

GET GROWING

SEEDS OF CHANGE

Gaby Bartai meets a biodynamic seed grower with inspiring plans for British-bred, locally produced seed



Picture: Hans Steenbergen, Stormy Hall Seeds



Extensive use is made of green manures such as phacelia



Picture: Hans Steenbergen, Stormy Hall Seeds

The North York Moors is not the place you'd look to find a seed producer; its climate is too harsh and its season too short to make it an obvious site for seed crops.

Nor is the seed company one you'd know to look for, unless you happen to be a biodynamic gardener. Stormy Hall Seeds is a deliberately well-kept secret, and it's a business that has grown out of its location, rather than having been planted there.

Stormy Hall Farm is part of Botton village, the original and largest of the Camphill communities. Camphill Village Trust, a charity supporting people with learning disabilities, mental health problems and other support needs, originated in Scotland at the end of the Second World War when a group of Austrian refugees founded a school based on the teachings of Rudolf Steiner. When the initial intake reached school-leaving age, the question arose of where they should go next. Out of this grew the idea for Camphill villages where adults with special needs would be able to live and work, supported by volunteer co-workers.

Botton estate, which had been owned by the family of one of the original school children, was made over to Camphill in 1955. Initially there were two farms; over the years more were bought to extend the estate. Part of Steiner's philosophy is the system of biodynamic growing, so as each farm was brought into the Camphill fold it was converted to biodynamic production.

The farms provide work for Botton's residents, around half of whom have special needs, and also feed the village; there's a strong emphasis within the Steiner ethos on local production and self-sufficiency. A range of associated businesses has evolved to provide additional employment opportunities for the residents – and one of these is Stormy Hall Seeds.

BIODYNAMIC BEGINNINGS

Hans Steenbergen, who runs the seed business, grew up in Holland and trained at the long-established biodynamic college there. He started his working life as a gardener in a Dutch Camphill community and moved to the UK in 1987 when he heard of a vacancy at Botton. For the first seven years he ran Stormy Hall as a dairy farm.

Meanwhile, he joined a group of gardeners and

RIGHT: Hans Steenbergen with his late-season 2014 field crops

farmers called the Biodynamic Seed Group, which had been established to address the problem of sourcing untreated seed. Organic seed was virtually unobtainable in this country at that point, and biodynamic seed not at all. The group started to grow and exchange seed and Hans became increasingly involved in that as a sideline to his dairy farming. Then, in 1994, the Biodynamic Association asked him if he would consider selling seed to the public.

Initially, Stormy Hall simply bought and repackaged organic and biodynamic seed from a Dutch company. Very quickly, however, Hans realised that he wanted to be selling seed that was adapted to UK conditions. "We find it important that seeds are produced as locally as possible," he says. Using the existing production network of the seed exchange, he started to add home-grown varieties to the catalogue.

Today, Stormy Hall lists around 270 varieties of vegetable, herb and flower seed, and is still the only commercial producer of biodynamic seeds in the UK. Around 100 varieties are grown at Stormy Hall, and a further 50 or so by a network of biodynamic gardeners and farmers around Britain, a couple of whom date back to the original Biodynamic Seed Group. The remaining varieties are bought in from biodynamic seed producers in Europe. All of the varieties are open-pollinated; hybrid varieties, which have generally been developed for industrial agriculture, are regarded as unsuitable for the needs of biodynamic growers.

SEED TO SEED

Stormy Hall Farm extends to 10 hectares (25 acres), and for under-cover growing there's a greenhouse, a polytunnel and a French tunnel. The land is divided into seven plots and cultivated on a seven-year

rotation, but only two plots are used for crops in any given year. Biodynamic growers aim to achieve a 'closed' organic system where no composts or manures are brought in from outside, so extensive use is made of green manures. The soil at Stormy Hall is relatively poor, so for the first two years of the rotation a fertility-building clover crop is grown, and this is followed by three further years of green manures to suppress weeds and improve the soil structure.

Other seed companies have to find creative uses for vegetables that don't make the grade for seed production, but that's not a problem at Botton; ➤



Stormy Hall Farm

LEFT: Field crops at the height of the growing season



there's a village to feed. Seed production is simply integrated with vegetable growing. Having so many people to feed is opportune because Hans needs to plant in quantity. "With open-pollinated seeds, you need quite a large population to select from. You need to have at least 2000 plants to make a good selection to maintain your variety."

With annual crops such as legumes and salads, substandard plants are thinned out, leaving only the best to go to seed. With biennials like brassicas, umbellifers and alliums, which produce seed in their second year, Hans grows a plot of the crop for the first year and then, at the normal harvesting point for the variety, selects the best specimens for seed production and harvests the rest for the table.

When I visited in early October, the beetroot crop was almost ready to be lifted. "We'll harvest all the beetroots and put them in store, but while we're harvesting we select the best plants for seed and keep those separate. Then in spring, when we plant them out again, we select

again the ones which have stored well." The 'King Richard' leek crop was due to be lifted at the end of October; the best plants would get transplanted into the greenhouse to go to seed.

In the greenhouse and a year further down the line, the 'Musselburgh' leek seed crop was at the point of harvest, with the first seedheads already drying on a table, covered with a cloth to catch the seeds, and the later ones ripening on the plants. The trick with leeks, says Hans, is not to cut the seedheads too early; you need to wait until the seeds are very nearly ripe. Cut them too soon and the pods won't ever open sufficiently, making it very difficult to get the seed out.

The bulk of the greenhouse space was given over to tomatoes; 2014's varieties were 'Golden Queen', 'Green Zebra' and 'Marmande'. Of the 100 varieties that are produced at Stormy Hall, around 40 are grown each year, producing enough seed to last for two or more seasons. Parsnip seed, a notoriously short keeper, needs to be produced every other year; most other seed is a little more accommodating.

The processing room houses an intriguing array of machinery. There's a big sieve for

pre-cleaning and a precision sieve into which inserts with different mesh sizes can be slotted. The brushing machine removes stalks and 'horns' from the likes of beetroot seed. There's a spiral separator which sorts seed on its shape – rounder seeds go down the spiral more quickly, while misshapen ones get held back. The indent cylinder grader sorts seed by length and the gravity separator sorts seed by specific weight – essential for the likes of parsnips, which produce an unacceptably high proportion of seeds without a germ in them.

Above the processing room is a loft that is used as a drying room, with dehumidifiers running constantly. Seed can also be dried in the greenhouse, but the atmosphere in the barns is generally too damp. "It's a real problem that things ripen later here, and then by the time they're ripe it's too damp," says Hans. Piles of harvested crops were queuing for their turn in the drying room, and by the time I visited, the seed store was filling up rapidly. Like other small companies that grow their own seed, Stormy Hall only puts its catalogue together once the harvest is safely in, sending it out in early December.

GROWING BY THE MOON

Biodynamic growing is a holistic system, seeing interconnections between the local, the global and the cosmic. Plant growth and fertility are therefore seen to be governed by the rhythms and cycles of the cosmos, and biodynamic growers use lunar calendars to determine the most favourable times to work with particular plants.

Plants are assigned to four categories: 'root', 'leaf', 'flower' and 'fruit/seed', depending on which part of them we most value – root plants, for instance, are those which we grow for their underground parts, such as carrots and onions. These categories relate, respectively, to the elements of earth, water, air and fire, which also relate to the constellations of the zodiac. The theory is that if you work with plants on days when the moon is passing through a constellation associated with the appropriate element, you will get better results.

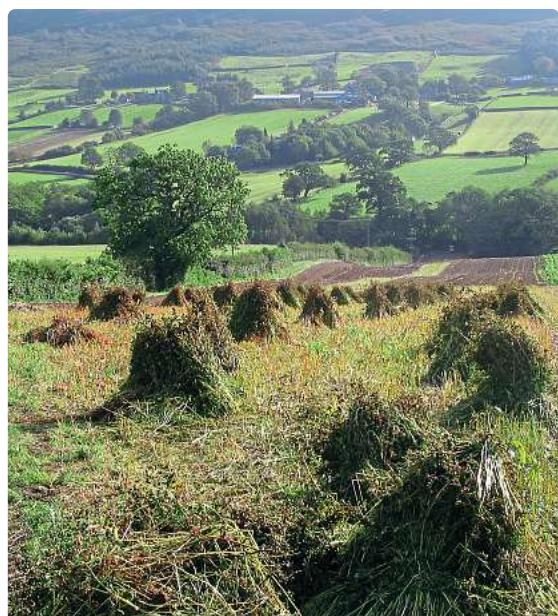
As far as possible, all cultivation at Stormy Hall is done in accordance with the lunar calendar. "The weather is always a factor," says Hans. "It's not just the sowing which is important, it's also when you work the soil and do the weeding. If you try to do everything that you do to the plants on the right day, it enhances the plants. ▶

BELOW: The Stormy Hall team on weeding duty

BOTTOM LEFT: Carrots in flower in the French tunnel

BOTTOM RIGHT: The buckwheat crop being harvested

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Picture: Hans Steenbergen, Stormy Hall Seeds

ABOVE: Corn marigold, cornflower and calendula

TOP CENTRE: Tomato 'Golden Queen'

BELOW: By October, most crops had already been harvested – but the tomatoes were still going strong



"We try to harvest the plants on the days that enhance the seed formation." This used to mean harvesting all seed crops on a 'fruit/seed' day, but current research suggests that it's better to harvest seed on the day appropriate to the type of plant, and this is the practice Hans now follows. So, for instance, he harvests beetroot seed on a 'root' day – even though his crop is the seed rather than the roots. He also applies a biodynamic silica preparation to the ripening crops to enhance seed formation.

PRODUCTION PLANS

The business has been held at its present size by the fact that it's a trading activity of Camphill Village Trust rather than a stand-alone seed company – so it has deliberately avoided becoming too well known, reaching out to new customers only through the Biodynamic Association and by word of mouth. That is set to change, however, because Stormy Hall is on the cusp of a new venture which should pave the way

for much more organic seed being grown in Britain. The new project will be based in Essex, where the soil and climate are far more favourable for seed production than in Yorkshire.

The venture is a joint initiative between Stormy Hall Seeds, the Biodynamic Association and the Open Pollinated Seed initiative, and will be independent of Camphill. They've set up a new company – a community benefit society called The Seed Co-operative – to run the project, but the business will continue to be known as Stormy Hall Seeds. It's too good a name to lose, says Hans, and it already has a strong customer base. The increased capacity at the new site will allow them to build on that. "We hope that we'll be able to grow, and double in size again, within the next five years."

The land they are renting in Essex is part of an already biodynamic farm, with buildings being converted into workshop space. The plan is to grow crops there for the next two years and take the seed north to Botton to be processed. After that the two sites will swap roles; by 2017 the





LEFT: The 'Musselburgh' leek seed crop in the final stages of ripening

BELLOW: By early October, the seed store was filling up fast

BELLOW LEFT: Tomato 'Green Zebra'

workshop space will be ready, so they will be able to move all the seed-processing equipment down there. Botton will start sending its seed south and become a grower supplying the new operation, and the seed processing and distribution will all happen from Essex. Hans will then move south and somebody else will take over his role at Botton.

Some trial crops were grown in Essex in 2014 – a huge pile of French bean pods, brought north for processing the previous week, was drying in the loft when I visited. "Although we had a late start in Essex, the crops were fantastic. They've grown so much better there. I can't wait to go there," says Hans.

BREEDING FOR BRITAIN

The long-term aim is for the new company to grow all of its seed in Britain. At the moment most of the organic seed for sale in the UK is imported; some comes from as far afield as New Zealand, which is hardly furthering the cause of local provenance. The Stormy Hall catalogue lists its ➤



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Picture: Hans Steenbergen, Stormy Hall Seeds



Stormy Hall Farm
under summer skies

growers and their locations, and the grower is noted alongside each variety – so customers have the option of choosing varieties adapted to their own region. The new co-operative will build upon this network of biodynamic seed growers, who will produce seeds for the company and also trial potential new varieties – because the other aim of the new venture is to start a seed breeding programme.

Plant breeding is a new departure for biodynamic growers in Britain. "We are only maintaining varieties, we haven't really developed new varieties, but we've noticed that just by maintaining and regrowing and selecting the plants on this particular site, they have adapted to our climate much better," says Hans. In Germany, where biodynamics is much more established, biodynamic growers have already registered some 20 new varieties.

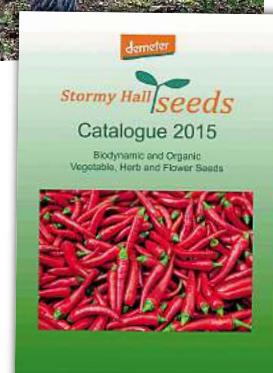
Biodynamic seed breeding has two key aims. It focuses on taste and nutritional value, and it develops locally adapted varieties for the benefit of growers within that region. Once the Essex project is established, the plan is to develop a breeding programme to produce open-pollinated varieties bred specifically for British conditions and for the needs of small-scale organic and biodynamic growers.

If you're inspired by the prospect, there's the opportunity to get involved. The Seed Co-operative is looking for new members, for donations towards its start-up costs and for biodynamic growers interested in joining its network of seed producers and taking part in its breeding trials. You can find out more from the website of the Biodynamic Association. At a time when seed production is becoming ever more global, here is a chance to bring it back home. ■



Field crops at the end of the season; the leaf beet is left in situ through the winter to produce seed in spring

Picture: Hans Steenbergen, Stormy Hall Seeds



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Stormy Hall, Danby Head,
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