



Co-creating pulsed based snacks

A UK Innovation Journey

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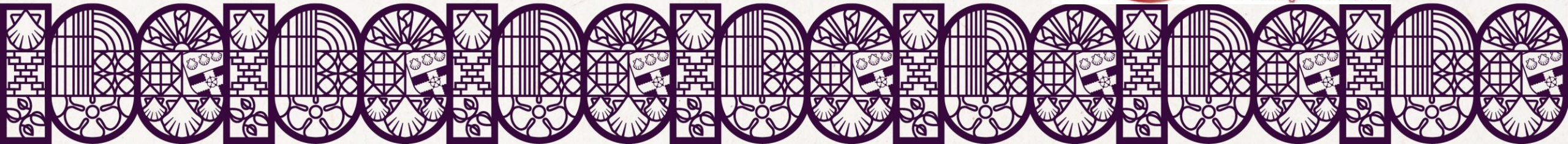
TUKFS Conference, 23 -24 March 2026



Background



- BSc in Food Technology
- PhD in Dairy Science
- Expertise in ingredient functionality, food product development and reformulation
- Food industry & academia career



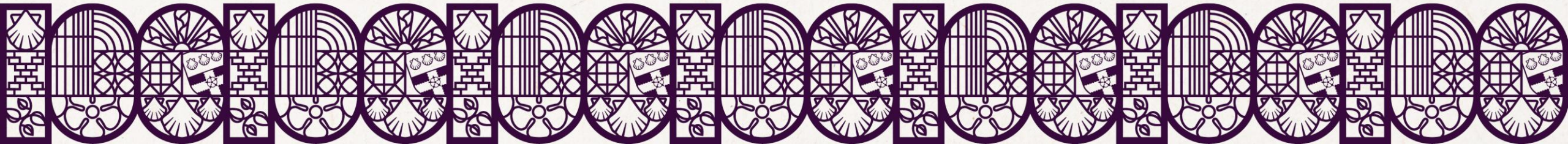
FoodSEqual project

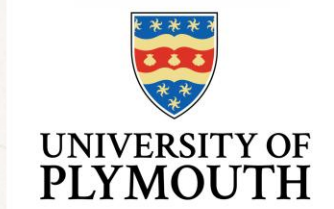
What is FoodSEqual?

The overarching vision of the national FoodSEqual project is:

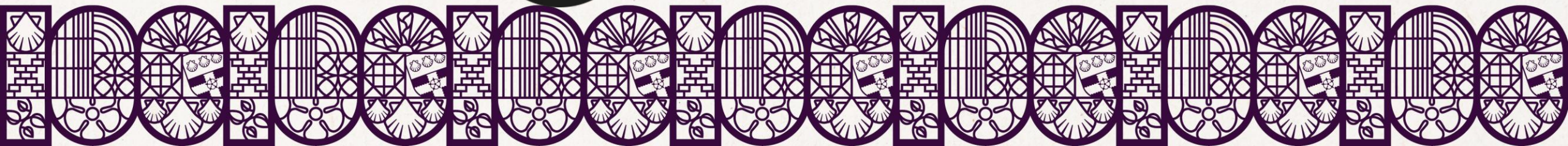
“ To provide citizens of socio-culturally diverse disadvantaged communities with choice and agency over the food they consume, by co-developing new products, new supply chains and new policy frameworks that deliver an affordable, attractive, healthy & sustainable diet.

”





Our partners



Our communities

Whitley, Reading

Suburb of Reading, UK



Tower Hamlets, London

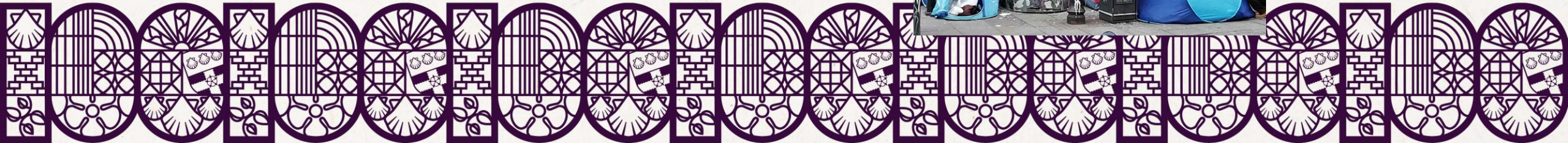


Whitleigh

District area of Plymouth



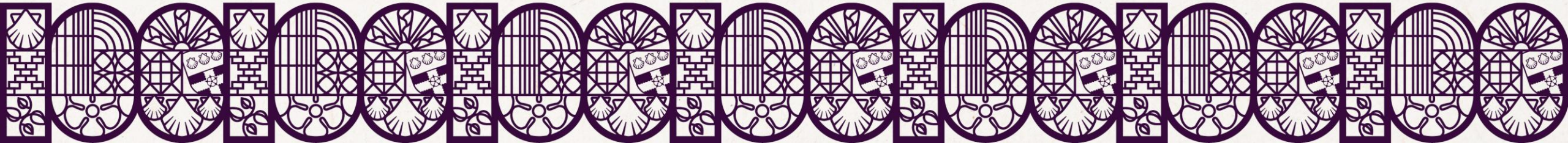
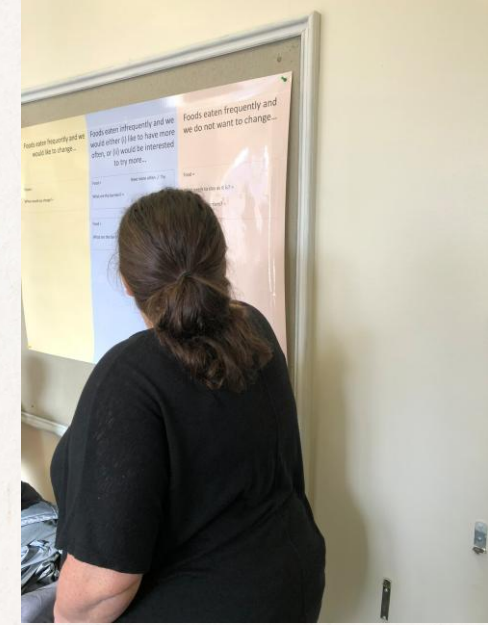
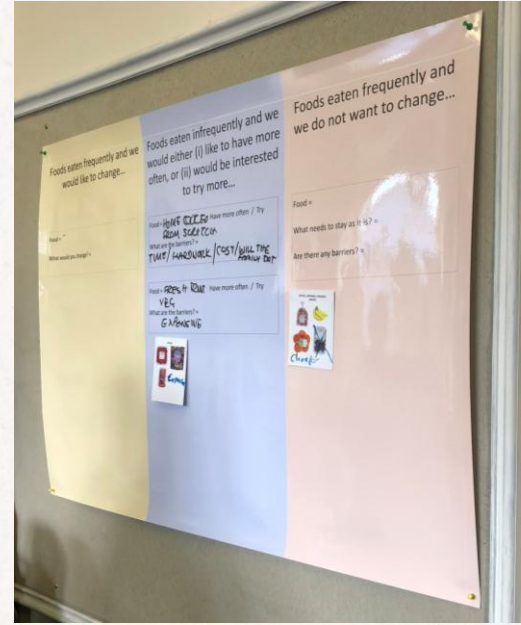
Brighton & Hove, Sussex



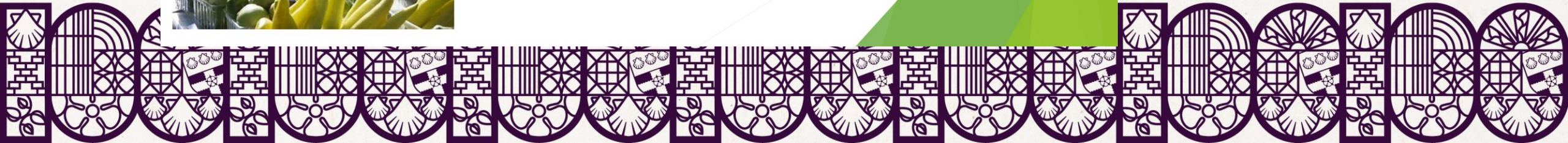
Engagement with communities



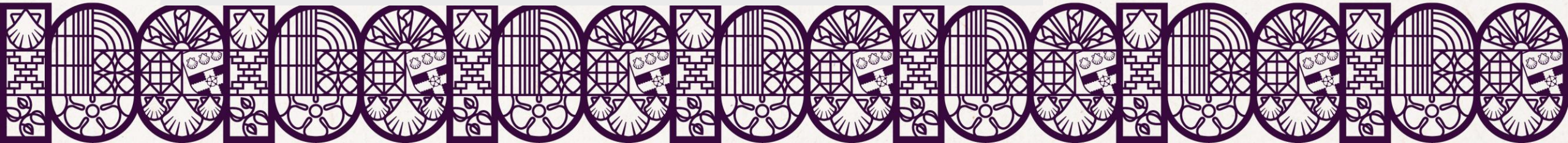
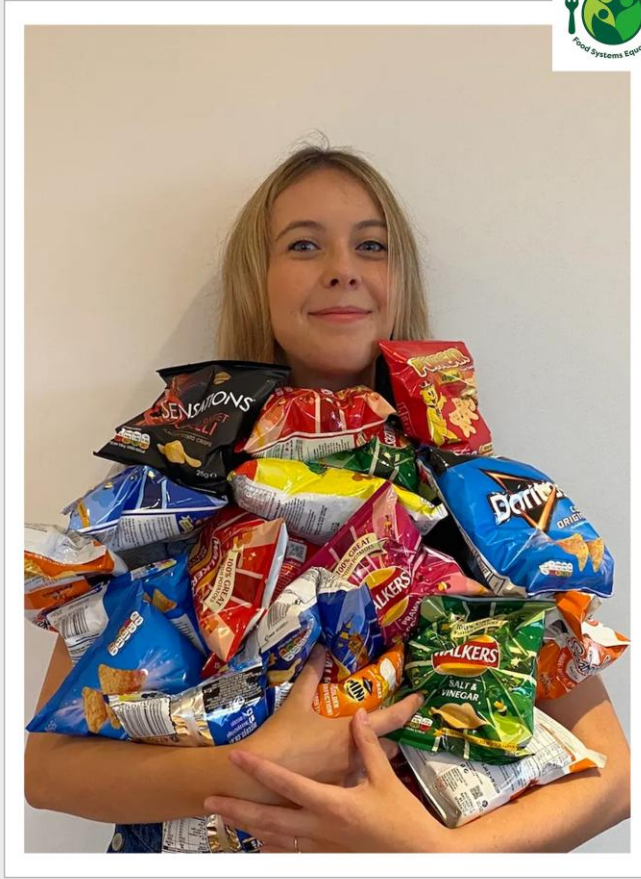
Current diets and aspirations



Desire for change



Time for less crisps

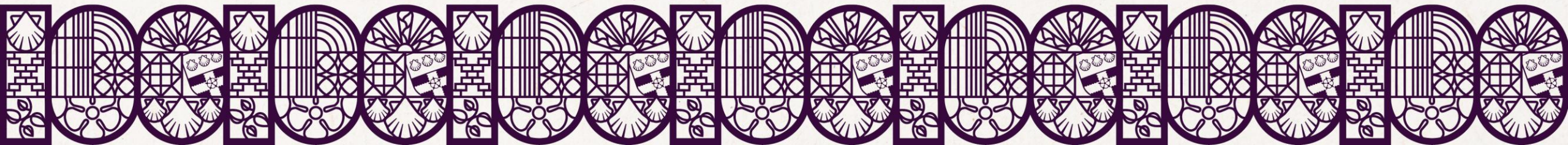


From potato to pulses

Co-created product concept brief



- **Taste: More filling/satisfying**
- **Texture: Crunchy**
- **Main ingredients: Protein/Fruits/Vegetables/Fibre/Lentils**
- **Appearance: Vivid colours, not wet looking food, appealing packaging**
- **Flavour: Strong flavours**





Dry Beans



Lentils



Faba Beans



Dry Peas



Chickpeas



Cowpeas



Bambara Beans



Pigeon Peas

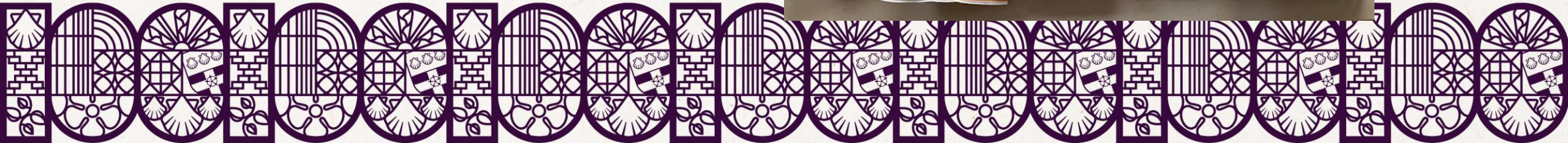


Lupins



Vetches

Pulses & pulse-based snacks

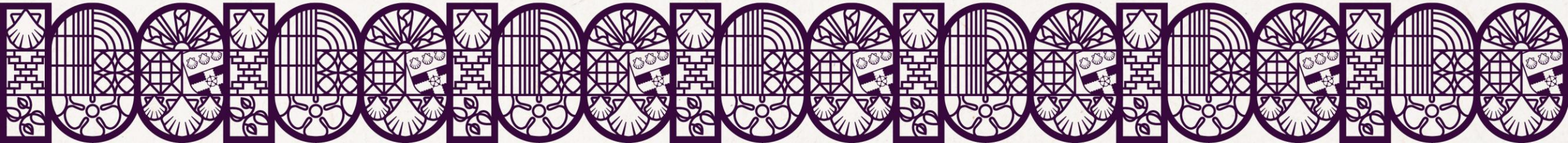


Current market of pulse based snacks

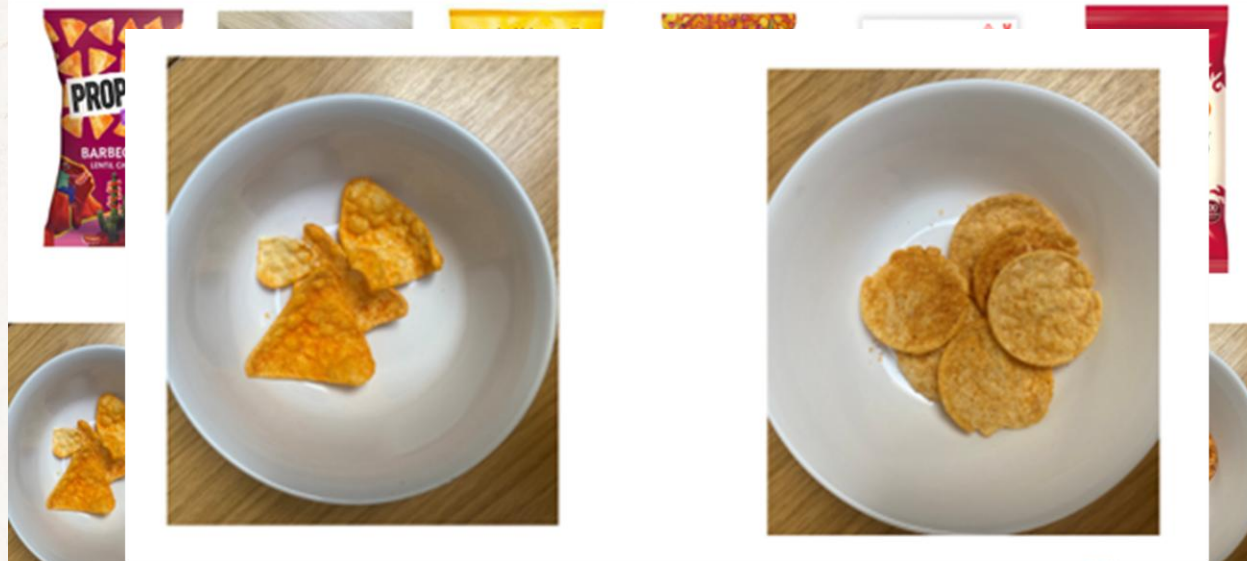
HIGH
PROTEIN

SOURCE OF
FIBRE

But



Consumers prefer pulse based snacks

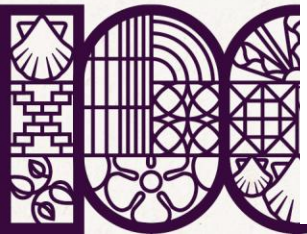


So amazed when I found out what the crisp are made out of it totally blew my mind would love to try more crisps made from this and would definitely like to see all children snacks made out of this ingredient

A very interesting test, it opens you up for more choices of health snacks

Some were good and some were awful 😬

Very insightful didn't realize how tasty pulse's etc can be



Pulse based snack development

Processing methods

Baking
Deep fat frying
Air frying
Extrusion

Ingredient type

Fava (broad beans)
Chickpea
Lupin
Yellow pea
Green pea

Product type

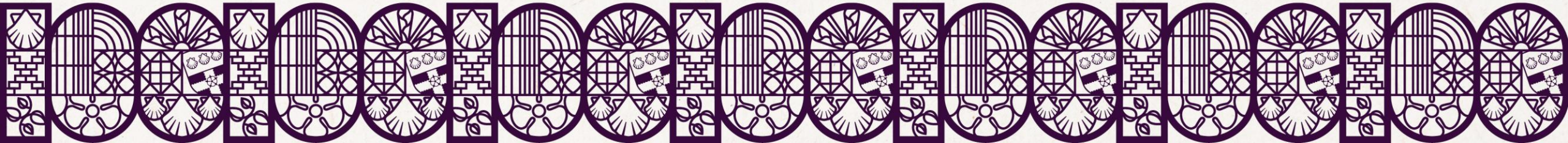
Cracker
Directly expanded snack



A new fava bean snack

Why?

- **Fava is ideal for UK cultivation**
- **Rich in macro & micronutrients**
- **Natural nitrogen fixer**
- **Gap in the UK market**
- **Consumers prefer pulse-based snacks**



A new fava bean snack

Materials

Method

Product

Fava bean,
yellow pea,
green pea
& rice flours

Twin screw
extrusion



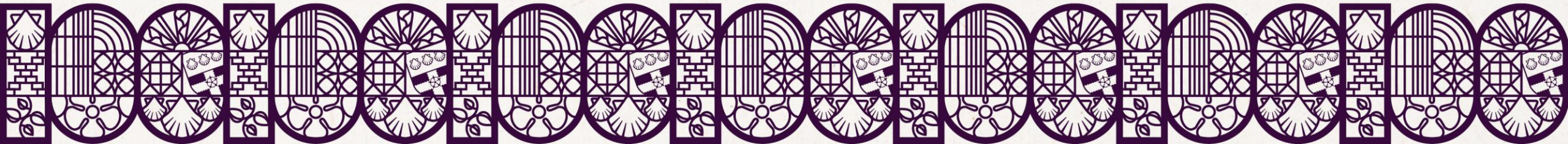
Our snack

- ✓ Can hold protein & fibre claims
- ✓ Is low in fat
- ✓ Is gluten free
- ✓ Contains UK pulses
- ✓ Received positive community feedback



Future work

- ✓ Prototype optimisation
- ✓ Consumer study
- ✓ Commercialisation pathways



100 YEARS  **1926**
2026
UNIVERSITY OF READING

Thank you!

