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Cotswold Seeds Partnering New Research Set to Increase Carbon Capture Through Cropping

A new research project aims to help UK farmers and growers target Net Zero and build farming resilience through diversifying their arable and forage cropping. It will also enable new revenue sources through a carbon marketplace and support enhanced value chains for industries such as textiles and construction.

The **Centre for High Carbon Capture Cropping** (CHCx3) is a four-year, £5.9 million project, supported by a consortium of 22 industry and research partners and led by crop science organisation NIAB. The project, which runs from spring 2023 to 2027, has been awarded funding by Defra under the Farming Futures R&D Fund: Climate Smart Farming. This forms part of Defra's Farming Innovation Programme, delivered in partnership with Innovate UK.

The research will focus on four cropping options: rotational cover crops; annual fibre crops (industrial hemp and flax); perennial food, forage and feed crops (including cereals and herbal leys); and perennial biomass crops (miscanthus, willow and poplar). In addition to evaluating their potential to enhance atmospheric carbon capture and sequestration, in the soil and crop-based products, CHCx3 will examine the effects of cultivation system and agronomy on economic returns and other environmental outcomes. Further work will optimise the production and use of renewable biomaterials for fibre, textiles, and construction and develop carbon insetting/offsetting platforms.

The Centre's 'Knowledge Hub' will provide resources to support the effective uptake and utilisation of crops with high carbon-capture potential, with practical outputs such as crop guides, web tools and apps available to landowners, farmers and agronomists. The project will offer a wealth of opportunities for its many stakeholders to engage with and participate in the ongoing research, including crop trials, field demonstrations, webinars, workshops and training.

Project Lead and Head of NIAB Innovation Farm Dr Lydia Smith explains that crop choice, management and utilisation all offer opportunities. "Farmers and associated industries can address climate change goals through input-efficient crops that are able to increase carbon capture, but they must have confidence in achieving profitable and sustainable outcomes," says Dr Smith.

Project Knowledge Exchange Lead and NIAB Director of Agronomy Stuart Knight highlights that the Centre will build on NIAB's extensive programme of crop diversity and improvement, farming systems and soils research. "The project will kick-start vital new collaborations between researchers, seed suppliers, growers and industries seeking to realise the full potential of crop-based products, establish new revenue opportunities within the carbon market, and give a major boost to our shared aim of achieving Net Zero," concludes Mr Knight.

Paul Totterdell, CEO of Cotswold Seeds says: "We're delighted to be partnering with NIAB again, on what is going to be such an important research project. At Cotswold Seeds we aim to bridge the gap between science and farming, offering practical ways to make best use of scientific research to improve agricultural operations and environmental outcomes. Carbon capture has become

synonymous with soil health and mitigation of climate change, and we hope that this research will help further develop such an important field of study."

Sign up to receive the newsletter and details of forthcoming CHCx3 events and activities:

https://www.niab.com/research/agronomy-and-farming-systems/centre-high-carbon-capture-cropping

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The full list of project partners:

NIAB, Biorenewables Development Centre, British Hemp Alliance, Cambond, Carbon Farm Hubs, Cotswold Seeds, Crops for Energy, Dark Green Carbon, Elsoms Seeds, Energy Crops Consultancy, English Fine Cottons, FarmED, F C Palmer & Sons, National Farmers Union of England & Wales (NFU), Natural Building Systems, Northern Ireland Hemp Association, Rothamsted Research, Scottish Hemp Association, Terravesta, UK Hempcrete, University of York, Unyte Hemp

About NIAB

NIAB is the UK's fastest growing crop science organisation, with rapidly expanding research capabilities in plant genetics, agronomy, farming systems and data science, the largest national field trials capability, and strong research links with industry, Government and academia. With headquarters in Cambridge, and regional offices across the country, employing more than 400 people across the UK, NIAB provides scientific research, technical services and practical advice to improve the yield, efficiency and resilience of crop production across the arable, forage and horticulture sectors.

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You can sign up below for information, details of events and (in due course) to receive the CHCx3 e-newsletter:

https://www.niab.com/research/agronomy-and-farming-systems/centre-high-carbon-capture-cropping

NIAB will be at Cereals 2023 (stand 405/406) and at Groundswell.

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