

Exploring Sustainability and Viability on Biodynamic Farms in the UK, a four farm case study research project

by Julia Wright & Gabriel Kaye

REASON FOR THIS STUDY

Biodynamic farming and what it offers has been little investigated by mainstream research and is sometimes disregarded as being more labour-intensive than organic farming. And so a challenge was set to show how viable, sustainable, diverse and resilient biodynamic farming can be. In 2018 the BDA put in a grant request to the Anthroposophical Society, with an outline of process and costs, to investigate four biodynamic farms of different sizes. This was granted and in 2019 we began our research project.

WHAT WE DID

Having trustees of biodynamic organisations who are also university researchers and professors has been a gift to our project with Dr Julia Wright of CAWR and Laurence Smith of RAU both agreeing to help set up and run our four-farm case study research project. We also had the help of a CAWR PhD student, Janus Bojesen Jensen whose own subject easily encompassed our research, to his benefit and ours.

On their advice we took on to work with the Public Goods Tool (PG Tool) developed by The Organic Research Centre for DEFRA for which we gained a permitted-use licence. This tool is a complex set of spread sheets designed to capture farm data that has been already gathered for various obligatory reporting by farmers, to show how a farm is managing a variety of 'public goods' aspects. These 11 aspects, or spurs, are: Soil, Water, Fertiliser, Energy/Carbon,

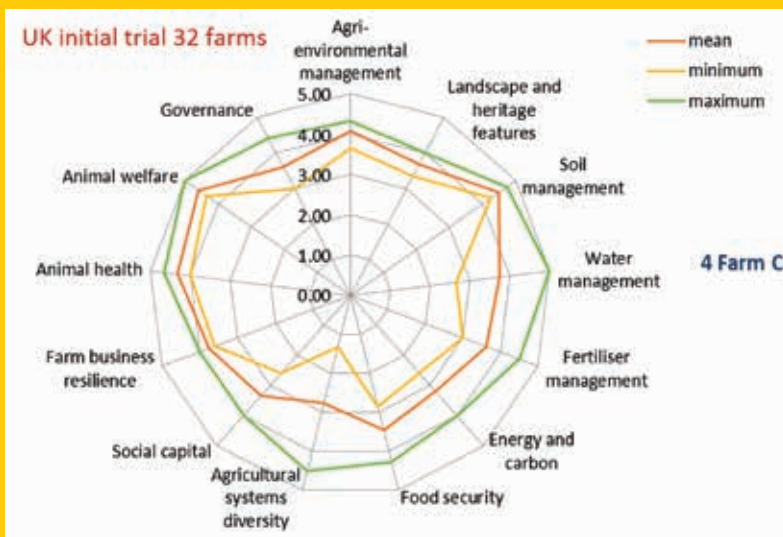
Agri-environment, Agriculture systems diversity, Animal health and welfare, Social capital, Farm business resilience, Landscape and heritage features, and Food security.

We found four farmers who were willing to give us time and access to their farms and farm data, whose Demeter certified farms met our criteria of mixed farming, different sizes, and management situations. Without them we would not have been able to complete the research project. We thank Brock (Adam Brocklehurst) of Loves Lane Farm, Liz Findlay of Nantclyd Farm, Nir Halfon and the team of Plaw Hatch Farm, and Richard Gantlett of Yatesbury House Farm for working with us and giving their time, enthusiasm and expertise to our project.

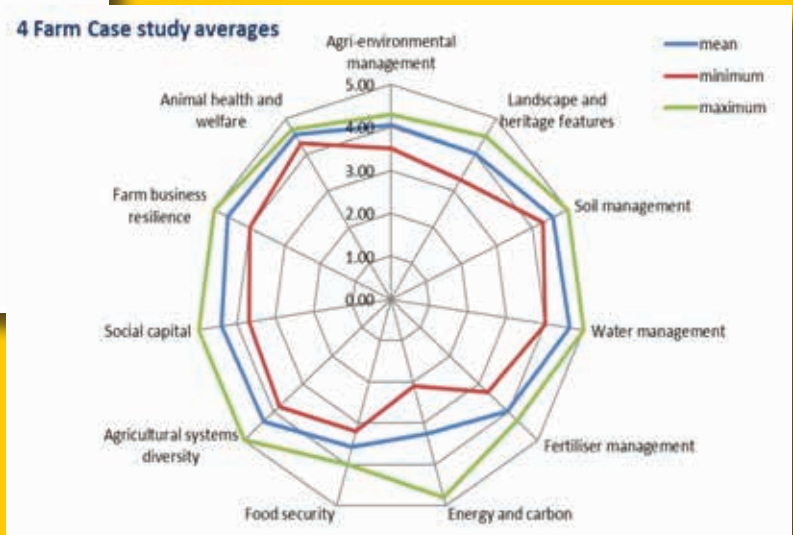
In September and October, members of the team visited each farm, spending half a day to apply the tool. This was followed by a workshop in December, where the data outcome was discussed by all concerned.

INTRIGUING RESULTS

Using the PG Tool and gathering all the data at each farm we found that the biodynamic farms performed well against a study of 32 conventional farms used in a previous PG Tool trial. In fact, the overall outcome was significantly higher in most aspects of the farm measurements and showed the consistency of quality on Demeter farms. *See comparison slide below.*



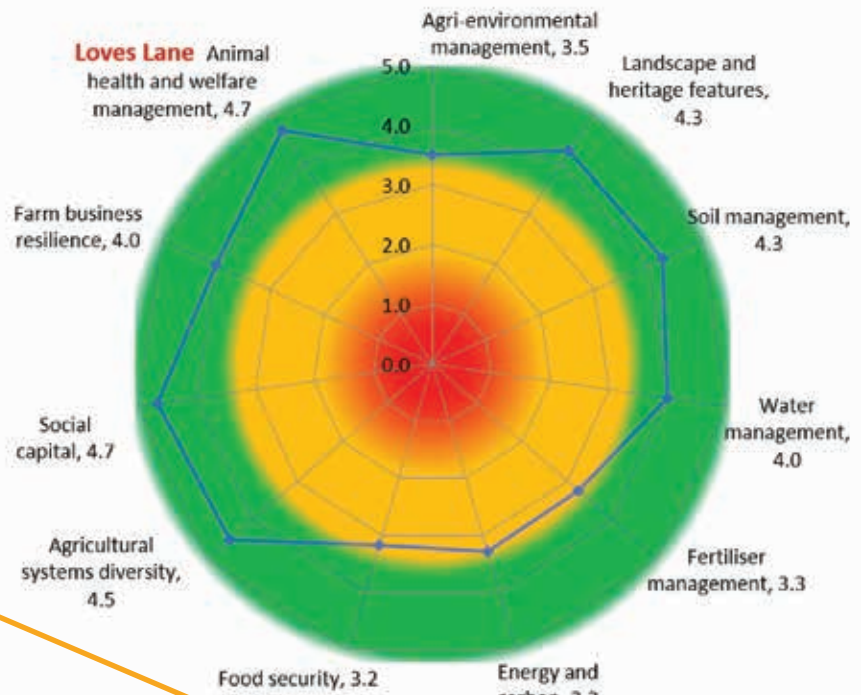
This shows the average of the 4 biodynamic farms surveyed for this project



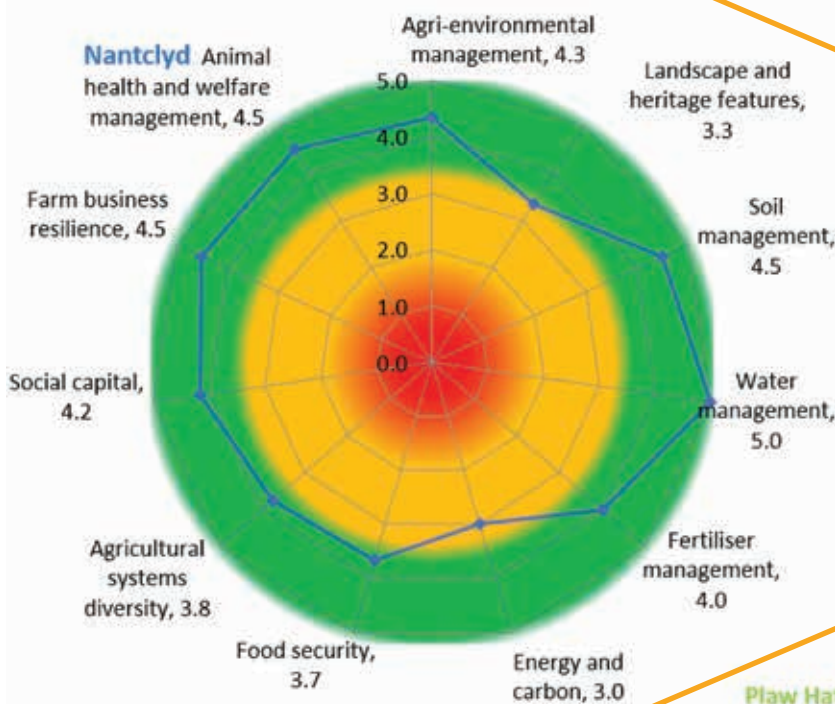
Summary of data from 32 conventional farms showing the scores of the 11 indicators or spurs (note that 8 farms in the pilot were stockless)

Here are the spidergraphs relating to the four farms. These show a perspective on each farm from eleven sets of management data, as a snapshot of their farms. See 4 farm graphs.

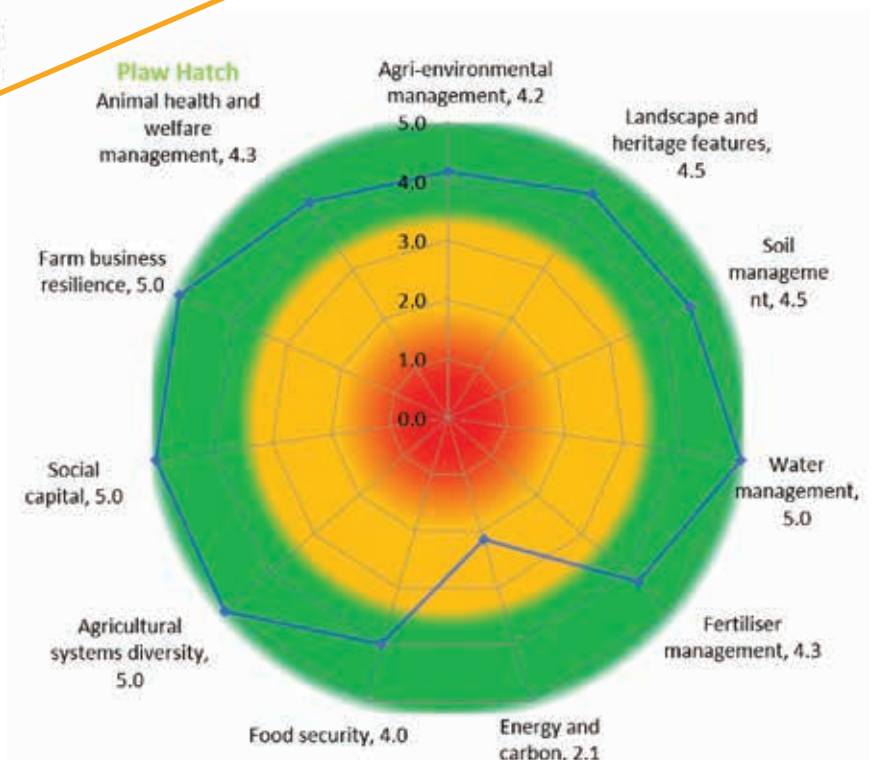
Loves Lane Farm in Somerset is a smallholding of 15.5 hectares



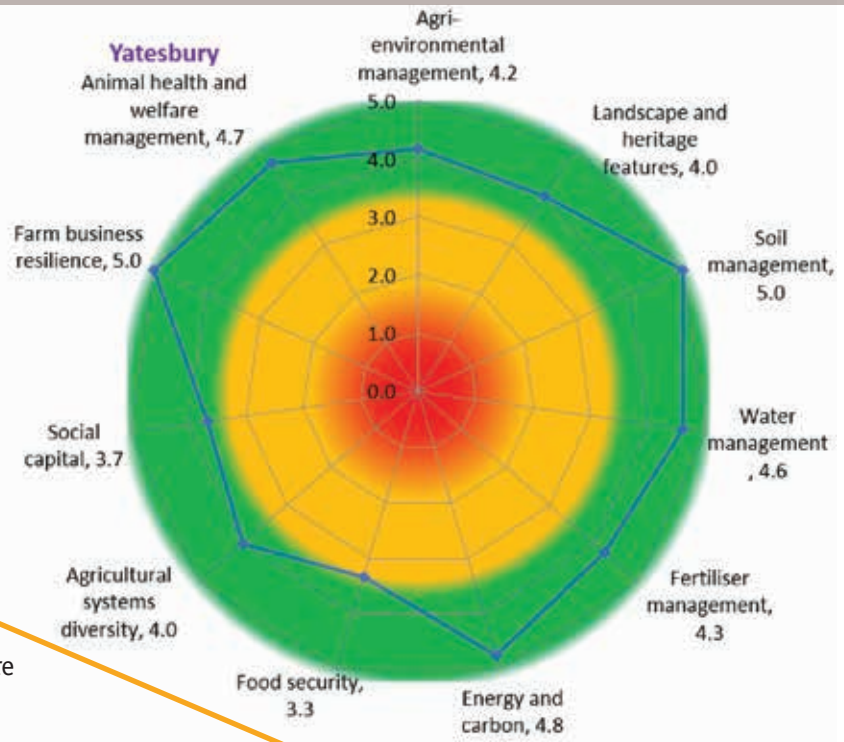
Nantclyd Farm is a family farm near Aberystwyth of 36.9 hectares over two sites



Plaw Hatch Farm is a cooperative mixed farm in Sussex of 131 hectares



Yatesbury House Farm is a mixed family farm in Wiltshire, with 654 hectares, it is the largest biodynamic farm in the UK



Each of the farmers found this to be an interesting process, getting them thinking about aspects of their farms and raising questions they had not previously considered or found important. Such as

- We know our soil is doing well but might we learn more detail and be able to show it if we did more frequent soil testing?
- Wanting to make use of a neighbour's whey to feed pigs feels good, but when we count the petrol used to fetch it does it make as much sense as we thought?
- In terms of energy and carbon, a couple of the farms scores were affected by having land/fields in more than one area and having to travel between sites with tractors and machinery.

CONCLUSIONS

Seeing the collected data and sharing the stories of these four farms and their biodynamic successes: healing soils, caring for and respecting animals and their nature, growing Demeter quality produce, creating employment and livelihoods in the countryside and helping nature, all in a sustainable and viable, climate-friendly way has been rewarding for all involved. (We have yet to collate the full report with the profiles of each farm.)

Reflecting on using a conventional farm assessment tool for non-conventional (biodynamic) farming has been interesting. The Public Goods Tool collects a lot of information from eleven different perspectives of farm activity but may not have the ability to capture the essence of biodynamic farming.

This data collection has shown how well these four farms performed against these standard criteria. The full picture of the diversity of biodynamic farming, showing each farm's organism and individuality, its internal relationships and interconnectedness of activities, relating to questions of food and feeding people rather than 'commodities' is more complex and sensitive than maybe this 'data' tool can manage. Which is why we will do a farm profile for each farm in the final report of the research.

The team can offer thoughts about further possible improvement of this tool for public goods measurement and

possibly adding a twelfth spur. Could one add more clarity on the food security spur so that food quality, direct/local sales, diversity of products also counts? Should the animal welfare spur include more evaluation of enabling animal natural behaviours, of farm fodder sourcing? How could we add to the social capital sector with social impact questions such as aspects of people/social diversity, creating local rural employment, equality of pay and respect, where cultural values and cultural events were also counted? Should there be more attention paid to farms as places of education about food, nature and farming? Should the extra spur be biodynamic and certification values?

This case study initial findings were presented at the Oxford Real Farming Conference (ORFC) in January to a full room and an excellent reception. The set of slides narrating the Four Farm Case Study is available, along with the audio recording of the session at ORFC, on the BDA website.

We, the research team, have yet to extract maximum findings and complete the full report and profile of this project. This will be published in a variety of ways over the next few months. We are grateful for the funding from the Anthroposophical Society and the support from CAWR and RAU and ORC and look forward to sharing this case study with many people around the country.

