
Agri-EPI: Project dissemination update: GreenShed



Welcome to the second newsletter about Phase 2 of the pioneering GreenShed project which will explore a net zero livestock production model and real production system. In our last newsletter (find it on the project's [web page](#)) we gave an overview of the project and highlighted the eight project partners. In this newsletter we bring you progress on the project after successful site visits with the project funder the Department for Business Energy and Industrial Strategy ([BEIS](#)).

Project recap

- GreenShed addresses the need for the livestock farming sector to reduce its Greenhouse Gas (GHG) emissions whilst improving productivity.
- Develop an integrated low carbon, circular, cattle and vertical farming system.
- Capture methane from housed cattle and utilises its combustion outputs to yield low carbon produce (meat, vegetables/fruits).
- Optimise resource efficiency. If implemented across the sector this could equate to

50% GHG reduction from these systems.

- No system currently captures and scrubs methane from housed cattle, and utilises outputs from its combustion (heat, power, CO₂).

Podcast: Introduction to the GreenShed Project hosted by SRUC's podcast channel.

Listen here to the interview with Prof Carol-Ann Duthie and John Farquhar, Consultant SAC <http://tun.in/tprdDy>



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Tour of future site by representatives from BEIS

On 27th February, representatives from Scotland's Rural College (SRUC), Agri-EPI Centre and the University of Strathclyde welcomed Theresa Redding - Lead, Direct Air Capture and Greenhouse Gas Removal (DAC and GGR) Innovation Programme at BEIS, Kat Glover - Energy Innovation Project Manager, Science and Innovation for Climate and Energy (SICE), and Project Monitoring Officer, Sandy Nimmo from Mott MacDonald, to the future GreenShed site.

It was important representatives from BEIS visited the site and met with the team delivering the project; hearing first-hand how the research will significantly impact initiatives to mitigate GHG emissions in beef production as the project received funding as part of the UK Government's Net Zero Innovation Portfolio (NZIP).

The visit started with a tour of the SRUC Beef and Sheep Research Centre, Easter Howgate Farm which was led by Prof Duthie.



The team headed out to visit the field site where the state-of-the-art shed will use cattle straw and manure to generate power, and to create fertiliser for a vertical farm to grow crops indoors.



The team moved indoors to Agri-EPI's Northern Innovation Hub for a working lunch and the projects monthly monitoring meeting. There was also an update on one of the work packages which focuses on consumer research of perceptions of the GreenShed and its production of beef, as well as a review of marketing potential and competition.

Before the GreenShed build gets underway, the team at the University of Strathclyde are creating a digital model of the shed to ensure that the environmental conditions inside are optimal. This is important for ensuring high welfare standards for the cattle, which is of key importance for GreenShed.

Consumer perception on beef – key insights

The purpose of the consumer research is to understand perceptions and consumer comprehension of the GreenShed concept, and to gather information about consumer preferences when it comes to buying beef. The focus groups are composed of meat eaters and people who are reducing their consumption of beef for environmental

reasons. The demographics of age, gender and life-stage have been considered as well as location: urban and rural.

Given red meat invokes considerable emotion (both positive and negative) the meaning behind words and phrases are to be explored in great detail in this research. An initial Scoping exercise has been completed with supply chain focussed research currently being developed with an initial engagement report ready shortly.

This work package is being led by Dr Sam Hoste, Agri-EPI Centre and consultant, who is working closely, and meeting weekly, with SRUC and independent consultant [Levercliff Associates](#). Kai Virtanen, Head of Growth at Levercliff said, “We do a lot of work in the broader food and drink sector, and while a large part of our work relates to innovation, it’s not often we come across a project like GreenShed that really pushes the boundaries of responsible beef production. As such we are thrilled to be involved in the project to explore how GreenShed benefits could be understood by consumers and shoppers.”

Supply Chain Development

The consumer research also includes supply chain development. In speaking regularly with two major UK retailers, which are supporters of GreenShed, they have provided useful overviews of consumer perceptions around beef, sustainability, and the environment. The consumer research will also involve retailer beef supply chains, via project workshops to explore how the concept fits into the supply chain, and to discuss future pilot programmes.

Dr Sam Hoste said “The collaboration of beef supply chains in parallel to the research, is relatively novel – we are building the research evidence and developing the whole supply chain knowledge of the system. Each is informing the other.”

A GreenShed Interest Group is also being established, made up of sustainable beef organisations, assurance and standards bodies, monitoring, verification and reporting

(MVR) schemes, investors and banks. “This will help to ensure that key stakeholders know about low carbon beef from GreenShed, and that the project learns from the global community. It will assist in making GreenShed investment ready, for farmer and supply chain,” said Dr Hoste.

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