

## An appetite for change: shaping consumer choices through food labelling amidst global challenges

In many societies today, food purchasing and consumption extends beyond only satisfying hunger. What we buy and eat encompasses multifaceted concerns over safety, health, sustainability and social justice and ethics. In navigating such complex issues, consumers often use the information provided on food labels to make informed choices. The battle over labelling space is a complex conflict that embodies the interests of various stakeholders, including consumers, manufacturers and retailers, and regulators. At the heart of this battle is a struggle for visibility and prominence on product packaging, where limited space is coveted.

For economic actors, labelling can help communicate product attributes, distinguish offerings from competitors and drive consumer engagement. However, the increased consumption of industrially produced food has raised significant concerns about the effects of our consumption and dietary choices on our wellbeing and the lasting impact on the world. Consumer protection advocates strongly make the case for greater transparency and clarity in labelling, advocating for measures to combat deceptive and misleading practices and to prioritise essential information over marketing messages. Finding equilibrium between trade and consumer protection in a world of many modern challenges presents a difficult and dynamic landscape for regulators.

From a public health perspective, conscious dietary choices may represent an important determinant of population health (Kelly and Jewell 2019). In the European Green Deal, the European Union (EU) set out how to make Europe the first climate-neutral continent by 2050: it maps a growth strategy to boost the economy, improve people's health and quality of life, care for nature, and leave no one behind (European Commission (EU) 2024a). At its heart, and the European Commission's agenda to promote the UN Sustainable Development Goals, lies the EU's Farm to Fork Strategy. This puts forward commitments to respond to challenges for a sustainable food system which embraces the links between healthy people, healthy societies and healthy environments (European Commission (EU) 2024b). A significant

element to this response is the European Commission's belief in food labelling to help contribute to some of our pressing concerns (Peonides et al. 2022). Since 2006, the EU has regulated health and nutrition claims, including those which appear on labelling and, since 2016, most food products have been required to be labelled with a nutrition declaration. However, evidence has since grown to show that consumers do not always see or understand nutrition labelling (Martini and Menozzi 2021). A relation between education, ease of use of the labels and the way consumers form their attitudes and intentions towards healthier products has been reported (Mazzù et al. 2022; Zanchini et al. 2022). Evidence has also shown that front-of-pack nutrition labelling is more effective in informing consumers about nutritional quality and can even lead to healthier dietary choices (Giner et al. 2023). In the Farm to Fork Strategy and Europe's Beating Cancer Plan, the EU again placed great faith in labelling to improve population nutrition. The Commission committed to propose mandatory front-of-pack nutrition labelling across the EU by the end of 2022 but the deadline continues to be missed.

In support to the best available evidence for labelling policies, in this issue of International Journal of Food Sciences and Nutrition, the study of López-Sánchez et al. (López-Sánchez et al. 2023) reported an econometric analysis of the impact of traffic light labelling of foods implementation in reducing deaths due to noncommunicable diseases in 21 Ecuadorian provinces; the authors showed that the implementation was estimated to led to the reduction of mortality especially during the last 3 years of analysis by 0.13% in 2017, 0.31% in 2018, and 0.29% in 2019, emphasising the potential for strengthening nutrition information through labelling to improve the health of the general population. Of concern related to food labelling, certain dimensions such as level of food processing are deemed as underrated in food labels while ultra-processed foods (UPFs) are linked to negative health outcomes (Grosso 2023). Although some limitations of using the current NOVA classification to study UPFs have emerged,

current evidence suggests that higher intake of UPFs is related to worse diet quality (Martini et al. 2021). In this context, the study of Vale et al. (Vale et al. 2024) aimed to investigate the nutritional quality of food according to the degree of processing in Portugal, confirming global trends showing UPFs were the most energy dense and had the highest content in sugar and saturated fats (the latter together with processed foods, which were also rich in sodium). Notably, the authors emphasised an important variation of the nutritional value within the group of processing and across food categories (i.e. snacks and beverages were appearing in all NOVA groups and provided the largest variation in nutrient profiles), thus underlining the importance of food labels and the content of their information. Another study specifically focused on the ingredient list and nutrient composition of plant-based burgers available in the global market: the study authored by Franca et al. (2024) showed important differences in nutrient profile and ingredients used, with predominance of legume protein (mostly from soy, but also peas and beans) and an important contribution of seed oils and sodium as very frequent ingredients. These results remarks earlier findings reported on similar protein alternative products previously published (Brooker et al. 2022; Bryngelsson et al. 2022): no geographical patterns were evident but a trend towards lower content in protein and higher in carbohydrates was reported. Albeit an important alternative to meat-based products to reduce the environmental pressure related to food production and dietary choices (Gastaldello et al. 2022), labels can help promote a more sustainable food system while informing the consumers on the nutritional quality of food products. In the Farm to Fork Strategy, the Commission announced a proposal for a sustainability labelling framework (including regulating green claims, extending origin labelling, and incorporating climate concerns) but there is no further progress visible and suggestions that this had been dropped together with its flagship initiatives under the Strategy of the legislative framework for sustainable food systems. The sustainability labelling framework was stated to include other social and ethical concerns, but progress on this matter is rather slow.

Labelling is an essential component to help better inform consumers and contribute to their empowerment. However, so far, these debates have not seemed to capture enough that labelling can only contribute to some limited extent to improving consumer choices. There are far bigger system challenges around food systems which affect consumption, such as social inequality or poverty. Labelling can help consumers make informed decisions that align with their health,

environmental and ethical priorities. However, labelling places responsibility on them despite the world being shaped by powerful economic interests (Gokani 2022). The wider social and commercial determinants of health need to be tackled in addition to improving labelling if we are to make progress on the major issues which we face. This requires countries and governments to work together to introduce national and international rules against the powerful economic interests which profit from shaping our food system.

Nevertheless, it is clear that the EU regulator, as with many other regulators across Europe and the world, places great emphasis on labelling to help tackle some of the most pressing issues facing societies. For labelling to work well, the regulator needs to reflect on developing evidence-based and context-sensitive rules on whether consumer information is provided, what is provided, where and when it is provided, and how it is provided. Harmonising rules can ensure that all consumers benefit and it also creates a level playing field for food businesses (Gokani and Garde 2023). Where harmonisation is proposed, it should choose the highest level of consumer, public health, environmental, and animal welfare protection.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Funding

The author(s) reported there is no funding associated with the work featured in this article.

## References

- Brooker PG, Hendrie GA, Anastasiou K, Colgrave ML. 2022. The range and nutrient profile of alternative protein products sold in Australian supermarkets between 2014 and 2021. *Int J Food Sci Nutr.* 73(8):1067–1079. doi: 10.1080/09637486.2022.2137786.
- Bryngelsson S, Moshtaghian H, Bianchi M, Hallström E. 2022. Nutritional assessment of plant-based meat analogues on the Swedish market. *Int J Food Sci Nutr.* 73(7):889–901. doi: 10.1080/09637486.2022.2078286.
- European Commission (EU). 2024a. European green deal. [accessed 2024 March 3]. [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_it](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_it).
- European Commission (EU). 2024b. Farm to fork strategy. [accessed 2024 March 3]. [https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy\\_en](https://food.ec.europa.eu/horizontal-topics/farm-fork-strategy_en).
- Franca P, Pierucci AP, Boukid F. 2024. Analysis of ingredient list and nutrient composition of plant-based burgers available in the global market. *Int J Food Sci Nutr.* 1–14. doi: 10.1080/09637486.2024.2303029.

- Gastaldello A, Giampieri F, De Giuseppe R, Grosso G, Baroni L, Battino M. 2022. The rise of processed meat alternatives: A narrative review of the manufacturing, composition, nutritional profile and health effects of newer sources of protein, and their place in healthier diets. *Trends Food Sci Technol.* 127:263–271. doi: [10.1016/j.tifs.2022.07.005](https://doi.org/10.1016/j.tifs.2022.07.005).
- Giner C, Rodriguez D, Elasri A. 2023. Developing food labels for improved health outcomes: Insights into simplified nutrition labelling policies. France: OECD Publishing.
- Gokani N. 2022. Front-of-pack nutrition labelling: A Tussle between EU Food Law and National Measures. *Eur Law Rev.* 47(2):153–174.
- Gokani N, Garde A. 2023. Front-of-pack nutrition labelling: time for the EU to adopt a harmonized scheme. *Eur J Public Health.* 33(5):751–752. doi: [10.1093/eurpub/ckad087](https://doi.org/10.1093/eurpub/ckad087).
- Grosso G. 2023. Role of food processing on human health and current limitations. *Int J Food Sci Nutr.* 74(1):1–2. doi: [10.1080/09637486.2023.2182255](https://doi.org/10.1080/09637486.2023.2182255).
- Kelly B, Jewell J. 2019. Front-of-pack nutrition labelling in the European region: Identifying what works for governments and consumers. *Public Health Nutr.* 22(6):1125–1128. doi: [10.1017/S1368980018003737](https://doi.org/10.1017/S1368980018003737).
- López-Sánchez M, Moreno-Salazar Y, Cuenca J, Ortega J, Román-Aguirre R. 2023. Incidence of traffic light labelling on noncommunicable diseases: A roadmap for achieving sustainable development. *Int J Food Sci Nutr.* 1–12. doi: [10.1080/09637486.2023.2280503](https://doi.org/10.1080/09637486.2023.2280503).
- Martini D, Godos J, Bonaccio M, Vitaglione P, Grosso G. 2021. Ultra-processed foods and nutritional dietary profile: A meta-analysis of nationally representative samples. *Nutrients.* 13(10):3390. doi: [10.3390/nu13103390](https://doi.org/10.3390/nu13103390).
- Martini D, Menozzi D. 2021. Food labeling: analysis, understanding, and perception. *Nutrients.* 13(1):268. doi: [10.3390/nu13010268](https://doi.org/10.3390/nu13010268).
- Mazzù MF, Romani S, Baccelloni A, Lavini L. 2022. Introducing the Front-Of-Pack Acceptance Model: the role of usefulness and ease of use in European consumers' acceptance of Front-Of-Pack Labels. *Int J Food Sci Nutr.* 73(3):378–395. doi: [10.1080/09637486.2021.1980866](https://doi.org/10.1080/09637486.2021.1980866).
- Peonides M, Knoll V, Gerstner N, Heiss R, Frischhut M, Gokani N. 2022. Food labeling in the European Union: A review of existing approaches. *IJHG.* 27(4):460–468. doi: [10.1108/IJHG-07-2022-0072](https://doi.org/10.1108/IJHG-07-2022-0072).
- Vale C, Almeida C, Azevedo J, Padrão P. 2024. Nutrient profile of packaged foods according to the degree of processing. *Int J Food Sci Nutr.* 1–9. doi: [10.1080/09637486.2023.2299771](https://doi.org/10.1080/09637486.2023.2299771).
- Zanchini R, Di Vita G, Brun F. 2022. Lifestyle, psychological and socio-demographic drivers in functional food choice: A systematic literature review based on bibliometric and network analysis. *Int J Food Sci Nutr.* 73(6):709–725. doi: [10.1080/09637486.2022.2048361](https://doi.org/10.1080/09637486.2022.2048361).

Nikhil Gokani

*School of Law, University of Essex, Colchester, UK*

Giuseppe Grosso

*Department of Biomedical and Biotechnological Sciences,*

*University of Catania, Catania, Italy*

*Center for Human Nutrition and Mediterranean Foods*

*(NUTREA), University of Catania, Catania, Italy*

 [giuseppe.grosso@unict.it](mailto:giuseppe.grosso@unict.it)

Received 5 March 2024; Accepted 8 March 2024

© 2024 Taylor & Francis Group, LLC