# Meatly cuts cultivated pet meat costs towards chicken parity with groundbreaking bioreactor and culture medium



British pet food startup Meatly has made significant strides in reducing the costs associated with cultivated meat, edging it closer to parity with conventional chicken prices. This advancement is notable given the ongoing challenges faced by the cultivated meat sector, particularly those relating to cost and mainstream consumer acceptance. With recent breakthroughs in both bioreactor technology and culture media, Meatly distinguishes itself as a frontrunner in the increasingly competitive landscape of lab-grown meat.

Last year, Meatly captured headlines by becoming the first company in Europe to receive regulatory approval to sell cultivated meat, launching its Chick Bites—dog treats composed of just 4% cultivated meat—priced at £69.80 per kg. In comparison, conventional options like oven-baked chicken treats retail at merely £23.08 per kg. The stark contrast in pricing reflects how cultivated meat currently sits at a significant disadvantage, often costing three times more than traditional pet food. However, with the latest improvements, this landscape may soon shift dramatically.

One of Meatly’s key innovations lies in its newly developed bioreactor, which differs markedly from those used in pharmaceutical production. The capacity of the newly designed pilot bioreactor is 320 litres, a leap towards the scalability required for commercial production. Industry insights suggest that cultivated meat firms need to amplify their fermentation capacity significantly—up to 22 times more than that of the pharmaceutical sector—to meet growing consumer demands. Meatly’s bioreactor is a crucial step in achieving this goal; its estimated cost of £12,500 is 95% cheaper than traditional fermenters and presents opportunities for substantial cost reductions in future production.

Furthermore, Meatly has made impressive advances in its culture medium. Previously a significant financial burden, this nutrient solution is now being produced at £1 ($1.25 at the time of announcement) per litre—down from hundreds of pounds. The latest improvements have brought the cost down to just 22p (approximately 30 cents) per litre, with a projected reduction to 1.5p (around two cents) at an industrial scale. This medium is notable for being protein-free and free from animal-derived components, which aligns with a growing demand for sustainable and ethically sourced ingredients. The elimination of costly additives like albumin and transferrin not only cuts production costs but also enhances the robustness of the supply chain.

Such advancements are pivotal, especially in light of the findings from a recent survey indicating that affordability is a critical factor influencing consumer interest in cultivated meat. Nearly half of European respondents expect lab-grown options to be cheaper than traditional meat, asserting that price parity could ease transitions to these innovative products. With Meatly's commitment to establishing competitive pricing, the company aims to leverage these developments to attract both consumers and brand partners.

Investors remain cautious in this landscape, especially as funding for cultivated meat has seen dramatic declines of up to 75% in 2023, with projections suggesting a further 40% drop in the coming year. However, Meatly's leadership is optimistic about securing the necessary capital to build a low-cost industrial facility, essential for scaling production. Co-founder Owen Ensor emphasised the company's readiness to adapt to market conditions while continuing its quest to revolutionise pet food with affordable, cultivated ingredients.

The potential of cultivated meat extends beyond cost savings; it offers substantial environmental benefits as well. Conventional poultry farming is heavily resource-intensive, necessitating 30-40% more water and generating up to 40% more carbon emissions than Meatly’s production methods. Moreover, Meatly's approach involves sourcing cells from a single egg sample, making it possible to produce meat indefinitely—a factor contributing to its sustainable appeal.

While the journey for cultivated meat remains paved with challenges, Meatly’s trajectory illustrates a burgeoning commitment to not only democratising access to lab-grown meat but also transforming perceptions about its viability and necessity. The company plans to expand its product range beyond Chick Bites in the near future, providing a broader array of options for conscientious pet owners aiming to make sustainable choices.

As the cultivated meat sector continues to evolve, Meatly's innovations may signal a turning point, potentially ushering in a new era of accessible, ethical pet food options that resonate with health-conscious consumers and environmentally aware pet owners alike.

## Reference Map:

* Paragraph 1 – [[1]](https://www.greenqueen.com.hk/meatly-pet-food-cost-of-lab-grown-cultivated-meat/), [[3]](https://www.mewburn.com/news-insights/paw-some-news-for-pets-uks-first-regulatory-approval-of-cultivated-meat)
* Paragraph 2 – [[1]](https://www.greenqueen.com.hk/meatly-pet-food-cost-of-lab-grown-cultivated-meat/), [[4]](https://www.foodmanufacture.co.uk/Article/2024/05/07/Meatly-unveils-culture-medium-costing-1-per-litre-to-create), [[7]](https://www.newsx.com/europe/uk-launches-worlds-first-lab-grown-meat-for-pets-check-the-ingredients/)
* Paragraph 3 – [[1]](https://www.greenqueen.com.hk/meatly-pet-food-cost-of-lab-grown-cultivated-meat/), [[2]](https://www.petfoodindustry.com/ingredient-issues/proteins/news/15670691/meatly-achieves-cultivated-meat-milestone-sees-further-production-cost-reduction), [[5]](https://globalpetindustry.com/article/the-era-of-cultivated-meat-pet-food-gets-a-step-closer)
* Paragraph 4 – [[1]](https://www.greenqueen.com.hk/meatly-pet-food-cost-of-lab-grown-cultivated-meat/), [[6]](https://www.cnn.com/science/first-lab-grown-meat-pets-meatly-spc/index.html)
* Paragraph 5 – [[2]](https://www.petfoodindustry.com/ingredient-issues/proteins/news/15670691/meatly-achieves-cultivated-meat-milestone-sees-further-production-cost-reduction), [[3]](https://www.mewburn.com/news-insights/paw-some-news-for-pets-uks-first-regulatory-approval-of-cultivated-meat), [[5]](https://globalpetindustry.com/article/the-era-of-cultivated-meat-pet-food-gets-a-step-closer)
* Paragraph 6 – [[1]](https://www.greenqueen.com.hk/meatly-pet-food-cost-of-lab-grown-cultivated-meat/), [[6]](https://www.cnn.com/science/first-lab-grown-meat-pets-meatly-spc/index.html)
* Paragraph 7 – [[1]](https://www.greenqueen.com.hk/meatly-pet-food-cost-of-lab-grown-cultivated-meat/), [[7]](https://www.newsx.com/europe/uk-launches-worlds-first-lab-grown-meat-for-pets-check-the-ingredients/)
* Paragraph 8 – [[1]](https://www.greenqueen.com.hk/meatly-pet-food-cost-of-lab-grown-cultivated-meat/), [[2]](https://www.petfoodindustry.com/ingredient-issues/proteins/news/15670691/meatly-achieves-cultivated-meat-milestone-sees-further-production-cost-reduction), [[6]](https://www.cnn.com/science/first-lab-grown-meat-pets-meatly-spc/index.html)
* Paragraph 9 – [[5]](https://globalpetindustry.com/article/the-era-of-cultivated-meat-pet-food-gets-a-step-closer), [[6]](https://www.cnn.com/science/first-lab-grown-meat-pets-meatly-spc/index.html)
* Paragraph 10 – [[1]](https://www.greenqueen.com.hk/meatly-pet-food-cost-of-lab-grown-cultivated-meat/), [[3]](https://www.mewburn.com/news-insights/paw-some-news-for-pets-uks-first-regulatory-approval-of-cultivated-meat)

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## Bibliography

1. <https://www.greenqueen.com.hk/meatly-pet-food-cost-of-lab-grown-cultivated-meat/> - Please view link - unable to able to access data
2. <https://www.petfoodindustry.com/ingredient-issues/proteins/news/15670691/meatly-achieves-cultivated-meat-milestone-sees-further-production-cost-reduction> - Meatly, a UK-based pet food startup, has achieved a significant milestone by developing a protein-free culture medium costing £1 per litre. This breakthrough reduces production costs, bringing cultivated meat closer to price parity with conventional meat. The medium contains no serum, animal-derived components, steroids, hormones, growth factors, or antibiotics, and is used in suspension culture bioreactors without microcarriers. Meatly plans to release its cultivated pet food products in the UK this year, becoming the first company to sell cultivated meat in Europe. The company has raised £3.6 million in capital to support this initiative.
3. <https://www.mewburn.com/news-insights/paw-some-news-for-pets-uks-first-regulatory-approval-of-cultivated-meat> - Meatly has achieved regulatory approval in under two years, developing a protein-free growth media costing less than £1 per litre. The company aims to scale up production and reduce costs, with plans to reach industrial volumes in the next three years. Pet food containing Meatly’s lab-grown chicken may be available on UK shelves by the end of 2024. However, the cost of cultivated meat for pet food needs to decrease significantly before it becomes widely adopted as an affordable ingredient.
4. <https://www.foodmanufacture.co.uk/Article/2024/05/07/Meatly-unveils-culture-medium-costing-1-per-litre-to-create> - Meatly has developed a protein-free culture medium for cultivating meat cells, priced at just £1 per litre. This innovation significantly reduces production costs, making cultivated meat commercially viable. The medium contains no serum, animal-derived components, steroids, hormones, growth factors, or antibiotics, and is used in suspension culture bioreactors without micro-carriers. Meatly plans to release its cultivated pet food products in the UK this year, becoming the first company to sell cultivated meat in Europe.
5. <https://globalpetindustry.com/article/the-era-of-cultivated-meat-pet-food-gets-a-step-closer> - Meatly has reduced the cost of its culture media from hundreds of pounds to just £1 per litre, a major breakthrough since this accounts for the main cost of cultivated meat. Despite this, producing 100% cultivated meat pet food remains prohibitive. Austrian-American start-up BioCraft Pet Nutrition has similarly cut the price of its growth media, with the end product now priced at between $2 and $2.50 per pound, making it competitive with conventional premium dog treats.
6. <https://www.cnn.com/science/first-lab-grown-meat-pets-meatly-spc/index.html> - Meatly's lab-grown chicken meat has tested well with cats and dogs alike. In product tests with dogs, the treat was enthusiastically received, with many preferring it to their baseline diet. Pet owners have responded positively, appreciating the sustainability and ethical aspects of the product. Meatly plans to scale up production using larger bioreactors to meet growing demand and aims to make lab-grown meat more accessible to consumers.
7. <https://www.newsx.com/europe/uk-launches-worlds-first-lab-grown-meat-for-pets-check-the-ingredients/> - Meatly's lab-grown chicken meat is nutritionally equivalent to traditional meat but free of steroids, hormones, and antibiotics. It requires 50-60% less land, 30-40% less water, and generates around 40% fewer carbon emissions compared to conventional poultry farming. The production process involves taking a single sample of cells from one chicken egg, which can then be used indefinitely to produce meat, making it a sustainable and ethical alternative to traditional meat production.