Biospringer by Lesaffre

Yeast Protein: Optimizing Nutrition, Elevating Product Performance

Complete nutrition, clean taste and versatile protein fortification

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BRIDGE2FOOD EUROPE
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01

The New Protein Expectation

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Protein has moved from niche to mainstream.

34% actively seek **functional foods**

57% actively **increase protein content**

80% of consumers globally **pay attention to protein in their diet**

84% believe **natural ingredients** provide multiple health benefits

1 - Innova Consumer Survey 2026-global

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02

The Challenge

The Challenges

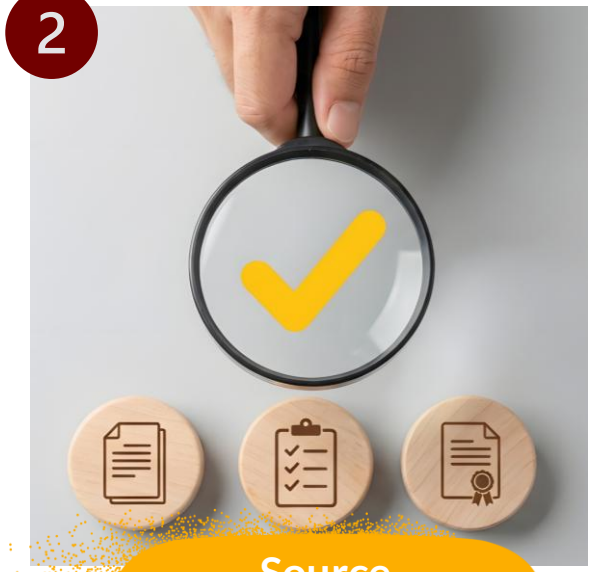
Demand for high-quality protein is accelerating

Global Consumers' Top Features for Quality Protein:

1

High in protein

2



Source transparency

3

Clean features

4

Natural or minimally processed

1-Innova New Product Launches database (including reformulation) - Period: 2023-2025

03

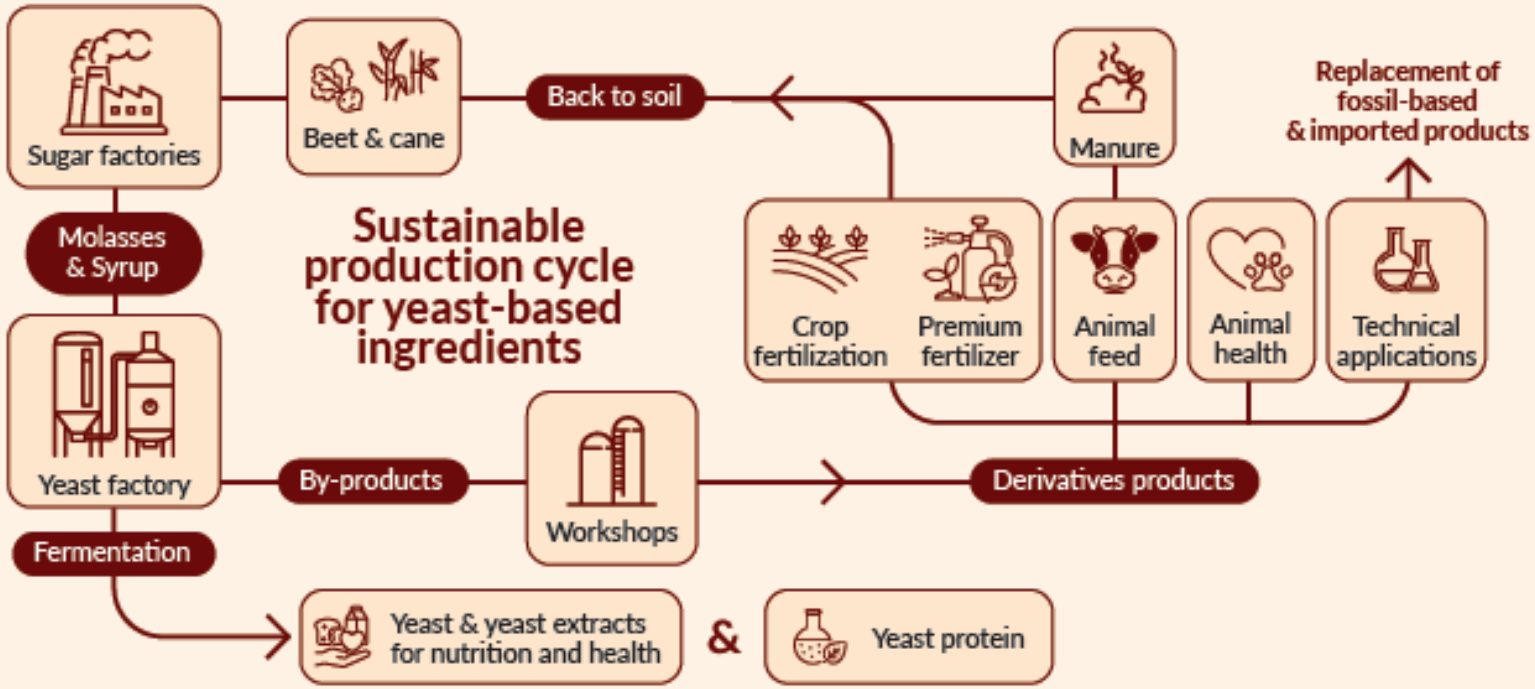
Introducing Springer Proteissimo®

Springer Proteissimo®

From natural yeast fermentation to sustainable protein ingredients

A next-generation yeast protein solution, produced through controlled fermentation, ensuring:

- Consistent composition
- High protein quality
- Sustainable production cycle



Springer Proteissimo®

A complete and highly bioavailable protein

- Naturally **rich in essential amino acids**
- Includes **branched-chain amino acids** (BCAAs)
- Supports **muscle metabolism** and recovery pathways
- **High digestibility** and physiological tolerance
- Suitable for **allergen-free** and **low FODMAP formulations**

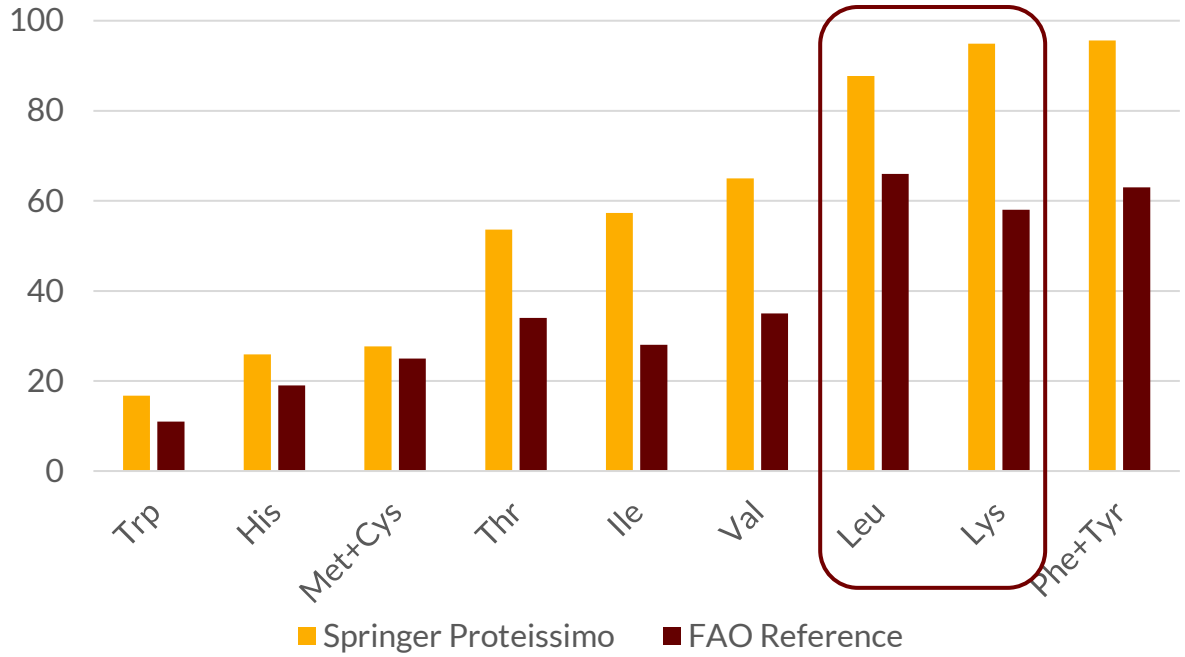
Springer Proteissimo® Delivers Complete and Highly Digestible Protein

A fermentation-derived protein with a balanced amino acid profile

- All 9 essential amino acids
- High BCAA (>21%)
- High EAA (>47%)
- PDCAAS =1
- DIAAS >1

Versus PDCAAS
SOY (0.86-1) | PEA (0.62- 0.93) | WHEAT (0.42-0.57)

Leucine *Key amino acid for muscle protein synthesis*
Lysine *Often limiting in plant proteins*



**These values are given for indicative purposes only*
- Protein content: +/- 5% scale based on average results obtained to date.*
- EAA: Essential Amino Acids for 100g protein

Proteissimo provides a complete protein comparable to many other proteins while remaining vegan and allergen-free.

Comparable Gastrointestinal Digestibility to Whey & Casein

Model: Simulated human gastrointestinal digestion (oral → gastric → intestinal phases)

① Gastric Phase (0–120 min)

- Whey = rapid digestion (fast protein)
- Casein = slower, coagulating protein
- **Yeast protein shows progressive hydrolysis profile**
- No delayed breakdown vs dairy

② Intestinal Phase

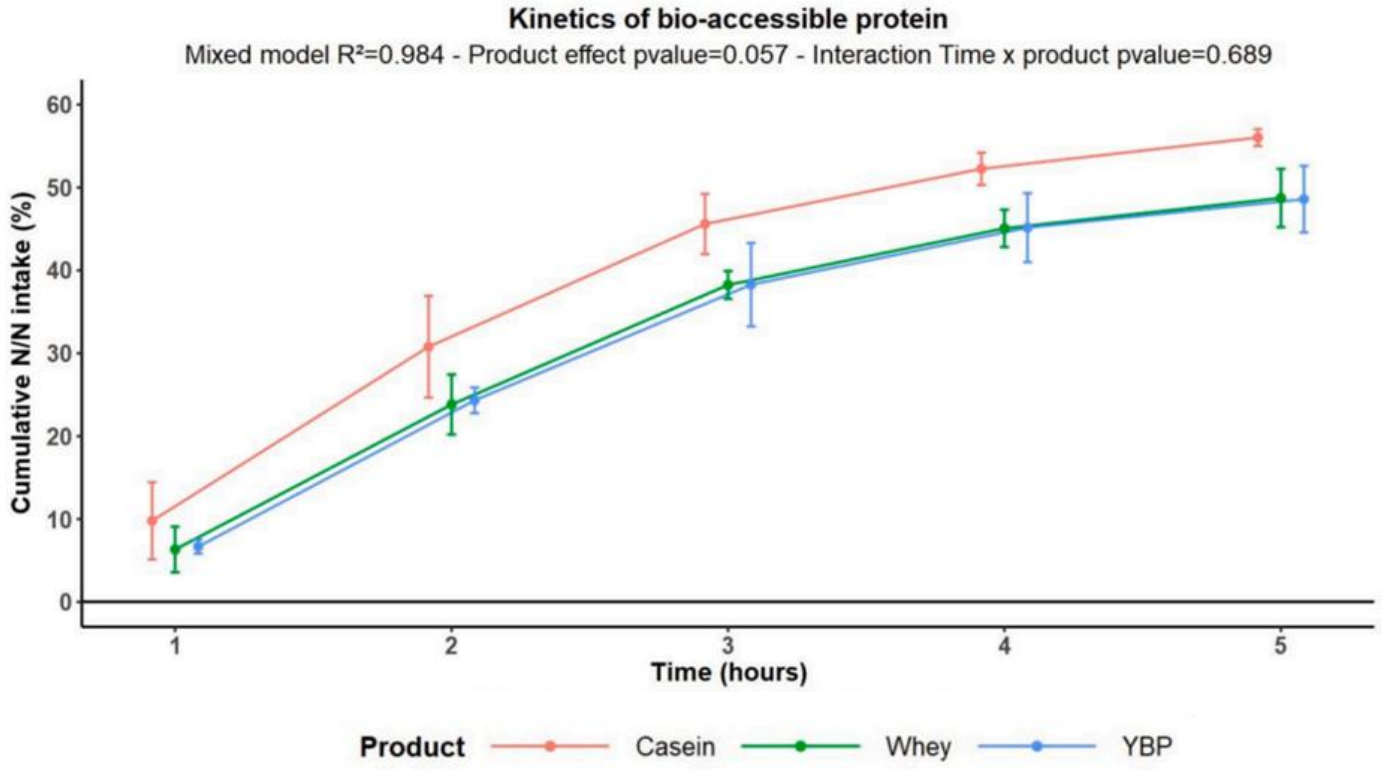
- Amino acid release from yeast protein

→ **Comparable to whey by end of intestinal digestion**

- Final digestibility plateau similar to dairy proteins

③ Ileal Digestibility

- High recovery of indispensable amino acids
- Consistent with DIAAS >1



Yeast protein is neither inferior nor limited in enzymatic accessibility.
Its digestion kinetics are in the same physiological window as whey and casein.

Source: *In vitro human gastrointestinal digestibility and colonic fermentation of edible yeast-based protein: A comparative study with whey and casein - ScienceDirect*

Digestive Sensitivity is a Growing Consumer Concern

Consumers increasingly look for foods that are easier to digest

MONASH UNIVERSITY LOW FODMAP CERTIFIED™

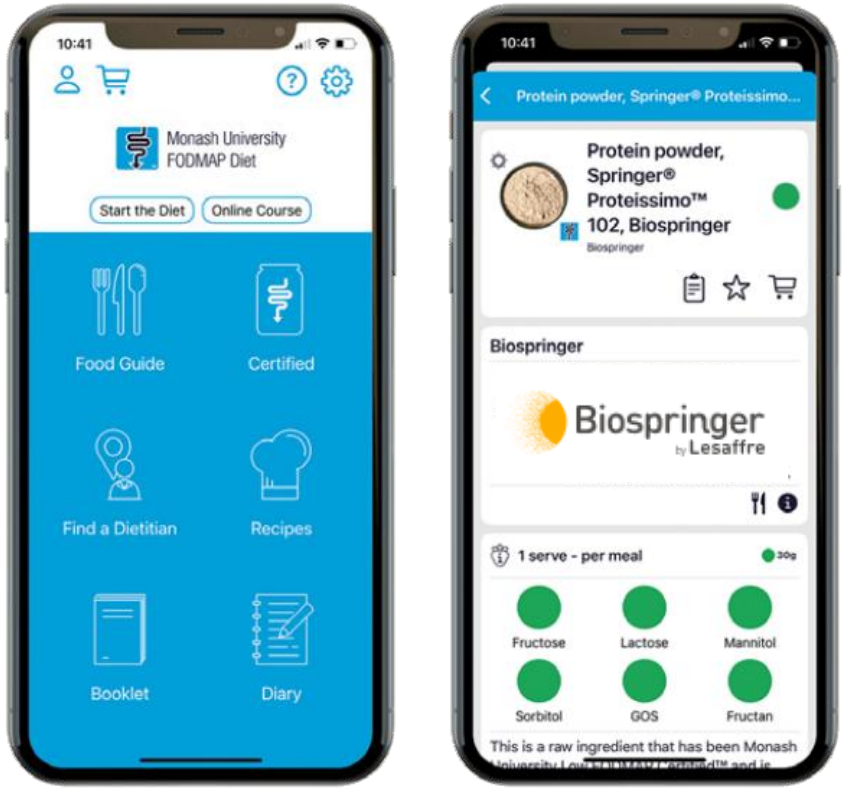
What is IBS ? *(Irritable Bowel Syndrome)*

- Certain carbohydrates are difficult to digest
- People with IBS experience stronger reactions to hard-to-digest foods
- Up to **1 in 7 consumers** experience IBS-related digestive discomfort

Market Opportunity: Appeals to consumers with **digestive sensitivities** (10-15% of the population).

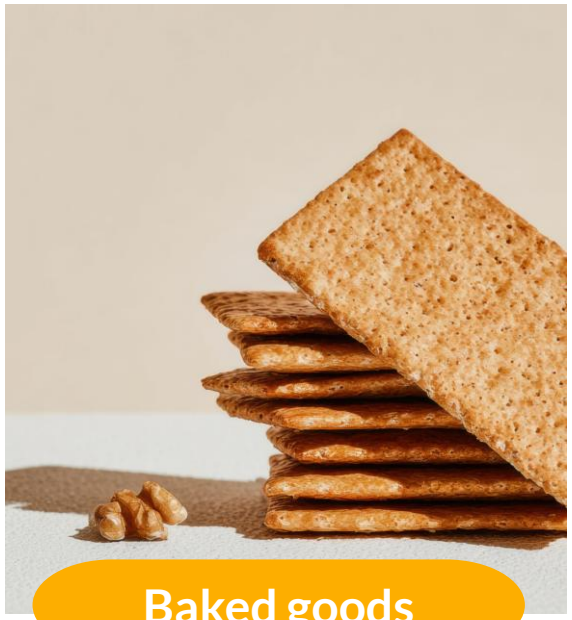
Consumer Trust: Monash certification provides scientific credibility

Competitive Differentiation: Springer Proteissimo® 102 is **gut-friendly alternative** to many plant proteins.



Functional & Sensory Performance

Multi-benefits for diverse applications

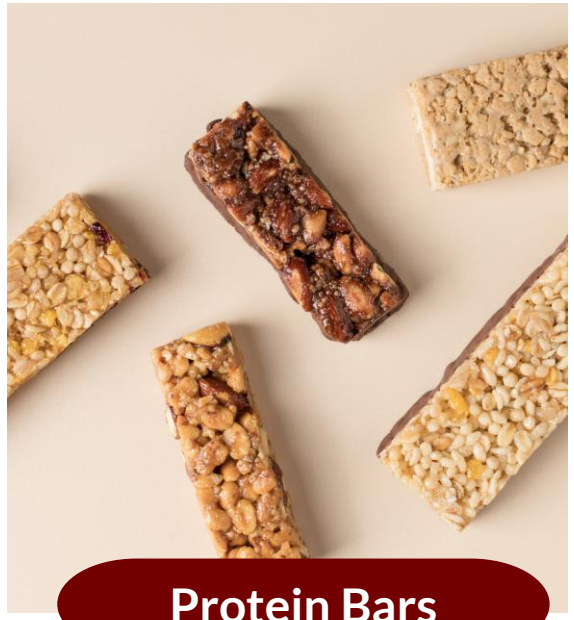


Baked goods

- Enable **high-protein nutritional claims**
- Improve the **nutritional profile**
- Maintains **clean flavor profile**

Protein Shakes

- Maintain **clean flavor profile**
- Enable **hybrid protein formulation**
- **Complete protein** *(all 9 essential amino acids)*



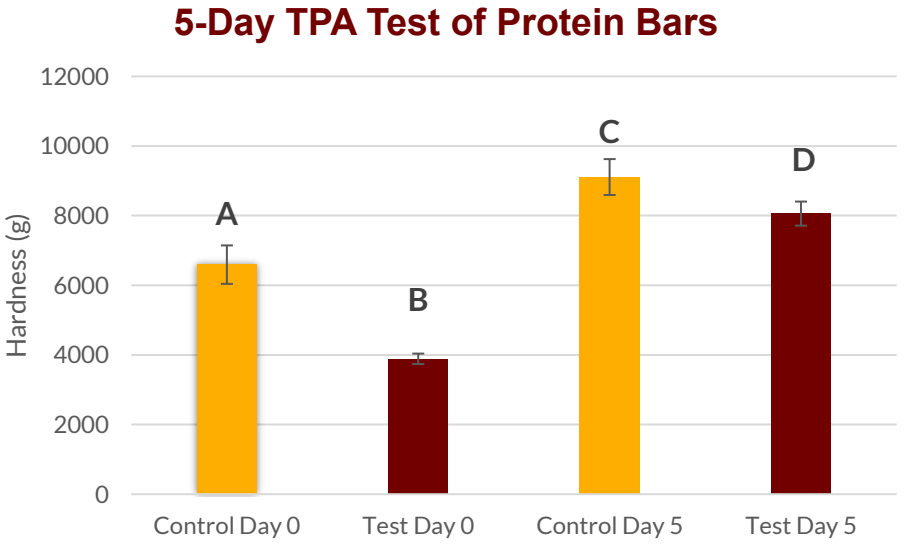
Protein Bars

- **Prevents bar hardening** over time
- Maintains **soft texture and chewiness**
- **Neutral taste** profile

Texture Profile Analysis: High-Protein Bar Filling

Results

Ingredients	Control (%)	Test (%)
Inulin Syrup	33.43	33.43
Pea Protein	27.90	20.90
Unsweetened Chocolate	20.00	20.00
Deodorized Coconut Oil	10.00	10.00
Glycerin	8.00	8.00
Caramel Flavor	0.60	0.60
Stevia	0.07	0.07
Springer® Proteissimo 102	-	7.00
	100.00	**100.00**



Test: ANOVA, Kruskal-Wallis

Texture analyzer TA.Xt plus

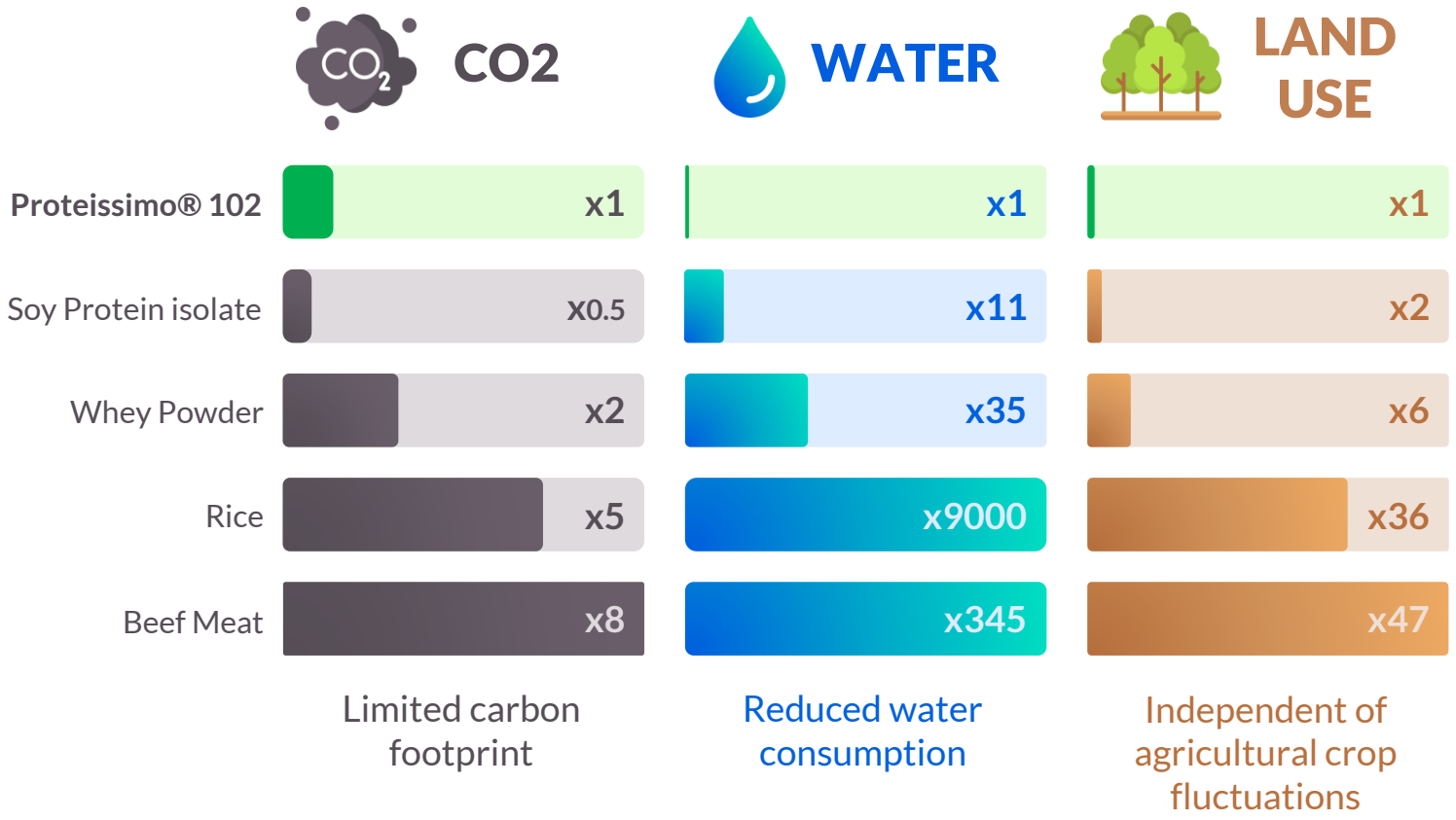
Day 5 results ➔ 7% Proteissimo 102 reduced hardness by 12% versus control.

04

Sustainability Advantage

A Low-Impact Protein

Significantly lower carbon, water and land footprint vs traditional protein sources



Fermentation Advantages

Converts simple nutrients efficiently into **protein**

Stable production independent of agriculture or climate

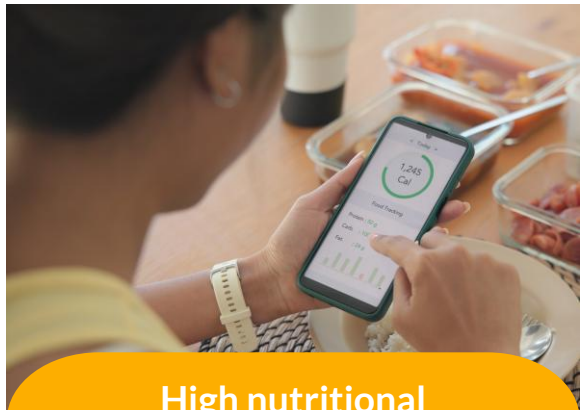
Lower water and **land requirements** than traditional proteins

Fermentation enables protein production with significantly lower environmental resource requirements.

Source: LCA of Proteissimo 102- EcoAct - December 2024

Unlocking Innovation
Enabling the next generation of protein products

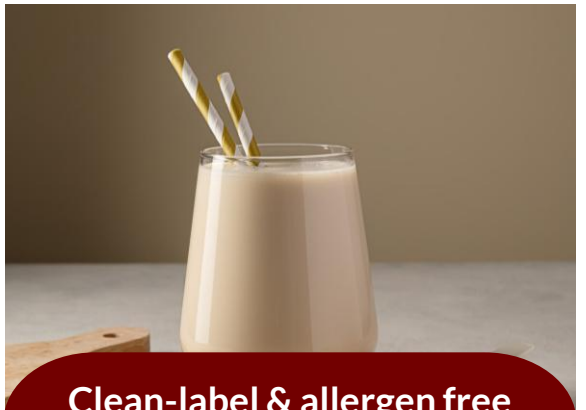
Springer Proteissimo® supports brands in delivering:



High nutritional performance

Superior sensory acceptance

Vegan & Sustainable protein positioning



Clean-label & allergen free formulation strategies

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Thank you