

## How are meat and dairy represented in a sustainability context in food-based dietary guidelines?

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Shifting towards more sustainable diets is urgent and unavoidable in the current health and climate crises. Substantial changes in dietary norms are necessary to facilitate this shift, as present-day norms around animal products, particularly meat, can prevent transitioning to more sustainable diets. Food-based dietary guidelines (FBDG) are well placed to demonstrate norms around food both written, e.g. the guidance within, and through visual information, e.g. how meat and dairy are portrayed.

Existing reviews have explored messaging within guidelines globally. For example, from a health perspective, representation of plant-based diets and plant-based guidance and sustainability messaging. However, research has yet to explore guidance around meat and dairy consumption in the context of sustainability, written and visually, focusing solely on consumer facing guidelines. This is particularly important, as citizens are unlikely to look beyond the succinct consumer-facing guidelines, especially as we are now so bombarded by health and nutritional messaging. Therefore, there is a need to explore FBDG recommendations for meat and dairy from a sustainability angle, focusing on consumer-facing information, to understand the guidance around sustainable diets.

83 countries' guidelines were identified for analysis, meeting the criteria of available FBDG and middle, upper-middle or high income. 13 countries contained sustainability key words in their consumer facing guidelines. Written guidance around meat and dairy were analysed, along with their visual representations in the guidelines.

A total of 6 out of 13 countries recommended reducing meat, with 3 of those countries giving weights and servings. Only one country recommended limiting consumption of dairy, with one country recommending maintaining a daily consumption of dairy. The visual representations of meat and dairy varied throughout guidelines, with one country representing meat as little as 1 out of 37 images overall, and another representing meat as 6 out of 48 images overall. In contrast, dairy tended to have its own section in visual representations. Furthermore, the representation of both meat and dairy varied between its own component, part of a meal, raw or cooked.

Clearly some countries are stronger with their messaging around reducing meat than others. However, this is not being done across enough countries, and in the appropriate format, i.e., in consumer-facing guidance. Recommendations around reducing dairy are weak to non-existent, potentially reflecting the acceptance of reducing meat but not dairy consumption. With the varying visual representation of meat and dairy, it brings into question whether these visuals reflect written recommendations, in turn what individuals interpret as dietary norms relating to meat and dairy consumption, and ultimately if these are aiding in the shift to more sustainable diets.

### References

1. Martini D, Tucci M, Bradfield J *et al.* (2021) *Nutrients* **13**(6), 1827.
2. Klapp A L, Feil N, & Risius A (2022) *CDN* **6**(11).
3. James-Martin G, Baird DL, Hendrie GA *et al.* (2022) *Lancet Planet Health* **6**(12), e977–986.