

Project aims to harness oats' unique properties

BY COLIN LEY

The rising importance of oats as a protein-rich cereal with an attractive low-carbon footprint is at the heart of a new three-year Danish-led research project with major input from a team at the James Hutton Institute in Dundee.

Designed to identify oat varieties which growers can commit to with greater production confidence than is currently possible, the project's Scottish involvement has been boosted by a £100,000 award to Hutton from the Novo Nordisk Foundation.

"The key issue for oat producers is the lack of stability in year-to-year supply and quality, largely due to seasonal fluctuations in environmental factors," said Dr Joanne Russell, the Hutton's project lead.

"We will therefore focus on the need to develop robust organic-ready oat cultivars, specifically tailored to sustainable organic production, while also addressing some of the emerging challenges in food and health security to help secure food production."

Oats are experiencing a global revival, ranking sixth in cereal production status worldwide, with UK output increasing by 19%

last year alone.

In addition, estimates suggest the oat market will grow by 3.7% annually between now and 2032. This is due to consumers' increasing health consciousness and demand for functional food, boosting items that are highly nutritious and associated with health benefits.

In this context, according to Hutton, oats have become the third most popular cereal crop grown in the UK, after wheat and barley. This status is based on its qualities as a "uniquely healthy cereal crop, rich in protein, minerals, and fibre, especially Beta-glucan". Oats are also "associated with a reduction in cholesterol levels and post-meal glycaemic responses".

"Oats are particularly well suited to organic production in northern Europe due to the crop's robustness and adaptability," said Hutton.

"It requires low inputs thanks to its low demand for nitrogen, has low susceptibility to diseases, and can cope effectively against weeds."

Led by the Innovation Centre for Organic Agriculture in Denmark and backed by total funding of £495,000, the project will include input from the Nordic Genebank

(NordGen) and Aarhus University in Denmark, alongside the team at Hutton. Working collaboratively, project researchers will seek to identify "nutritionally superior and yield-stable oat varieties" through a combination of experimental and on-farm field trials across a range of diverse environments and organic management systems.

"The project brings together experts in plant genetics, agronomy, and mathematics to harness the unique properties of oats, with their low carbon footprint and significant nutritional and health benefits," said Dr Russell.

The plan is to study the genes of 200 oat varieties and landraces that have been collected from across the Nordic region and grown for a century, each surviving changes in climate and agricultural practices.





The research into oats will take place over three years.



KEY CEREAL: Research to 'develop robust organic-ready oat cultivars tailored to sustainable organic production' is being led by Dr Joanne Russell.

