Notes from a visit to northern Germany...

Last August we travelled through Northern Germany and were given the opportunity to visit a vegetable grower near Bremen. The holding is part of the 'Hofgemeinschaft Verluessmoor' roughly translated as 'farm community at Verluessmoor'. This comprises two farms (including field scale vegetables, dairy, arable and poultry), the vegetable holding and a thriving and diverse farm shop. The Hofgemeinschaft is a registered association originally set up by biodynamic farmer Friedel Lütjen, who we had the pleasure of meeting.

History

Friedel Lütjen

Friedel explained that the original farm has been in his family since 1850, when the village was founded by pioneers who made the moorland cultivable. This was quite a challenge given that the peat layer was 7m thick at the time. Unsurprisingly, peat was the main source of income for the farmers in the early years. It was only possible to build permanent farmhouses after the completion of a ship canal, which drained the land. Over the years income from peat became less important and in 1948 the farm was cultivating 12.5ha including vegetables. In 1954 a young Friedel Lütjen went to an inspiring lecture on biodynamic farming. When the family farm was handed to him in 1963, he decided to manage the farm biodynamically and became certified under Demeter. The 'Hofgemeinschaft' was founded in 1979 in order to buy a neighbouring farm.

Securing the future

Today the association manages 235ha, 92ha of which it owns, together with several hectares of woodland. In addition a foundation was set up to legally safeguard the biodynamic integrity of the Lütjen estate in perpetuity. This meant that Friedel's family waived their rights of inheritance. The underlying philosophy is the belief that soil is a non-renewable resource that should not be owned. Managers, including Friedel's son and grandson, run the enterprises as if they were their own. Important financial decisions have to be passed by the board, which has to contain a proportion of practising farmers. The association has around 50 members, including the Lütjen family, farm and shop managers, friends of the family and interested members of the public, but an influx of new young members is badly needed.

The vegetable holding

The Luetjen family had been growing vegetables on the home farm from the 60's and the vegetable holding was bought in 1992. Since 2005 the holding has been managed by Rainer Merkt, who despite a busy timetable gave us a friendly welcome and much of his time.

The 5ha holding includes 2000m2 of protected cropping. Rainer grows a wide range of crops, mainly for their box scheme, which provides a reliable, if low, return. He also supplies the farm shop of the Hofgemeinschaft and 5 other shops, however, Rainer finds it difficult to compete with the wholesalers. The recession has not hit their business as hard as others and he is able to sell all the produce he grows. Apart from Rainer and his wife the holding employs two full time staff plus work experience and seasonal workers.

Box scheme

Rainer delivers around 300 boxes a week though he would like to increase this to 500 in order to sell more of his own produce through the boxes. The box scheme is very flexible: there is a standard box, one for raw food diets, one with only local/regional produce and a mother/child box containing easily digestible vegetables. Their own produce is supplemented with bought-in vegetables, especially between February and March. Recipes are often provided for more unusual crops. Other products such as bread, dairy and eggs are also bought in, where possible from local producers. All products in the box are organic, but not necessarily biodynamic. Boxes come in three sizes and customers can substitute items or select the contents of their box entirely. Customers submit their orders online two days before delivery. Vegetables are harvested the next day and the boxes are packed by two people ready for delivery (2 vans).

Protected cropping

Four large polytunnels are located on parts of the farm too wet for field production. They are double-skinned with automatic vents which provide air circulation. The tunnels are re-covered every ten years.

Rainer Merkt with the peppers trained through fishing nets

The main summer crops are tomatoes, peppers and cucumbers. A lot of the varieties come from local biodynamic plant breeder Ulrike Behrendt, such as the open-pollinated tomato Ruthje, from which Rainer saves seed. Other varieties include Ruth, Piluweri and cocktail tomato Devotion, with Pantos being the main pepper and Aramon and Helena the main cucumber varieties. Both peppers and tomatoes are fertilised with 2kg compost per m². Early in the season a liquid feed from nettles is made. In the future Rainer plans to try under-sowing with green manures. The tomatoes are trained on re-usable cotton strings. They are irrigated by drip lines which are supplemented with overhead sprinklers as necessary.

The peppers are trained through fishing nets, which are fixed to vertical posts 3m apart within the bed. The netting is very strong and can be re-used many times. Rainer considers the peppers to be a marginal crop without heat.

Cucumbers are trained by allowing two main stems to grow up, and thinned out to 2 fruit per node. Towards the end of the season the leaves are stripped off, which restricts the cucumbers to a more marketable size. Late season cucumbers provide the best return.

In winter Rainer grows lambs lettuce, which is very popular in Germany (see OG11), and winter purslane. Other crops that are grown in the tunnels are spinach, radish and swiss chard. The latter is planted in August and can be harvested until Christmas and again from March onwards. In between crops, he sows a green manure mix of oats, vetch, red clover and phacelia. This is cut with a mulch mower before being incorporated in spring, ready for planting. Rainer also has a glasshouse, which is heated early in the season, from which he can harvest his first tomatoes in mid-June.

Outside crops

Rainer does not have a conventional plough, but uses a ridge plough which keeps soil disturbance to a minimum, creating good growing conditions and encouraging micro-organisms. The ridges are formed 2-3 weeks before planting. They are weeded several times using chain attachments pulling out the weeds on the sides of the ridge. Once the plants are more established inter-row hoes are used but some persistent weeds such as gallant soldiers and weeds within the rows still have to be hand weeded.

Rainer grows a large variety of crops outside, some direct-sown, such as spinach, but mostly transplanted using bought-in modules. A borehole provides water for a movable sprinkler system. Harvesting is done by hand.

The most common pest is the cabbage moth caterpillar which is kept under control by covering the crop with fleece or mesh. Rainer largely avoids carrot fly by growing carrots away from hedges, which provide a habitat for the pest, but sometimes uses fleece or mesh as protection. In order to encourage natural predators and wildlife, Rainer established a beetle bank, grows some flowers and also lets some crops such as fennel go to seed.

Along with the vegetables and some strawberries, cereal crops are also included in the rotation, under-sown with grass-clover.

Chain and disc cultivator

Photos: Phil Sumption

Field production on the farm

The Hofgemeinschaft also grows field-scale vegetables. Carrots and potatoes are grown as part of a 7-8 year rotation (grass for cattle – cereal – 3x green manures of mixed legumes - carrots – potatoes – autumn cereal under-sown with grass – back to pasture). Biodynamic preparations of horn manure and horn silica are applied annually, and any cow manure spread on the field will have been treated with a biodynamic preparation. If the weather allows, sowing follows the moon calendar.

We visited a 4 ha field with carrots of the Nantes 2 type-Fynn, drilled at the end of May and ready for harvesting in the first week of September. Following an initial pre-emergent flame weeding, Polish seasonal workers (traditionally many come across to work on farms in the summer) weed by hand without using hoes. The windy site discourages carrot fly. A long rotation and not using fresh compost also helps. Electric fencing is necessary to keep out deer. Students and other seasonal staff help with the harvest, which is done by hand. The carrots are then sorted, stored and sold to the wholesale market as required. Marketed as 'moor carrots', they sell for a good price due to their renowned quality.

Our next visit was to a potato field. Four varieties are grown on 3ha, namely Solara, Linda, Gala and Belana. Following carrots

in the previous year, the field was fertilised with cow manure. As the peat soil stays cold for a long time pre-chitted potatoes are planted in ridges in May into warm soil to advance the yield ahead of the onset of blight. However, blight can still be a problem and in Friedel's experience the tastier varieties are unfortunately also more susceptible. The potatoes are also marketed as 'moor potatoes' and sell well.

The shop

The shop is run by Karsten Meyer. Like the managers of the other enterprises, he runs it as his own business, owning all the stock and making the commercial decisions. He also makes sure that the building and shop is kept in good order, but does not have to pay rent. The shop is certified under Demeter and is visited by inspectors twice a year.

Initially, the shop was purely an outlet for produce from the farms of the association, but it now stocks around 4000 biodynamic and organic products, from fresh and processed foods to cosmetics and cleaning products. The size of the shop is 270sqm. Karsten tries to concentrate on seasonal and local produce, including vegetables from Rainer, but some products have to be available all year round.

Karsten Mayer

Photos: Phil Sumption

Despite its slightly remote location the shop is well-known and customers travel from far afield. The biodynamic / organic market in Germany is growing (see OG13) and sales in the shop have been largely unaffected by the latest recession. However, there has been a shift in the customer base: twenty years ago customers were mainly 'greens' motivated by environmental factors. Today, most customers are relatively well off and concerned about their health, often considering the choice to buy biodynamic and organic products as a kind of status symbol.

The shop runs a membership scheme: new members pay a €50 one-off deposit (which is returned at the end of the membership) and a monthly fee, which entitles them to a discount. The deposit and fees help the shop to cover its running costs and to invest in positive changes that would otherwise have to be funded through an expensive bank loan. In order to avoid abuse of the membership card, each displays a photograph of its owner.

Altogether we were inspired by everyone's enthusiasm and their dedication to biodynamic principles. We would like to take this opportunity to thank those we spoke to for making time in their busy schedule to show us around.

Isabeau Meyer-Graft and Phil Sumption

Letters

Dear OG,

Compost or green manures?

Re: Charles Dowding's article, OG13. I have to say that I am very much of the orthodoxy that green manures are an important part of the solution to reducing climate harm and with Iain Tolhurst, I (under my maiden name of Hall) have written detailed notes about their use in Growing Green: Organic Techniques for a Sustainable Future. For an agricultural technique to be sustainable, it has to: 1) continue indefinitely; 2) be easily replicated in most circumstances; and 3) the practice has to be widespread. Unfortunately, reduced tillage in agrochemical systems usually depends on herbicides and infringes 1), and the techniques Charles Dowding describes depends on ghost acreage for mulching materials; and at a global level cannot be replicated for all cropping systems and therefore infringes 2). Organic systems have to move towards closed-system fertility, and any augmentation of fertility must come from the recycling of societal wastes such as treated sewage, garden greenwaste, and sources other than stealing another farm's fertility.

I agree that every crop has its temperature threshold, but that is more to do with the roots working and not the release of nitrogen by the soil biota. I am, however, massively concerned about Charles' recommendation that we should be adding nitrogen-rich soil amendments in winter. Even if Charles argues that it does not lead to much nitrogen leaching (which I doubt), it does lead to widespread volatisation of air emissions; nitrous oxide and other emissions are especially increased by freezing and thawing. Nitrous oxide (N20), caused by augmentation of the nitrogen cycle, is the weak spot in organic systems. N20 is 310-times as potent as carbon dioxide, and more importantly destroys stratospheric ozone in a similarly damaging way to CFCs. Hence why the scientific community are as concerned about nitrogen as carbon in the climate change debate.

Having ley green manures allows the soil to recover, as well as augmenting the nitrogen cycle. However, organic proponents are wrong to think that all nitrogen automatically becomes bound by humus and stays dormant. That only happens in wild systems,