



Working to ensure
sustainable, resilient
and healthy food
supplies for all



Combining world-leading crop and
livestock research with extensive
expertise in social sciences in a single
research initiative





Combining, soil health, resilient and productive crops and livestock, novel diagnostics and predictive modelling to promote resilient, sustainable food production



The production of food needs to become more efficient in its use of resources without compromising the ecosystem and social services that agricultural landscapes provide.

We also need to prevent any reduction in our current production capacity - by mitigating the effects of climate change, reducing land and water degradation and protecting production from pests, weeds and diseases. We will take a systems-approach to

sustainable food production. Areas we will focus on include precision agriculture (in the application of fertilisers and pesticides), better diagnostics for crop and livestock diseases, and genomics (in plant and livestock breeding and improving soil function)



Adapting food supply systems to deliver better resilience while improving nutrition, reducing environmental impacts and sustaining economies fairly



Food security exists when people have access to sufficient, safe, nutritious food to maintain healthy, active lives, but globally, achieving food security must also promote sustainable development.

Achieving resilient global food security lies at the nexus of economic growth, resource demand, environmental sustainability and public health.

Our goal is to adapt food supply systems so that they are more resilient and deliver better nutrition while improving public health, reducing environmental impacts and sustaining economies.

The challenge is to integrate our understanding of food supply networks from food production and supply through to consumption and nutrition and to identify and apply innovative practices to adapt the UK's food supply network.



Improving public health while lowering the burden of food production and distribution on the natural environment: through changes in behaviour, diet and other socio-economic factors



We will focus on consumers' dietary needs, food preferences and practices, and their links to public health and food supply, affordability and distribution.

We will examine both individual behaviour and social practices, and the barriers to - and incentives of - behavioural and practice change.

We will explore the cognitive, psychological and situational factors driving individual, collective and institutional consumption decisions, and the wider social forces shaping behaviours.

Ultimately, innovations to promote sustainable nutrition (technological or societal) will fail without changes in understanding the practice amongst all stakeholders.

We will combine nutrition, health, behavioural and social sciences to develop innovations that meet people's dietary needs and promote healthy and sustainable lifestyle.

Securing sufficient, safe and nutritious food

A growing and increasingly affluent population is putting pressure on our ability to guarantee food security, both now and in the future: agricultural production needs to grow by 60% by 2050 to keep pace with the rising populations and increasing meat consumption. Producing more food in the face of climate change and increasingly unpredictable water supplies is a significant global challenge.

N8 AgriFood combines crop and livestock research with expertise in social sciences in a single research initiative focused on ensuring the stability and integrity of national and global agri-food supply chains in the face of environmental and socioeconomic challenges.

The N8 universities have an impressive track record in agri-food science:

With more than 370 researchers and a portfolio of £269m of research funding over the last six years, the N8 has the greatest concentration of bioscientists engaged in agri-food research in the UK. With a new investment of £16m from the N8 and HEFCE, N8 AgriFood is building on these strengths to transform food security research.

N8 AgriFood combines expertise across the natural and social sciences, including:

- Soil health
- Plant biology crop and biofuel improvement
- Weed, pest and disease management
- Livestock health and wellbeing
- Human and animal nutrition
- Consumer behaviour and diet choice
- Globalisation, supply chains, fair trade and food economics
- Waste and resource management

N8 AgriFood combines expertise across the natural and social sciences, including:

- Combine the world-leading crop and livestock research at the N8 universities with the translational capabilities of six university farms to create a single research programme focused on improving the sustainability of food production;
- Work with companies and farmers to apply the insights generated to increase the resilience and economic competitiveness of national and global agri-food supply chains;
- Understand global food consumers' motivations and develop interventions that promote better nutrition and sustainable consumption.

N8 AgriFood has three inter-connected multi-disciplinary themes, addressing key challenges in food security





For further information about N8 AgriFood, the HEFCE-funded N8 AgriFood Resilience Programme:

www.N8AgriFood.ac.uk

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HEFCE is the Higher Education Funding Council for England.



HIGHER EDUCATION
FUNDING COUNCIL FOR ENGLAND



The N8 universities (Durham, Lancaster, Leeds, Liverpool, Manchester, Newcastle, Sheffield and York) have an established track record of working together on large capital investments and collaborative research projects.

