

Collaborative Programme Funding CPF II Project Spotlight

Project Spotlight: Making Frozen Plant-Based Steak Taste Better

Project: Maintaining Texture And Flavour In Frozen Mycelium-Based Whole Cut Meat Alternatives To Unlock Commercial Scale Production

Lead Organisation: University of Nottingham

Industry Partner: Adamo Foods

Stream: Proof of Concept 2

Addressing NAPIC Innovation Challenges:

Structuring for Functional and Nutritional Benefits

Enabling Sustainable Bioprocessing at Scale

Acceptability and Accessibility

Can frozen plant-based steak taste just as good as fresh?

As demand for high-quality meat alternatives continues to grow, manufacturers face an important challenge: ensuring products maintain their texture, flavour and quality throughout storage and distribution.

Adamo Foods has developed an innovative mycelium-based steak alternative that closely replicates the fibrous texture and taste of conventional meat. However, like many frozen foods, the product can lose quality during freezing and thawing, making it more difficult to deliver a consistently great eating experience.

This project will develop practical solutions to overcome this challenge by optimising freezing and thawing methods and improving the product formulation to better retain moisture, texture and flavour. Researchers will test a range of commercial freezing technologies alongside natural ingredients that help preserve quality during frozen storage.

The project aims to generate scalable solutions that food manufacturers can adopt to improve the quality of frozen plant-based meat products, helping bring better tasting, more reliable alternatives to supermarket shelves.

By addressing one of the key barriers to consumer acceptance, the project has the potential to accelerate the adoption of whole-cut meat alternatives and support the transition towards more sustainable diets.

Why this matters

- Improves the taste and texture of frozen plant-based meat alternatives.
- Develops practical manufacturing solutions to maintain product quality during storage and distribution.
- Supports retailers and manufacturers by increasing the commercial viability of whole-cut meat alternatives.
- Helps accelerate consumer adoption of sustainable protein products.
- Bridges the gap between research and commercial food innovation.