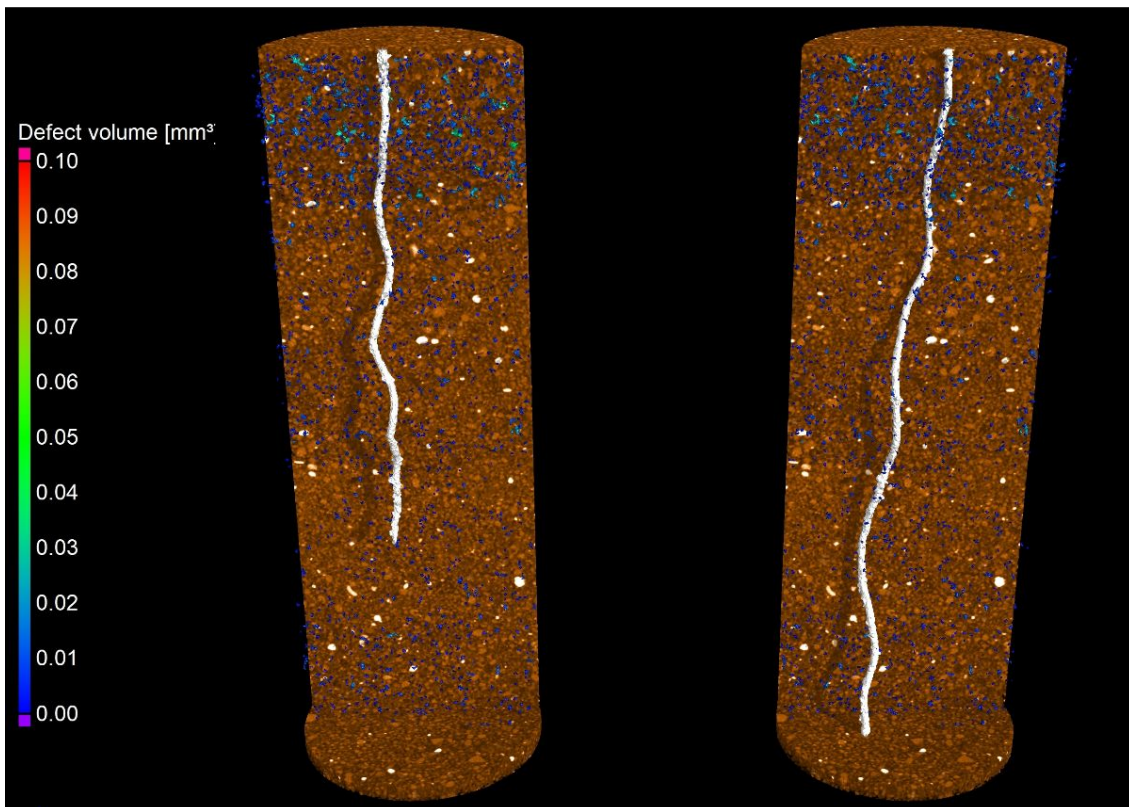




University of
Nottingham
Future Food

Future Food Beacon newsletter - amended

January 2021



A ground breaking new paper has just been published in Science called '**Plant roots sense soil compaction through restricted ethylene diffusion**'. The lead author, Bipin Pandey, was funded by the Beacon for a year prior to this publication and Rahul Bhosale, one of the Beacon's Nottingham Research Fellows, is a co-author. The talented research team also includes UoN co-authors Malcolm Bennett, Sacha Mooney, Craig Sturrock and Lottie Jose.

This paper has been extraordinarily well received in more than 20 countries around the world and through more than 30 news outlets and TV stations. Some examples of this coverage are:

- a **UoN press release**, containing Craig Sturrock's great promotional video;
- a summary in **nature**;
- an article in **The Conversation**
- Malcolm Bennett's **BBC Radio 5 Live Science interview** (scroll to 33 mins)
- Malcolm Bennett's **interview on CBC Radio** in the USA



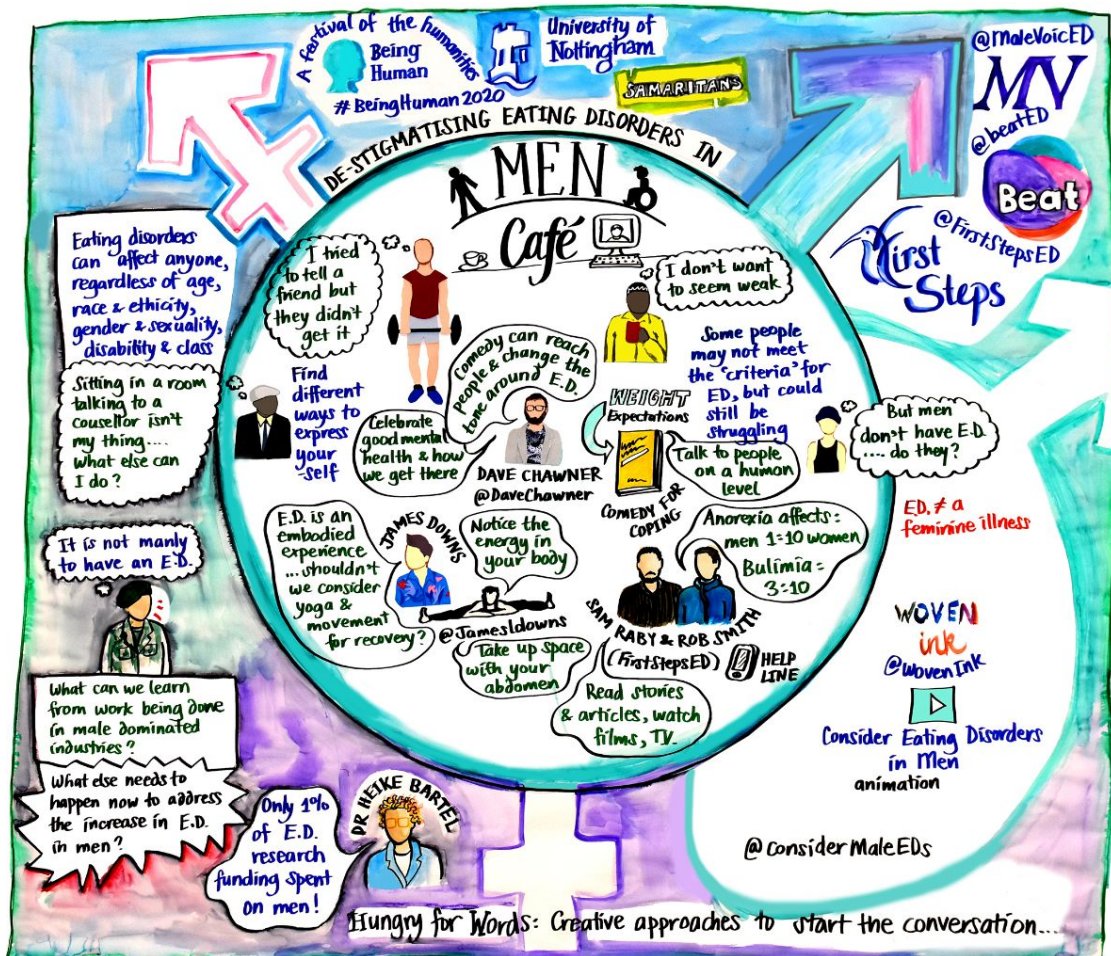
Congratulations to Molly Muleya of our Future Proteins Platform who has published a **new paper on digestion of iron and zinc from cereals and legumes**. Her co-authors are Scott Young and Liz Bailey from the UoN School of Biosciences so it is an all-Nottingham production!



A huge well done to Eliot Jones of the Beacon, Horizon CDT and CIMMYT on his first publication! He and his co-author review **how farmers in the Global South are adopting sustainable intensification technologies in maize systems**



We are pleased to present yet another excellent publication by our **Ionomics Facility** manager, Paulina Flis! This time, she and her international co-authors have conducted an **'Ionomic analysis of spring wheat grain produced in Kazakhstan and Russia'**.

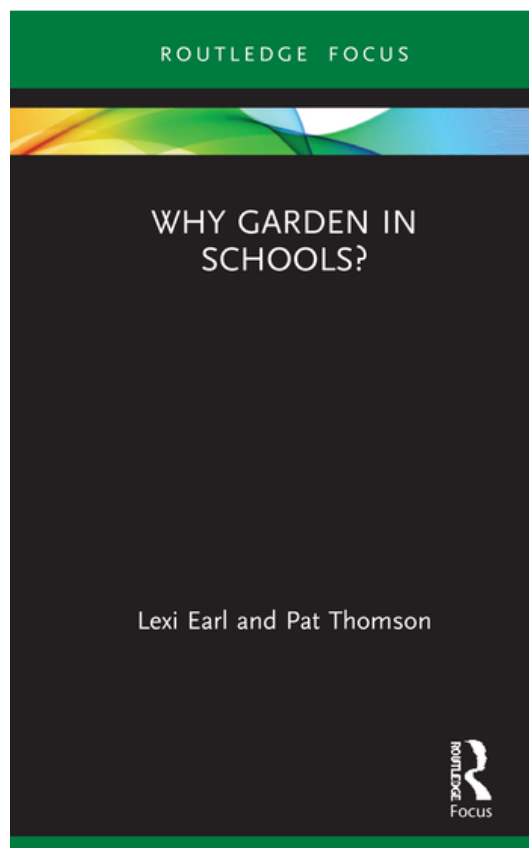


De-Stigmatising Eating Disorders in Men Cafe, University of Nottingham, November 2020. Graphics by www.penmendonca.com @MendoncaPen

These superb visual notes by Pen Mendonca (Twitter = @MendoncaPen) come from the sold-out online 'Destigmatising Eating Disorders in Men Cafe', co-organised by Heike Bartel as part of 2020's Being Human Festival.

The event was a success thanks to help from Richard Vytningu, Fiona Frost and charity partner First Steps Eating Disorders, who also provided a helpline after the event. Follow @ConsiderMaleEDs on Twitter for more!

We are delighted that Lexi Earl's essential new book on gardening in schools is now **available to buy!**



Our **2019-2020 Yearbook** is a collection of all of our blogs from 1 August 2019 to 31 July 2020. Just pick and choose the articles you are interested in and treat it like a magazine!

Future Food News

Gabriel Castrillo presented the findings of his Science paper '*Coordination between the microbiota and the root endodermis is required for plant mineral nutrient homeostasis*' on 20 January 2021.

Levi Yant's recently accepted paper **Adaptive introgression: how polyploidy reshapes gene flow landscapes** is listed in Publications below. We will feature this in February's newsletter.

In our last blog of 2020, we introduced you the amazing new **Rovercam** machine. Look out for an updating blog showing Rovercam in action later this year!

In 2021, our blog got off to a highly topical start with Dr Yiqun Gao explaining **what it is like to arrive in the UK during a pandemic** and still manage to conduct top-level science! Next, our Prof. Salt responded to the latest controversy around **bees and neonicotinoids with an information statement blog**.

The University of Nottingham's **Food Innovation Centre** Food continues to offer free technical and scientific advice to food and drink SMEs in Nottinghamshire and Derbyshire.

Arriving too late for our December newsletter, this short but fascinating piece about the **Christmas dinners of the future** is well worth your time in early 2021.

Researchers interested in supply chains in India will want to read about **the TRANSSTIoN project**.

Sticking with India, NERC have released the recording and the slides from their November 2020 webinar '**Sustaining water resources for food, energy and ecosystem services in India**'

PODCAST! **Super Rice** featuring **Dr Smita Kurup** of Rothamsted Research.

Really useful explainer about **vitamins and minerals** for those of us who are not already experts!

Interesting KTN article of **food trends in the last 10 years** and a little future casting.

Table's 'Fodder' newsletter for January is typically interesting, featuring articles on the environmental impacts of **microwave cooking**, **dry pet food** and **external climate costs of food in Germany**

Upcoming talks, seminars and conferences

IFST Food Waste Webinar Series: **Minimising loss, maximising resources** (Midlands) - 11.00 on 21 January 2021

FoodSHIFT public webinar: urban and peri-urban agriculture - 12.00 on 21 January 2021

Demystifying systems change: introducing a mission-approach to food systems transformation - 10.00 on 26 January 2021 - Live on Zoom - Register to receive link

Implementation of sustainable meals in practice - 18.00 on 26 January 2021 - Live on Zoom - Register to receive link

Future Food Beacon seminar by **Prof. Pathmanathan Umaharan**, Director of the Cocoa Research Centre at the University of the West Indies and Honorary Professor at the Future Food Beacon 2020-2021 - 14.00 on 2 February 2020 on **MS Teams**

IFST Food Waste Webinar Series: **Managing Waste at the Consumer Interface** - 11.00 on 4 February

Westminster Food & Nutrition Forum - seminar on 2 February and 27 April 2021

Atomic Force Microscopy - Applications in Bioscience Challenges presented by Jacob Patten - 17 February 2021 (UoN only via MS Teams, with apologies)

National Imaging Facility at Harwell presented by Assistant Professor Lin Wang - 17 March 2021 (UoN only via MS Teams, with apologies)

Black Botanists - the online lecture series continues into 2021

Nottingham Festival of Science and Curiosity (FOSAC) - apply now to take part in February 2021!

FDf webinar **Supply Chain Resilience: How to predict, manage and mitigate supply chain risks** - 11.00-12.00 on 25 February 2021

IFST Scotland Branch Event: **Net Zero Gin, Utilisation of Barley, find out innovative ways the food industry is becoming sustainable in Scotland?** - 18.00 on 23 March 2021

New publications from Future Food

Adaptive introgression: how polyploidy reshapes gene flow landscapes (Accepted paper) Schmickl and Yant (2021)

Farmer adoption of sustainable intensification technologies in the maize systems of the Global South. A review Jones-Garcia et al (2021)

A stable isotope approach to accurately determine iron and zinc bioaccessibility in cereals and legumes based on a modified INFOGEST static in vitro digestion method Muleya et al (2021)

Ionomic analysis of spring wheat grain produced in Kazakhstan and Russia Abugalieva et al (2021)

Building a resilient and sustainable food system in a changing world - A case for climate smart and nutrient dense crops Mustafa et al (2021)

Why Garden in Schools? book - Earl and Thomson (2021)

Insects: a potential source of protein and other nutrients for feed and food Hawkey et al (2021)

Bambara Groundnut: An Underutilized Leguminous Crop for Global Food Security and Nutrition Tan et al (2020)

Men Writing Eating Disorders: Autobiographical Writing and Illness Experience in English and German Narratives book - Bartel (2020)

A network of transcriptional repressors modulates auxin responses Truskina et al (2020)

Coordination between microbiota and root endodermis supports plant mineral nutrient homeostasis Salas-Gonzalez et al (2020)

Targeted expression of the arsenate reductase HAC1 identifies cell type specificity of arsenic metabolism and transport in plant roots Fischer et al (2020)

A single bacterial genus maintains root growth in a complex biome Finkel et al (2020)

Increasing zinc concentration in maize grown under contrasting soil types in Malawi through agronomic biofortification: Trial protocol for a field experiment to detect small effect sizes Botoman et al (2020)

Formation and diversification of a paradigm biosynthetic gene cluster in plants Liu et al (2020)

Cultivating elders for the UK processing industry - a Nuffield Scholar report by Alice Jones, sponsored by Thatchers Cider (2020)

Wood hemicelluloses exert distinct biomechanical contributions to cellulose fibrillar networks Berglund et al (2020)

Structural Insights into the Mechanism of Heat-Set Gel Formation of

Polyisocyanopeptide Polymers Gavrilov et al (2020)

Tales from the countryside: Unpacking “passing the environmental buck” as hypocritical practice in the food supply chain Glover et al (2020)

Poetry on Eating Disorders in Men (book chapter) Bartel (2020)

Food biotechnology Foster et al (2020)

Effect of phosphorus supply on root traits of two *Brassica oleracea* L. genotypes Pongrac et al (2020)

A nociresponsive specific area of human somatosensory cortex within BA3a: BA3c? Sanchez Panchuelo et al (2020)

Uclacyanin proteins are required for lignified nanodomain formation within Casparian strips Reyt et al (2020)

The Effect of Dissolved Gases on the Short-Range Attractive Force between Hydrophobic Surfaces in the Absence of Nanobubble Bridging [Azadi et al \(2020\)](#)

Rapid temperature responses of photosystem II efficiency forecast genotypic variation in rice vegetative heat tolerance Ferguson et al (2020)

Low-Cost Automated Vectors and Modular Environmental Sensors for Plant Phenotyping Atkinson et al (2020)

Arctic rolls and gender roles - Female and male eating disorders in Karen Duve's *Regenroman* and other texts Bartel (2020)

Barley sodium content is regulated by natural variants of the Na⁺ transporter HvHKT1;5 Houston et al. (2020).

Low cost automated vectors and modular environmental sensors for plant phenotyping Bagley et al. (2020).

Perspectives from CO+RE: How COVID-19 changed our food systems and food security paradigms Bakalis et al. (2020).

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

Andrew Edwards (Ed), Acting Communications Officer for the Future Food Beacon



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