FoodBioSystems DTP - PhD Project Advertisement Text

Project Title: FOODBIOSYSTEMS - Investigation into sustainability labelling of food and implications for the consumer and the food industry

Lead Supervisor: Dr Alice Mauchline, University of Reading, School of Agriculture, Policy and Development
Email: a.l.mauchline@reading.ac.uk

Co-Supervisors: Prof Moira Dean, Queen's University Belfast, Institute for Global Food Security: School of Biological Sciences

Research Group: FOODBIOSYSTEMS BBSRC DTP
Project ID: FBS2020-33

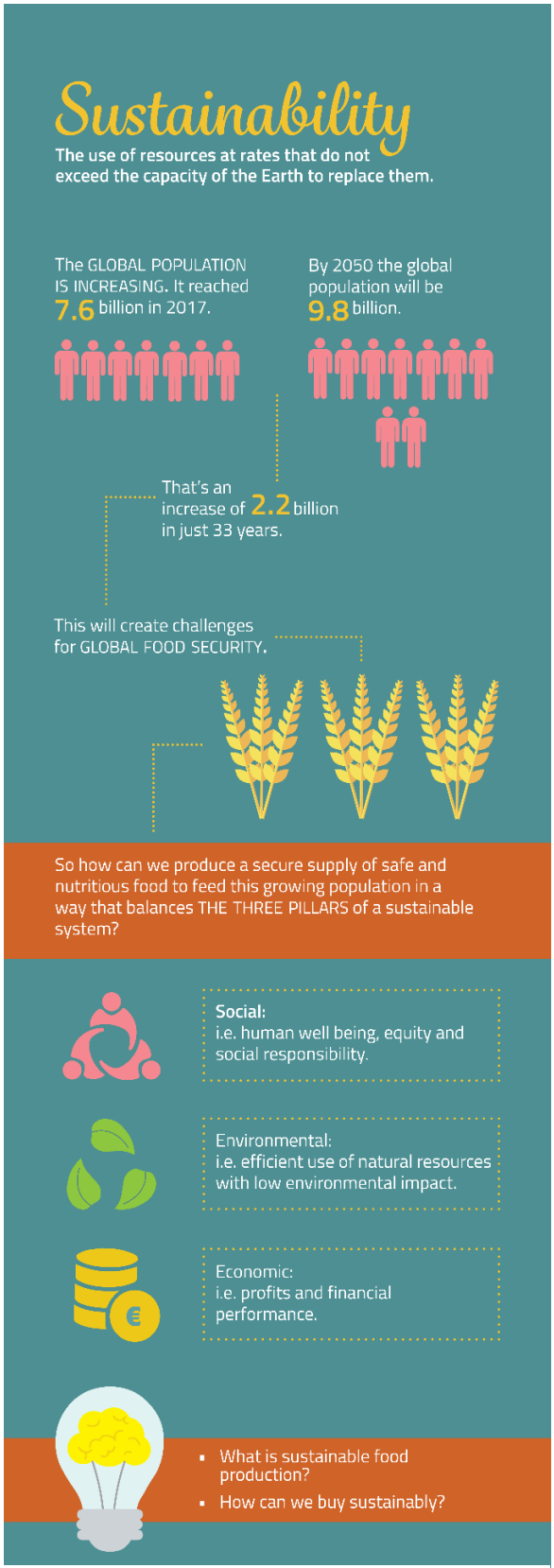
Application Deadline: 6 March 2020

Project Description: There is a real challenge to produce enough food in a sustainable way to feed the growing global population. However, what is sustainable food production and how can this be communicated to consumers?

This project addresses the dual problems of i) advancing the agri-food industry towards more sustainable systems and ii) low consumer trust in our food (in relation to food safety, nutrition and production) due to a lack of transparency in the food system. Studies have shown that transparency of food chain information via tools such as QR codes on food packaging (that convey assurances about the production system) is one way of increasing consumer trust.

Nevertheless, our food system is in constant flux due to new environmental conditions, changing consumer preferences and market forces. Therefore, existing labelling schemes may no longer be fit for purpose or could be in need of improvement. Further, there is an urgent need for consumers and regulators to feel that the Food Industry is committed to food chain transparency and that environmental sustainability is embedded in their business decision making and practices.

Currently the food industry lacks a comprehensive system to accurately measure the effects a food item has on the planet. Though some metrics do exist, they typically focus on a singular element, such as carbon emissions. However the impact is much wider and should include water use, land use, nitrogen released, energy for cultivation, process, package and transport foods, as well as emissions and materials associated with packaging and food lost in production. The multifactorial measurements require many metrics to capture the various contributions and to translate this into a system the consumer would understand. Major progress is being made by researchers to develop robust metrics around a suite of key sustainability indicators and to develop a 'lifecycle analysis' approach that considers all upstream and downstream processes.



This infographic was created by Aanand Tank, an undergraduate student from the University of Reading's Typography and Graphic Communication Department.

This PhD project will investigate the co-creation of a food labelling system such as the "front of pack" nutrition wheel to display sustainability indicators to the consumer.

Our hypothesis is that: A comprehensive, front of pack labelling system for food, that conveys environmental sustainability information to the consumer, will lead to an increase in consumer trust in food and willingness to pay.

The objectives of the research are:

- To conduct a critical appraisal of existing information systems in Nutrition, Food Safety and Environmental Sustainability to ascertain information on the most pressing topics around sustainability in the food chain
- Using a mixed qualitative methods approach including interviews and focus groups; to identify industry & consumer needs, wants, aspirations, barriers etc. to the selected elements such as cost of production, safety assurance, carbon footprint, waste to be considered in the system
- To explore knowledge of the characteristics, ease of use and accuracy of existing sustainability/carbon footprint measures of a selected food product for use in a novel front of pack labelling system
- To consider the inspection and certification systems that would need to be implemented to provide such assurances and transparency and to conduct a cost-benefit analysis for food producers
- To conduct co-design workshops with consumers to develop different prototypes of labelling options of the key elements of a front of pack labelling transparent sustainability system
- To evaluate alternative systems with consumers for their perceptions, understanding, trust, intention to buy, willingness to pay

Funding Notes: This project is part of the FoodBioSystems BBSRC Doctoral Training Partnership (DTP), it will be funded subject to a competition to identify the strongest applicants. Due to restrictions on the funding, this studentship is only open to UK students and EU students who have lived in the UK for the past three years.

The FoodBioSystems DTP is a collaboration between the University of Reading, Cranfield University, Queen's University Belfast, Aberystwyth University, Surrey University and Brunel University London. Our vision is to develop the next generation of highly skilled UK Agri-Food bioscientists with expertise spanning the entire food value chain. We have over 60 Associate and Affiliate partners. To find out more about us and the training programme we offer all our postgraduate researchers please visit https://research.reading.ac.uk/foodbiosystems/.

Training opportunities: The student will have the opportunity to work with researchers in both the University of Reading and Queen's University Belfast and therefore benefit from working with two different research areas; Agricultural ecology & sustainability and Consumer psychology & Food security. The student will receive training in ecological measurements, participatory and social science research methods and critical analysis techniques to address the challenge set by this project.
Both research groups collaborate widely with other research partners and therefore the student will benefit from being integrated into two active research groups who are working on key research topics in AgriFood. Further, the student will be able to benefit from the Reading Researcher Development Programme (RRDP) which provides tailored learning for all graduate students to meet personal development needs including building; knowledge and intellectual abilities, personal effectiveness, research governance and organisation, engagement, influence and impact.

Student profile: This studentship would suit a candidate with a strong interest in advancing the food system and in agricultural food systems. This project would be suitable for students with a degree in biology, nutrition, agriculture, psychology, food science or a closely related science.