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Latest News

Farm of the Future: The Royal Agricultural Society of England's vision on how farming can adapt to climate emergency challenges

On 8th March 2022, The Royal Agricultural Society of England (RASE) launched the Farm of the Future: Journey to Net Zero, a report with strong insights on land and resource management; bioenergy and renewables; low emission vehicles and fuels; and agri-tech innovation. The report follows a COP26¹ policy brief, which was published by the Organisation in October 2021.

The Farm of the Future report was commissioned by RASE² to pull together the latest science and its on-farm application, show what farmers can realistically achieve, and to identify practical steps they can take to decarbonise the farming industry.

Farmers and land managers have a key role to play in developing a more circular, resource-efficient rural economy. Many farmers need help, advice, and support if they are to embrace transformational change, adopt new ideas and technologies, while make fundamental adjustments to the way that they farm.

The report is practical in its guidance, highlighting the emissions reduction options available to farmers and growers, including improved resource management, renewable energy generation, use of low emission farm vehicles, replacement of fossil fuels and adoption of digital technologies.

Like much of the climate-related guidance for farmers from other organisations, RASE's report has a very strong emphasis on improving soil health through investment in natural capital. Farming's transition to low carbon production requires:

- Enhanced soils management, carbon sequestration and supporting biodiversity,
- Protection of rural resources (land and water) while enhancing natural capital,
- Decarbonising agri-food supply chains including on-farm and low carbon energy,
- Adopting low emission vehicles and developing non-fossil fuels and automation.

Commenting on the report Phillip Gready, Chairman of RASE said: "For transformation to happen, farmers need practical guidance on the decarbonisation options based on currently available and emerging technologies, along with independent advice and technology demonstration sites. To improve carbon capture, they need access to farm-level emissions accounting and benchmarking tools."

Of course, achieving a low-carbon future for agriculture will be challenging. The Report makes a number of specific recommendations to support UK farmers and land managers on their journey:

- Clear and effective government support is required to deliver 'systems change' and ensure farm business viability during the transition.
- Policy transition must be aligned across government departments to reflect farmers' role as food producers, while managing the natural resources and sustaining the rural economy.
- Farmers need better access to research, knowledge transfer and advisory services particularly on improving soil health, biodiversity and natural resource management, alongside current changes to government policies.
- Technology innovation requires an enhanced network of farm demonstration sites and events to aid transition to more sustainable farming, replacement of fossil fuels and on-farm renewable generation and storage.
- Accurate data and measurement systems will be vital to help UK farmers benchmark and better understand their performance improvements, including reliable carbon measurement tools and data indices for livestock and crops.
- As farmers adapt to and fully embrace digital technologies, field robotics and artificial intelligence (AI), more investment in rural infrastructure is required to improve connectivity, mobile communications and power networks.
- Changing consumer preferences are impacting the food supply chain. Better labelling and accurate carbon accounting will help promote quality, sustainable British food in potentially volatile home and global markets.
- Systems change must include rewarding farmers for supporting national decarbonisation goals and delivering 'public goods', including greater food security. This requires sound economic valuation of natural capital.

Alongside the main report, the Royal Agricultural Society of England asked specialist authors to comment on decarbonisation journeys for key farm production sectors, such as cereals, dairy, horticulture, meat, fuels and vehicles.

All reports are available at www.rase.org.uk/reports