



Farming Connect Management Exchange

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Visiting: Austria, Sweden, France and England

Small-scale permaculture based farms that are producing food as well as financial and environmental profits.

June 2018 to June 2019

1 Background

I got into farming with the understanding that farmers sit in the driving seat of the future of humanity and our biosphere. I wanted to be part of this and able to have the most important job in the world, to be a farmer. To make this worthwhile for me I have to farm in a way that is not only sustainable but in a way that produces food, and makes a profit financially and ecologically. I also have to enjoy doing so.

Following my PhD in Ecology, I worked for the BBC where I worked on programs such as Coast, Countryfile, Planet Earth and Frozen Planet. I left as an Assistant Producer and (in order to be able to afford the deposit to buy a farm) I, with my wife, set up a solar panel company specialising in installing the most environmentally friendly systems possible. We went from a small company to having over 25 staff in two years and won Solar Installer of the Year award. In 2012 we bought Henbant, a small farm (30Ha) in north west Wales, derelict for the previous 50 years.

We have done a lot of building work, had three children and have established a successful eco-tourism business. We also farm sheep, laying hens and are in the process of establishing a micro-dairy and market garden. We employ one local person and have volunteers helping us over the summer. So far all our food production has been on a profitable, but very small scale and now we have had our last child and the building work is becoming less urgent, this means it is time to take our farming more seriously.

Over the next few years we want the farm to:

- Produce a reasonable income from food production
- Provide more employment
- Do so in a regenerative way that strengthens our customer's health, our community, our bank balance and our ecosystem.
- Become a model for this sort of agriculture in Wales

Though we have made a start with this, the Farming Connect Management Exchange program came at the perfect time for us to test our plans and visit farms doing similar things around Europe.



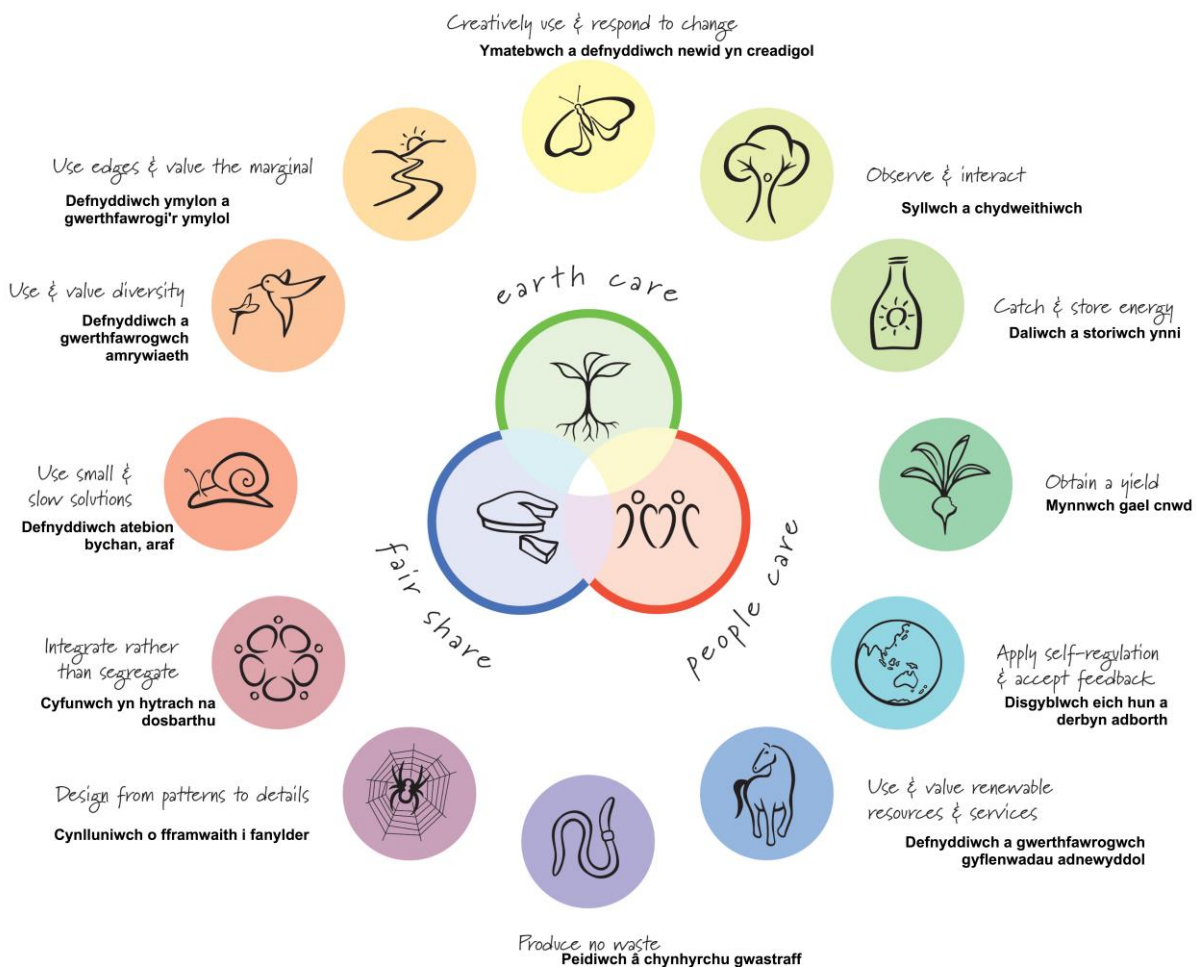
I believe we are too busy trying to make farming less harmful, less damaging and more sustainable. In this we are completely missing the point that producing food can be a positive thing, it can make for stronger, richer ecosystems, offer more job creation and produce healthier food and hence healthier people.

I thus wanted to visit smaller farms that were:

- Using Permaculture or Agro-ecological methods
- Producing food and making a profit from doing so
- Regenerative, in that their farming practices were making the farm and ideally their farmers stronger and healthier.
- Be running enterprises that were applicable to what we want to do at Henbant.

What is Permaculture?

Permaculture is a set of design principles and ethics for human systems that directly utilise the patterns and resilient features observed in natural ecosystems. The word has been adopted into the Welsh dictionary as Paramaethu. The original term was coined in the 1960's and comes from the words permanent and agriculture. For example a woodland ecosystem is incredibly productive and supports a huge volume of life, yet it has no waste or significant inputs, it just continually grows stronger. Imagine if we could adapt that ecosystem to provide more for human needs, or if we could use principles from that to make human centred systems less polluting or reliant on external inputs.



2 Itinerary

Over the exchange I visited a range of farms that met my criteria, I tried to visit some that were well established, some that were new, some that were small and some that were large. Many of these enterprises had additional teaching, tourist or value added food based businesses. Here incomes and staffing levels refer only to the food production side of the business.

August 2018 Keramterhoff, Austria

Site: 40Ha, Five staff over summer with three over winter. It was hard to break down the finances of the business but it was over £80k net/pre labour and possibly significantly more.



The Kerameterhof is among Europe's oldest Permaculture based farm and was started in the 1960's by Sepp Holzer who saw farms around theirs were closing down or amalgamating and going to the valley bottoms, but he wanted to stay. He saw great benefits in diversity and the farm is based on the successful layering of many enterprises. Permaculture here was developed convergently to the Australian model.

It is worth noting that the Kerameterhof has quite extremely unfavourable physical situation. It is on the side of a mountain with land between 1100 to 1500m above sea level, most of the land is thus steep and rocky and temperatures drop below freezing for 160 days of the year. All the similar land in locality is forested. However being productive in these extreme conditions is just of the many things that makes it so interesting.

The whole system here works on layering multiple systems and making sure that every part of the system plays more than one and ideally three functions. This means that no bit of sunshine or water that hits the farm is wasted.

Sepps specific principles are:

1. Look at how nature does something. I.E. look at how an animal or plant would act in their natural environment; does this exist already on the farm? What can you learn from it, can it be recreated in a way that works for you secondly?
2. Farm the farm. This means to work within the constraints of the farm, i.e. never buy in commercial feed. If your farm can support 20 cows without buying feed, have 20. Don't have more; instead also have 20 sheep and possibly 20 pigs etc. They were very strong in their

belief that as soon as you buy concentrated feed you are part of the industrial food system and are no longer farming in its true sense. This, combined with the layering was very effective. It minimised costs and resulted in a very creative and regenerative system.

3. Review and interact - no system is static or perfect. It was important to them to constantly strive to improve their systems.



With many different enterprises it is hard to summarize here all the things they produce but the main products are based around Aquaculture (various fish, crayfish and aquatic herbs); herbs and the growing of rare plants for specific ingredients i.e. Yellow Gentian for making speciality lemonade, this alone nets them £40k/year from just four days harvesting work. Their other main food product is pig meat, which is produced without any bought in feed using ancient breeds of pigs that can fatten with lower levels of lysine. They also produce commercial quantities of eggs, chicken meat, vegetables and apples. The high diversity, speciality and quality of what they produce means that there is high demand for their products, which are mainly sold to restaurants.

One thing of further interest is that it was really Joseph's father Sepp Holzer who developed the farm, now Joseph and his sister Heidi are running the farm. There was for me much to learn from seeing Sepp's children's pride in the farm and how much they wanted it to continue being a family business.

I spent four days here and went over the details of how they do what they do and why and how they develop their systems, what enterprises they capitalise on and how. I spent the final day here with Joseph Holzer who is now the principle farmer, going over designs and ideas for our own enterprises at Henbant. This was very interesting; one of the main features of the Kerameterhof is that they have not been scared of making landscape scale changes, and physically remodelling the farm with ponds and terraces.

Lessons from the Kerameterhof

I came away with a huge amount of affirmation from the Kerameterhof that using permaculture at a farm scale can really work and can do so in a way that creates a whole farm ecosystem that bursts with diversity and life. It made me understand that these things are worth doing; indeed I don't think there is another way we can do things.

There is a permaculture saying that the only limitation to a farm's productivity is the farmer's imagination. This is a phrase I had heard before, but seeing the Kerameterhof was the first time I had believed it.

Things I learnt to take home to Henbant. Water systems, first approaches to farm, nut and top fruit, woodland based pigs, standing by your principles sometimes without compromise can make your product stand out, and that it's worth creating something beautiful that your children can be involved with and proud of.

May 2019 Market Garden Tour Dorset/Devon/Somerset

One of the most obvious and time tested ways of making money from a smaller patch of land and one of the ones that clearly produces healthy food that is locally valued is market gardening and this is an enterprise that we are keen to develop at Henbant. I visited a range of producers who were to different extents using regenerative or permaculture principles. I felt there are three things to be careful of with the Market Gardens. This was; working very hard for little pay, cultivating soil and thus not providing an environmentally regenerative product and not being able to sell produce.

Trill Farm Market Garden, Dorset

Site: 2Ha, >80k net profit/pre labour, two paid staff, two summer interns.



They tried to all take time out each week and slowed down a little in winter. Thus if you paid everybody it would probably work out at circa. £11/hr.) This does work and the easy supply of people wanting to learn means there is a more reasonable rate per hour for the owners of the business, Ashley and Kate.

Ashley was a second generation market gardener and although he was experimenting with some permaculture based techniques, fixed beds, no-dig and a very small amount of multi-cropping his techniques were quite traditional and though they did make a healthy profit they did make it look like

hard work. They had done a good job of building strong relationships with restaurants and could sell salad for circa £18/kg.

I was only there for one day and it was much more about what they were doing than discussing Henbants plans, but there I did manage to learn quite a lot about crop planning and maintaining a steady supply of veg and salad through the season.

Fresh and Green Market Garden, Devon.

Site: 5Ha site, >45k net profit/pre labour, 75hrs labour per week.



Ruth is a brilliant grower with over 25 years experience producing over 90 veg boxes a week through the year and some restaurant sales (this is a small part of her business). She has some help, paid and voluntary, and estimated that there are 75hrs per week in summer going into the business. Earnings are thus over £12/hr. across the year.

Ruth's growing was quite traditional and was extensive and mechanical. Essentially quite different from the approach I want to take. I did however learn a lot in terms of life balance and keeping and establishing a customer base from Ruth.

May 2019, Homeacres Market Garden, Somerset

Site: 0.1Ha site, >26k net profit/pre labour, 45hrs labour per week.



Homeacres is a 0.1 Ha site, with Charles Dowding, a grower with over 25 years experience who specialises in no-dig gardening, intensive production and multiple and successive cropping. He is also one of the most content and happy people I have ever met (these people are always learning from).

He earns 26k per year with 45hrs per week input selling salad through local shops, as such he is selling it at a lower price than some of the other salad growers I visited but he isn't spending time selling to individuals or multiple restaurants.

The simplified concept is that soil is rarely disturbed in nature and that when it is, it kills off mycorrhizal and bacterial soil food webs thus reducing the health of the soil. Further it initiates the conditions for weed seed species etc. to germinate. The practice is dependent upon a healthy soil fauna that is fed by adding compost from above. It's a very effective way of building soil and thus locking down carbon whilst still producing annual crops.

One interesting thing at Charles's was that though he was only cultivating a very small area, it was essentially a large back garden, and though he had quite a lot of space to expand right next to his current beds he thought that having more growing space would actually reduce his productivity as he wouldn't be as focused.

This no-dig method is by far the most environmentally friendly way of growing annual crops and allows very high productivity from a small area.

I had good chance to talk over our plans for the market garden expansion and for making compost at Henbant, this seems to me be the way forward for market gardening.

June 2019, Ridgedale Permaculture, Sweden

Site: 25 Ha site, >155k net profit/pre labour, 160hrs labour per week in summer.



Staff and Income: Four staff over summer with two over winter. The farm was producing a healthy profit from three main enterprises, laying hens (making over 56k net/year), pastured broiler chickens (making over 53k net/year and a market garden making 46k net/year). Some of this work is very seasonal but even if the same labour was applied over the whole year it would still profit over £19/hr.

Ridgedale is lead by Richard Perkins who is a well-known permaculture, holistic management and key line designer. He has spent decades as a consultant and he is now five years into applying his theory and teachings into his own practice. This is to dramatic effect. In the first five years of being there he has managed to pay off the cost of buying the farm. He is a very driven person and has a work ethic like no one I have ever met but he is running a system that is by design replicable for other new start up or diversifying farms and all his enterprises are profitable, quick to establish and regenerative.

It should be added that he can also generate substantial extra labour and income from teaching what he does, but he is very conscious to keep his enterprise figure and hours worked separate from this.

I would say Ridgedale was the most influential place I visited on the tour, the key lessons were:

- Holistic Management is key to getting what you want from your farm.
- Believe in your food story and don't be shy of selling it as a quality product.
- It very much is possible to be regenerative and comfortably profitable and that you can do so selling regular 'commodity' foods.

Ridgedale and Richard are both very busy and the only way to spend time there was to commit to doing the 10 days small regenerative farm-training course that he runs. This meant I was there as part of a group and after six days of learning the ins and outs of what they do there I was able to spend the last four days there going over our plans for Henbant in fine detail. With Richard I was able to review our wider farm designs, our holistic goals and contexts, Key lines, agroforestry, water etc. As well as going over individual enterprise designs. This was incredibly valuable and I came away with strong drive to put these reviewed plans into action.

June 2019, Farm Bec Hellouin, France

Site: 21Ha, income 106k net, labour hours unknown.



Staff and Income: There are eight paid staff over summer but it is hard to work out how labour is divided as there is a lot of building, teaching, added value food work (making Cider and Preserves etc) as well as growing. All work is done by paid labour and there is high emphasis on maintaining professionalism and providing employment. The market garden and fruit sales business produce a net income of 63k and 43k respectively.

Farm Bec Hellouin is a small farm permaculture based farm in Normandy, run by Perrine and Charles Herve-Gruyer. It started in 2006 with the intention of feeding and providing a healthy life for their family but they since realised that we have to feed everybody in the same way. They now produce over 106k net of veg and fruit from less than 4000m².

The system here is a very diverse and complex, much in the same way as the Kerameterhof but in a system that is less matured and is much more aligned just to fruit and veg production. They are now working out how they can reduce the growing area whilst increasing production. They manage to have successive and multi-sown crops. For most of the growing area they are no-dig, though there is still some horse-cultivated areas. They believe they can provide two jobs per hectare managed with their production methods.

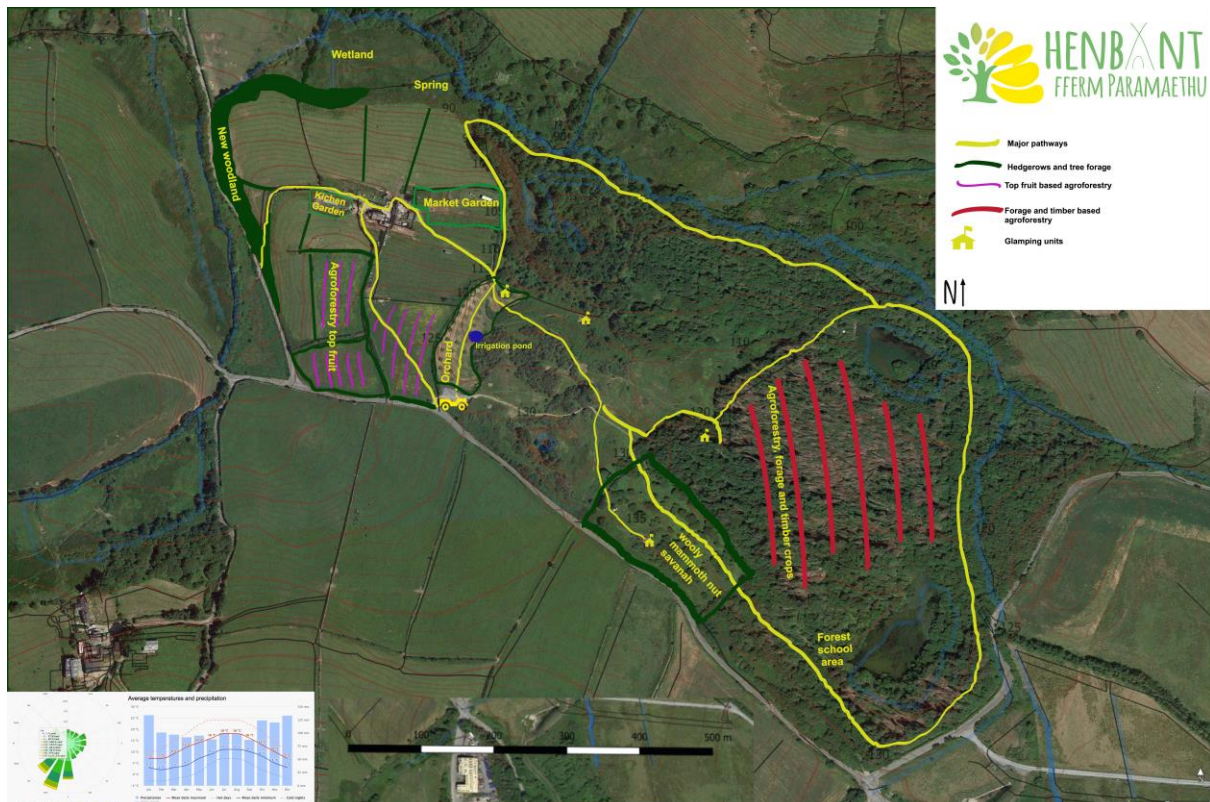
They have also done a study with a Belgium University funded by French Government finding their farming methods can sequester six times more carbon than woodland, can produce ten times more food per unit area than tractor based cultivation and can produce 15k net profit from a 1000m² area with 40hrs input. This is producing regular organic veg, not a niche product.

They have also established a lot of agroforestry and silvopasture on the farm. With the same research group as the market gardening study they have a newly establish forest garden looking at how much food, income and soil organic matter can be developed within this system. I only spent two days here, one looking into their methods and a tour of the farm with translation and again a day going over our own intentions for Henbant.

3 Next Steps



Our plans for Henbant have come a huge way over the exchange program. Going over the farm designs with all these individuals has affirmed some things we wanted to do, challenged others and offered fresh ideas as well. It has cemented our ideas that we do want to provide more opportunities for employment on the farm and it is clear that within food production we can provide at least two extra full time (if seasonal) roles. One other thing that was reinforced was that everybody I visited was very proud of their farm, often their children were part of the farm and also played an active role in it.



Our next steps involve:

- Establishing more agroforestry and silvopasture on farm, the first step of this is to establish a tree nursery and propagation program (2019).
- Use water from the other side of the farm with gravity to a new pond over our market gardening area (2020)
- Expand the no-dig market garden and find somebody to run this (aim to employ somebody on this full time in 2021)
- Continue developing micro dairy, go to 6 cows by end of 2020 (estimated profit of 8k/net. after paying labour)
- Develop pastured laying hen enterprise, aiming for 1000 layers by 2021 (estimated profit of 15k/year net after paying labour)
- Find somebody to employ to run dairy and egg enterprise (2020)
- Work with Joseph Holzer to develop lakes into a more complex system for aquaculture (2021). We have already implemented some of his plans and have introduced commercial fish species into the lakes.
- Improve holistically managed grazing by reducing grazers to one unit (+laying hens) and by introducing agroforestry as extra field divisions.
- Continue working to make the farm a beautiful place to be. The value of this on some of the farms was much appreciated and did bring significant financial benefits.
- **Work to push the concept that the future is not about limiting the impact of farming on the environment. It is about the positive impact that regenerative agriculture can have.**
- Run more courses teaching these concepts at Henbant, invite in experts from some of the farms I visited, work to make Henbant a model for some of these methods.

4 Key Messages to the industry



1. We need to stop looking for ways to make farming less harmful to the environment, instead we need to realise that farming is the most powerful tool we have to make positive changes to the environment and that in applying permaculture and agro-ecological methods we can

produce healthier food in greater quantities and with more profit. We can have farms that ever increase in resilience.

2. Even areas that we think of as being marginal are very capable of producing food in a profitable way.
3. The only limit to a farms productivity is the farmers imagination.
4. Small farms often offer greater capacity for change and for diversifying. These alternative systems are often more complex and thus need more people per acre. This is not to be seen as more difficult it needs to be seen as a better employment opportunity.
5. Holistically managed grazing systems offer our best hope to reverse climate change. Building soil and producing food from sunlight will be key to the future of Welsh agriculture.
6. Add layers of function to your farms, can you make every part of your farm perform more than one function? Do you make the most of all the resources on your farm?
7. We should all look at our Holistic Contexts, why are we farming, what do we want to gain from it.
8. Is your farm consistently growing stronger? Financially, Environmentally and in its social and health effects on the population. All farms can do this.
9. We should all question hard how we farm; do we truly do it in the best way? Could we do it better?