

PhD Project Advertisement

Project title: Packaging, date labelling and nutritional quality – can less equal more?

Project No: FBS2024-069-Hart-sc

Lead supervisor: Kathryn Hart, Nutritional Sciences, University of Surrey

Email: k.hart@surrey.ac.uk

Co-supervisors:

Kenisha Garnett, Cranfield University

Charo Hodgkins, University of Surrey

Lada Timotijevic, University of Surrey

Project description:

Should we ditch the plastic? What's the point of best before dates? What's more important – achieving optimal nutrient intakes or reducing waste?

Changes to UK food policy (Sept 2022) encouraged removal of best before dates (BBE) from fresh produce such as uncut fruit and vegetables, aiming to reduce wastage of food. In parallel there has been a push towards the removal of unnecessary plastic packaging from these products (which automatically removes dates but further reduces specific food packaging waste).

Whilst these changes can drive waste reduction the relationship between food packaging and food waste is not simple as reducing packaging can both increase and decrease waste and other benefits of packaging may be lost (not least retention of nutrients). Date labelling changes may actually lead to supermarkets stocking sub-optimal quality fruit and vegetables which could actually reduce the amount bought and eaten. So far very little research has assessed the impacts of these policy changes on consumer behaviour or on the nutritional quality of the food they buy. No research has investigated the environmental and nutritional consequences in parallel to inform optimal recommendations supporting both planetary and human health.

This project will investigate what happens to our behaviour and intakes when policies to reduce food waste and food packaging waste are implemented and, if the push to reduce waste is having unintended negative consequences for UK diets, what can be done to protect both planetary and human health.

You will work in a dynamic team of likeminded researchers (including with other DTP students) from the Universities of Surrey and Cranfield, supported by external stakeholders in high profile UK Nutrition organisations, to access training and mentorship and undertake a series of related and novel studies aimed at understanding:

- How the recommended packaging reduction and date labelling policies are actually being implemented by UK fresh food retailers and which products and consumers are most affected by these
- How these changes may affect consumer behaviour – do they buy more/ less, are they more likely to wash or peel unpackaged foods, how do they decide when to dispose of unlabeled produce?
- How these changes may affect nutrient content of food and the nutrient intakes of consumers.
- How we can support retailers and consumers to achieve optimal waste reduction AND maximal nutrient retention and consumption.

The PhD is organised into 5 interlinked work packages each led by a member of the supervisory team who is an expert in that field and each utilising different methodologies to best answer the research question, allowing you to develop a varied and unique research and skills portfolio:

WP1 – scoping review and audit of policy implementation: How are the policies actually being implemented by UK retailers? Which foods do they affect, how much variability is there between shops/ foods/ geographical areas? You will

be reviewing company policies and conduct in-store field work.

WP2 – consumer research: Has consumer behaviour changed since labelling and packaging changes took place? What would consumers choose when faced with different combinations of foods/ packaging/ date labelling? You will be conducting qualitative interviews and choice experiments with consumers face to face or online.

WP3 – food analysis : Which nutrients are most affected by differences in packaging and by the removal of date labels on fresh fruit and vegetables? You will be analysing samples of fresh fruit and vegetables in our own in-house food science laboratory to assess nutrient effects of different packaging and storage options.

WP4 – modelling: How can the data generated be integrated into models to describe i) what is currently happening to dietary intakes as a result of packaging changes and ii) what the optimal solution would look like to balance waste reduction with nutrient retention. You will be using modelling software to model actual and ideal outcomes.

WP5 – dissemination: Who needs to know about these findings and who should shape the recommendations made? You will share your findings via publications and presentations and hold a stakeholder event to get feedback on the models proposed.

Training opportunities:

As a student based at the University of Surrey and co-supervised by Cranfield University you will have access to world leading training and development opportunities relevant to this proposed project but also essential to your future career.

You will be part of a supportive group of PhD and academic researchers working on related projects, sharing your research and giving and receiving peer feedback.

Generic researcher development training will include:

- Literature review
- Statistical analysis
- Presentation & scientific writing skills
- Ethical research
- Open research principles

Project specific training will include:

- Big data analysis
- Collecting and using National food survey data (including supported use of the National Diet and Nutrition survey data)
- Designing and conducting consumer research
- Qualitative methodologies and analysis
- Conducting laboratory analyses to quantify the nutrient content of foods
- Data modelling

Placement opportunities:

- British Nutrition Foundation (London) – science communication, understanding the UK food retail sector
- Nutrition Society (London) – nutrition training & communication, sustainable diets
- Additional opportunities in the chemical analysis and retail sector will also be sought

Conference opportunities:

You will be encouraged to attend relevant meetings to network and present your research findings, including local, national and international events across your PhD.

Student profile:

We are looking for an individual with a background in nutrition/ food science who is interested in to generating universally beneficial solutions for food waste and diet quality. Experience in any of the following are desirable: consumer research, waste management, sustainability, statistics.

This project uses a broad range of quantitative and qualitative methodologies, from consumer research to laboratory food analysis so an openness to learning new techniques is essential. You should have experience of data analysis and research and the ability to work independently and as part of a small team.

Stipend (Salary):

FoodBioSystems DTP students receive an annual tax free stipend (salary) that is paid in instalments throughout the year. For 2023/24 this is £18,622 and it will increase slightly each year at rate set by UKRI.

Equality Diversity and Inclusion:

The FoodBioSystems DTP is committed to equality, diversity and inclusion (EDI), to building a doctoral researcher(DR) and staff body that reflects the diversity of society, and to encourage applications from under-represented and disadvantaged groups. Our actions to promote diversity and inclusion are detailed on the [FoodBioSystems DTP website](#).

In accordance with UKRI guidelines, our studentships are offered on a part time basis in addition to full time registration. The minimum registration is 50% FT and the studentship end date will be extended to reflect the part-time registration.

References:

WRAP (2023) Label better, less waste: uncut fruit and vegetables. Available online at:

<https://wrap.org.uk/resources/guide/label-better-less-waste-uncut-fruit-and-vegetables> [Accessed October 2023]

WRAP (2023) Citizen insights on use by and best before dates on dairy produce. Available online at:

<https://wrap.org.uk/resources/report/citizen-insights-use-and-best-dates-dairy-products>. [Accessed October 2023]

For up to date information on funding eligibility, studentship rates and part time registration, please visit the [FoodBioSystems website](#).