



InnovateUK
KTN

Forgotten Foods UK Research Expertise and Capabilities Database

July 2022

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Terms of use

We make this database available on the condition that it is not directly reproduced or used for any other purpose than to support making productive collaborations.

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We request that you do not blanket contact those included and respectfully approach potential collaborators.

Disclaimer

The information included in this Database has been supplied by each organisation/individual. We have collated this information, but it has not been checked or updated by Innovate UK KTN.

If some fields are empty, this is because the organisation didn't complete them when they registered to be included in this Database.



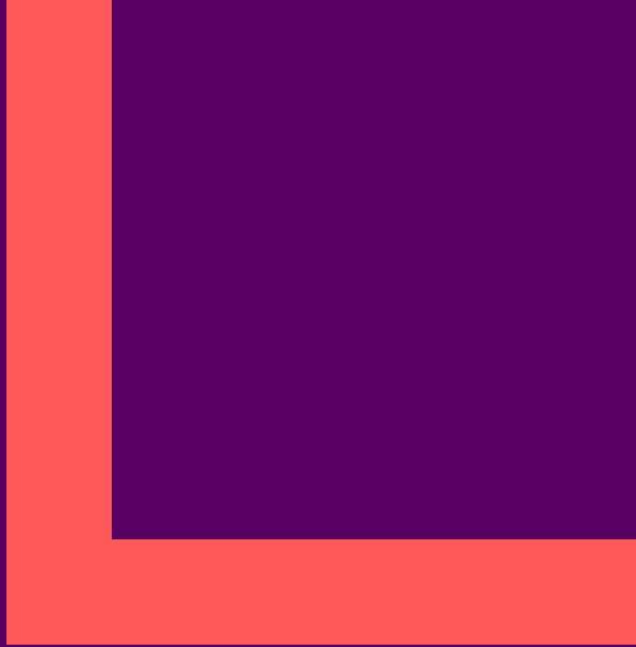
How to use the database

This Collaboration Database features UK research organisations and individuals who are interested in collaborating around Forgotten Foods.

Search by keyword

If you'd like to search for a key word you have in mind, use the shortcut "Command (cmd) + F" (Mac) / "Control (ctrl) + F" (Windows) on your keyboard and enter your keyword in the search box that will appear.

Summary Table



Organisation	Name	Crops	Expertise
Aberystwyth University	Luis Mur	Millet	Omic (especially metabolomic) characterisation of nutritional traits and responses to biotic and abiotic stress.
Crop Health and Protection (CHAP)	Jemma Taylor	Lupins	Plant breeding, crop physiology and crop genetics. Background in molecular biology including plant transformation techniques such as CRISPR.
Crop Health and Protection (CHAP)	Victoria Woolley	Common bean, Lablab	Integrated pest management in orphan crop legumes including cowpea and lablab.
Crops for the Future	Sayed Azam-Ali	Bambara Groundnut, Amaranth, Minor millets, Winged bean	Crop physiology, climate change, knowledge systems
Natural Resources Institute, University of Greenwich	Andrew Armitage	Cowpeas, Bambara Groundnut, Yam, Cassava, African Yam Bean	Fungal pathology and bioinformatics. Fundamental research interests in genomics, evolution of pathogenicity and plant-microbe interactions. Applied research interests in development of pathogen diagnostics, supporting breeding programmes and training in bioinformatics.
Natural Resources Institute, University of Greenwich	Aurelie Bechoff	Cowpeas, Bambara Groundnut, Sorghum, Amaranth, Cassava, Millet, Baobab	Food technologist and nutritionist.
NIAB	Gerard Bishop	<i>Solanum aethiopicum</i> (African Eggplant)	Crop Physiology.



Organisation	Name	Crops	Expertise
NIAB	Matthew Milner	Teff	Crop physiology, genomic, trait dissection.
Royal Botanic Gardens, Kew	Caspar Chater	Cowpeas, Bambara Groundnut, and a range of legume orphan crops and crop wild relatives, and non-legumes with other Kew colleagues	Molecular genetics, crop physiology, drought resilience, transformation, gene editing.
Royal Botanic Gardens, Kew	Melanie-Jayne Howes	Yam, Baobab, Gundelia and Underutilised species - various	Phytochemical and nutritional traits; methods in analytical and natural product chemistry; scientific basis of useful plants.
Royal Botanic Gardens, Kew	Nicola Kuhn	Yam, <i>Solanum aethiopicum</i> (African Eggplant)	How plant functional traits (particularly root traits) vary along environmental gradients in drylands in South Africa. Nutritional traits. Traits analyses, species distribution modelling and other spatial techniques.
SRUC	David Marshall	Yam, Cassava	Crop bioinformatics and genetics.
The James Hutton Institute	Raul Huertas	Common bean, barley, potato, blueberry, and others	Molecular physiology, crop nutritional traits, food quality traits.
University of Hertfordshire (UH)	Cristina Barrero Sicilia	Sorghum, also Barley, maize but I would like to apply my knowledge to millet and other forgotten foods	Plant molecular biology with a strong background in seed development and germination.



Organisation	Name	Crops	Expertise
University of Lincoln	Ravi Valluru	Cowpeas, Sorghum	Crop physiology, robotic phenotyping, nutritional traits.
University of Nottingham; Crops for the Future	Sean Mayes	Bambara Groundnut, Millet	Genomics, Crop Genetics, genetic analysis of traits.
University of Reading	Luke Bell	Millet, various <i>Solanum</i> species	Experienced in plant breeding techniques, genetics, plant biochemistry, flavour and sensory science.
University of York	Katherine Denby	Amaranth	Genomics; quantitative genetics; crop disease resistance, yield and nutritional traits.

Database



Aberystwyth University | Luis Mur

Contact details

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Crops

Millet.

Expertise

Omic (especially metabolomic) characterisation of nutritional traits and responses to biotic and abiotic stress.

Technologies relevant to Forgotten Foods available at this organisation

Aberystwyth University houses the national plant phenomic centre (NPPC) and the high-resolution mass spectroscopy suite that are of direct relevance to the definition of key tef and pearl millet trait and nutritional status.

Projects relevant to Forgotten Foods

SUPERTEFF: A new paradigm in boosting orphan crops to super grains: Linking metabolomics and gene editing to improve Teff for global food security and sustainable agriculture: 2020-2023

<https://cordis.europa.eu/project/id/842118>

Publications relevant to Forgotten Foods

1. Girija, A.; Jifar, H.; Jones, C.; Yadav, R.; Doonan, J.; Mur, L.A.J. Tef: a tiny grain with enormous potential. *Trends Plant Sci* 2022, 27, 220-223, doi:10.1016/j.tplants.2021.11.011.
2. Girija, A.; Han, J.; Corke, F.; Brook, J.; Doonan, J.; Yadav, R.; Jifar, H.; Mur, L.A.J. Elucidating drought responsive networks in tef (*Eragrostis tef*) using phenomic and metabolomic approaches. *Physiol Plant* 2022, 174, e13597, doi:10.1111/ppl.13597.
3. Girija, A.; Yadav, R.; Corke, F.; Doonan, J.; Mur, L.A.J. Untargeted Metabolomic Profiling Reveals Variation in Metabolites Associated with Nutritional Values in Tef

Accessions. *Plant Food Hum Nutr* 2021, 76, 536-539, doi:10.1007/s11130-021-00931-6.

4. Yadav, C.B.; Srivastava, R.K.; Gangashetty, P.I.; Yadav, R.; Mur, L.A.J.; Yadav, R.S. Metabolite Diversity and Metabolic Genome-Wide Marker Association Studies (Mgwas) for Health Benefiting Nutritional Traits in Pearl Millet Grains. *Cells* 2021, 10, doi:10.3390/cells10113076.

Crop Health and Protection (CHAP) | Jemma Taylor

Contact details

jemma.taylor@chap-solutions.co.uk | <https://chap-solutions.co.uk/>

Crops

Lupins.

Expertise

Plant breeding, crop physiology and crop genetics. I have a background in molecular biology including plant transformation techniques such as CRISPR.

Technologies relevant to Forgotten Foods available at this organisation

Digital phenotyping equipment, genome sequencing, field scale precision equipment, glasshouses, vertical farms, fungal biopesticide development lab, soil health capabilities, natural light growing centre, international pest horizon scanning, mobile labs.

Projects relevant to Forgotten Foods

Ethiopian Lupins for Food and Feed (Sept 2017-Feb 2019)

Publications relevant to Forgotten Foods

1. Taylor, J. L., Angelis, G. D., & Nelson, M. N. (2020). How have narrow-leafed lupin genomic resources enhanced our understanding of lupin domestication? In *The lupin genome* (pp. 95-108). Springer, Cham.
https://link.springer.com/chapter/10.1007/978-3-030-21270-4_8
2. Hufnagel, Bárbara, Alexandre Soriano, Jemma Taylor, Fanchon Divol, Magdalena Kroc, Heather Sanders, Likawent Yeheyis, Matthew Nelson, and Benjamin Péret. "Pangenome of white lupin provides insights into the diversity of the species." *Plant biotechnology journal* 19, no. 12 (2021): 2532-2543.
<https://onlinelibrary.wiley.com/doi/full/10.1111/pbi.13678>

Crop Health and Protection (CHAP) | Victoria Woolley

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victoria.woolley@chap-solutions.co.uk | <https://chap-solutions.co.uk/>

Crops

Common bean, Lablab.

Expertise

Integrated pest management in orphan crop legumes including cowpea and lablab.

Technologies relevant to Forgotten Foods available at this organisation

DNA sequencing, crop phenotyping (fine scale and glasshouse scale), biopesticide development laboratory, vertical farm development.

Projects relevant to Forgotten Foods

Natural Pest Regulation in Orphan Crop Legumes in Africa-
<http://www.agricultureecosystems.org/projects/41-naprocla>

Publications relevant to Forgotten Foods

1. Ndakidemi, B. J., Mbega, E. R., Ndakidemi, P. A., Stevenson, P. C., Belmain, S. R., Arnold, S. E., & Woolley, V. C. (2021). Natural pest regulation and its compatibility with other crop protection practices in smallholder bean farming systems. *Biology*, 10(8), 805. <https://www.mdpi.com/2079-7737/10/8/805>
2. Woolley, V. C., Tembo, Y. L., Ndakidemi, B., Obanyi, J. N., Arnold, S. E., Belmain, S. R., ... & Stevenson, P. C. (2022). The diversity of aphid parasitoids in East Africa and implications for biological control. *Pest Management Science*, 78(3), 1109-1116. <https://doi.org/10.1002/ps.6723>
3. Ndakidemi, B. J., Mbega, E. R., Ndakidemi, P. A., Belmain, S. R., Arnold, S. E., Woolley, V. C., & Stevenson, P. C. (2022). Field margin plants support natural enemies in sub-Saharan Africa smallholder common bean farming systems. *Plants*, 11(7), 898. <https://www.mdpi.com/2223-7747/11/7/898>

Crops for the Future | Sayed Azam-Ali

Contact details

sayed@cropsforthefutureuk.org | <https://cropsforthefutureuk.org/>

Crops

Bambara Groundnut, Amaranth, Minor millets, Winged bean.

Expertise

Crop physiology, climate change, knowledge systems.

Technologies relevant to Forgotten Foods available at this organisation

Global knowledge base, crop breeding, nutritional analysis

Projects relevant to Forgotten Foods

1. <https://www.landsupport.eu/>
2. <https://www.radiantproject.eu/>
3. <http://pbwob.org/>

Publications relevant to Forgotten Foods

https://scholar.google.com/citations?view_op=list_works&hl=en&hl=en&user=MeoEGg4AAAAJ

Natural Resources Institute, University of Greenwich | Andrew Armitage

Contact details

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Crops

Cowpeas, Bambara Groundnut, Yam, Cassava, African Yam Bean.

Expertise

Expertise in fungal pathology and bioinformatics. Fundamental research interests in genomics, evolution of pathogenicity and plant-microbe interactions. Applied research interests in development of pathogen diagnostics, supporting breeding programmes and training in bioinformatics.

Technologies relevant to Forgotten Foods available at this organisation

Genome sequencing; nanopore sequencing; established pipelines for genome assembly, annotation and downstream analysis; controlled pathogenicity/resistance assays; genetics of fungicide resistance; tissue culture; hplc; proteomics; molecular biology facilities.

Projects relevant to Forgotten Foods

1. Characterisation of *Colletotrichum* and *Curvularia* spp on African yam bean. Commonwealth split-site PhD fellowship.
2. Distribution characterisation of fungi responsible for post-harvest rots in yams and control with biopesticides in the Cote D'ivoire – PASET Scholarship.
3. African Cassava Whitefly Project - https://agshare.today/project_acwp/

Publications relevant to Forgotten Foods

1. Kavil S.P., Otti G., Bouvaine S., Armitage A.D. and Maruthi M.N. (2021) The PAL1 gene of the phenylpropanoid pathway increases resistance to the Cassava brown streak virus in cassava. *Virology Journal*, 18:184. <https://doi.org/10.1186/s12985-021-01649-2>

Selected wider horticultural research:

1. Nellist C.F.*, Armitage A.D.*, Bates H.J., Sobczyk M.K., Luberti M., Lewis L.A. and Harrison R.J. (2021) Comparative analysis of host-associated variation in *Phytophthora cactorum*. *Frontiers in Microbiology*, 12:679936.
2. Estevez S.V., Armitage A.D., Bates H.J., Harrison R.J. and Buscaino A. (2021) The genome of the CTG(Ser1) yeast *Scheffersomyces stipitis* is plastic. *mBio*, 12 (5): e01871-21.
3. Khayi S., Armitage A.D., Guilli M.E., Kadmiri I.M., Lahlali R., Fokar M. and Mentag R. (2021) Complete mitochondrial genome and phylogeny of date palm pathogenic fungus, *Fusarium oxysporum* f. sp. *albedinis*. *Mitochondrial DNA Part B*, 6 (10). pp. 3059-3061.
4. Jenkins S., Taylor A., Jackson A.C., Armitage A.D., Bates H.J., Mead A., Harrison R.J. and Clarkson J.P. (2021) Identification and expression of secreted in xylem pathogenicity genes in *Fusarium oxysporum* f. sp. *pisi*. *Frontiers in Microbiology*, 12:593140.
5. Adams T.M., Armitage A.D., Sobczyk M.K., Bates H.J., Tabima J.F., Kronmiller B.A., Tyler B.M., Grünwald N.J., Dunwell J.M., Nellist C.F. and Harrison R.J. (2020) Genomic investigation of the strawberry pathogen *Phytophthora fragariae* indicates pathogenicity is associated with transcriptional variation in three key races. *Frontiers in Microbiology*, 11:490.
6. Cockerton H.M., Li B., Stavridou E., Johnson A., Karlström A., Armitage A.D., Martinez-Crucis A., Galiano-Arjona L., Harrison N., Barber-Pérez N., Cobo-Medina M. and Harrison R.J. (2020) Genetic and phenotypic associations between root architecture, arbuscular mycorrhizal fungi colonisation and low phosphate tolerance in strawberry (*Fragaria x ananassa*). *BMC Plant Biology*, 20:154.
7. Armitage A.D., Cockerton H.M., Sreenivasaprasad S., Woodhall J., Lane C, Harrison R.J. and Clarkson J.P. (2020). Genomics evolutionary history and diagnostics of the *Alternaria alternata* species group including apple and Asian pear pathotypes. *Frontiers in Microbiology*; 10: 3124.
8. Armitage A.D., Nellist C.F., Bates H.J., Zhang L., Zou X., Gao Q.H., Harrison, R.J. (2020) Draft Genome Sequence of the Strawberry Anthracnose Pathogen *Colletotrichum fructicola*. *Microbiology Resource Announcements*, 9 (12).
9. Wilson F., Harrison K., Armitage A.D., Simkin A.J., Harrison R.J. (2019). CRISPR/Cas9-mediated mutagenesis of phytoene desaturase in diploid and octoploid strawberry. *Plant Methods*. 15(1):45.
10. Armitage AD, Taylor A, Sobczyk MK, Baxter L, Greenfield BPJ, Bates HJ, Wilson F, Jackson AC, Ott S, Harrison RJ, Clarkson JP (2018) Characterisation of

pathogen-specific regions and novel effector candidates in *Fusarium oxysporum* f. sp. *cepa*e. Scientific Reports. 2018;8:13530.

11. Armitage AD, Barbara DJ, Harrison RJ, Lane CR, Sreenivasaprasad S, Woodhall JW, Clarkson JP (2015) Discrete lineages within *Alternaria alternata* species group: Identification using new highly variable loci and support from morphological characters. Fungal Biology. 119(11):994-1006.

Natural Resources Institute, University of Greenwich | Aurelie Bechoff

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Crops

Cowpeas, Bambara Groundnut, Sorghum, Amaranth, Cassava, Millet, Baobab.

Expertise

Food technologist and nutritionist.

Technologies relevant to Forgotten Foods available at this organisation

Sensory and consumer testing, recording of traditional processing methods and technological improvement.

Projects relevant to Forgotten Foods

1. Currently formulation of infant foods (University internal funds): sorghum; Acceptability of bambara nuts by UK consumers (2019-20) MacKnight Foundation; NUTRI-P-LOSS (2016-19): cowpea;<https://www.anh-academy.org/immana/grants/grants-round-2/natural-resources-institute-nri-university-greenwich-0>
2. British Council Early Career Scientist Network on african leafy vegetables.
3. HarvestPlus funded project (2012-14): amaranth, cassava, cassava leaves; EU-funded AFTER project (2011-14): baobab drinks and hibiscus drinks.

Publications relevant to Forgotten Foods

1. 2022: Estimation of nutritional postharvest losses along food value chains: A case study of three key food security commodities in sub-Saharan Africa.
<https://link.springer.com/article/10.1007/s12571-021-01238-9>
2. 2018: Cassava traits and end-user preference: Relating traits to consumer liking, sensory perception, and genetics.
<https://www.tandfonline.com/doi/abs/10.1080/10408398.2016.1202888>

3. 2014: Relationships between anthocyanins and other compounds and sensory acceptability of Hibiscus drinks.

<https://www.sciencedirect.com/science/article/pii/S0308814613013976>

NIAB | Gerard Bishop

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gerard.bishop@niab.com | <https://www.niab.com>

Crops

Solanum aethiopicum (African Eggplant).

Expertise

Crop Physiology.

Technologies relevant to Forgotten Foods available at this organisation

Analysis of water use.

Projects relevant to Forgotten Foods

SASSA-SAI - improving the production efficiency of African Eggplant for smallholder farmers in sub-Saharan Africa

<https://www.niab.com/research/agricultural-crop-research/research-projects/improving-african-eggplant-production>

Publications relevant to Forgotten Foods

Farmer preferred traits and genotype choices in *Solanum aethiopicum* L., Shum group. DOI: 10.1186/s13002-021-00455-y

NIAB | Matthew Milner

Contact details

matthew.milner@niab.com | <https://www.niab.com/about/people/dr-matthew-milner>

Crops

Teff.

Expertise

Crop physiology, genomic, trait dissection.

Technologies relevant to Forgotten Foods available at this organisation

Sequencing, field trials, transformation.

Projects relevant to Forgotten Foods

Response of Eragrostis tef to Zn fertilization and its ability to increase grain Zn content” Cambridge-Africa ALBORADA Research Fund, 2021-2022.

Publications relevant to Forgotten Foods

<https://bmcplantbiol.biomedcentral.com/articles/10.1186/s12870-022-03595-9>

Royal Botanic Gardens, Kew | Caspar Chater

Contact details

c.chater@kew.org | <https://www.kew.org/>

Crops

Cowpeas, Bambara Groundnut, and a range of legume orphan crops and crop wild relatives, and non-legumes with other Kew colleagues.

Expertise

Molecular genetics, crop physiology, drought resilience, transformation, gene editing.

Technologies relevant to Forgotten Foods available at this organisation

Genome sequencing, genomics, niche and climate modelling, thermal imaging, mass spec.

Projects relevant to Forgotten Foods

Project on Sub-Saharan orphan crops soon to be live.

Publications relevant to Forgotten Foods

Gutaker RM, Chater CCC, Brinton J, Castillo-Lorenzo E, Breman E, Pironon S. Scaling up neodomestication for climate-ready crops. *Curr Opin Plant Biol.* 2022 Apr;66:102169. doi: 10.1016/j.pbi.2021.102169. Epub 2022 Jan 19. PMID: 35065528.

Royal Botanic Gardens, Kew | Melanie-Jayne Howes

Contact details

m.howes@kew.org | <https://www.kew.org/>

Crops

Yam, Baobab, Gundelia and Underutilised species – various.

Expertise

Phytochemical and nutritional traits; methods in analytical and natural product chemistry; scientific basis of useful plants.

Technologies relevant to Forgotten Foods available at this organisation

High resolution accurate mass HRAM LC-PDA-MS (Orbitrap Fusion tribrid technology), low resolution LC-MS (ion trap MSn), semi-preparative LC-MS for compound isolation, NMR spectroscopy (400MHz), DART-TOF-MS, TD-GC-MS, HPLC-DAD, HPLC-ELSD and FTIR-NIR/MIR.

Projects relevant to Forgotten Foods

<https://www.kew.org/read-and-watch/akkoub-wild-thorny-Mediterranean-secret>

Publications relevant to Forgotten Foods

doi.org/10.1016/j.foodres.2020.109636; doi.org/10.1002/ppp3.10145

Royal Botanic Gardens, Kew | Nicola Kuhn

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Crops

Yam, *Solanum aethiopicum* (African Eggplant).

Expertise

Primarily I research how plant functional traits (including and especially root traits) vary along environmental gradients in drylands in South Africa. I am currently applying this to wild edible yams in Madagascar for which I am also measuring nutrition traits. For this research I use trait analyses, species distribution modelling and other spatial techniques.

Technologies relevant to Forgotten Foods available at this organisation

Root architecture analysis (Ground penetrating radar); remote aboveground vegetation analysis including remote sensing and drone capabilities.

Kew also has genome sequencing and other technologies, however I do not use these, but they are available.

Projects relevant to Forgotten Foods

1. Wild edible yam aridity tolerance in Madagascar (start date June 2022).
2. Exploring the potential of GCFR (Greater Cape Floristic Region) edibles as climate resilient, nutritious future foods. - Nutrition component of this is underway (currently analysing data from literature review of subset of GCFR edibles); Climate change resilience component not funded or started yet (likely early 2023 work will begin)

Publications relevant to Forgotten Foods

None yet.

SRUC | David Marshall

Contact details

david.marshall@sruc.ac.uk | <https://www.sruc.ac.uk>

Crops

Yam, Cassava.

Expertise

I am crop bioinformatician and geneticist with 40 years research experience in a wide range of annual perennial crops. I have worked with research groups in Europe, Africa, South and Central America and Asia.

Technologies relevant to Forgotten Foods available at this organisation

Quantitative genetics, design of breeding programs. Food quality. Trial design.

Projects relevant to Forgotten Foods

I chair the Technical Advisory Committee of the Bill & Melinda Gates Foundation funded AfricaYam project.

Publications relevant to Forgotten Foods

My main current expertise is directed at technical consultancy in Forgotten foods.

The James Hutton Institute | Raul Huertas

Contact details

raul.huertas@hutton.ac.uk | <https://www.hutton.ac.uk/staff/raul-huertas>

Crops

Common bean, barley, potato, blueberry, and others

Expertise

Molecular physiology, crop nutritional traits, food quality traits.

Technologies relevant to Forgotten Foods available at this organisation

Genome sequencing, mass spectrometry, food chemistry, plant phenotyping.

Projects relevant to Forgotten Foods

ZIRON Pulse, <https://gtr.ukri.org/projects?ref=BB%2FT008865%2F1>

Publications relevant to Forgotten Foods

1. Huertas et al., 2022. Iron and zinc bioavailability in common bean (*Phaseolus vulgaris*) is dependent on chemical composition and cooking method.
2. Huertas et al., 2022. Biofortification of common bean (*Phaseolus vulgaris* L.) with iron and zinc: Achievements and challenges.

University of Hertfordshire (UH) | Cristina Barrero Sicilia

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Crops

Sorghum, also Barley, maize but I would like to apply my knowledge to millet and other forgotten foods.

Expertise

Plant molecular biology with a strong background in seed development and germination.

Technologies relevant to Forgotten Foods available at this organisation

Transcriptomics, in vitro culture, gene expression analysis, protein analysis, plant physiology.

Projects relevant to Forgotten Foods

N/A

Publications relevant to Forgotten Foods

N/A

University of Lincoln | Ravi Valluru

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Crops

Cowpeas, Sorghum.

Expertise

Crop physiology, robotic phenotyping, nutritional traits.

Technologies relevant to Forgotten Foods available at this organisation

Shoot and root phenotyping, spectral biology sensors and 3D models.

Projects relevant to Forgotten Foods

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Publications relevant to Forgotten Foods

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University of Nottingham; Crops for the Future | Sean Mayes

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<https://cropsforthefutureuk.org>

Crops

Bambara Groundnut, Millet.

Expertise

Genomics, Crop Genetics, genetic analysis of traits.

Technologies relevant to Forgotten Foods available at this organisation

Genome sequencing, nutritional analysis, crop physiology.

Projects relevant to Forgotten Foods

1. BamBreed <https://www.nottingham.ac.uk/research/beacons-of-excellence/future-food/our-research/futureproofing-agricultural-systems/bambreed/index.aspx>
2. RADIANT <https://www.radiantproject.eu/>
3. Plant Breeders Without Borders <http://pbwob.org/>
4. Crops for the Future (UK)CIC <http://cropsforthefutureuk.org/>

Note that I will also be based at ICRISAT from 1st September 2022 as Programme Director Accelerated Breeding; <https://www.icrisat.org/>

Publications relevant to Forgotten Foods

2021-22

1. Rachael Catherine Symonds; Norain Jamalluddin; Festo J Massawe; Sean Mayes; Wai Kuan Ho (2022) Genetic Diversity Analysis and Marker-Trait Associations in *Amaranthus* species. PLoS One 17(5): e0267752. <https://doi.org/10.1371/journal.pone.0267752>
2. Ho WK, Tanzi AS, Sang F, Tsoutsoura N, Shah N, Moore C, Wright V, Massawe F and Mayes S. A genomic toolkit for 'the soybean of the tropics' – winged bean (*Psophocarpus tetragonolobus*) Nature Communications (in revision) at ResearchSquare. <https://doi.org/10.21203/rs.3.rs-1355353/v1>

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3. Mateva KI, Chai HH, Mayes S, Massawe F (2022) Natural Genetic Variation Underpins Root System Response to Drought Stress in Bambara Groundnut (*Vigna Subterranea* (L.) Verdc.) submitted to *Frontiers in Plant Science* 13:760879.
DOI: 10.3389/fpls.2022.760879
4. J, van Zonneveld M, Achigan-Dako EG, Bajwa B, Brouwer ID, Choudhury D, de Jager I, de Steenhuijsen Piters B, Dulloo ME, Guarino L, Kindt R, Mayes S, McMullin S, Quintero M, Schreinemachers P (2022) Fruit and vegetable biodiversity for nutritionally diverse diets: Challenges, opportunities, and knowledge gaps to Global Food Security. v.33 pp. 100618
10.1016/j.gfs.2022.100618
5. Jahanshiri E, Goh EV, Mayes S, Syaherah T, Nizar MNN, Sarah S, Wimalasiri EM, Azam-Ali S and Potential of bambara groundnut as a Commercial Crop (2022); An analysis for the People's Republic of China *Food and Energy Security* e358. <https://doi.org/10.1002/fes3.358>
6. Halimi RA, Raymond CA, Mayes S, Barkla BJ, King GJ (2022) Development of selection indices for improvement of seed yield and lipid composition in bambara groundnut (*Vigna subterranea* (L.) Verdc.) *Foods* 11(1) 86.
<https://doi.org/10.3390/foods11010086>
7. Gao X, Chai HH, Ho WK, Kundy AC, Mateva KI, Mayes S, Massawe F (2022) Genetic linkage map construction and identification of QTLs associated with drought resistance in bambara groundnut (*Vigna subterranea* (L.) Verdc) *Food and Energy Security*. <https://doi.org/10.1002/fes3.353>
8. Jamalluddin, N.; Massawe, F.J.; Mayes, S.; Ho, W.K.; Singh, A.; Symonds, R.C. (2021) Physiological Screening for Drought Tolerance Traits in Vegetable Amaranth (*Amaranthus tricolor*) Germplasm. *Agriculture* 2021, 11, 994.
10.3390/agriculture11100994
9. Cowling S, Treeintong P, Ferguson J, Soltani H, Swarup R, Mayes S, Murchie E (2021) Out of Africa: characterising the natural variation in dynamic photosynthetic traits in a diverse population of African rice (*Oryza glaberrima*) *J Exp Bot* erab459.
10.1093/jxb/erab459
10. Abdullah SNA, Mayes S, Moradpour M (2021) Target Gene Identification and sgRNA Design for Waterlogging Tolerance in Foxtail Millet via CRISPR-based Transcriptional Activation accepted *Current Chinese Science* .
10.2174/2210298101666210709104258
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University of Reading | Luke Bell

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Crops

Millet, various *Solanum* species.

Expertise

Experienced in plant breeding techniques, genetics, plant biochemistry, flavour and sensory science.

Technologies relevant to Forgotten Foods available at this organisation

Mass spectrometry - LC-MS, UPLC-MS/MS, GC-MS, GC-QTOF-MS, GCxGC-TOF-MS. Olfactometry (with GCxGC-TOF-MS). NMR & spectroscopy suite. Microscopy - SEM, Confocal suite. Controlled environment facilities, including CO₂ enrichment. Plant phenotyping - 3D multispectral camera. Sensory science facilities.

Projects relevant to Forgotten Foods

Understanding & utilising the phytochemical diversity of *Solanum incanum* - 2021-2025 (no weblink available presently)

Publications relevant to Forgotten Foods

None to date.

University of York | Katherine Denby

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Crops

Amaranth.

Expertise

Genomics; quantitative genetics; crop disease resistance, yield and nutritional traits.

Technologies relevant to Forgotten Foods available at this organisation

Metabolomics - mass spectrometry, ICP, HPLC. Genome sequencing (ONT).
Controlled environment growth chambers.

Projects relevant to Forgotten Foods

Improving Amaranth for increased nutrition, livelihoods and climate resilience for smallholder farmers in Southern Africa. Ongoing project with the Agricultural Research Council of South Africa, North West University, African Orphan Crop Consortium and World Vegetable Center

Publications relevant to Forgotten Foods

Ma, Vaistij, Li, Jansen van Rensburg, Harvey, Bairu, Venter, Mavengahama, Ning, Graham, Van Deynze, Van de Peer and Denby (2021). A chromosome-level *Amaranthus cruentus* genome assembly highlights gene family evolution and biosynthetic gene clusters that may underpin the nutritional value of this traditional crop. *The Plant Journal*. <https://onlinelibrary.wiley.com/doi/10.1111/tpj.15298>

