

Leeds University Farm Pioneers Climate-Smart Research to Halve Carbon Footprint

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The University of Leeds farm, located between Leeds and York, is set to become a pioneering research station dedicated to testing and accelerating climate-smart agricultural methods. The site is one of 10 farms across Europe participating in a new project that aims to reduce their collective carbon footprint by 55% over the next five years.

The University will receive **£1.1 million** in funding from the **Horizon Europe** programme for its research role, which includes helping to draw up a project framework and collecting and sharing vital learnings. This work forms part of the larger **£11 million Climate Smart Research project**, coordinated by Wageningen Research in The Netherlands, involving 33 partners from 26 European countries.

Holistic Solutions for Climate-Neutral Agriculture

The project's strategy involves introducing a wide range of new measures on the farm, such as altering the feed given to livestock, managing emissions from manure and slurry, and monitoring how semi-natural features like **hedgerows** can prevent harmful greenhouse gases from entering the atmosphere.

Professor Guy Ziv from the School of Geography is leading the research being carried out by the University of Leeds. He said: "Tackling agricultural emissions isn't about a single silver bullet; it's about understanding the farm as a complete, interconnected system. By studying everything from animal feed and manure management to how our cropping systems and hedgerows can capture carbon, we can identify holistic solutions that are truly effective. Ultimately, this research is about providing farmers here in the UK and across Europe with robust, evidence-based options that are both environmentally and economically viable."

The overarching aim of the five-year international effort is to develop, test, and promote cutting-edge

solutions to speed up the transition toward climate-neutral agriculture in Europe, tackling the growing pressure on the industry to both adapt to climate change and reduce emissions.

The Smart Farm Advantage

The Climate Smart Research project will leverage work already underway at the University of Leeds Research Farm, which operates commercially across approximately 317 hectares and brings together four farmsteads. The site is already home to several advanced agricultural facilities:

- The **University of Leeds Terrestrial Observatory**, a £3 million suite of instrumentation.
- The **National Pig Centre**, opened in 2019, making Yorkshire one of the best places in Europe for pig research.
- A regional centre for the **National Institute of Agricultural Botany (NIAB)**.
- **EntoExplore**, a containerised insect farm prototype exploring the role of insect farming in sustainable food systems.
- A unique **regenerative agriculture research trial** that measures the impact of different farming practices on soil health, crop production, and business profits.

Dr Ruth Wade from the School of Biology is one of the researchers running the regenerative agriculture trials at the University of Leeds farm which is currently funded by FixOurFood and Defra. She added: “The University of Leeds farm is such a fantastic resource to lead research, knowledge exchange and teaching activities in future-proofing farming systems. This new project enables us to join our cutting-edge research with other leading farms across Europe – sharing research findings and learning from one another, building a robust evidence-base to support farms into the future.”