

CASE STUDY

UPP-ing the Burger Game

How heirloom butter beans and upcycled fibre deliver a juicier, mindful blend.



Learn more at upp.farm/casestudies

Meet the cast

The upp logo consists of the word "upp" in a lowercase, rounded, green sans-serif font, centered within a white circle.

UPP transforms underutilised brassica crops into sustainable protein and fibre ingredients for food manufacturers. Through its harvest-to-ingredient platform, UPP helps brands improve nutrition, reduce emissions, and lower costs. Its ingredients are designed to integrate seamlessly into existing products without compromising taste or texture.

The fiba logo consists of the word "fiba" in a lowercase, rounded, green sans-serif font, centered within a white circle.

Fiba™ is UPP's upcycled brassica fibre ingredient, designed to increase fibre content in everyday foods. It enables manufacturers to improve nutritional value while maintaining consumer-preferred taste and texture. Clean-label and allergen-free, Fiba™ delivers a practical route to healthier, more sustainable products.

The Bold Bean Co logo features the words "BOLD BEAN CO" in a stylized, hand-drawn font inside a yellow circle.

Bold Bean Co is on a mission to make the world obsessed with beans by sourcing the highest-quality, best-tasting legumes. By championing heirloom varieties and expert sourcing, they help food brands and chefs elevate dishes naturally, proving that sustainable, plant-based foods can lead on flavour and premium quality.

The logo for Bold Bean Co's Queen Butter Beans features the words "BOLD BEAN CO" in a stylized font inside a yellow circle, with a yellow banner below it reading "QUEEN BUTTER BEANS".

Bold Bean Co's Queen Butter Beans are specially selected heirloom butter beans, renowned for their exceptionally creamy texture, thin skins, and rich flavour profile. Functionally, they act as an excellent natural bulking agent and fat-mimetic in meat blends, seamlessly boosting fibre and moisture while lowering saturated fats.

**"The future of food is built on better ingredients,
not better intentions"**

UPP-ing the Burger Game

Overview

This project assessed the ability of Fiba™ and Bold Bean Co Queen Butter Beans to improve the nutritional profile of a beef burger—a staple of the UK meat and barbecue market—while preserving the juicy sensory characteristics expected from a premium traditional patty. The findings demonstrate how ingredient collaboration can support healthier, more sustainable meat-reduction (hybrid) development without compromising bite or flavour.

Background & objectives

As consumer demand grows for healthier, more sustainable, and clean-label meat options, manufacturers are seeking ways to reduce meat content without compromising quality. This project evaluated blending UPP Freya's upcycled brassica fibre (Fiba™) and Bold Bean Co's premium Queen Butter Beans into an 20% fat beef mince burger.

The aim was to enhance nutritional value, naturally lower saturated fats, and maintain the exact eating experience consumers expect.

The product

The product featured in this study was a blended beef burger. The UPP and Bold Bean Co enhanced formulation incorporated an 20% fat beef mince base (70%), blended with Fiba™ (15%) as a structured fibre inclusion and Bold Bean Co Queen Butter Beans (15%) to add creaminess and volume. The objective was to improve the product's nutritional credentials (slashing fat and boosting nutrients) while preserving a juicy, familiar burger bite.

(1) Source: <https://www.mrketresearch.com/GlobalData-v3648/United-Kingdom-UK-Ready-Meals-39462472/>

Burger concepts captured over 30% of the UK quick-service restaurant market size, highlighting a massive commercial window for premium, clean-label hybrid meat reformulation. (1)

Implementation & next steps

Implementation strategy

- Replaced 30% of the core beef mince content with a 1:1 ratio of Fiba™ (15%) and Bold Bean Co Queen Butter Beans (15%) to increase fibre and lower total fat.
- Utilised the natural moisture and creaminess of Queen Butter Beans alongside the structural hold of Fiba™ to replicate the mouthfeel and juiciness of a high-fat beef patty.
- Maintained standard burger forming, chilling, and cooking processes to ensure seamless integration into existing manufacturer supply chains.
- Evaluated nutritional, sensory, and functional performance against a 100% beef mince control recipe.

Conclusion

The UPP & Bold Bean Co enhanced burger successfully demonstrated that significant nutritional improvements can be achieved without compromising the satisfying taste, juicy texture, or appearance of a traditional beef burger. The reformulated hybrid patty delivered stronger nutritional credentials, added clean-label plant protein and plant nutrients, and fully maintained the premium eating experience.

Next steps

- Validate performance through consumer sensory testing and larger-scale production trials.
- Explore further optimisation of fibre enrichment and nutritional positioning.
- Assess application across additional ready meal and meal centre formats.
- Develop a roadmap for commercial implementation and on-pack claim activation.

Metric	Key Result
Fibre	Boosted from 0% to 1.8g per 100g
Nutrition	-23% kcal, -29% fat, -30% saturates
Claims	Source of Protein, "Boosted Fibre," Low Sugar

Appendix [1]

Product makeup

- **113.5g Burger Pattie**
 - **Control: 100% 20% Beef Mince**
 - **Hybridised Burger: 70% 20% Beef, 15% Fiba, 15% Queen Butter Beans**

Upp-graded

QUID: Beef Mince (20% Fat) (70%),
Fermented Broccoli Fibre (15%), Queen
Butter Beans (15%)

Control

QUID: Beef Mince (20% Fat),

Functional & sensory evaluation

Attribute	Control	Upp-graded
Texture	• Firm, meaty bite, typical chew of an 20% fat burger.	Juicy, excellent moisture retention (thanks to the beans), firm bite and good structure (thanks to Fiba™) without being crumbly or mushy.
Flavour	Rich, savoury, forward beef flavour.	Flavour (Upp-graded): Strongly savoury and beef-forward; the butter beans and Fiba™ carry the beef notes with with no noticable overt brassica or bean-like aftertastes.



Appendix [2]

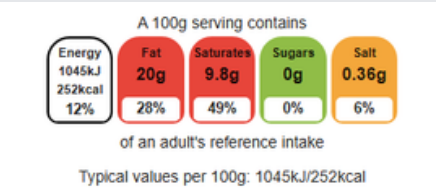
Nutritional attributes – calculated using NutriCalc (2)

Nutritional comparison (per 100g)

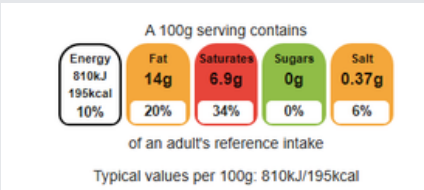
	Control	Upp-graded	Variance	% Change
Energy kcal	252	195	-57	-23%
Energy KJ	1045	810	-235	-22%
Protein	18.4	13.9	-4.5	-24%
Fat	19.8	14.1	-5.7	-29%
Of which saturates	9.8	6.9	-2.9	-30%
Carbohydrates	0	2.4	2.4	N/A- Boosted to 2.4g per 100g from 0
Sugars	0	0.2	0.2	N/A- Boosted to 0.2g per 100g from 0
Fibre	0	1.8	1.8	N/A- Boosted to 1.8g per 100g from 0
Salt	0.36	0.37	0.01	3%

Front of pack nutritional messaging comparison

Control



Upp-graded



Claims & positioning (3)

- Control Potential Claims: High Protein, Low sugar
- UPP-Graded Potential Claims: High Protein, Low Sugar, "Boosted" Fibre

(2) Nutritional Data Disclaimer: Nutritional profiles generated via theoretical calculation using NutriCalc® software and have not been verified by laboratory testing. Actual nutritional content may vary due to natural ingredient fluctuations, supplier differences, and physical changes during manufacturing
(3) Based on UK/EU Regulation (EC) No 1924/2006

upp[™] freya[™]

SERVING THE PLANTERS, PRODUCERS
PEOPLE & THE PLANET



Learn more at
upp.farm/casestudies