

Food AND solar farming? Exploring what is possible in our local context in a nut shell.

Context

The number of large-scale solar farms is set to increase around the UK over the next 10 years. As each one is planned, there is always a debate about use of land for renewables vs use of land for farming. While we also advocate for solar arrays on buildings and warehouses, this article explores the potential for a win-win situation where farming takes place underneath, or between the photovoltaic panels. This system is called agrivoltaics, (Agri PV) and is more developed in other Western European countries and in the U.S. and East Asia than it is in the UK.

Growing crops in the spaces between the panels is a real option and has multiple benefits. This is already happening across Europe so it could and should happen here.

What is Agri PV

Agri-PV (Agricultural Photovoltaics) is an innovative system that integrates solar energy generation with farming on the same land, allowing for dual land use to produce both food and electricity, optimizing efficiency and creating new income streams for farmers energy and food!

Agri PV Networking Workshop Summary of Outputs

On 3rd December 2025 an AgriPV Networking workshop was held at Hockerton Housing Project. The outputs are below. The event brought together 28 people from farming, energy and academic backgrounds to look at the opportunities for Agrivoltaic systems in the UK.

The outputs on the challenges, benefits, new ideas and next steps for Agri voltaic systems are to be found via the links below.

[New ideas for Agri PV](#)

[Next Steps for Agri PV](#)

[Benefits of Agri PV](#)

[Challenges for Agri PV](#)

Questions and Answers session [link here.](#) (We will aim to add to this so if you learn things along the way to more Agri PV please feel free to let me know and I can update it. (enquiries at sustainablehockerton.org)

We made a film of the presentations which are available on Vimeo.

<https://vimeo.com/1146987107?share=copy&fl=sv&fe=ci>

The slides associated with the presentations presented by Simon Tilley and Stephen Briggs are available here:

[Sustainable Hockerton's demo project Agri PV](#): file type pdf

[Stephen Briggs Agri PV presentation](#). :file type pdf

Background to the Demonstration AgriPV project in Hockerton

Sustainable Hockerton Limited (SHL) commissioned Hockerton Housing Project Trading Limited (HHP) to explore the potential for a localised agrivoltaic pilot project. The feasibility was funded by the Community Energy Fund (Midlands Hub) and SHL worked with agricultural consultant Stephen Briggs of Abacus Organic. SHL is seeking a lease from local farmer Simon Christy to run a pilot project next to the community wind turbine in Hockerton and use this sample site as a demonstration and research site.

Throughout SHL's work, we have been in communication with Elements Green, who are leading on the public engagement around the 1-gigawatt Great North Road (GNR) Solar Project which is nearly on our doorstep. Our aim was to make them aware of the potential for food growing between the panels in case this can be factored into the GNR solar project.

Agrivoltaics systems can reduce the effect of over-drying and overexposure to sunlight in hot dry climates further south by providing much needed shade. However at our latitude in the UK we run the risk of insufficient light levels if crops are over-shielded by photovoltaic panels. Therefore we needed to explore which crops might work under such a system, and what would be the optimal spacing of the panels to allow for efficient solar capture as well as sufficient light for crops and ease of farming between them.

We are grateful to Stephen Briggs for his comprehensive and extensive review of different models for agrivoltaics and illustrative examples of how these models have been tested out with different crops in different climatic contexts. We discovered that PV panels are being developed for agricultural use on greenhouses, in open fields, and some are designed to rotate or tilt to allow tractors to pass; capture sunlight from both faces; or be translucent to enable light to pass through them.

Stephen also helped us to conclude what kind of agrivoltaics system and which crops might be best suited to our sample plot of land in Hockerton. Leafy greens or berries showed most potential.

These findings are available for download in [Stephen Briggs' report](#).

We have also produced a reference list of [academic research on agrivoltaics](#), including an overview of pilot projects happening overseas and in the UK.

While there is a growing body of research on Big-Ag agrivoltaics projects, involving heavy inputs and large machinery, what we would be doing on the land in Hockerton would be much smaller scale and more suited to a market garden scale of agriculture. Small-scale food growers are often limited by the challenge of accessing land.

We noticed that while some of the bigger landowners are agreeing to lease their land to the Great North Road Solar Project (and therefore giving up on farming this land), there might be an opportunity for smaller-scale food growers to work the land between the panels without big machinery and using less environmentally impactful farming methods. Given that the margins are narrow, especially for tenant farmers, we modelled at what scale this could be feasible and which crops would suit such a system. Our findings are available [here](#).

In the next phase of our work, we will be working with local farmer and landowner Simon Christy to seek planning permission to install a solar array on the fields next to our community wind turbine, and to design a community allotment or locally-owned soft fruit enterprise to run between the panels. Like the turbine, the plan would be for the community to buy shares in the array and for its benefits to feed into our village sustainability grant which is available year on year to each household to make their homes and gardens greener. We might also find we are eating more berries in our village!

For more information about our research, please get in touch.