars  
To be aware of their speaking  
Can give strength to spirit man.

Christmas 1922, Rudolf Steiner



**Thomas Lüthi** (Sweden): Co-leader of the Section for Agriculture at the Goetheanum; responsible for the part-time biodynamic training at Järna.

1 Rudolf Steiner: Michael letters (GA26), Man in his macrocosmic nature.

# Genius Loci

Ola Aukrust



Harald Sohlberg: Vinternatt i Rondane (1914, 160 x 180,5 cm)

## Places and non-places

We are always working in one particular place, the time we live in has never existed before and each of us is a unique human being found nowhere else on earth.

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

## My place in the world

I would like to take you on an exotic journey into the high mountains of the north, to Norway. The examples I will present are not specially exciting. But they come from the world I know best. It is my world, my home.

Our mountains rise to nearly 2,500 metres. The tree line is at 1,000 metres. The alpine region reaches the same height. Our farm is situated at 500 metres above sea level on the sunny side of a valley. In the summer it hardly gets dark. From the beginning of November until the middle of February the sun never shines on the farm. We are on the eastern side of the highest mountains and being in the rain shadow, receive only 350 mm rainfall per year. For hundreds of years artificial irrigation has been a necessity for agriculture. The soil consists of boulder clay made fertile through centuries of livestock farming – and with a great deal of hard work removing stones!

The farm has been in the family for many generations. My parents managed it in the classical way as a conventional dairy

farm. My grandfather continued clearing the land until he was 80 years old and in the winter shifted the stones on to a pile using horse and sledge. His brother was a fairly well-known Norwegian poet, someone who sought the inner aspects of human and mountain nature. His quest was perhaps somewhat similar to Segantini. Think perhaps of his picture «La Morte» (Death) – like the path into the mountains, it is a path to the beyond.

The Norwegian painter Harald Sohlberg presents a similar mood in his well-known picture «Vinternatt i Rondane» (A Winter Night in Rondane) – The mountains tell of another world, a sacred, sublime, supernatural world.

My grandfather's brother also lived on our farm and in 1921, on a journey back from Rome, spent eight days in Dornach. He wrote about the unusual building which had been "built entirely by hand and in which Rudolf Steiner had himself painted esoteric paintings in the cupolas". It was the first Goetheanum made entirely of wood – and whose roof was of Norwegian slate.

## The spirit of a place

What I have tried to briefly describe in a somewhat fragmented way provides the background to my main theme of "Spirit of Place – Genius loci". The place (Locus) includes everything connected with its geological, geographical and climatic conditions. And everything which makes up what is known by wine growers as the "terroir" and which gives carrots, for instance, their site-specific flavour. The concept of "Genius loci" is however even broader. It would seem that the term "Genius" is connected with "creative power", the capacity for bringing about something new.

In earlier times this "spirit of place" was experienced in a very direct and concrete way. It was of great importance to the Ro-





Giovanni Segantini: La Morte (1898–1899, 190 x 320 cm)

mans. They frequently built altars to the ‘Genius loci’, to the so-called guardian angel who was active, created its mood and influenced the people living nearby.

The ‘Genius loci’ is influenced by both nature and human beings. It is the spirit of place. The ‘farm individuality’ is a core concept for the biodynamic movement. The spirit of place should, therefore, be very familiar.

The spirit of the place appears to us in the first place as a mood or atmosphere. All that has happened leaves a trace behind; everything we do becomes part of its history. Each place has its own atmosphere which we can be more or less conscious of. We can feel attuned to its particular quality. An orchard may invite a picnic. A Japanese garden invites stillness, contemplation, and reflection. The atmosphere in the Goetheanum park on a day in June is unique and very different to a pompous baroque garden such as that in Versailles.

What is actually a garden? Its great archetype is found in the Bible – the garden of Eden, of Paradise. The creation of a garden has played an important role in the development of all great civilizations. With their expulsion from Paradise, human beings have had to wear more or fewer clothes – their first protection or envelopment. Then comes the house and around it the garden as a further zone.

The garden is a protected zone. Etymologically the word means a place enclosed by a fence, a hedge or a wall. It is a humanised area that is no longer wilderness. It is to a certain degree a place that keeps out evil. It is a zone of morality that distinguishes itself from nature which is ‘beyond good and evil’. For this reason, a garden is a place of peace, stillness, for being alone or for intimate conversations. A garden is a place of the spirit.

## Metamorphosis

Before taking on the family farm I had the opportunity of participating in the ‘Goethean Study Year’ at the Glashaus in Dornach. Whilst there I met two important teachers with whom I developed a long term working relationship and arranged many workshops in Norway and on my farm.

One of these teachers was Jochen Bockemühl. Put simply his main focus was on the ever changing nature of living processes. My second teacher was Georg Maier who taught me how to understand aesthetics through sense observation. The recognised founder of modern aesthetics is Alexander Gottlieb Baumgarten (1714–1762). He was concerned to establish aesthetics as a sister discipline of logic. He understood aesthetics as being a “sense-based understanding” - thereby attaching greater value to what people take in through their senses than to what they can grasp through abstract concepts.

The approach is therefore much broader than simply the question as to whether something is beautiful or not. He develops the principle idea of what today is referred to as an “extended concept of art”. This, of course, brings to mind the life and work of the artist Joseph Beuys who expresses it somewhat in the following way: Whether we lay a table, prepare a meal, conduct a conversation or design a garden – everything can have an artistic quality, they are all creative activities in the sense of working with the ‘Genius loci’.

## Nordgard Aukrust

Four years ago we gave up milking cows on our farm. Now we have a beef suckler herd and the cows give birth to their calves outside on the pastures during the summer. They are important co-creators of the landscape. Good grassland can be the most ecologically diverse of landscapes. Having animals of

course immediately raises the issue of fencing. They are important landscape structures. Fences and stone walls break up the landscape into units and improve their micro-climates.

We have re-designed our garden over the last few years and have come to realise that we have too few stones rather than too many. Our main focus of production is now on herbs and edible flowers. Only some of them are sold fresh. They are mostly dried for making teas and condiments. The edible flowers are particularly important to us since they bring colour to our farm throughout the summer and add to the range of products we have available.

We now have three main gardens – a production area where we grow row crops in a more or less traditional way; a mixed garden used partly for production and partly as a demonstration garden; and a more intimate herb garden for welcoming and offering cups of tea and coffee to our visitors.

Some years ago we started building a community hall. It has a wooden construction similar to that of Norwegian stave churches. There are covered walkways outside the building on three sides – reminiscent of church cloisters. Some visitors comment that there is a Japanese feel to it.

The new building has changed the farm. The old herb garden with its wilder, English style design no longer fits so well. We are now in the process of giving it a more structured form.

There is today a great deal of interest and openness towards the specific and unique qualities of a farm or garden. The farm as a whole makes a very particular contribution to society. The farm's individual character should be recognisable in the products which are being marketed too. The garden layout is designed to show the various relationships, including the

historical ones found there. They should all find expression in the products.

## Garden culture

Culture in the garden is about the inter-relationship between ideals and practical reality. Ideas can only realize themselves through specific forms.

Consider the origin of the word 'agriculture'. It has to do with a human intervention – otherwise, it remains 'nature'. To my understanding, the word 'culture' also implies a further working on nature, a refining, an enhancing, perhaps an ennobling. A 'non-culture' also exists however in the way we work with landscapes, soil, and nature. We increasingly find landscapes that are broken, have been destroyed, whose individual quality is lost and which can no longer be described as agricultural. An agriculture which impoverishes a landscape cannot be considered in this context as 'agri-culture'. The impoverished landscape lacks biodiversity, natural habitats, experiences of value and beauty. It is a reduction rather than an enhancement.

From a gardener's point of view, however, it is not only about purely technical and productive agronomic issues. The gardener takes a more aesthetic view to what lives in the landscape, its mood and quality. Such a way of farming or gardening creates greater value to society than mere production orientated agronomy.

Biodynamic farms as sources of inspiration for the global garden will become places of growing importance in the world perhaps even exceeding that of certified products on the anonymous market place. And now a happy paradox for the end of my lecture – the more something is tied to a particular time, place and people living there, the more it begins to take on a universal character!

I would like to conclude with three challenges and thereby link back to the start of my presentation:

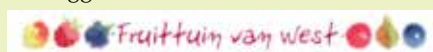
1. Take seriously the place (or Genius loci) where you are working, work on its transformation.
2. Take seriously the time in which you are living, seek pictures from the future rather than the past.
3. Take yourself seriously, your individuality and motivations. Avoid clichés, stuff from the past, tradition, adopted things.

### Kaleidoscope



**Wil Sturkenboom** Founder and farmer at Fruittuin van West - an urban farm used as "organic supermarket"

([fruiittuinvanwest.nl](http://fruiittuinvanwest.nl)) in Amsterdam, NL. "...our clients can harvest their own fruits and eggs..."



**Ola Aukrust** (Norway): studied teaching and art history, has been a biodynamic farmer and medicinal herb grower for 30 years.



# The School Garden of Today

Peter Lange

School gardening is an amazing profession. And yet even here the question surfaces: What do children and young people need today? It is a question which requires a lot of thought. How can it be answered? By myself drawing on my own experience? The college of teachers? The Section for Agriculture at the Goetheanum? The Swiss Parliament? Or Rudolf Steiner? In fact, it is only the teacher who can find an answer because he is directly involved with the children.

I am faced with this question today more than ever. It has arisen due to the following observations:

1. I found that there were pupils who could not tie knots. I didn't believe it at first and told them off. But it was true.
2. The children are keen to join the gardening lesson but it is not easy for them to carry out a task in a practical and systematic way. The amount of work achieved has become less. And as a result, the area under cultivation has had to be reduced.
3. I notice that their perception of nature is increasingly undifferentiated. A bee is no different from a wasp. Everything that flies is a bee! On the other hand, there are pupils who know everything about Siberian tigers or about dinosaurs. Thanks to the media!

This is how it is today. We live in a very abstract world. We know everything but lose contact with life. Practical everyday skills such as tying shoelaces, mopping the floor, washing up, sawing logs are replaced by machines and gadgets. These observations made a big impression on me. But what should I do? I couldn't simply continue teaching as before!

## What do the children want?

My task as a teacher is to get the children active and involved. They want to be meaningfully engaged in the world and with society. I expect the pupils to work and I guide and assess them. Even as a teacher in a Rudolf Steiner school I am under social and parental pressure to make sure the young people are fit for today's conditions. Is that right? Is that what the children want? Does the school want that, do I? Do we not



The school garden: learning centre of the future?  
(In the picture: school garden of the Waldorf school Schopfheim)

want something else, something more human, more future oriented?

## Between teacher and gardener, between looking back and looking forward

What is a typical teacher? He must have enthusiasm for the world in all its diversity. He needs to understand what exists in the world so that he can impart it to the children in such a way that they want to learn. The teacher, therefore, spends time reflecting on and feeling into what he has presented, how the pupils have responded and what improvements he could make in future. The teacher is strongly focussed on reflection and reviewing the past.

I am also a gardener. The gardener works with plants. He needs to get the living conditions right for them. He must know what they need and then create the right growing conditions. He makes a connection to the plants more through his heart than his head. The gardener looks towards the future, towards what is becoming. Hope lives very strongly in the gardener – hope that the weather will be right, that the plants will be healthy and that the machines don't break down.

How would it be if the teacher became more of a gardener and the gardener more of a teacher? If as a teacher I were more of a gardener, I would seek to create the right growing and development conditions for the pupils, look more towards the future and have greater hopes. And the gardener in me would become something of a researcher. He would perhaps think over things more and reflect on how to work more closely with the being of the plant. It would be very interesting!

And now for an example: The children and young people love coming to the school gardening classes. Most of them do what the teacher asks of them. But not all – they do nothing or rather do what they are not supposed to do. These are then the 'difficult' pupils. They are a challenge to the teacher. Even to the point of asking whether they can be managed at all. If I now

observe such a 'difficult' pupil through the eyes of the gardener, which means looking with the heart, I see what the pupil is particularly good at and what might develop in him. I look from the future towards the present. This is a very different gesture to simply looking at him from the point of view of achievement. I would like to call this other gesture one of 'leading from the future'. When it succeeds, even if only for one instant, it works like magic: The pupil feels acknowledged, accepted and can grow and develop. I feel this to be a future-focused orientation. And on the other side, as a gardener – I always look forward to the holidays! I can then work all day long in the garden. I don't have to think about pupils and lessons. I can simply lose myself in the work. That is really wonderful. But after a while, I begin to feel a bit empty. Something is missing. Just being and working in nature is not fulfilling for me in the long term. That is when I need the teacher's attitude – I need to observe, learn, understand and express myself in words. If I manage to do this I experience another moment of magic - new and fruitful ideas are born. This also brings something of the future.

To sum up: The teacher in me needs the garden outside so that he can become inwardly alive. The gardener in me needs to care for the inner garden so that the outer one can be enlivened. Both of them ray outwards towards other people.

## Wonder and Amazement

We hold both aspects within ourselves. We need to cultivate them consciously. They meet resistance. We are living today in a very materialistic age. It diverts attention, blinds and deludes us. There is a very simple way of counteracting this – through wonder and amazement

### Kaleidoscope



**Linda Jolly** is assistant professor in Oslo, co-founder of 'Living School' in Norway and currently leading a research project on school gardens and the cooperation of schools and farms.  
([www.livinglearning.org](http://www.livinglearning.org))

"...The smallest boy answered: I learned an incredible amount! We learned to work effectively, eat healthy food and be happy."



An example: A pupil who was working quietly by himself, looked at a dahlia flower and then said to me: 'Have you seen this flower? It is amazing how beautiful it is'. At that moment, the pupil had broken through the outer material phenomenon. He was aware that there was a power within what he saw that could create such a flower. We would not be able to grasp this power using our causal thinking (the teacher who counts petals). It needs the feeling sensitivity of the gardener.

We can have a sense of wonder for everything in the world. For tractors, mobile phones, and other people. Wonderment is also the best fertilizer for our inner garden. This fertilizer is vitally important for us because although our causal intellectual thinking produces fantastic results, it carries no life. Being amazed provides the key to the thoughts and ideas behind the material phenomena. If I need a spade, it is available as a physical tool. I know that the spade was made by a person. Before the spade could be made, someone must have thought about how the spade would be used, its material and how it should be finished etc. Nothing is visible of all these thoughts. We only see the finished spade. But without those thoughts and the work put in by many people, there would be no spade! That is clear to everyone. How is it with the flower however, a turnip, a house fly or a stone? Who thought of or invented them? Amazement allows us to approach the quality of being that lies behind outer material phenomena.

Discovering the ideas and qualities existing behind the veil of material substance is the great challenge facing humanity if it is to overcome materialism. The time for this is now. Anthroposophy introduced to us by Rudolf Steiner, is a great help in this. It is able to unite the work of the teacher with that of the gardener. It brings together the clear thinking of the researcher and the devoted work of the carer.

## Gratitude

I also teach religion. It is not an advanced subject but it is an important one for life. The comedian Kurt Tucholsky once said reflectively: «The human being looks at the world in two ways – when he feels well and when he feels ill. The second is called religion.» If we are in a bad way we look for transcendent help. It is not wrong to do so. For then we break through materialism and find the forces of creativity. But how would it be to do this when in high spirits too? This does not happen however via the head, but through our sensitive soul, our heart. If we start to practice this a warm feeling of gratitude begins to develop – a gratitude towards everything around me which makes my existence possible.

## Meaningful activity, warmth of feeling and clear thoughts

What then do children and young people need today? In order to engage with the world, meaningful activity, warmth of feeling and clear thoughts are needed. These three qualities need to exist in a certain harmony. People will then feel content.

At the very beginning when the first Waldorf school started in Stuttgart, Steiner introduced the gardening curriculum. At that time, almost all schools had gardening classes as part of a drive towards self-sufficiency and national well-being. That was not



Rudolf Steiner's intention, however. His intention came from the future and he gave specific indications about the gardening lessons. He said for instance that the pupils of class 10 should learn about the mystery of grafting.<sup>1</sup>

Why did Steiner speak of the mystery of grafting and not the technique of grafting? A mystery is something mysterious, unexplainable and cannot be understood using our causal thinking. I have grafted roses with the pupils. Only gradually did I discover the many aspects lying hidden in it. It is precisely what I referred to above – meaningful activity, warmth of feeling and clear thoughts.

It is mostly fruit trees, vines, and ornamental shrubs that are grafted. There are various ways of doing it. In the case of roses, the rootstock of a wild rose is used. The gardener grafts the bud of a cultivated rose variety on to it. It starts growing and from the rootstock of the wild rose, a cultivated rose emerges with large coloured blossoms. For the pupils it is first of all about learning the skill: From which shoot should the buds be taken, how should they be cut, inserted, tied together and then cared for. A whole series of individual steps that need to be understood and carefully carried out. That alone would be sufficient. But then come the many questions: «Why do they grow together, they are after all, two plants? Is it possible to do this with all plants? Could I graft a strawberry on to a wild rose?» Then I enter into it all. «Have you noticed when making the cut that there is between the bark and the wood, a very fine slippery layer? Using the grafting knife you can scrape some off and see how it tastes.» Tasting with the senses is also a way to learn. We then discover that this layer is made up of countless single plant cells. They are quite undifferentiated. Tissue, wood, bark or growth cells can develop from them. If we had a laboratory an entire rose plant could be created from a single cell. If a bud containing such cambium cells is cut and inserted beneath the bark of the rootstock the two layers of cambium can grow together precisely because they are undifferentiated. But this only happens with plant species closely related to one another. And sometimes even then it doesn't. This whole procedure can be taken in and experienced on a factual-technical level. If it is successful everyone is amazed at how full of mystery nature is.

### Human beings and cultivated plants are one

The next question then soon arises: «At some point, there must have been a first cultivated rose variety. Where did it come from?» This question touches on the nature of wild and cultivated plants and their connection to human beings. We need to clearly experience how dependent as human beings, we are on cultivated plants. Wild forms of all our cultivated plants are found in nature. There are however no large starchy grains in the wild cereal plants, wild apples are small and sour and the fruit of wild tomatoes fall to the ground before they can be picked and although wild strawberries taste good – try making jam from them for a large family....! Human beings, culture, cultivated plants and of course domestic animals as well, belong together. They deserve our greatest respect and deepest gratitude.



Working the earth gives a sense of purpose.

About 6,000 years before Christ, humanity took a huge step in its development – hunter-gatherers began to settle. Cities were built. It is the period known as the «Neolithic Revolution». At the same time, cultivated plants and domestic animals made their appearance. All kinds of Darwinistic theories are used to explain this. I tell the children how the plants and animals have a being like ourselves. In earlier times mankind concluded a deal with the plant and animal beings – human beings would agree to look after them and in return they would provide nourishment. This relationship has become rather fraught today. But you can imagine how pleased the animal and plant beings must be about the continuing growth of organic and biodynamic agriculture. For me, it is very important that young people are able to meet them. All three fields come together: We need to understand the processes of grafting, we need to do it, be amazed, develop awareness and gratitude. We can then appreciate the extent to which we as human beings are connected with the whole of nature. We have to thank her for our existence in every respect. Because our consciousness is not yet so broad and all encompassing, we have our small gardens. We can learn in them and make our experiences. And if we are able successfully and diligently to work there, the time will draw closer when we will be able to cultivate the whole earth as our garden.

The question «what do our children and young people need today?» remains open. I am still not able to answer it in terms of a curriculum. But I see a direction. They need an education that engages them through their heads, hearts and hands. The Waldorf schools offer great opportunities for this. Above all, they need to have enthusiastic people as examples. And best of all those who would like to make the whole earth into a garden with everything that belongs to it!



**Peter Lange** (Switzerland): gardening and religion teacher at the Rudolf Steiner school Zürcher Oberland in Wetzikon, Lecturer on pedagogical gardening.

<sup>1</sup> Rudolf Steiner: Lectures for the teachers of Free Waldorf School of Stuttgart (GA300c), lecture of 25th May 1923: "One has asked about the gardening lectures in the higher classes.

Dr. Steiner: We have gardening up to the 10th class. The upper classes should be left without gardening classes. The kids would like to graft. If they are introduced to the mystery of grafting, they will like to do this."

# Breeder's gardens, growing points for the future

Peter Kunz

## Areas of expansion: Saratov, Russia 1994

Fields of wheat so huge that the combine disappears over the horizon. Sergei the plant breeder celebrates the approval of his first new wheat variety and its multiplication on 1,000 ha, together with colleagues. Champagne is flowing in tin cups! 17 years before in 1977, Sergei had selected the parent plants for crossing. In 1984, he selected from over 10,000 plants, the single ears from whose grains the future variety would eventually emerge after years of careful trialling on ten to twenty different locations. Through its multiplication the following year, enough was already grown to feed 200 million people. If Sergei's new variety proves reliable, millions of people will eat, be satisfied and draw regenerative strength for their lives from it. It all began with a single grain in a breeder's garden.

## Place of focus, of reduction

Before the crossing took place in 1977, Sergei tested over 500 possible parent plants and the genetic resources of the world's best hard wheat varieties and breeding lines of breeders and seed companies throughout the world. They had access to the most varied plant character traits such as: The form and bearing of the ears, structural strength, resistance to pests and diseases, milling quality and whether plant growth is more focused on vegetative or ripening processes.

Of the 500 possible parent plants there remained only two or perhaps three or four that could be used for breeding. The new variety had to meet forty to fifty criteria. One single deficiency – such as susceptibility to yellow rust – is reason enough to exclude it. The expectations of farmers and those of processors and salespeople are so high today that in the end very little diversity remains.

## Kaleidoscope



**Holger Coers** is a biodynamic gardener, tree and landscape carer and collaborator of Petrarca ([www.petrarca.info](http://www.petrarca.info)), seeking the inner in the outer and the outer in the inner  
“...observe with patience all the changes and interactions that take place in your relationship with a location...”



## Place of meeting, recognising all the influences

The ongoing development of cultivated plants occurs in the breeder's garden, under the guiding hands of plant breeders. Everything they think, feel about or intend, flows consciously or unconsciously into the plant's development. It has an effect on the breeding process if a farmer receives a bad price for his ton of grain and then has to live from it; if artificial fertilizers, growth regulators and pesticides are applied and food enzymes and other additives are used during processing; or if consumers want bread rolls in large quantities or demand cheap food. If the breeder is under pressure to produce a result because his livelihood depends on it, this also flows directly into and influences the breeding process.

Place of dedication, perceiving the principles of life and quality

The cultivated plant is more than the sum of its properties. How do we understand a plant's inbuilt capacity to overcome resistance and manifest the principle of life? How can they draw on this source, continually re-enliven the earth and secure the survival of other life forms? Plants take in everything that is living and working in a given location, absorb it inwardly in imaginative form and condense its activity in their fruiting organs. How they grow, develop and ripen is what produces the quality and yield on which we all depend.

Is the breeder able to access the tools needed to perceive, grasp and then guide the breeding process in a focused way? Is he sensitive enough to perceive what has never been seen

## Kaleidoscope



**Vincent Galarneau** is engaged in urban gardening in Canada, author of “Nourishing cities” ([www.facebook.com/vincent.galarneau](https://www.facebook.com/vincent.galarneau)).  
“...the garden is fertile soil to cultivate solidarity in our communities...”





before? Can he find the connections between what he sees, the influence of the current location, the specific capacities of the plant in question and the quality expectations of people 50 years hence? Does he have a way of measuring vitality and the plant's adaptability as well as the balance between fruit formation and ripening processes? Is he able to decide and then intervene, has he developed his own effective method?

### Place of individual imagination, the effectiveness of the breeder's eye

The greater part of a cultivated plant's nature is there without any input from us – wheat has existed for 10.000 years. It lives outwith our ordinary consciousness, not in the detailed qualities that we focus on but what is streaming in the closer and more distant surroundings and manifesting in the growth cycles of time and season, of fruit formation and ripening. Through all this the growing plants are continually forming and regenerating themselves.

If the breeder wants to be more than a mere unconscious manipulator, he has no choice but to extend his professional knowledge with a training in observational skills and in developing an organ of perception for what is less immediately apparent. This gives him scope to express his own spiritual insights concerning plant development. Whether new aspects can be discovered and integrated into his plant breeding work, will depend on how aware and attentive he is to experiences made on the threshold of sense perception. Plant selection is based on what the breeder's eye can see and only this has lasting validity. Anything that passes by unnoticed will disappear again.

#### Kaleidoscope



**Gautam Mohan** is farm manager of Tea Promoters India ([www.eza.cc](http://www.eza.cc)) and sees the commercial future of Demeter products in their spiritual conception.

"...using spirituality for promoting the biodynamic tea products..."



### Place of altruism

Since plants have no egoism within them a 'space of dignity' needs to be created within the hearts of breeders. The Swiss constitution refers to: «The moral consideration of plants for their own sake.» Dignity is something to be mutually known and recognized, otherwise plants will be misused for utilitarian purposes. The danger is particularly great when breeders make a living from their varieties and like most of the big seed companies, have no other aim but making money i.e. earning dividends for the shareholders.

### The struggle for free access

Breeders Rights, a legal concept developed in central Europe, publicises developments in plant breeding and protects the breeder's right to a research garden and to have access to any genetic resources. No one can prevent a breeder from using existing and protected varieties to develop new strains. Retaining this freedom guarantees an open process of development and is a pre-condition for ensuring the diversity of cultivated plants. Patents placed on varieties and on procedures such as the CMS breeding of hybrids is a privatisation of cultivated plants. Access to certain varieties is already so severely restricted that it is almost impossible to find freely available breeding material.

### Source of diversity or a money machine?

The real aim of plant breeders throughout the world is to advance diversity and make new and well-adapted varieties available to agriculture. Breeding carried out for purely economic reasons inevitably reduces diversity and channels the seed towards lucrative markets in order to bolster income. The result is the globalised seed monopoly. This ultimately leads to the complete control by global corporations of the entire food chain.

To bring healing to this situation, the plant breeding carried out within a non-profit context needs to be made economically independent. For this financial support is urgently needed. A 0.1% surcharge on various foodstuffs could quickly and painlessly raise the necessary funds.



**Peter Kunz** (Switzerland): studied agriculture and forestry. After studying natural science at the Goetheanum he founded the not-for-profit cereal breeding enterprise Peter Kunz (GZPK).

# Working with the beings of Nature

Anna Cecilia Grönn

How does the perception of beings of a soul-spiritual nature alter our relationship to the earth? This is the question addressed in the following short contribution.

In the market garden where I am working my task is to look after the propagation unit. I would like to share an experience from this area of work which is perhaps familiar to one or the other farmer or gardener. For example, one morning I entered the greenhouse several days after having sown a large amount of lettuces seeds and felt that something had changed. Already as I reached the door of the greenhouse I was met by a dynamic mood of intense joy. An initial glance around me suggested that everything was as it had been before but then I noticed that the seeds had germinated. This powerful process of seed germination had changed the atmosphere of the whole greenhouse and I had perceived it on a soul level before seeing the change which had taken place physically.

This kind of soul experience is surely known to every gardener and farmer through the following typical situation. We often ask ourselves when looking at our fields and crops: 'Is there a good soil structure? Do the plants need feeding or watering?' What we see there with our physical eyes is more than mere intellectual information, it is also often accompanied by a feeling of empathy for say the deficiency, abundance or balance.

We are perceiving something here in a very rudimentary way, of a soul-being quality in nature that we can find if we are sufficiently awake to it – we would not be able to perceive anything if there was nothing present in the soul. We know of these nature beings from the tales and legends of many cultures. In Europe these beings are known as elves or gnomes. Rudolf Steiner referred to them as nature or elemental beings.

## The greenhouse being

Using a few concrete examples from my daily work, I would now like to show how by accepting the existence of these beings of soul and spirit, our relationship to nature and our awareness regarding what we do, changes.

I have already described something of the greenhouse where I raise the young plants. I feel that a nature being is connected with this greenhouse which in a very special way, lives intimately with the processes of germination and the development of seedlings. The nature of this being is accordingly characterised by mobility and liveliness on the one hand and by gentleness and devotion on the other. If I am inwardly open enough, this being can tell me something about the overall conditions in the greenhouse, in the way I mentioned at the beginning.

## The plant sales being

Another being is connected with our sales department. To me, this being appears upright, somewhat reticent but also mild, friendly and communicative. I regularly ask it to give our customers the right inspiration and lead them to the plants they are looking for – this working together usually works well and makes my daily work more enjoyable.

## The waterer

The third being I would like to mention is one who accompanies us when we water the plants. A lot of watering is still done by hand in my plant nursery. During the summer one person spends nearly two-thirds of her working day on watering. This important task is accompanied by a nature being that I refer to as 'the waterer'. I work with him quite a lot. He may help me for instance to estimate the correct amount of water to give each plant or indicate the right time for watering. I experience the 'Waterer' as a quick-witted somewhat serious but also protective and supportive being.<sup>1</sup>

I find that if we are able to work consciously in this way with nature beings, it changes our relationship to things. We begin to work differently with the materials around us, take greater care when making decisions and many other things besides.

### Kaleidoscope



**Patrice Drai** is founder of the enterprise Altair in the Dordogne (France) ([www.altair-plantes.com](http://www.altair-plantes.com)). He observes the effect of human care on plant growth. "...nature is plentiful and generous, but with one precondition: that the gardener opens his inner being to her..."





## A feeling for the whole earth

Nature beings are not only present in one's own particular place, they surround the entire earth with a mantle of living forces. They are closely interconnected with one another and are therefore aware of what is happening across the world. The meditative inner attitude of the farmer or gardener towards the crop land, his 'inner conversation with his field', could, therefore, lead to a 'conversation with the earth as a whole'. If we live in the knowledge that the soul of nature is active throughout the world and can sense where there is a deficiency, abundance or a state of balance as we do on our own fields, we can develop not only a global awareness but a global feeling too. My field is part of the earth – if I stand on the field, I stand on the earth! The field forms part of the surrounding landscape, the landscape is part of the continent on which it is found and this, in turn, is a part of planet earth. By living with this thought

I can feel that whatsoever I do to my field, I do to the whole earth.



**Anna Cecilia Grün** (Germany): studied languages, slavic and tibetan studies; trained as a biodynamic gardener; lecturer, workshop leader and author on the perception of spiritual beings.

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- 1 See for example: Almut Bockemühl (Ed.): Rudolf Steiner: Die Welt der Elementarwesen, Dornach 2006. Anna Cecilia Grün: Ellenlang, Flensburg 2010 and Die Regenbogenglocke, Flensburg 2012 and Atem der Erde Flensburg 2015. Wolf Ulrich Klünker (Ed.): Rudolf Steiner: Geistige Wesen in der Natur. Themen aus dem Gesamtwerk 18, Stuttgart 2010.

# How can plants be improved, accompanied and ennobled?

Ute Kirchgaesser

I am living and working in a vegetable breeding garden. It forms part of a larger landscape made up of fields, woods, and hedgerows alongside the flood plain of a river. Who is living there in such a landscape? We may look at the statistics: Of the running and jumping warm-blooded animals (rabbits, deer, mice, squirrels etc.) there are around 15 to 20 species. Of the creeping and crawling animals (frogs, lizards, snails) there are some 50 species. There could well be more than 200 species of insect present. The 50 to 60 species of bird is probably the best-known group. With regard to plants in Germany, there is an average of 650 species per 6.25 square Kilometres of land. All in all, there are near 1,000 species as well as hard to assess number of organisms living in the soil.

## Relationships of life

Recent research is finding more and more examples of how intimately this great diversity of living organisms is connected with one another – even as regards the communication with one another.<sup>1</sup> We could indeed go further and say that the interconnection of organisms finds a reflection in the human being, at least as regards their functionality. The root activity of plants can be compared to the brain function in our organism. The interactions of soil micro-organisms has been compared to the internet. Everything is imbued with intelligence and feeling. The soul-spiritual aspect of a plant can be understood through anthroposophy. The group ego of the plant world has its home

in the centre of the earth and so the plant roots try to grow down into the depths in search of their egos.<sup>2</sup> The plant also longs for the sun and the heavens. And certainly also has a soul relationship with human beings.

My own observation is that the range of connections and possibilities for this communication is lessened with cultivated plants – just as the natural instincts of domestic animals are weaker. They are no longer bound into the wisdom of nature like their wild cousins. Today their connection to human beings is a cause of health problems while on the other hand food allergies and incompatibilities point to the relationship between human beings and cultivated plants being out of balance. One may certainly ask oneself who is allergic to whom? Regarding our responsibility towards the plant world, the question needs to be: What kind of relationship is needed for the plant to be healthy?

## Renewing the connection

The garden of paradise as a walled garden was a cultural space, a place of ritual (see contribution from Christine Gruwez). The task of the priest was to care for the relationships and the purpose was the same as that of transubstantiation lying at the heart of the Christian sacrament. As human consciousness developed the union of the sacramental and cultural gradually broke down (see contribution from Jean-Michel Florin). Cultic rituals withdrew more and more into the inner sanctum of the

temple. Access was limited to the priests alone. They dedicated themselves to maintaining a connection with the divine world on behalf of their congregation. We know this from the Jewish tradition and how the 'Holy of Holies' is accessible to the priests alone and that a curtain separates it from the laity. That this curtain was torn apart during the crucifixion of Christ points to a future ending of this separation.

It is interesting at this point to observe the position of the altar, the place of transubstantiation, in the Christian church. It was initially positioned right against the eastern wall of the apsis and protected by a chancel screen. As time went on it gradually shifted westwards into the choir while the chancel screen moved eastwards before being finally removed. The congregation increasingly shared in the sacramental process of transubstantiation and in the cultivation of this relationship to the divine. This gradually led to a decline in the influence of the priest.

There was thus, on the one hand, an opening up of the sacraments to the congregation and on the other a decline in the role of priests. How should the life of ritual be cultivated, how should relationships be cared for in daily life? Who will take on the task which once lay with the priests?

The answer is clear. We must care for these relationships ourselves. We can no longer simply rely on the priests. We must take responsibility for cultural development ourselves as part of our work. This is how we can improve the health of our cultivated plants and connect them to the soul-spiritual element. The letter of St. Paul to the Romans (ch. 8, 19) gains new relevance here: "The creature awaited salvation through human beings" in the Lutheran translation. Nature awaits salvation from human beings who are able through inner schooling, to

recognise the Son of God within them. The whole of nature awaits the metamorphosis of paradise (the starting point) into the city made of jewels, the heavenly Jerusalem (the goal). Nature needs mankind for this to succeed, human beings who are willing and able to acknowledge the soul-spiritual elements in the world.

### Being an example

How might this look? We know from the science of human development that in order to be human it is not sufficient simply to be born. We need an example in order to learn how to stand upright. The human being degenerates if there is no one to imitate. What we need is the loving and knowing look of the mother, her recognition and that of other adults around. It is a lifelong challenge.

How can we meet the plants with this priest-like quality? How can gardening and the sacramental, culture and ritual be brought together again? By approaching plants (and animals too) with precisely this attitude – of recognising the nature of soul and spirit. The nature of the meeting and how we work with them is crucial. In connection with the beings of nature, we also cultivate a relationship with the divine.

Bring the sun to the earth.

You humans who live between light and darkness.

Fight for the light,

Love the earth.

Transform the plants,

Transform the animals,

Transform yourself,  
into a radiant jewel!

Ancient Persian verse

### Kaleidoscope



**Antonio Latucca** is a biodynamic consultant, founder and coordinator of the programme 'Urban gardens of Rosario' ([www.agriurbanarosario.com.ar](http://www.agriurbanarosario.com.ar)), bringing a new sense of purpose to unemployed and marginalized people. "...biodynamic agriculture is a vocation that comes from the future..."



**Ute Kirchgaesser** (German): plant breeder at Bingenheim, doing fundamental research on plant breeding since 13 years.

- 1 The relationship between elephants, acacia trees, giraffes and ants has for example become known - see Todd M. Palmer et al.: Breakdown of an Ant-Plant Mutualism Follows the Loss of Large Herbivores from an African Savanna. Science 11 January 2008: Vol. 319. no. 5860, pp. 192–195.
- 2 See for example Rudolf Steiner: The world of the senses and the world of the spirit (GA 134), lecture of 1st January 1912.



# The earth's ecological and economic climate

Ueli Hurter

An important characteristic of a garden is that it is enclosed. A garden is not infinitely large but is of limited size and usually surrounded by a hedge or a wall. A farm, by contrast, has an open boundary, it extends out into the landscape. The farm has the tendency to fill space. The garden creates a space.

I would like to make this polarity between farming and gardening visible with an example. I once had the opportunity of visiting the nomadic herdsman of West Africa. Their landscape is the Sahel – half desert, half savannah. These people belong to the Peul (or Fulani) tribe and live with their animals in this endless and very dry country. It is hard for us as settled people to understand how they are able to live in this vastness without getting lost. We saw in the early morning twilight a disappearing cloud of dust on the horizon as the herdsman vanished into the distance and at the end of the day as night approached saw the herdsman reappearing through a cloud of dust with their animals.

A very delicate balance between vegetation and livestock exists in this landscape. Over the last decades, the animal population has grown too large and the Sahel has been turning to desert. These people are not able to live in the way they have done in the past. They have had to change their way of life. They had, for instance, to learn how to care for and take responsibility for certain places within this vast expanse, to have somewhere to which they could always return, where they could find some kind of home. One of the chieftains recognised this and developed an ingenious social instrument to initiate change: A garden would be established for each extended family. He called it “le jardin de l'éleveur” the herdsman's garden. An enclosure is created with thorn branches, there is a holding place for the animals, a place for the family with a roof for shade and – where possible – a few square metres that can be watered regularly for at least a few months of the year, for growing a few plants. Through this very simple garden set up by the Peul, they were able to experience that the earth is not infinite but on the contrary is limited and that certain designated areas must be cared for.

## The earth – a global ecosystem

To address our planet as a garden is to recognise it and acknowledge its limits. Our earth is no longer that endless unknown expanse – no, it is as known to us as our own garden. We know it is round, has a circumference of some 40,000 Kilometres, that the continents swim like great islands in the oceans, the poles are uncomfortably cold and the equator hot and moist... It is however quite amazing that since the first circumnavigation of the earth by Magellan, less than 500 years ago, this earth has become the garden of our home.

That the earth is not only spatially limited but is also limited in terms of its ‘household’ comes to expression through our use of the Greek word ‘Oikos’ (meaning house) to describe the earth's household – its ecology. The science of ecology has developed during the course of the 20th century. A very first beginning of this new approach can be found in Rudolf Steiner's agriculture lectures of 1924.<sup>1</sup> Rudolf Steiner summarised this finiteness of nature in the image and concept of the agricultural organism. This refers in particular to the soil-fodder-manure-soil cycle. Only in this way is it possible to cultivate a piece of land in a productive and sustainable way. The closed system was however for Rudolf Steiner not an end in itself. The organic closed system created the conditions that could ‘awaken’ the individualising forces introduced by this approach to agriculture. The closed organic cycle is the pre-condition for spiritual awakening.

A milestone in the public perception of this new school of thought came with the publication of the book by Rachel Carson “The Silent Spring”. It was also during this time that traces of the DDT sprayed in the tropics were found in the fatty tissue of penguins in Antarctica. With this, it became clear that the earth is one large ecosystem, a living organism. A further milestone came in 1972 with the publication by the Club of Rome of “Limits to Growth”. In the 1980s the world's public became aware of an ozone hole that was appearing each year in the stratosphere caused by the use of chlorofluorocarbons (CFCs). Here again was the now familiar picture of tiny quantities of substance which the ecosystem was unable to digest, causing gigantic effects in the periphery. Who would have thought that gases used in spray cans and fridges could destroy the ozone layer which protects the earth from UV radiation and lies more than 10,000 metres above sea level?

We are currently faced with global climate change. The Climate Change Conference (COP 21) with its many thousands of participants, took place in Paris from 30th November until 12th December 2015. The holding of the conference was briefly put in question. On Friday 13th November 2015 a brutal, social thunderstorm broke out over Paris – the so-called terrorist attack against Parisian culture which left more than a hundred people dead and several hundred more wounded. The term ‘thunder storm’ is intended to show that the earth also has a social climate. There is not only an ecological climate that we as mankind need to address if we are to secure our global garden. We are also challenged by a social climate that is likewise leading to the abyss.

## Ecology and Economy

If we look across the world and try to discover what is driving the current situation in society we arrive inevitably at the

economy. The economy dominates everything, our lives are determined by economic factors to a far greater extent than they were even 20 years ago. Each of us has become an 'Homo economicus'. The theory and practice of economics today is still based on the premise of unlimited growth. Economically speaking we are still behaving like the herdsmen of the Sahel – we take on more and more cows as though the grazing lands could extend to the infinite.

I would like to draw your attention to this gap between ecology and economy. We do not yet bring these two sciences, these two practical dimensions of life together as a global civilization! We know about the laws of ecology, we have learnt step by step how to introduce an ecological lifestyle during the course of the 20th century and we are continuing to do so in the 21st century. We need to recognise and accept that the earth's resources are limited and find innovative ways to work with them.

At the same time, however, we are living with an economy that promotes endless wealth and well-being for everyone. Our global civilization has in this regard become schizophrenic. With such an approach to life, an individual would be diagnosed as having a split personality.

With this diagnosis, I am looking for a global economic order worthy of its name, one that enables everyone on earth to live and have their basic needs met. Economics is about providing for what human beings need on the earth. We have these needs because we have a physical body. This body is not immortal and neither are its needs. Economics has nothing to do with immortality but with what is finite in our existence. And if we only have the smallest inkling of how the basic needs of all humanity might be met within the global context – and cer-

tainly in relation to agriculture – we will arrive at a regionally structured economy. This is also part of our theme "Our earth – a Global Garden?"

### Unlimited growth in the spiritual realm

In order for economic activity to find its rightful place, we need to consider not only our bodily needs but also those of soul and spirit. Individual self-awareness is the primary focus for the human soul in this modern age. There is perhaps no greater power in humanity today than the drive to individualise. This is why so much power resides in the economy because we try to live out this urge to individualise by drawing on economic activity to satisfy our physical needs. This is not how it should be, however. The right thing would be to have endless growth in the realm of soul and spirit. The space is open there. The question is how to access this spiritual-cultural growing space. We all know the answer – there is nothing to buy or sell here, there is only work to do. There is first of all work that I must carry out on myself as a human being, secondly concerted work with others on the issues of our time and thirdly spirited work in my garden, or on my farm – that piece of the earth for which I am responsible.

These three areas of work can be the foundation for an enriched soul life and for spiritual growth. This is the wellspring of our humanity that I referred to at the beginning. It is not a feel-good sense of togetherness but a quality of brotherhood achieved by each person being in a learning dialogue with himself, his place and his times.

"Our Earth – a Global garden?" is a theme that addresses the way we work with nature and at the same time the way we work socially with others. It is about both the ecological and the social climate.

### Kaleidoscope



**Enrico Amico** is farm manager at La Colombaia ([www.lacolombaia.it](http://www.lacolombaia.it)), combining tourism, preservation of the cultural heritage and agriculture.

"...we offer our agricultural products in our restaurants following the idea of cooking vegetarian food for non vegetarians."



**Ueli Hurter** (Switzerland): Co-leader of the Section for Agriculture at the Goetheanum; farmer at L'Aubier.

1 Rudolf Steiner: Agriculture Course (GA 327).



# Creating a Fertile Soil – from Nature to Culture<sup>1</sup>

Jean-Michel Florin, Ueli Hurter, Thomas Lüthi

For thousands of years, fertile soil has been the key factor underpinning cultural development. Creating, maintaining and enhancing this soil fertility is one of the noblest of agricultural objectives. It is our civilisation however that is overseeing the loss of agricultural soil each year on a gigantic scale through desertification, runoff, and urbanisation. The issue of soil fertility is therefore of major social and global significance.

## Soil

From an agricultural point of view the soil is the meeting point between the realm of light above and the darkness of earth below. These two spheres interpenetrate one another and upon the earth's mineral foundation a unique zone of life comes into being. Much can be discovered through natural and spiritual science about this complex interweaving of cosmic and earthly forces. The practical farmer also knows however that the actual processes going on in the soil are specific to each individual place and moment in time. Close attention needs to be paid to the soil so that when conditions are right, cultivation can proceed with confidence.

Viewed from society the question engaging most interest today is, which type of soil cultivation saves most energy in a relative and absolute sense? What conditions enable the soil to sequester carbon? For the farmer, it is about soil tilth and creating a soil structure that lasts. Having permeable soil is increasingly important in the face of today's extreme weather. How can this be achieved where I live? From a socio-economic point of view the issue of land rights is becoming more acute than ever – what are the consequences of land grabbing? How can we free land from speculation? How can farm succession be made workable outside a family context? How can land be held in common? Possible answers to these questions can be found through our practical engagement with biodynamic agriculture.

## Fertilisation

Systematic fertiliser use has led agriculture out of its traditional structures and into the modern world. Modern manuring practice, however, should not be limited to nutrient replacement but needs a far more comprehensive approach. This is what lies at the heart of biodynamic agriculture - the creation by human beings of an agricultural organism. The livestock within it supplies its plant population with the right manure. The plants

in their turn enliven the soil through their growth. Fertilisation always proceeds from the higher to the lower, from the ego consciousness of human beings to the soul nature of animals and from these to the living power of plants and thence to the soil.

The issue of farm compost is being taken far more seriously in Europe than it was only a few years ago. How do the various composting methods differ? What is the right approach to manuring and compost making on my farm? The question of foliar feeding and agri-forestry is widely discussed in the tropics – how has it been applied there and what can be learned from it for other climatic zones?

## Preparations

The preparations are agents of fertilisation, but of a quite specific kind. What processes do they invite? How do we understand the relationship between spirit and substance when Rudolf Steiner says in the Agriculture Course that new spiritual forces must be drawn down so that life can continue on the earth? As well as stimulating the formation of substances and the processes of life and maturation, the preparations also serve to individualise a landscape. Ego processes can be activated – but the question is, how we can learn to observe and communicate in that realm? Can we find strength and fulfilment through the practical care of the preparations, our inner relationship to them and their social integration? The preparations have been worked with all over the world for many decades. We can experience great richness in all this diversity. The creation of soil fertility belongs in the first place to agriculture. It can be advanced and supported by researching the relationship between substances and forces, developing innovative land ownership structures and working with an economy that doesn't burden the land with capital but instead releases it. In this way, a further step is taken and the care of soil fertility becomes a cultural task in society for all those wishing to take active responsibility for this essential common good.

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<sup>1</sup> The international Agriculture Conference from 1st - 4th of February 2017 on this topic will take place at the Goetheanum in Dornach (CH). The Michael letter "The sense- and thought- systems of man in relation to the world" and its three leading thoughts 171-173 (GA 26) are part of the annual theme 2016/17.

# Edible towns

Bastiaan Frich

Could you imagine your town as being edible? If not then let yourself be inspired by the Basel Urban Agriculture Network (UANB; [www.urbanagriculturebasel.ch](http://www.urbanagriculturebasel.ch)). The conditions in Basel were particularly favourable for starting an urban agriculture initiative. There are now over 6,000 community gardens and more than 3,600 composting initiatives. Until very recently however there was no connection between the gardeners and that is what UANB sought to change. Its aim was also to prevent gardens from being built on and to retain more land for home production. More than 1,000 people are already engaged in over 50 projects. This has its consequences for life in Basel. You will find shopping trolleys – there are more than 300 of them distributed across town – filled with earth and growing edible plants. UANB christened this the ‘non-shopping trolley’ campaign.

You might find that a neighbour complaining about a weed growing outside her house in your garden bursts into tears on discovering that like herself, this plant – speedwell – is also called Veronica! You might also come across a jar of ‘town honey’ that contains fewer residues than rural honey. You might learn from one of the gardeners, while walking passed a community garden growing more than 250 varieties of plants, that this was once the site of a football stadium where a match between Germany and Switzerland took place in 1954. Young children are now sowing and harvesting on this historic football site – it is very exciting! Having fun and celebrating is also important for UANB. It has a political influence too having for example been able to persuade Basel City Council to sign the Milan Food Policy Pact. UANB is more than a cultural initiative, it is a movement.



**Bastiaan Frich** (Switzerland): co-founder and activist of the Urban Agriculture Network Basel and Permakultur Switzerland.



Sektion für Landwirtschaft  
Section for Agriculture  
Section d'Agriculture  
Sección de Agricultura

## Agriculture for the future –

Biodynamic agriculture today – 90 years since Koberwitz

Ueli Hurter (Ed.)



The «Agricultural Course» held in 1924 by Rudolf Steiner gave a new impulse for the development of agriculture. A worldwide movement for the renewal of agriculture has developed since. In this book competent authors portray the richness of ideas and practices in the biodynamic movement today.

Topics include: The farm as an organism – New methods of research – Biodynamic preparations – Landscaping – Seed breeding – Bees – Wine – Nutrition – Biodynamic training.

**Technical data:** 288 pages, 22 chapters, format 21x21 cm  
ISBN: 978-3-7235-1512-9

This book is published by the Verlag am Goetheanum in German and English. Order your copies in your bookshop or via [info@vamg.ch](mailto:info@vamg.ch).



# Growing fruit biodynamically

## Background, experiences, practice and research

Conference on biodynamic fruit growing on 24<sup>th</sup> and 25<sup>th</sup> November 2016 at the Goetheanum, Dornach (CH)

Under the title „Growing fruit biodynamically“, the Section for Agriculture organises a conference from 24<sup>th</sup>-25<sup>th</sup> November 2016 on orchards of all kinds.

More and more fruit growers question their own practices and become interested in the possibilities offered by biodynamic agriculture. Other growers who are already working biodynamically are looking for new perspectives and wish to share experiences, particularly concerning current topical issues, such as the cherry fruit fly.

Fruit production has a reputation for being difficult and very demanding. „We want to show that biodynamics is interesting and provides future-oriented, sustainable solutions for commercial fruit growing for all kinds of fruit“, says Jean-Michel Florin from the Section for Agriculture.

During the 2 days general principles of biodynamics will be presented as well as specialist topics concerning the most important tree crops, such as fruits, nuts and wine, and these will be covered in presentations of practical examples. The conference addresses fruit growers, growers of oil crops, vintners and orchard consultants.

How do biodynamic practices help to provide a sound base for fruit production? And how can biodiversity be



encouraged in order to shape a balanced farm organism? In addition to questions concerning soil health, issues such as dealing with diseases and pests as well as the importance of animals will be addressed.

Workshops on plant protection, tree nurseries, tree care, cooperatives and joint marketing offer room for deepening knowledge and sharing experiences. A training of sense perceptions has very practical significance. The speakers are experienced practitioners, researchers and consultants.

Come and let us all shape the future of biodynamic fruit production together!


The programme and further information will be available from July onwards at [www.sektion-landwirtschaft.org](http://www.sektion-landwirtschaft.org)

The Section for Agriculture at the Goetheanum is one of currently eleven departments of the School of Spiritual Science based at the Goetheanum in Dornach, Switzerland. The Section for Agriculture contributes to the development of agriculture, out of anthroposophical spiritual science. The main tasks of the Section for Agriculture are to coordinate and give impulses to the worldwide biodynamic agriculture movement through international conferences, seminars, networking and research.



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## **Edible Towns**

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**More contributions on the conference can be found on the  
Website [www.sektion-landwirtschaft.org/Agriculture](http://www.sektion-landwirtschaft.org/Agriculture)  
Conference 2016**