Briefing Recipe for resilience: the benefits of a thriving plant-based protein sector in the UK



October 2025

Summary

The government has promised to tackle inflation and leave people with more disposable income by the end of this parliament. But rising food prices, particularly of meat and dairy, are a significant reason why inflation is higher than expected.

With the price of meat rising quickly, alternative proteins could play an important role in the transition to a more secure food system.

This briefing focuses specifically on the plant-based meat sector, which consists of products aiming to give a similar taste and texture to meat. These products offer a convenient alternative to meat within a familiar meal, such as using plant-based mince to make a lasagne. Many plant-based meat products are already available, but sales have stalled, and the UK risks losing the reputation it has established as a world leader in the sector.

This briefing explores reasons why the government should do more to grow this sector, as follows:

Food security In the past year, the price of meat has increased faster than plant-based options in every category, besides bacon, at a major supermarket. Some plant-based products are now cheaper than meat equivalents; for example, it costs £2.15 less to make a family-sized lasagne with plant-based mince.

<u>Health</u> Replacing 20 per cent of meat eaten weekly by the average person with plant-based options would increase fibre intake by four per cent, and reduce saturated fat by two per cent, without increasing salt or sugar intake.

<u>Investment</u> To date, public investment has been successful in stimulating private investment in the plant-based food sector. Every £1 of government funding has stimulated £1.92 of private investment. This means more private investment has been stimulated per pound of government investment into the plant-based food sector than in AI or in commercialising university research projects.

Economic growth The Committee on Climate Change recommend replacing 11 per cent of meat consumption with alternatives by 2030, and 20 per cent by 2035, to help reduce emissions in line with net zero. Expanding the plant-based meat sector in line with the trajectory set by the Committee on Climate Change would see retail sales grow from £336 million today to £2.7 billion by 2035.

Farming Growing the inputs needed to manufacture plant-based meat offers an opportunity for some farmers. Demand for peas could increase 23 per cent, for instance, if the government is successful in attracting more companies to the UK who use domestically grown inputs.

To capitalise on these opportunities, we recommend that the government:

- 1. Makes growing the alternative protein sector a priority in delivering the goals set out in a <u>Good Food Cycle</u>.
- 2. Develops a growth plan for the horticulture sector to boost domestic production and the consumption of fruit, vegetables, beans, pulses and other crops used in plant-based foods. This should include measures to develop processing infrastructure for lesser grown crops and an initiative to connect companies making plant-based products with growers in the UK.
- 3. Establishes a new £30 million innovation fund to support the development of domestic supply chains and improve the taste, affordability, and nutrition of plant-based products.
- 4. Mandates supermarket reporting on healthy and sustainable food sales and sets targets to boost sales of healthy food, increase the proportion of protein sold that is plant-based and reduce supply chain (scope three) emissions.
- 5. Secures an exemption in the new UK-EU Sanitary and Phytosanitary Agreement so the UK retains the ability to approve new products containing novel ingredients which could enhance the taste and texture of plant-based meat products.

Key statistics



Change in average price for a kilogram of meat or plantbased food in the last year



Nutritional change from swapping 20% meat intake for plant-based alternatives



£2.15

Saving from making a family sized lasagne with plant-based mince



Introduction

Food is a big political issue in this parliament. It is a source of national pride and identity, but also a driver of the public health and climate crises. Almost one in two people are worried about being able to afford food in the next 12 months. The government's flagship missions are tied to the food system:

- The government has promised people more disposable income. This
 means tackling inflation, which is high in part due to the rising cost of
 food, particularly meat and dairy.
- The government cannot afford an "NHS fit for the future" unless it tackles diet related ill health, which costs the NHS an estimated £12.6 billion a year. Costs to the wider economy are far bigger, potentially exceeding £250 billion. Meat plays a role in this: regularly eating red and processed meat increases risks of obesity, cardiovascular disease, type 2 diabetes and certain cancers.
- The government recognises climate change as a threat to the food system and national security in its <u>Plan for Change</u>. The food system itself is a major cause of the climate crisis: it contributes one <u>third</u> of global emissions and is the single biggest <u>driver</u> of biodiversity loss. Meat production accounts for <u>60 per cent</u> of these emissions, and <u>beef</u> production is the single biggest driver of deforestation.

Increased consumption of meat alternatives could help the government make progress on these issues. The government should also look to the alternative protein sector as a source of economic growth. In 2023, we estimated the sector could be worth £6.8 billion to the UK economy by 2035. But further government support is needed to bring a wider range of better tasting and healthier products to market, as sales have stalled since 2022 (though Lidl's growing sales are a notable exception).

Public appetite for trying these products is high: <u>60 per cent</u> of people are willing to try plant-based proteins and <u>58 per cent</u> are already trying to reduce their meat consumption. <u>Research</u> suggests that improving the taste and familiarity of plant-based products would boost sales. <u>Countries</u> such as Canada, Singapore and the US are pushing ahead with investment and support for the sector; the government needs a bolstered strategy to attract companies to the UK and avoid ceding this growth opportunity to other countries.

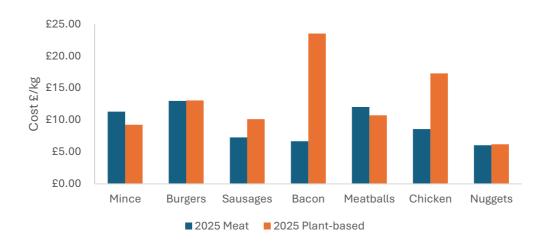
In this briefing, we focus specifically on plant-based meat which we define as products like plant-based mince and sausages that offer direct replacements to meat within familiar meals like lasagna or bangers and mash. We expand the case for supporting the plant-based meat sector beyond its often cited benefits for <u>climate</u> and <u>nature</u>. We present new evidence of the benefits the sector offers in terms of food security, public health and economic growth. We explore what is holding back sales and recommend how barriers can be overcome so that these benefits can be realised.

1. Food security

Affordability is central to food security, which is defined as people having access to sufficient, safe and nutritious food. With meat prices on the rise, we investigated the relative affordability of plant-based options. To do so, we compared prices for a selection of products from Tesco's online store, which is the UK's largest supermarket. We followed the method used by the Food Foundation in 2024.¹

In 2024, meat options were cheaper per gram than plant-based options across every category. However, this has now changed significantly due to rising meat prices. We found plant-based mince and meatballs are now cheaper per gram than meat equivalents. Plant-based burgers and nuggets now cost approximately the same as meat equivalents.

The relative price of meat and plant-based alternatives



Change in price over the past year in meat and plant-based alternatives



^{*}The substantial price fall on plant-based nuggets is largely due to a more expensive product on sale last year that is no longer stocked in 2025.

The price of beef has risen faster than any other meat: products have risen by 33 per cent on average. Prices of plant-based options have seen less change, and, in some cases, have fallen. Plant-based pork and chicken products (besides nuggets) remain more expensive than meat equivalents. But pork and chicken are experiencing higher rates of inflation than plant-based alternatives (except bacon), so price parity is closer than it was a year ago.

Why is the price of meat rising faster than plant-based products?

Factors increasing meat prices are unlikely to relent. The price of meat in the UK is largely driven by global commodity markets. Factors driving up the price of beef in the UK appear to include climate change induced <u>droughts</u> in North America, as well as unprecedented global demand. Some <u>estimates</u> suggest global meat consumption will double between the early 2000s and 2050. High global demand is driving up chicken and pork prices, compounded by ongoing pandemics of <u>African swine fever</u> and <u>avian flu</u>.

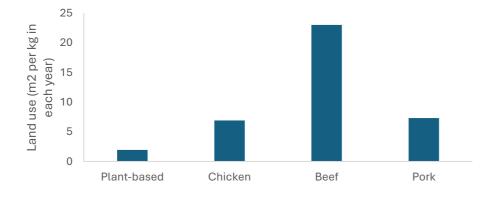
Environmental advantages of plant-based foods

Plant-based foods are a viable way to reduce global emissions, owing to their smaller <u>land</u> and <u>emissions</u> footprints.

Land use: Reducing the land needed for food production is critical to halting deforestation and restoring land for nature. Beef is the single <u>largest</u> driver of deforestation, followed by the production of oilseeds, predominantly soybeans and palm oil. While soybeans are used in plant-based alternatives, the vast majority (77 per cent) are used as animal feed. The land use <u>footprint</u> of plant-based meat products is at least three times smaller than chicken and ten times smaller than beef.²

Emissions: The growing direct impacts of climate change could limit production, as already demonstrated by recent increases to <u>beef prices</u>. While the plant-based protein market is also exposed to these effects, our analysis found these pressures are increasing the price of meat faster than plant-based equivalents.

The land footprint of meat and plant-based alternatives



Resilience

Plant-based products also offer a significant advantage by not being susceptible to the pandemic diseases that affect livestock. Avian flu and African swine fever are driving up the price of <u>pork</u> and <u>poultry</u>. When these diseases strike, livestock populations are often culled, which constrains supply and increases prices, including of other <u>types</u> of meat. For example, the 2018 outbreak of <u>swine flu</u> in China led to the death of 40 million pigs, and cost an estimated \$111 billion. In the UK, over three million birds have been culled <u>since 2022</u> to prevent the spread of avian flu, with £42 million paid in compensation to farmers.

The UK's <u>National Risk Register</u> identifies a one to five per cent likelihood of a major avian flu outbreak in the UK. This is the same likelihood as a major heatwave or a disruption to the global oil trade. A 2024 *British Medical Journal* article characterised the risk of a major avian flu outbreak as "large, plausible and imminent". Experts recommend increasing the <u>consumption</u> of plant-based foods as an important pandemic prevention measure.

The path forward

The changing picture of the relative affordability of meat and plant-based products shows that plant-based products could play an increasingly important role in creating a resilient and secure food system. However, despite their increasing price competitiveness, <u>sales</u> of plant-based products are not growing. Consumer <u>concerns</u> about taste and quality are holding back sales, even though 60 per cent of people are <u>willing</u> to try them.

Continued investment is crucial to developing new, tasty, and healthy products that can better compete with meat. Integrating novel components made with precision fermentation and cell cultivation, such as those used for the Impossible Burger, could be critical for the industry. The government has played an important role in the sector's growth to date, and should continue to do so to bring competitive products to market, as we explore in section five below.

2. Health

Consuming high amounts of red and processed meat is <u>linked</u> to an increased risk of obesity, cardiovascular disease, type 2 diabetes and certain cancers. Obesity is primarily caused by <u>overconsumption</u> of calories, whilst too much saturated <u>fat</u> and not enough <u>fibre</u> is detrimental to health. We explored the relative health outcomes of replacing meat with plant-based alternatives.

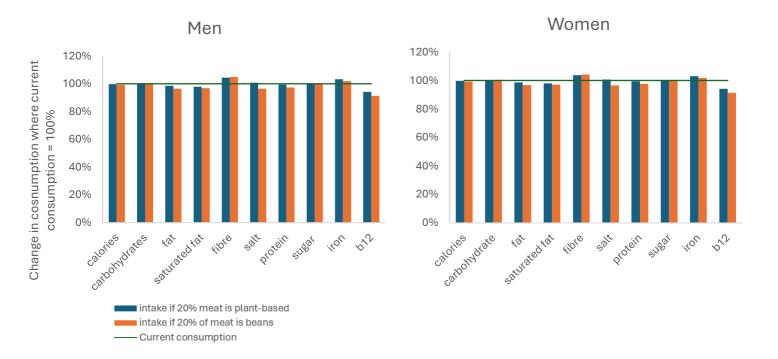
Using the same products as we studied for our price analysis, we found that replacing 20 per cent of weekly meat consumption with plant-based meat options would increase fibre consumption by four per cent and decrease saturated fat consumption by two per cent.³ Protein intake would fall by one per cent, while sugar and salt would remain largely unchanged.

Plant-based meat is sometimes criticised for being unhealthy compared to wholefoods like beans and lentils. Our analysis shows that, while replacing 20 per cent of meat consumed with unprocessed beans would offer a slightly greater increase in fibre (an additional 0.4 per cent) and a larger decrease in saturated fat (an additional one per cent), the health benefits of eating either plant-based meat or unprocessed beans are clear.

Interestingly, we found that iron consumption would increase by three per cent in the plant-based meat scenario, though this may be in part reduced if iron <u>absorption</u> is lower from plant-based foods, as some evidence suggests. Additionally, while there would be a six per cent fall in vitamin B12 intake, average <u>consumption</u> of this vitamin is four times the recommended amount, and fortification of plant-based products can address this concern.

Overall, our findings challenge the notion that plant-based meat is unhealthy and demonstrate its benefits for fibre and saturated fat intake. But to accelerate sales, consumers want better tasting products. To ensure this, the government should support research and development of the most nutritious and tasty options, whilst also incentivising retailers to sell healthier products.

Nutritional consequence of replacing 20% of average daily meat consumption with plant-based alternatives for men and women



3. The case for public investment

In 2024, retail sales of plant-based foods that mimic meat products, such as plant-based mince, were an estimated £898 million, accounting for $\underline{0.84}$ per $\underline{\text{cent}}$ of total UK household food sales. Of this, plant-based meat sales were £336 million.

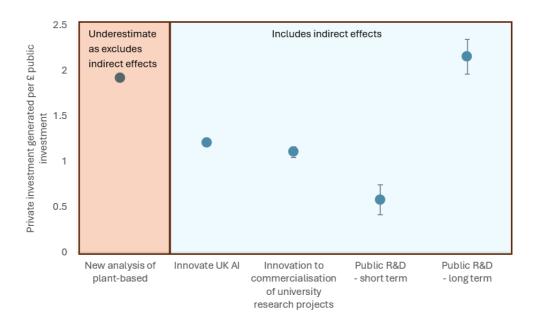
The UK has been a leader in this market in Europe, with more <u>plant-based</u> products launched in 2022 than any other country. However, the UK's position is at risk, as <u>the Asia-Pacific region</u> is projected to become the fastest growing alternative protein market.

Public investment is crucial for stimulating private investment in nascent markets, which is key to economic growth. Since 2022, the UK government has invested an estimated £106 million in alternative proteins, with £29 million going to plant-based products. Of that, £10 million went to 'for profit' companies. In new analysis, we found this £10 million has stimulated £19 million in private investment. In other words, every £1 of public investment has stimulated £1.92 of private investment.⁴

We compared this to other sectors' investment to gain perspective. We found that public investment in the plant-based protein sector has stimulated more private investment than other high profile growth sectors, despite our estimate not including private investment beyond the initial companies which is considered in the following estimates:

- Innovate UK's investment in AI stimulated £1.21 of private investment per pound of public investment.
- 'Innovation to commercialisation of university research projects' stimulated £1.10 of private investment per pound of public investment.
- Generally, each pound of government R&D funding <u>has drawn</u> in private investment of between £0.41-0.74 in the first year, and £1.96-2.34 in the long term.

Private investment generated in different sectors for every pound of public investment



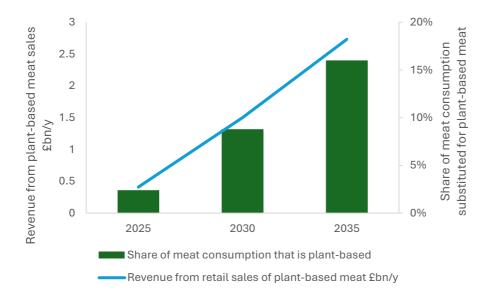
Economic opportunity

Our analysis demonstrates that investing public funding in the plant-based meat sector is a viable way to stimulate private investment in the UK which contributes to the economic growth the government wants to deliver.

However, significantly growing this sector will require an uptick in government investment. The <u>Committee on Climate Change recommend</u> reducing meat consumption by 11 per cent by 2030, and by 20 per cent by 2035, compared to 2019. They expect 80 per cent of this reduction will be met by existing alternative proteins, which are primarily plant-based. Sales of plant-based products will need to grow significantly to deliver this..

We analysed the economic value of growing the plant-based sector to meet the Climate Change Committee's <u>trajectory</u>. We found that, if the domestic plant-based meat sector grew to meet this demand, retail sales would increase more than sevenfold to £2.7 billion by 2035. 5 The UK, and its farmers, would benefit most if the products consumed in the UK were also produced in the UK, as we explore next.

Possible growth in plant-based alternative sales to meet climate targets



4. Impacts on farmers

Growth in the plant-based meat sector would increase demand for the crops they are made from. However, for UK farms to benefit, products must be made with UK produce. Many existing products use imported soy, which is not profitable to grow in the UK. Initiatives like <u>Protein Industries Canada</u> could be a model to emulate, to attract companies to set up in the UK and source their ingredients domestically.

The oat market already shows the potential of this approach. Alpro recently <u>announced</u> that its new factory would source solely from the UK. We estimate this could increase demand for UK-grown milling oats by two per

cent. If other producers followed suit, and all oat milk sold in the UK was made with UK oats, we estimate demand for them would increase by over seven per cent.

Growing demand for plant-based meat would increase demand for crops like peas, lentils and beans. These 'break crops' also help clear pests and diseases from the soil before more profitable cereal crops are grown. Higher demand from the plant-based meat market, especially if companies commit to using ingredients grown in the UK, could make it more financially viable to grow these crops. The Climate Change Committee's projected growth in consumption of plant-based meat would lead to a two per cent increase in total UK crop demand by 2030 and a four per cent increase by 2035. For peas specifically, demand would grow more substantially, by 23 per cent by 2030, and by 41 per cent by 2035, if pea-based products sold maintain their current market share.⁶

Scaling up the UK's supply chains could increase the competitiveness of British growers. At present, processors are <u>hesitant</u> to invest in new infrastructure without a guaranteed supply from producers, who are reluctant to increase crop production without a guaranteed market. The government has a critical role in bringing stakeholders together to identify and deliver the infrastructure needed to enable this growth.

The impact of an expended plant-based meat market on the UK's livestock farmers depends on various factors. Farming policy has transitioned to a new policy of 'payments for public goods' which fundamentally changes what is profitable. Under the new system, profitability can be <u>enhanced</u> by reducing herd sizes, and increasing income from agri-environment schemes that pay for improved carbon sequestration, air quality and water quality.

Therefore, increasing plant-based meat consumption could be compatible with a more profitable and sustainable farming industry, though delays to agri-environment schemes must be <u>overcome</u>.

Additionally, impacts will be minimised if export opportunities for livestock products continue to grow, and if plant-based products disproportionately displace imports rather than meat produced in the UK. The government should address each of these factors to ensure a thriving, sustainable UK livestock industry.

Recommendations

Plant-based meat could play an increasingly important role in maintaining, and improving, food security in the wake of the rapid price inflation of meat products, particularly beef, in the UK. It can also help to reduce the area of land overseas needed to produce food imported to the UK that continues to drive deforestation, whilst helping the UK and other nations to decarbonise and restore land for nature.

Government investment in plant-based products to date has been crucial in unlocking private investment, and much more economic growth in the sector is possible. To capitalise on these opportunities, we recommend:

- 1. The government's food strategy should expand the alternative proteins sector as a priority. High level signals are important to maintain the UK's reputation as a leader in this market, helping to attract start-ups and businesses at the cutting edge of product innovation and development to the UK.
- 2. The government should back up this commitment with a growth plan for the horticulture sector that sets out measures to increase the production and consumption of UK grown fruit, vegetables, beans and pulses. This should include plans to improve the infrastructure for processing beans and pulses, and an initiative to connect plant-based meat companies with growers in the UK.
- 3. As part of that plan, in partnership with Defra, UK Research and Innovation (UKRI) should establish a new £30 million plant-based food innovation fund. This should be focused on developing domestic supply chains as well as the taste, affordability and nutrition of plant-based products.
- 4. The government should follow through on plans to mandate supermarket reporting of sales of healthy and unhealthy food and set targets for supermarkets to increase sales of healthy food over time. Mandated reporting should include supply chain (scope three) emissions and the percentage of protein sold that is derived from livestock and plant sources.
- 5. The UK should secure an exemption for novel foods in the new Sanitary and Phytosanitary deal with the EU that ensures the UK can retain the ability to approve products containing novel ingredients. Integration of components made through precision fermentation and cell cultivation to create plant-based meat could be key to improving taste, such as used to make the Impossible Burger, now available in 11 countries, including the US, but not the UK.

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Methodology

¹ The list of products is available in annex 1 of the Food Foundation's report *Rethinking plant based meat alternatives*. We identified these products at Tesco online. We extracted their price on three occasions in July and August 2025. Where the prices of products were not available at Tesco, due to being out of stock or no longer stocked, we took prices from Sainsbury's instead. Where products were not available on either site, we excluded them.

² We estimated the footprint of plant-based options by taking the mean land use footprint in the following: S M Seves et al, 2017, 'Are more environmentally sustainable diets with less meat and dairy nutritionally adequate?', Public Health Nutrition, for plant-based burgers, mince, sausages and nuggets. We compared this to the land use footprints stated for chicken, beef and pork. These figures are presented in the graph of land use footprints.

³ The list of products is the same as above. We used the nutritional value of these products combined, as reported in *Rethinking plant based meat alternatives*, for calories, saturated fats, fibre, salt, protein, and sugar. We used information reported by Tesco to quantify their nutritional value in terms of carbohydrates, fats, iron and vitamin B12. We could not study additional micronutrients as their value is not commonly reported in the products we studied. In comparing consumption against current consumption, we extracted the average consumption of these nutrients in men and women aged 19-64 from the 'National diet and nutrition survey 2019 to 2023'. We used data for the most recent period available (2019-23). It is known that consumption is underreported in this survey, and so we corrected reported intake by 30 per cent, as reported by the National diet and nutrition survey. We assessed the change in nutritional intake when 20 per cent of meat was replaced with "new gen" products and "unprocessed grains and beans" as reported in *Rethinking plant based meat alternatives*.

⁴ We used publicly available data of the funding that Innovate UK has invested in businesses developing plant-based products since 2022. We then searched websites including Pitchbook and Tracxn to estimate the private investment in these businesses since they received public investment. We backed up reported investments on Pitchbook and Tracxn through news articles reporting details of those investments. We added up the total public investment across all companies, and the total private investment across all companies, to establish the amount of private investment following each pound of public investment.

 5 In 2025, plant-based meat retail sales were worth £336 million, excluding Aldi and Lidl. We estimated sales from Aldi and Lidl to be £73 million, assuming the 18 per cent share they hold in the retail market extends to plant-based meat. This makes total plant-based meat retail sales £410 million. The Climate Change Committee estimated that two per cent of meat consumption is currently plant-based. We assumed the following: plant-based meat consumption will grow according to the committee's pathway to 16 per cent by 2035; following that, meat consumption will fall by 20 per cent by 2035; and 80 per cent of this will be replaced with "existing alternative proteins" which we assume to be plant-based. This would mean that consumption of plant-based meat would grow eight fold by 2035. Assuming this translates into an eight fold increase in retail sales, this would mean sales grow from £410 million in 2025 to £2.7 billion in 2035.

⁶ We estimated the increase in crop demand from an expansion of plant-based proteins. We used <u>data of meat eaten</u> in the UK in 2022 to estimate population level

consumption. We used the Climate Change Committee's estimated growth in the percentage of meat that could be displaced by plant-based options by 2030 and 2035 to estimate the volume of plant-based meat that could be eaten in future. We estimated this as a percentage of <u>current crop production</u>, finding it equated to a two per cent increase in total UK crop demand by 2030 and a four per cent increase by 2035. We estimated the increased demand for peas using these same projections, assuming that <u>16% of plant-based</u> products continue to be made from peas, as well as <u>current pea production data</u>.