

# ENOUGH<sup>®</sup>

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**Press release ENOUGH BV - *Embargoed until 00:01 BST, 20 September 2022***

*Making protein sustainable by making the most scalable and sustainable source of protein - One Earth needs to be ENOUGH*

## GAME CHANGING SCALE FOR NON-ANIMAL PROTEIN

**Glasgow (UK) / Zeeland (NL) – September 16, 2022** ENOUGH announces the completion of its Flagship facility to add game-changing additional capacity to the protein market.

Exactly one year after breaking ground, food tech company ENOUGH (formerly 3F BIO) celebrates the completion of the construction phase of one of the world's largest protein facilities.



Livestock farming represents 15% of all GHG emissions and with protein consumption forecast to double in the next 30 years, a protein transition is crucial to meet the protein gap sustainably. Producing vast quantities of delicious, nutritious and SUSTAINABLE protein is one of the most urgent global priorities, and relative to other companies in this sector ENOUGH's focus is on adding capacity to support the pace and scale of the required protein transition.

With initial capacity to produce 10,000 tonnes (22 million pounds) per annum from Q4 2022, the 15,000 square metre (160,000 square feet) facility is co-located alongside the Cargill facility in Sas van Gent in the Netherlands. The location and collaboration with Cargill ensures the most efficient feed source and supports the zero-waste advantages of ENOUGH's product.

ENOUGH's plans target 60,000 tonnes of capacity by 2027, equivalent to growing one cow's worth of protein every two minutes. This is wholly aligned with the development of the Circular Economy and the new facility has been supported by the circular Bio Based Europe Joint Undertaking CBE JU with receipt of €16.9 million of EU funding as part of project [Plenitude](#)<sup>1</sup> which involves partners from the full value chain.

**Jim Laird, CEO of ENOUGH** said "ENOUGH's aim is to grow capacity for sustainable non-animal protein sources in line with needs of the market. There are multiple forecasts about the pace of potential market growth and at this time the constraint on growth is a supply chain challenge of providing high quality protein sources at scale that can make delicious foods."

ENOUGH grow ABUNDA<sup>®</sup> mycoprotein by fermenting fungi using renewable feedstocks to make the most sustainable source of food protein. The role of fermentation as an advantaged means of growing protein to meet

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<sup>1</sup> This project has received funding from the circular Bio-based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No 838104.

the needs of a growing global population has been increasingly highlighted. The World Economic Forum quotes: “Fermentation presents an opportunity to fundamentally change the way the world eats and improve global human and environmental health and the economy.”

ENOUGH’s process is readily scalable to use any locally grown feedstock and the company’s medium term goal is to grow over 1 million tonnes cumulatively by 2032. To do so will require over 300k tonnes of annual capacity and ENOUGH anticipate that this will be in a minimum of 3 locations, close to both feedstocks and consumers.

The impact from switching 1M tonnes from animal sources to ABUNDA is the equivalent of replacing 5 million cows, or over 1.2 billion chickens, and reducing more than 6 million tonnes of CO2 emissions or the equivalent of planting >30 million trees.

**Andrew Beasley, Commercial Director of ENOUGH** said “As a B2B supplier of a nutritious whole food ingredient, rich in protein and fibre, we support food companies to produce not only delicious and sustainable foods, but healthy and nutritious too. This is fundamental to the continued growth of the sector, permitting the switch to non-animal proteins. The use of minimal processes and short ingredient lists will give confidence to businesses, retailers and consumers alike and is important to the further growth of the sector.”

**Nicoló Giacomuzzi-Moore, CBE JU Executive Director** attended the ribbon-cutting event to commemorate this key chapter of ENOUGH and Plenitude: “**Today’s inauguration of Plenitude’s plant demonstrates Europe’s leading role in supporting bio-based innovations in the world.** The ABUNDA mycoprotein produced in PLENITUDE’s first-of-its-kind facility uses a zero-waste process to offer consumers a sustainable and affordable meat alternative, while taking pressure off ecosystems and natural resources. The CBE JU support to this project has helped to reduce capital costs and boost technological efficiency of the plant. I would like to congratulate ENOUGH and the project partners with this important milestone and thank them for their contribution to the local economy and EU’s climate targets. We look forward to continuing supporting the consortium in this key endeavour”.

ENOUGH’s vision is fully aligned with consumers desires to shift towards a more sustainable diet. The plant built in the Netherlands also supports the Dutch Government’s National Protein Strategy and its efforts to cultivate alternative protein sources, including microbial proteins and cultured meat.

ENOUGH also contributes to green job creation in the region as it currently employs 30 people directly and many more in the supply chain, with significant expansion plans.

**Franck Monmont, Managing Director for Cargill’s Starches, Sweeteners and Texturizers business in Europe** added: “As global demand for protein continues to rise, this collaboration with ENOUGH serves as another avenue to help realize our mission of nourishing the world in a safe, responsible and sustainable way. At Cargill, we are committed to bringing alternative and traditional protein source options to the table. We see ENOUGH’s mycoprotein as a valuable and sustainable alternative source of protein and are looking forward to our collaboration in the years to come.”

#### **Sustainable Leadership and Partnerships**

As a sustainable food ingredient company, ENOUGH believes that to address the urgent need for large scale volumes of healthy and sustainable protein via collaboration.

- As part of this we look forward to participating at COP27 in November of this year, where ENOUGH will be one of 4 food companies supporting one the first ever food pavilions at a COP.
- We will also be participating at SIAL Paris in October, Plant Based World London in November and Food Ingredients Europe in December.

Building on the announcement today, ENOUGH will be in a position to commence first sales from December of this year and thank all our current and potential commercial partners for their support.

**END**

## Notes to editors

### About ENOUGH

ENOUGH (formerly 3F BIO) is a food-tech company with technology to grow the most sustainable source of food protein.

ENOUGH are pioneering high scale sustainable protein production, to tackle the combined issues of feeding a growing global population and the unsustainable impact of traditional protein farming.

ENOUGH has an R&D centre based in Scotland which it refers to as the Farm and Kitchen. The Farm is a scale down version of its industrial scale process which produces ABUNDA as well as permitting the company to explore other innovations. The development Kitchen helps ENOUGH to develop foods and techniques to share with commercial partners.

ENOUGH has built a first of its kind protein factory which will initially produce 10,000 tonnes per annum and which targets producing over a million tonnes by 2032. ENOUGH's 15,000 square metre (160,000 square feet) facility is located in the Netherlands. The plans are supported and have received funding from the Bio-Based Industries Joint Undertaking within the European Union's Horizon 2020 research and innovation programme under grant agreement No 838104-Plenitude.

The Company has a team of over 50, spanning 14 nationalities, located in Scotland, England and the Netherlands. For more information about ENOUGH, please visit <http://www.enough-food.com>.

### About Plenitude

The Plenitude project is coordinated by ENOUGH and supported by nine other partners. They strive to meet the growing demand for proteins in the world with sustainable production.



Figure 1 Simplified Process to make ABUNDA with zero-waste



Figure 3 Plenitude Consortium

For media enquiries, please contact:

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## The Market for Alternative Protein

Recent research<sup>1</sup> suggests that Europe and North America will reach “peak meat” by 2025, at which point consumption of conventional meat starts to fall. The global meat-free sector is expected to hit US\$290 billion in 2035, by which point there will be “realistic alternatives” for nine out of ten of the world’s favourite dishes. The report from the Boston Consultancy Group, predicts that the market for alternative proteins will grow from the current 13 million metric tons a year to 97 million metric tons by 2035, when it will make up 11% of the overall protein market in our base case scenario. Faster technological innovation and full regulatory support could speed growth to 22% of the market by 2035.

## The role of Fermented Foods

As the population grows towards 9 billion, there is wide recognition that demand for protein will grow by c.60% to >800 M tonnes by 2050 and there is therefore high levels of investment in protein sources that can provide an alternative to the animal including insects, cultured meat and fermented protein. Fermentation is increasingly recognised as the best option as a “protein powerhouse” to make foods that taste as good or better and cost the same or less than the animal alternative. A 2020 annual report from GFI highlighted 51 companies who are active in growing protein with fermentation, with >\$585M raised in 2020, greater than 50% of all-time sector funding.

ENOUGH grows non animal protein by fermenting fungi using renewable feedstocks to grow the most sustainable source of food protein. This produces ABUNDA<sup>®</sup> mycoprotein, a complete food ingredient containing all essential amino acids as well as being high in dietary fibre. It is versatile and can be made into alternative/vegan meat, seafood and dairy products. The company will supply ABUNDA as a B2B (business to business) food ingredient to consumer brands and retailers, addressing the need for high scale supply of healthy and sustainable protein to address a rapidly growing market.

### FOR MORE INFORMATION PLEASE VISIT:

- [Enough-Food.com – Sustainable Protein \(enough-food.com\)](https://enough-food.com)
- [About BBI JU | Bio-Based Industries - Public-Private Partnership \(bbi-europe.eu\)](https://bbi-europe.eu)
- For further information please contact: [media@enough-food.com](mailto:media@enough-food.com).
- For Press only, please contact: [Andrew.Beasley@enough-food.com](mailto:Andrew.Beasley@enough-food.com)

### OTHER SOURCES

1. Announcement re offtake volume with M&S  
[M&S and 3F BIO collaborate for mycoprotein vegan range \(foodnavigator.com\)](https://www.foodnavigator.com/Article/2021/03/23/M&S-and-3F-BIO-collaborate-for-mycoprotein-vegan-range)
2. Announcement re collaboration with Unilever  
**The Times** - [Unilever launches new foray into the meat-free market](https://www.thetimes.co.uk/story/unilever-launches-new-foray-into-the-meat-free-market-2021-03-23)  
**The Grocer** - [Unilever challenges Quorn through tie-in with mycoprotein specialist Enough](https://www.thegrocer.co.uk/news/unilever-challenges-quorn-through-tie-in-with-mycoprotein-specialist-enough/2021-03-23)  
**Food Navigator** - [Unilever partners with mycoprotein supplier ENOUGH on ‘game changing’ protein innovation](https://www.foodnavigator.com/Article/2021/03/23/Unilever-partners-with-mycoprotein-supplier-ENOUGH-on-game-changing-protein-innovation)  
**Vegconomist** – [Unilever Partners With ENOUGH to Provide Zero Waste Mycoprotein for The Vegetarian Butcher](https://www.vegconomist.com/news/unilever-partners-with-enough-to-provide-zero-waste-mycoprotein-for-the-vegetarian-butcher/)
3. Announcement of Series B  
[ENOUGH closes €42m funding round to ‘maximise the pace of growth’ \(foodnavigator.com\)](https://www.foodnavigator.com/Article/2021/03/23/ENOUGH-closes-42m-funding-round-to-maximise-the-pace-of-growth)  
[ENOUGH raises €42m \(\\$51M\) Series B to supercharge sustainable protein - Duurzaam Financieel \(duurzaam-beleggen.nl\)](https://duurzaam.beleggen.nl/enough-raises-42m-51m-series-b-to-supercharge-sustainable-protein)  
[ENOUGH Raises €42M to "Transform Protein Production" With Mycoprotein - vegconomist - the vegan business magazine](https://www.vegconomist.com/news/enough-raises-42m-to-transform-protein-production-with-mycoprotein)  
[Mycoprotein specialist Enough raises €42m to fund rapid growth | News | The Grocer](https://www.thegrocer.co.uk/news/enough-raises-42m-to-fund-rapid-growth)
4. 3F BIO made with EIT Foods to explain the process

<https://www.foodunfolded.com/videos/mycoprotein-protein-made-out-of-fungi-sustainable-alternative-proteins>

5. 3F BIO made with EIT Foods – company overview

[3F BIO - EIT Series - Fighting for the Future of Food - YouTube](#)

6. EIT Food How Biotech is Becoming a Disruptive Force in Food – Jim Laird Podcast

[https://youtu.be/qXpvgOSh\\_nk](https://youtu.be/qXpvgOSh_nk)

7. EIT Alternative Proteins (April 2021)

<https://we.tl/t-kuUxRkK8mW>

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<sup>1</sup> Food for Thought: The Protein Transformation (2021), Boston Consulting Group and Blue Horizon Corporation