

Nestlé, Cargill and CCM Technologies launch collaborative pilot to turn cocoa shells into low carbon fertiliser

- Trials underway will use a process from CCM Technologies to manufacture fertiliser for two UK farms, which supply Nestlé. These farms supply wheat to Nestlé factories producing breakfast cereals and pet food
- If successful, up to 7,000 tonnes of low carbon fertiliser could be produced in York and offered to farmers in Nestlé UK and Ireland's supply chain

Nestlé UK and Ireland and Cargill launch their latest regenerative agriculture initiative, a UK supply chain trial, to assess whether cocoa shells from a confectionery site in York could be used to create a low carbon fertiliser.

This two-year trial is designed to evaluate the fertiliser's performance on crop production, soil health and greenhouse gas (GHG) emissions reduction. If successful, up to 7,000 tonnes of low carbon fertiliser could be produced and offered to farmers in Nestlé's UK wheat supply chain. This amount of fertiliser equates to around 25% of Nestlé UK's total fertiliser use for wheat.

The production and use of conventional fertiliser accounts for approximately 5% of global GHG emissions¹, and more than half of the carbon footprint of wheat grown in the UK is related to fertiliser use.

Recycling valuable nutrients from waste streams within the food system provides a promising opportunity to create a lower emissions supply chain. Scaling up low carbon fertiliser production in the UK can provide farmers with a more sustainable product at a reliable price.

The cocoa shells are supplied by Cargill, which processes the cocoa at the York facility to become key ingredients in iconic products like *KitKat* and *Aero*. A trial volume of cocoa shell has been processed and pelletised by Swindon-based CCM Technologies.

The trials, which were designed and are being overseen by York-based Fera Science Ltd, are currently taking place on arable farms in Suffolk and Northamptonshire. They are designed to investigate the performance of the fertiliser in terms of wheat yield and quality. They will also assess the impacts on soil biodiversity and GHG emissions in comparison to conventional products applied on the same farms.

For all companies involved, turning cocoa shells into a lower carbon fertiliser embodies their commitment to innovation, collaboration and creating a more sustainable supply chain. This project is an example of the innovative solutions that Nestlé is investigating to help achieve net zero emissions by 2050. Nestlé has also committed to sourcing 50% of its key ingredients from regenerative agricultural methods by 2030.

"Farmers often find themselves to be among the first groups to be exposed to global issues, and these risks are then borne by the food system we all depend upon. We have to find ways to build more resilience into the system and optimising our use of natural resources is a critical part of this," said Matt Ryan, Regeneration Lead at Nestlé UK & Ireland.

"This project is a small, but very meaningful step towards a net zero future, where farmers, local enterprises, and nature all stand to benefit," added Ryan.

Richard Ling, farm manager at Rookery Farm, Wortham in Norfolk, who supplies wheat to Nestlé Purina, said: "We have now finished harvesting and we've successfully grown a Winter wheat crop using this new fertiliser.

¹ <https://www.nature.com/articles/s43016-023-00698-w>

We've compared two parts of the field, one which used the cocoa shell fertiliser, and one which used with the conventional fertiliser, and there is no significant difference in the yield so we can see that it works!

"We are really reassured with the results and are looking at running further trials. It's a step change to be able to use a fertiliser made from a waste stream and see the same results as using a conventional product.

"It's an exciting and promising time and we are pleased to be taking part in these trials to help reduce the carbon emissions from our farming."

Sam Thompson, Global Engineering Lead at Cargill Cocoa & Chocolate, said: "Cargill and Nestlé have been working together for more than 60 years building resilient supply chains across communities where we both operate. We are excited to continue to build on this strong partnership through our innovative cocoa shell fertiliser trial,"

"Together, we hope to contribute to a more sustainable future for the British farming industry," said Thompson.

"Moving to a more sustainable world involves creating partnerships that think about waste differently," said Pawel Kisielewski, CEO CCm Technologies.

"CCm's technology enables many of the biggest players across agriculture and the food sector to give waste generated from routine food manufacturing a second lease of life as valuable low-emission sustainable fertiliser. This benefits farmer, customer and planet," added Pawel.

Nestlé's focus on regenerative agriculture is underpinned by its work with the Landscape Enterprise Networks (LENs). LENs is an independent trading community which connects businesses with a common interest to protect and restore the environment in which they operate.

Regenerative agriculture is also a key element of Nestlé's Cocoa Plan, as it works closely with farmers in countries like Côte d'Ivoire and Ghana to create a more sustainable supply chain for cocoa.

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NOTES TO EDITORS

About Nestlé

Nestlé is the world's largest food and beverage company. With more than 2,000 brands ranging from global icons to local favourites, we are present in 191 countries around the world.

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About Cargill

Cargill helps the world's food system work for you. We connect farmers with markets, customers with ingredients and families with daily essentials—from the foods they eat to the floors they walk on. Our 160,000 team members around the world innovate with purpose, empowering our partners and communities as we work to nourish the world in a safe, responsible, sustainability way.

From the feed that reduces methane emissions to waste-based renewable fuels, the possibilities are boundless. But our values remain the same. We put people first. We reach higher. We do the right thing. It's how we've met the needs of the people we call neighbours and the planet we call home for 158 years—and how we'll do so for generations to come. For more information, visit Cargill.com and our [News Center](#).

CCm Technologies

CCm Technologies is an award winning cleantech company, focused on resource optimisation and Carbon Capture and Utilisation (CCU). CCm's technology converts captured carbon dioxide, ammonia and phosphates from industrial, agriculture and water waste streams and turns these into stable value-added fertiliser pellets. This helps lower the emissions and waste footprint of sectors including food, agriculture, wastewater advanced materials & energy storage.

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