



University of  
**Nottingham**  
Future Food

## August news

Welcome to the latest newsletter from the Future Food Beacon. As it is August, we are highlighting recent stories and publications. We hope you have an excellent summer!

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In this edition:

Who are Future Food?

Recent highlights from the Future Food team

Opportunities to join our team!

News from the Food Innovation Centre

Upcoming talks, seminars and conferences

Selected publications

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### Who are we?

We are an open, research cluster exploring ways to feed a growing population sustainably within a changing environment. The University of Nottingham has over 250 researchers working on questions across the food system, spanning five faculties. The Future Food Beacon focuses this breadth and depth of expertise to generate transdisciplinary solutions to questions of future food security.

You can find out more [on our website](#). Want to work with us? [Get in touch!](#)

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## Recent highlights from the Future Food team

The Geonutrition team (captured below) published their paper in *Nature*: [The nutritional quality of cereals varies geospatially in Ethiopia and Malawi](#). Martin Broadley writes more about the research [here](#), and you can read the [press release](#). Murray Lark, Christopher



We have written responses to The National Food Strategy, published last month. Prof David Salt highlighted Future Food's [contributions to the report](#), while Prof Andy Salter [explored the implications for protein](#).

Dr Heike Bartel is part of a [£3.8m interdisciplinary project](#) examining the way eating disorders are understood and treated in adolescents. Dr Bartel has previously worked on projects focused on male eating disorders, working with local community partners to [develop a training tool](#) for GPs to better help those struggling with illness. This new project, led by King's College London and the University of Edinburgh, provides a valuable opportunity to deepen Dr Bartel's interdisciplinary work and interest in how personal narratives of illness and recovery can be used to increase understanding amongst the public and professionals.

PhD candidate Kellie Smith takes us on [a duckweed hunt](#) with her blog series.

Our Associate Director for Research has some [advice](#) for early career researchers.

Congratulations to Dr Sean Mayes, Dr Rahul Bhosale, Dr Guillermina Mendiondo and Prof John Brameld on a successful EU Horizon 2020 grant: RADIANT!

Prof David E Salt (Director of the Future Food Beacon and in the School of Biosciences) is a Co-Investigator on a new research project led by Prof Mike George (Director of the Green Chemicals Beacon and in the School of Chemistry), funded by EPSRC. The project will pioneer innovative nanoscale imaging capability at the University of Nottingham.

You can read more about the people who make up [the Palaeobenchmarking Resilient Agricultural Systems project](#), the [Future Proteins Platform](#), and the [current UoN-Rothamsted PhD candidates](#).

Our [research engagement map](#), showcasing all the global connections of Future Food, is live on our website.

Prof. Murray Lark undertook the statistical modelling that made possible the first ever [map of the rate of groundwater recharge across Africa](#). An international team of scientists from the British Geological Survey, UoN and universities in South Africa, Nigeria and the US collaborated to produce the work, which is published in [Environmental Research Letters](#).

duplication has resulted in a 4-year Leverhulme Trust grant for: "*PREADAPT: revealing the basis of whole genome duplication-mediated adaptation*".

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## Opportunities



### Job opportunity for a data scientist

[Join the MAPS project!](#)

### PhD studentship in soils





Our YouTube channel features not only our Food Shots series but also videos of our technology platforms!

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## Food Innovation Centre news

The appetite for innovation in the food and drink sector has led to the Food and Drink Innovation Centre at the University of Nottingham experiencing one of its busiest times. Some of the sector's businesses have been hit hard by the Covid pandemic, but there has been a surge in entrepreneurship, which has generated new products, new ideas and new ways of working. Ease of access to the sector has helped!

The team at the Food Innovation Centre has responded to this in a difficult lockdown environment by giving free help and advice to a range of SMEs in Derbyshire and Nottinghamshire in recent months to boost productivity - supporting the current vibrancy of the sector, said Head of the Food Innovation Centre Richard Worrall. Specific help has been given to the region's craft brewers by Rod White of International Centre for Brewing Science, sharing invaluable knowledge and experience.

Take a look at some past case studies [here](#) to get a flavour of the work undertaken by the Food Innovation Centre.



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## Upcoming talks, seminars and conferences

### 1 DECEMBER

[Systematic innovation for food security and rural sustainability in China](#). Call for ECR participants extended to 15 September.

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## Publications from Future Food

Dr Erik Murchie has a [new paper out in \*New Phytologist\*](#) examining nocturnal conductance in wheat.

Dr Gabriel Castrillo has a publication showing [how plants have a sensing mechanism](#) that regulates arsenate/phosphate uptake, protecting them from potentially toxic compounds in the soil.

Prof David E Salt, Dr Levi Yant and colleagues have written [how \*Arabidopsis thaliana\* plants adapt to life in coastal soils](#) in North Eastern Spain.

Dr Tania Dottorini has a [new publication](#) from the [FarmWatch](#) project.

Christopher Chagumaira is the lead author of a paper which explores [how best to communicate complex spatial data about micronutrients in food crops](#), including to policy makers.

Dr Guilhem Reyt is the lead author of an excellent new paper in *Nature Communications*: [Two chemically distinct root lignin barriers control solute and water](#)

that [landscape position affects the zinc content of food plants in the Amhara region of Ethiopia](#).

Prof Matt Jones has had a fascinating paper published about the range of [food plants consumed by hunter-gatherers in the Epipalaeolithic](#) period.

Levi Yant has a publication in *PNAS*, with his Chinese collaborators and friends, about the properties of [the amazing loquat](#) and how whole genome duplication has affected it.

Sacha Mooney, Hannah Cooper and Sofie Sjogersten had a great article about [no-till farming](#) published in the *The Conversation*.

Andrew Salter is a co-author of a new paper in *Nature Food* analysing [historic dietary shifts](#) in order to help our transition to more sustainable diets in the future. A helpful [explanatory article](#) by the lead author, Emily Moberg, offers a summary of the paper.

Lisa Yon and her colleagues in Brazil have persevered with their collaborative project in the face of the Covid-19 pandemic and have succeeded in [publishing their findings](#) in *Agriculture, Ecosystems and Environment*.

The [paper by Elliot Owen, Tristan Dew et al](#) on fruit and vegetable biomarker development and dietary assessment was nominated as [Editor's Choice](#) in the April edition of the Journal of Nutrition.

Congratulations to Hina Kamal and Andrew Salter of the Future Proteins Platform on the publication of their [review of extraction techniques for recovering protein from food waste](#).

A paper in *Science* titled '[Plant roots sense soil compaction through restricted ethylene diffusion](#)', led by Bipin Pandey and co-authored by Nottingham Research Fellow Rahul Bhosale, Malcolm Bennett, Sacha Mooney, Craig Sturrock, and Lottie Jose.

Molly Muleya of our Future Proteins Platform has published a [new paper on digestion of iron and zinc from cereals and legumes](#).

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To tell us your news, share conference registrations or abstract opportunities, as well as any food-related reading please email:

[Lexi Earl](#), Outreach and Engagement Manager, Future Food Beacon



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