

WORK PACKAGE 3.1: IMPROVED FOOD & DRINK PRODUCTION

The research in Work Package (WP) 3.1 will deliver evidence which can improve Scottish food and drink production, across the supply chain, in terms of making it more desirable, nutritious, beneficial to health, safe, economically viable, sustainable and ethically produced.

Scotland has an extensive larder of nutritionally valuable animal- and plant-derived products that can be grown, harvested, produced and processed to provide a healthy and sustainable diet. Driven by the Scottish national Food and Drink Policies, A Recipe for Success (2009) and Becoming a Good Food Nation (2014), which aim to increase access to good quality food to improve Scotland's diet and food culture, this research will focus on providing scientific evidence to deliver foods with superior nutritional qualities and reformulate processed foods to improve their healthiness while retaining consumer appeal and food manufacturer acceptability.

Food borne illness currently affects 1 million people in the UK annually, costing the UK economy £1.5 billion. Research in WP 3.1 will help improve food safety by defining the risk factors, improving detection of the most important food-borne pathogens and toxins, and encouraging uptake by stakeholders across the food industry.

Significant food security challenges lie ahead for agricultural production due to an increasing global population and climate change pressures. Food waste, from farm to consumer level, impacts on this with 570,000 tonnes of food and drink being wasted by Scottish households annually in Scotland. WP 3.1 will assess food waste along main Scottish food supply chains (e.g. dairy, potatoes and fruits) and consumption in Scotland, to provide robust strategies to reduce waste and identify valorisation routes at different levels across primary and secondary production, processing, retailing, consumption and society.

The research in WP 3.1 will underpin the long-term sustainability, economic growth and societal value of Scottish food and drink, and will deliver outputs relevant to a diverse range of stakeholders including policy, industry, academia, and consumers.

Key aims of WP 3.1 are, therefore, to contribute to a sustainable, healthy diet by improving the nutritional and health qualities, affordability, availability and sustainability of Scottish primary and processed food and drink through:

- The identification of the nutritious and health beneficial components in major, underused or emerging affordable and seasonal Scottish primary produce that would benefit from enhancement.
- The characterisation and development of strategies for improving the nutritive value and health benefits of processed foods.
- The development of technologies and strategies for the prevention, detection and eradication of food borne infections and related toxins with particular relevance for Scotland.
- The development of tools, techniques and best practice to allow the Scottish food and drink industry to reduce or valorise waste.

Work Package co-ordinator:

Derek Stewart (James Hutton Institute), derek.stewart@hutton.ac.uk