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## What information do consumers want about the greenhouse gas emissions of their diets?

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According to UK Government targets, greenhouse gas emissions(GHGE) should now have been reduced by  $37\%^{(1)}$ . Food consumption is responsible for <30% of the environmental impact of households<sup>(2–3)</sup>. Moving to diets with lower GHGE will require shifts in eating patterns by consumers, yet many are unaware that there is a relationship between what they eat and climate change<sup>(4)</sup>. Thus an important step towards more environmentally sustainable diets is to make people aware of this relationship. The aim of this study was to develop consumer-friendly methods to inform people of the environmental impact of the foods they eat.

Dietary GHGE feedback images and text were designed to present to users of an online dietary assessment tool. Images were adapted from existing online dietary feedback tools and front-of-pack labels due to their familiarity to consumers. Nutritional information was not presented to participants except for examples of food items/categories e.g. rice, biscuits. We collected the views of consumers in two ways: (1) a token drop voting activity where visitors to wellbeing fairs and farmers markets in Aberdeen answered the question: 'which image do you prefer?'; and (2) discussion by focus groups, recruited to attract a heterogeneous sample with a mix of socio-demographic characteristics.

In the token drop voting activity, of the four images for GHGE dietary feedback displayed to consumers (n = 66), footprints using traffic light colours were the preferred option to show environmental impact with a star rating the least popular.

Participants of focus groups (seven groups, n = 36, 8 male and 28 female) preferred a scale of environmental impact, as they thought that simpler images, such as the footprints, although immediate and impactful might be confused with other labelling currently in use, e.g. nutritional traffic lights. It was clear from participants that not everyone understands the terminology around GHGE, including 'CF', 'CO2', and 'carbon footprint', and that any messages must explain these concepts to consumers. Participants were split between those that wanted only an image and those wanting more information. This latter group wanted to know which foods contributed the most to their dietary environmental impact and alternative foods they could eat to reduce it.

This study illustrates that consumers want to know the environmental impact of what they eat and that the information needs to be personalised to be effective<sup>(5)</sup>. Text based dietary GHGE messages need to be composed so as to not encourage unhealthy eating behaviours. Consideration should be made so that the images, vocabulary and amount of information provided are inclusive for different individuals. Effective communication of the impact of food and dietary choices on climate change is required from policy developers and retailers if we are to meet the targets for GHGE reduction and is an area for future research.

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