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## Mismatches between UK food supply and dietary guidelines: a dietary gap assessment

August 2025

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### Summary

**Less than 1% of the UK population is currently meeting all nine recommendations of the national dietary guidelines, the Eatwell Guide,<sup>1</sup> and only 30% meet five or more of the recommendations.<sup>2</sup> There is potential for dietary guidelines to be used more broadly than as a communication tool to advise the public. Dietary guidelines should be used as the goal of food-related policies.**

There are many systemic barriers to eating diets in line with healthy eating recommendations, including lack of affordability of healthy diets, and difficulties accessing healthy foods. The UK ratified the UN's International Covenant on Economic, Social and Cultural Rights, meaning they have a duty to ensure the right to food for all people in the country.<sup>3,4</sup>

ensure that it is possible for the whole population to eat in line with these recommendations. The Eatwell Guide is already being used to inform school food standards, and in public procurement, but there are opportunities to implement the guidelines across the food system.

Dietary guidelines should be considered the "dietary vision" for a country<sup>5</sup> and can be used to guide wider food systems policies to

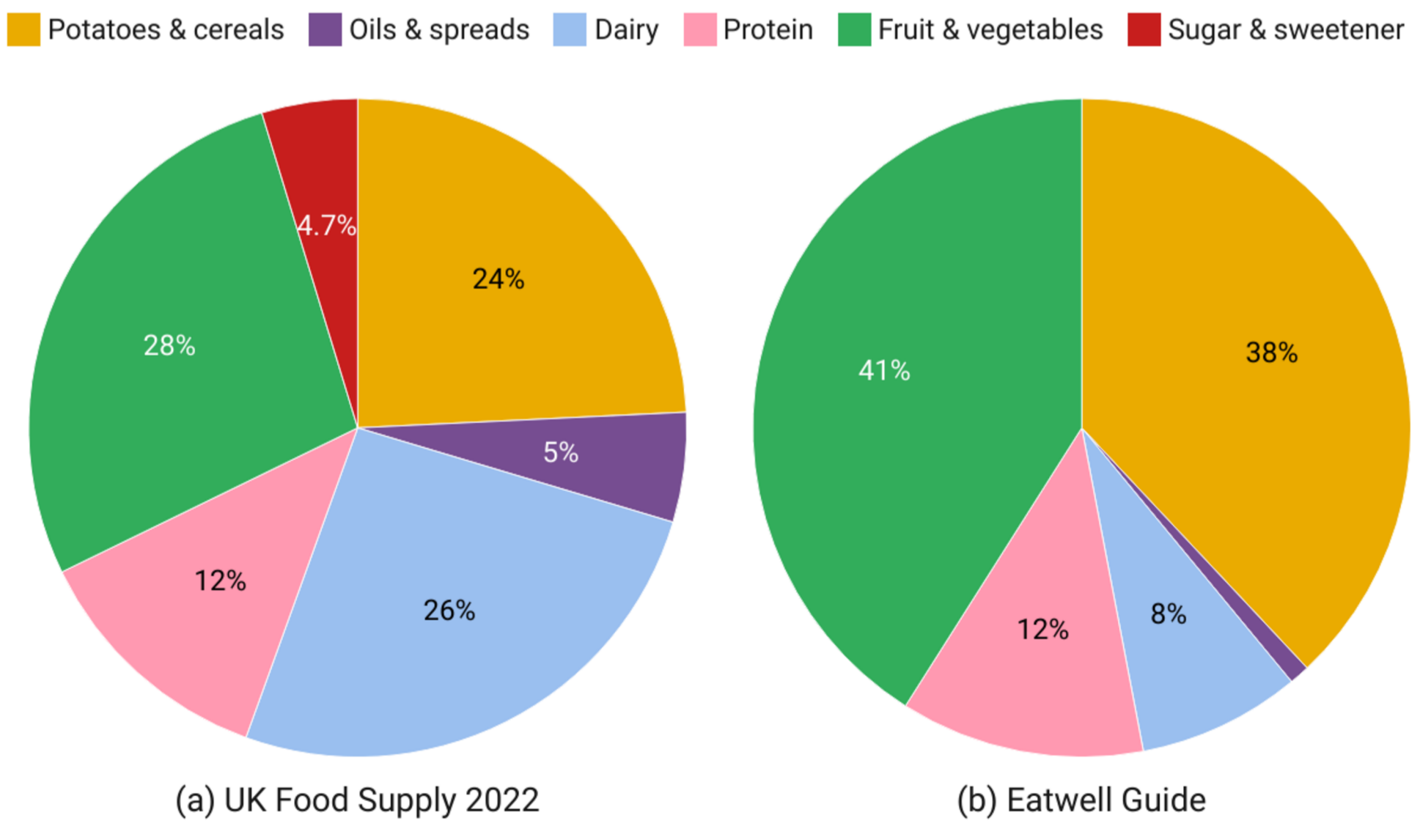
This paper compares the UK food supply with the Eatwell Guide to explore how well what we produce, import and export currently aligns with national healthy eating recommendations.<sup>6</sup>

### What is a dietary gap assessment?

This method, first developed by Kuyper,<sup>7</sup> compares a country's total food supply with their national guidelines, to identify how well it **supports the availability of healthy diets for the population.**

The analysis presented in this brief goes beyond traditional dietary gap assessments by breaking down the total food supply into what foods are **produced within the UK, and what is imported and exported.** An additional analysis was also carried out including animal feed to see how the total food and feed supply compares to the Eatwell Guide.

**Figure 1. A dietary gap assessment comparing (A) the UK Food Supply in 2022 with (B) the Eatwell Guide.**

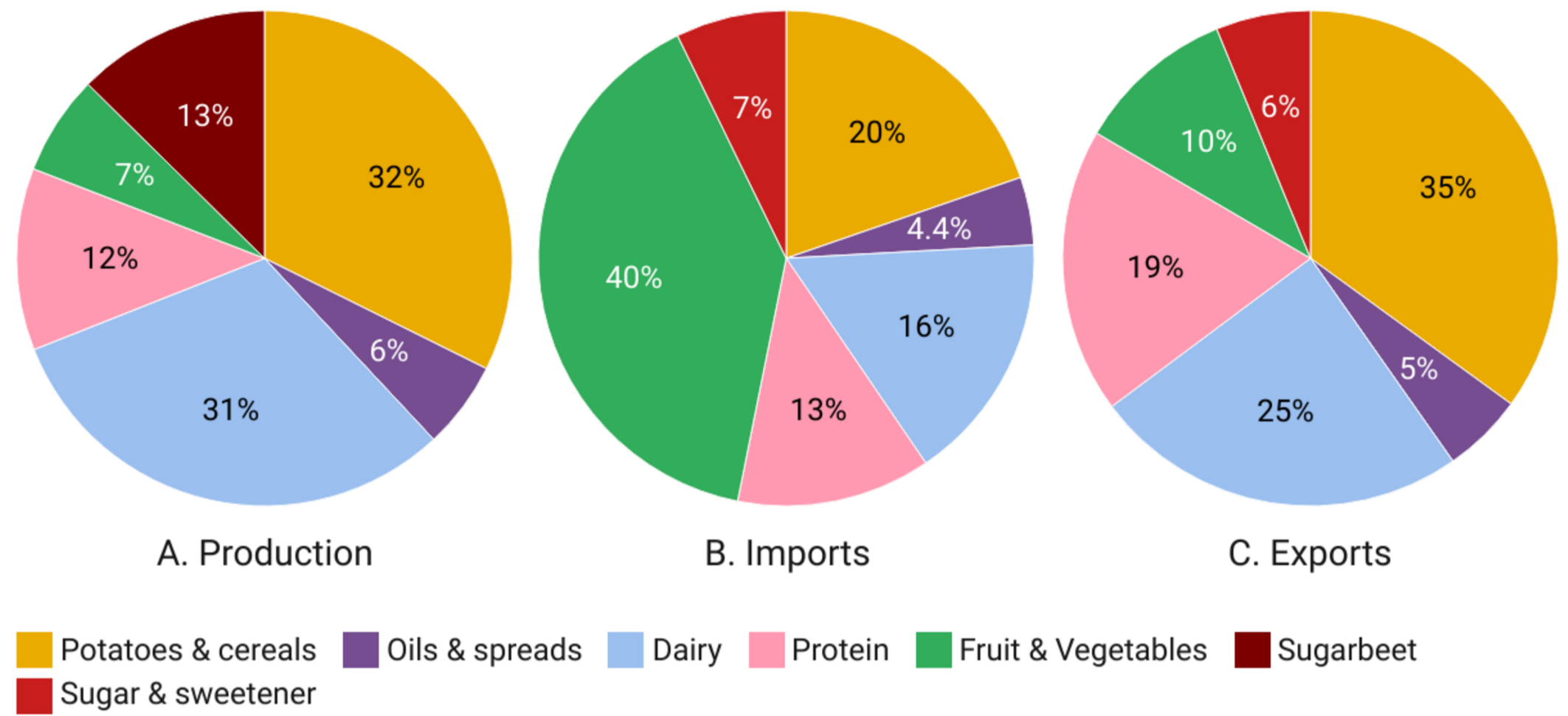


*Pie charts show the percentage contribution of the weight of each food group to the overall food supply based on data from FAOSTAT Food Balance Sheets for 2022 and the Eatwell Guide. Food groups are based on the groups in the Eatwell Guide. Excludes foods used for animal feed, seed and non-food uses.*  
 Chart: Adapted from Kelly, N.M et al (2025) Public Health Nutrition • Source: FAOSTAT data • Created with Datawrapper

In 2022 **Fruit and vegetables made up only 7%** of the food produced within the UK.

Average self-sufficiency for the total food supply was 60%, with fruit and vegetables having the lowest rate of 15%.

**Figure 2. UK Food Supply breakdown for A) food produced within the UK, B) Imports and C) Exports**



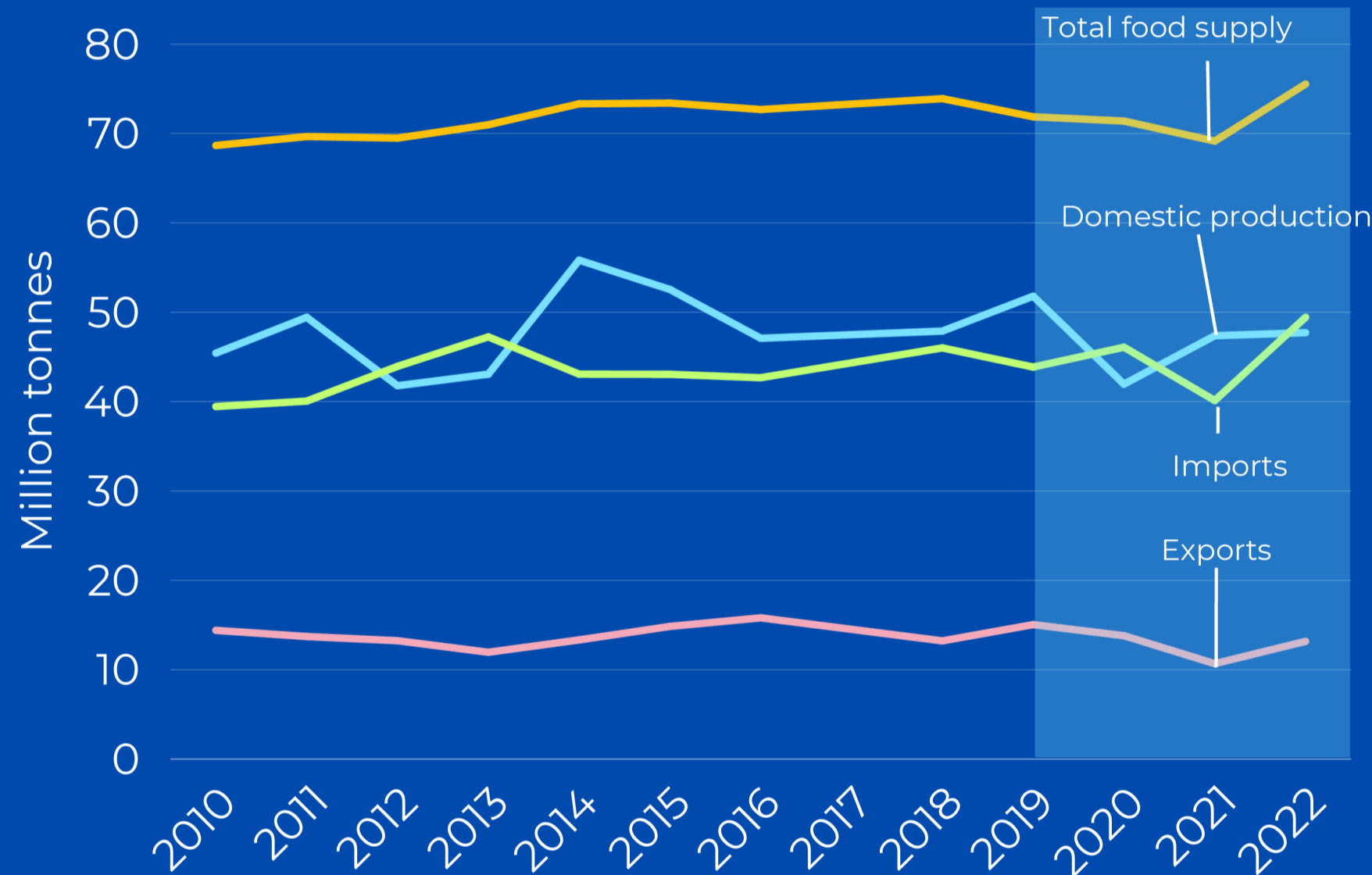
Pie charts show the percentage contribution of the weight of each food group to food A) produced in the UK, B) imported into the UK and C) exported from the UK in 2022. Food groups are based on the Eatwell Guide. Excludes foods used for animal feed, seed and non-food uses.

Chart: Adapted from Kelly, N.M et al (2025) Public Health Nutrition • Source: FAOSTAT data • Created with Datawrapper

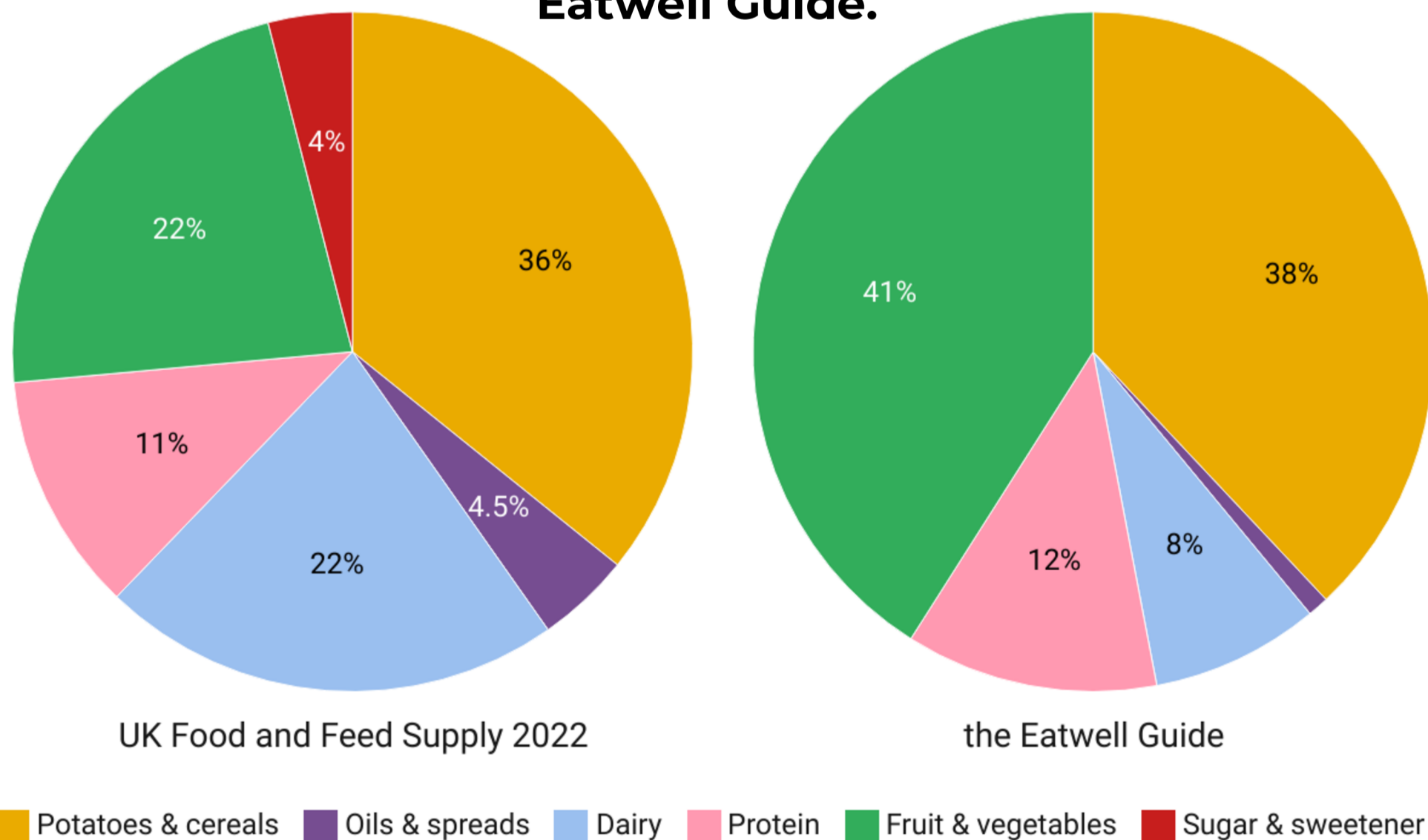
## How was the UK food supply affected during the COVID pandemic and Brexit?

We explored trends in the overall food supply from 2010 to 2022, which highlighted the food supply changes from 2019 to 2022. Throughout this period the UK experienced both a national lockdown during a global pandemic, as well as leaving the European Union (EU), its main trade partner.

During the lockdown year 2020 domestic food production reduced by 10 million tonnes (20%), which was somewhat offset by increased imports (+3 million. Both imports and exports then reduced in 2021, the first year after the UK left the EU. Domestic production of food did increase during that year, but not enough to keep the total supply at the levels of previous years. Imports and exports have since increased again.



**Figure 3. The UK Food and Feed supply compared to the Eatwell Guide.**



Pie charts show the percentage contribution of the weight of each food group to the overall food supply based on data from FAOSTAT Food Balance Sheets and the Eatwell Guide (based on the groups in the Eatwell Guide). Includes food used for animal feed. Excludes foods used for seed and non-food uses.

Chart: Adapted from Kelly, N.M et al. (2025) Public Health Nutrition • Source: FAOSTAT data • Created with Datawrapper

## Animal feed and the food supply

- Approximately **41% of the potatoes and cereals in the total food and feed supply for the UK were used for animal feed**
- When animal feed is included in the dietary gap assessment, the proportion of potatoes and cereals in the food and feed supply align with the recommended proportion.
- The breakdown of the food and feed supply into UK production, imports and exports can be found in the supplementary material of the article [here](#).

## Key Takeaways

The discrepancies identified between the UK food supply and dietary guidelines are reflective of the trends seen globally. When implementing national dietary guidelines, governments have a responsibility to ensure that the healthy diets they are advocating for are available, accessible and affordable to all. This is crucial in realising the right to food for the population. National dietary guidelines should be used as the goal of food-related policies.

Evaluating the impacts of food policies and practices through the lens of availability and affordability of, and access to diets in line with the Eatwell Guide could help to address some of the **systemic barriers to healthy eating** and help to ensure the food system is supporting healthy diets, and alleviates some of the burden from individual choices.

Lack of domestically produced fruit and vegetables poses a risk to the **resilience of the food supply** particularly considering the dependence on imports from climate-vulnerable countries. As climate change continues to impact the weather patterns, and increase the frequency

of extreme weather events, a strong domestic horticulture sector will be essential to access to healthy diets in the UK. Continuing to the Eatwell Guide and dietary gap assessments to monitor the food supply, particularly when broken down into domestic production, imports and exports, could help to monitor trends and progress towards nutrition security.

Finally, any changes to the food supply would also consider the **impacts on farmers and their livelihoods**. A just transition is essential to the shift towards a healthier food supply, and support must be provided to help farmers navigate this transition.

## Recommendations

### For Policymakers

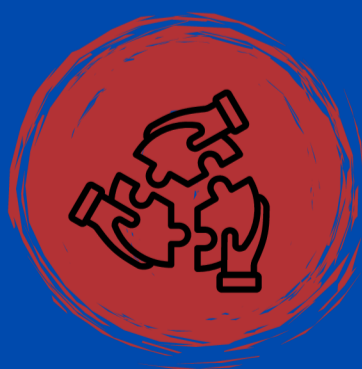
Include dietary gap assessments in future Food Security Reports to monitor progress, and identify areas where more support or policy measures may be needed to ensure a healthy food supply.



Work with farmers to develop more financial and policy support for the UK horticulture sector to increase domestic production of fruit and vegetables.



Consider how upcoming policies and instruments like the National Food Strategy and Land Use Framework could impact the availability of diets aligning with the Eatwell Guide.



### For Nutrition professionals

Work with supermarkets to monitor their overall stock and sales of food and assess how these align with the Eatwell Guide.



Engage with agronomists and farmers to help work towards better aligning domestic production with dietary guidelines.



Advocate for policies that improve the availability of healthy foods, and align the food supply better with dietary guidelines, particularly including fruit and vegetable production.



## References

1. FAO (2020) Implementation | Food-Based Dietary Guidelines. Rome: Food and Agriculture Organization of the United Nations.
2. Scheelbeek P, Green R, Papier K, et al. (2020) Health impacts and environmental footprints of diets that meet the Eatwell Guide recommendations: analyses of multiple UK studies. *BMJ Open* 10, e037554.
3. Committee on Economic, Social and Cultural Rights (1999) General Comment 12. The Right to Adequate Food (Art. 11). <https://docs.un.org/en/E/C.12/1999/5>
4. Boyle K & Flegg A (2022) Briefing - ESC Rights Part Four: The Right to Food in the UK- An Explainer. [https://dspace.stir.ac.uk/retrieve/67b40252-e5a0-420f-849e-662d682f3da/05-Briefing4-food\\_18MAY22.pdf](https://dspace.stir.ac.uk/retrieve/67b40252-e5a0-420f-849e-662d682f3da/05-Briefing4-food_18MAY22.pdf) (accessed April 2025).
5. Public Health England (2016) From Plate to Guide: What, Why and How for the Eatwell Model. London: PHE.
6. Kelly NM, Wells R, Sharpe R, Reynolds C. Mismatches between UK food supply and dietary guidelines: a dietary gap assessment. *Public Health Nutrition*. 2025;28(1):e121. doi:10.1017/S1368980025100633
7. Kuyper EM, Engle-Stone R, Arsenault JE, et al. (2017) Dietary gap assessment: an approach for evaluating whether a country's food supply can support healthy diets at the population level. *Public Health Nutr* 20, 2277–2288.

This research brief summarises a paper published by Niamh Kelly, Rebecca Wells, Rosalind Sharpe and Christian Reynolds [6]. The full paper and supplementary materials can be accessed from **[Public Health Nutrition](#)**

The graphics included in this brief, along with additional charts, can be accessed for reuse on Figshare **[here](#)**

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<https://ukfoodsystems.ukri.org>

<https://www.citystgeorges.ac.uk/research/centres/food-policy>

