ROTHAMSTED RESEARCH

Rothamsted Research

Strategic Research Opportunities

New Strategic Research Positions Open at Rothamsted Research

Rothamsted Research (www.rothamsted.ac.uk) is at an exciting phase of its tremendous history of advancing scientific knowledge and providing solutions with global impact for agriculture. We are developing a new research strategy as a stepping stone to fulfil our purpose to transform agriculture through integrated cutting edge-science that will deliver knowledge and accelerate innovation for the sustainable intensification of agricultural systems. Our emphasis is on arable and grassland-livestock systems, nationally and internationally. Ultimately, our approach will result in agricultural practices that benefit people along the agri-food chain, the consumers and the environment. We are enabled to achieve our goals by our core outstanding research facilities and capabilities and our strategic partnerships with institutions, universities and companies in the UK and worldwide. Most importantly our collective success is ensured by supporting excellent scientists to achieve success, fulfil their potential and deliver impact.

We are currently recruiting for eight outstanding, highly motivated, strategic thinkers who have high potential to be or already are established research group leaders to fill the following positions:

- Genome Engineering Specialist – (reference 01)
- Molecular Crop Physiologist – (reference 02)
- Quantitative Statistical Genomicist – (reference 03)
- Computational Systems Biologist– (reference 04)
- Systems Agronomist – (reference 05)
- Grazing Livestock Systems Specialist – (reference 06)
- Nutrient Management Specialist – (reference 07)
- Agro-Eco Informatician – (reference 08)

As a core member of the principal investigator community at Rothamsted Research the successful candidates for all positions are expected to have a PhD degree in relevant areas, significant post-PhD research experience, an excellent track-record of quality and impact peer-review publications, leverage of competitive funding from diverse sources, as well as experience in leading research groups and/or research students to successful completion of projects and building strategic cross-disciplinary collaborations with a range of academic and industrial partners both nationally and internationally. We will support you in achieving our common goals and your career aspirations by offering a start-up package and continuous professional development.

Initial appointment grades will depend on the successful candidates' qualifications. Each position will be funded for an initial period of five years with a review at the start of year five, which if successful may lead to tenure.

A highly competitive benefits package and start-up funds covering staff and basic research costs (flexible in specific allocations) to enable the development of highly motivated, fulfilled and productive research groups will be available for the successful candidates.

The Grazing Livestock Systems position is based at North Wyke, Devon, UK, whereas all other positions are located at Rothamsted Research's headquarters in Harpenden, Hertfordshire, UK.

More detailed information on these positions and how to register your interest can be found at:
www.rothamsted.ac.uk/careers
Candidates are strongly encouraged to contact the individual recruitment lead for informal enquiries.

The closing date for receipt of applications is **31 March 2016**. The search for suitable candidates may continue until the positions are filled.

Genome Engineering Specialist
Located at Harpenden, Herts

Job Reference = 01

Overview:

We are seeking an expert in the area of applied advanced genetic engineering and genome editing to further advance Rothamsted's capability in these areas. The successful applicant will be responsible for leading a dedicated research group focussed on applying the most up-to-date techniques such as CRISPRs to solving problems of global significance. The research focus at Rothamsted will be on applying these new approaches to agricultural systems, to deliver a step-change in crop improvement and resilience. The appointee will be expected to develop and lead an independent group, seek external funding and establish an international presence in the research topic. The appointee will have access to excellent core facilities and substantial support (including a post-doc position). They will also work synergistically with other research groups at Rothamsted Research, towards the institute's strategic goal. Target traits will need to be informed by the considerable and wide-ranging expertise present at Rothamsted Research, or related to new topics in line with the scientific strategy of the institute.

Key responsibilities and contact information:

1-line profile	A leader for genome editing and other advanced genetic engineering technologies in crop research
Key roles	• Develop and apply next-generation genome editing and other techniques in plant research • Explore new, complex genetic engineering challenges • Expand and manage the genetic transformation lab to become a world class facility/national capability for next generation genetic engineering research
Recruitment lead	Professor Johnathan Napier
Contact details	johnathan.napier@rothamsted.ac.uk +44 (0)1582 938136
Application procedure	More detailed information on this position and how to register your interest can be found at: www.rothamsted.ac.uk/careers

Candidates are strongly encouraged to contact the individual recruitment lead for informal enquiries

Molecular Crop Physiologist
Located at Harpenden, Herts

Job Reference = 02

Overview:

We are seeking a research leader with interests in arable crop performance and efficiency traits. The successful candidate will work at the interface of molecular biology and crop physiology to unravel mechanisms underpinning resource use efficiency (light, water, nutrients), plant response to environmental change, and/or abiotic stress tolerance in wheat and other important crop species. Possible specific areas of research might include (but not be limited to): exploiting genetic diversity for trait discovery; mechanistic understanding of gene functioning; linking molecular genetics with nutritional physiology to create novel "nutrient use efficiency ideotypes" and understand their underlying mechanisms; utilising the field phenotyping capability at Rothamsted; exploring new challenges: e.g. flowering biology and seed set in hybrid wheat seed production. The appointee will be expected to develop and lead an independent group, seek external funding and establish an international presence in the research topic. The appointee will have access to excellent core facilities and substantial support (including a post-doc position). They will also work synergistically with other research groups at Rothamsted Research, towards the institute's strategic goals. The long term goal is to build an effective trait pipeline for discovery and implementation of efficiency-related traits, including exploitation of genetic engineering.

Key responsibilities and contact information:

1-line profile	A leader for molecular to field physiology research on crop efficiency traits
Key roles	• Work at the interface of molecular biology and crop physiology to unravel mechanisms underpinning resource efficiency (light, water, nutrients), plant response to environmental change, and/or abiotic stress tolerance in wheat and other important crop species • Exploit genetic diversity for trait discovery and mechanistic understanding of gene functioning; build an effective trait pipeline for efficiency - related traits, including genetic engineering • Link molecular genetics with nutritional physiology to create novel "nutrient use efficiency ideotypes" and understand their underlying mechanisms • Utilise high-throughput field phenotyping technology • Explore new challenges: e.g. flowering biology and seed set in hybrid wheat seed production
Recruitment lead	Dr Malcolm Hawkesford
Contact details	malcolm.hawkesford@rothamsted.ac.uk +44 (0)1582 938597
Application procedure	More detailed information on this position and how to register your interest can be found at: www.rothamsted.ac.uk/careers

Candidates are strongly encouraged to contact the individual recruitment lead for informal enquiries

Quantitative Statistical Genomicist
Located at Harpenden, Herts

Job Reference = 03

Overview:

We are seeking a research leader who is highly conversant with a range of genetic and genomic analysis methodologies, including the analysis of Linkage and Association Genetics, Genome-Wide Association Studies (GWAS), Population Genetics, Molecular Breeding approaches (MAS and Genomic Selection), Gene-environment Interactions, and Genetics of Gene Expression (eQTL analysis), ideally applied in an agricultural research environment. Applicants with abilities to develop their own methodologies as well as apply bespoke programmes will be particularly well received. The appointee will be expected to develop and lead an independent group, seek external funding and establish an international presence in the research topic. The appointee will have access to excellent core facilities and substantial support (including a post-doc position). The successful applicant will interact closely with relevant teams at RRes including genetics and genomics researchers, crop modellers, statisticians, bioinformaticians and computational systems biologists. They will also work synergistically with other research groups at Rothamsted Research, towards the institute's strategic goals.

Key responsibilities and contact information:

1-line profile	A leader in the field of quantitative genetics for discovery research and trait development
Key roles	• Work across a wide range of research areas and with various inter-disciplinary teams to conduct research on genetics, gene discovery, gene functions and trait development i n different crops (wheat, willows, camelina, etc.) and other organisms • Predictive crop phenotyping and genome-based pre -breeding approaches • Contribute to exploring novel traits and organisms • New challenges: e.g. heat tolerance, phenology, flowering and seed set as well as epistasis and epigenetics
Recruitment lead	Professor Angela Karp
Contact details	angela.karp@rothamsted.ac.uk +44 (0)1582 938855
Application procedure	More detailed information on this position and how to register your interest can be found at: www.rothamsted.ac.uk/careers

Candidates are strongly encouraged to contact the individual recruitment lead for informal enquiries

Computational Systems Biologist
Located at Harpenden, Herts

Job Reference = 04

Overview:

We are seeking a research leader with a keen interest in using systems biology approaches to understand and exploit regulatory networks controlling plant metabolism and development for the purposes of crop improvement. Ideally the appointee will have multidisciplinary expertise that encompasses mathematical or computational modelling and biochemistry/molecular biology. Possible areas of research might include (but are not limited to) modelling primary or secondary metabolism at the whole plant, organ, or cell level using data obtained through techniques such as isotopic labelling, metabolomics, proteomics and transcriptomics. The appointee will be expected to develop and lead an independent group, seek external funding and establish an international presence in the research topic. The appointee will have access to excellent core facilities and substantial support (including a post-doc position). They will also work synergistically with other research groups at Rothamsted Research, towards the institute's strategic goals. The long term objective is to successfully employ mathematical modelling to improve crop productivity and product quality through predictive bioengineering.

Key responsibilities and contact information:

1-line profile	A leader in the field of systems biology for discovery biosciences research
Key roles	• Systems biology in relation to gene discovery and gene function, with emphasis on predictive capabilities • Genetic regulatory networks • Metabolic network modelling, metabolic flux analysis, constraints analysis and predictive metabolic engineering, • Exploring novel traits and organisms
Recruitment lead	Dr Peter Eastmond
Contact details	peter.eastmond@rothamsted.ac.uk +44 (0)1582 938184
Application procedure	More detailed information on this position and how to register your interest can be found at: www.rothamsted.ac.uk/careers

Candidates are strongly encouraged to contact the individual recruitment lead for informal enquiries

Systems Agronomist
Located at Harpenden, Herts

Job Reference = 05

Overview:

We are seeking an Systems Agronomist to build up and lead a new research group that aims to integrate advances in biological research, engineering, and IT for designing the next generation of arable cropping systems. The successful candidate will have a deep understanding of the key processes involved and the ability to work across disciplines and scales at a whole food production system level. They will apply theory and quantitative analysis to practical problem solving, including taking advantage of rapid advances in sensors, new tools and data science. The appointee will be expected to develop and lead an independent group, seek external funding and establish an international presence in the research topic. The appointee will have access to excellent core facilities and substantial support (including a post-doc position). They will also work synergistically with other research groups at Rothamsted Research, towards the institute's strategic goals. This area provides many new challenges and opportunities.

Key responsibilities and contact information:

1-line profile	Leads research on closing yield and efficiency gaps and designing future arable cropping systems
Key roles	• Quantitative understanding of yield potential and yield gaps in major UK crops, including modelling • Lead inter-disciplinary research on designing and optimising future/novel cropping systems and crops of relevance for the UK • Sustainable intensification research platforms and networks with partners in the UK and internationally • Real-time precision farming solutions
Recruitment lead	Professor Achim Dobermann
Contact details	achim.dobermann@rothamsted.ac.uk +44 (0)1582 938618
Application procedure	More detailed information on this position and how to register your interest can be found at: www.rothamsted.ac.uk/careers

Candidates are strongly encouraged to contact the individual recruitment lead for informal enquiries

Grazing Livestock Systems Specialist
Located at North Wyke, Okehampton, Devon

Job Reference = 06

Overview:

We are seeking an established Livestock Systems Specialist, ideally with a proven research track record in Grazing Research to work on enhancing the productivity and efficiency of grazing systems. The successful applicant will be expected to develop a research programme based on plant-animal interactions relevant to the Rothamsted Research Sustainable Intensification agenda for maximising production whilst minimising environmental impact.

Relevant areas include experience and understanding of cattle and sheep production systems, grazing practices, forage conservation and basic ruminant nutrition, combined with a capability to develop the use of sensing technologies (tracking and video surveillance) to study impacts of interventions on the production, health and welfare of grazing livestock. The appointee will be expected to develop and lead an independent group, seek external funding and establish an international presence in the research topic. The appointee will have access to excellent core facilities and substantial support (including a post-doc position). They will also work synergistically with other research groups at Rothamsted Research, towards the institute's strategic goals.

Key responsibilities and contact information:

1-line profile	Leads research on enhancing the productivity and efficiency of grazing systems
Key roles	• Quantitative understanding of yield potential and yield gaps in grassland – livestock systems, including application of modelling • Grassland ecology and management for optimal performance, including site-specific nutrient management approaches • North Wyke Farm Platform and networks with partners in the UK and internationally
Recruitment lead	Professor Michael Lee
Contact details	michael.lee@rothamsted.ac.uk +44 (0)1837 883578
Application procedure	More detailed information on this position and how to register your interest can be found at: www.rothamsted.ac.uk/careers

Candidates are strongly encouraged to contact the individual recruitment lead for informal enquiries

Nutrient Management Specialist
Located at Harpenden, Herts

Job Reference = 07

Overview:

We are seeking a Nutrient Management Specialist who will work within the multidisciplinary environment at Rothamsted Research, interacting with staff in many areas, including plant and crop scientists, agronomists, soil scientists, pest and disease specialists, mathematicians and modellers. Industry and international collaboration will be an important component of this position, including new initiatives such as the UK-China Centre for Sustainable Intensification in Agriculture and initiatives related to implementing the UN Sustainable Development Goals in different countries.

We require a leader with a deep understanding of all of the processes involved, who has the ability to work across disciplines and scales at a whole food production system level, including future arable as well as grassland-livestock systems. The appointee will be expected to develop and lead an independent group, seek external funding and establish an international presence in the research topic. The appointee will have access to excellent core facilities and substantial support (including a post-doc position). They will also work synergistically with other research groups at Rothamsted Research, towards the institutes strategic goals.

Key responsibilities and contact information:

1-line profile	Leads research on enhancing the efficiency of nutrient use in intensively managed arable and grazing-livestock systems
Key roles	• New approaches and tools for site -specific nutrient management (G x E x M real-time interventions) • Novel ways of monitoring nutrient use efficiency and nutrient footprints of agriculture (indicators and monitoring systems) • Novel fertilisers • Full-chain nutrient use efficiency: metrics and novel interventions to increase it, including nutrient recycling
Recruitment lead	Professor Steve McGrath
Contact details	steve.mcgrath@rothamsted.ac.uk +44 (0)1582 938631
Application procedure	More detailed information on this position and how to register your interest can be found at: www.rothamsted.ac.uk/careers

Candidates are strongly encouraged to contact the individual recruitment lead for informal enquiries

Agro-Eco Informatician
Located at Harpenden, Herts

Job Reference = 08

Overview:

We are seeking an experienced and dynamic data or informatics scientist who has familiarity with the ecosystem sciences and would lead a new agro-eco informatics group in Rothamsted Research. The objectives of this position will be to drive efforts to improve access to our data and software to ensure their longevity, quality and usability. Key responsibilities include expanding data and metadata representations to facilitate interoperation between agricultural and natural ecosystem datasets held at Rothamsted and by national agencies and our collaborators. Research and development of methods to link integrated datasets with data mining, visual analytics and other big data technologies will drive the discovery of new knowledge and science from our unique data collections. The appointee will be expected to develop and lead an independent group, seek external funding and establish an international presence in the research topic. The appointee will have access to excellent core facilities and substantial support (including a post-doc position). They will also work synergistically with other research groups at Rothamsted Research, towards the institute's strategic goals.

Key responsibilities and contact information:

1-line profile	Leads research and provides support for informatics solutions in agricultural and environmental research
Key roles	• Apply the latest informatics techniques to big data applications along the whole agri_food system • G x E x M real - time monitoring and forecasting; metrics • Existing data platforms/national capabilities (LTE, RIS, North Wyke etc.) • New data platforms (e.g. phenotyping) • ICT applications
Recruitment lead	Professor Chris Rawlings
Contact details	chris.rawlings@rothamsted.ac.uk +44 (0)1582 938871
Application procedure	More detailed information on this position and how to register your interest can be found at: www.rothamsted.ac.uk/careers

Candidates are strongly encouraged to contact the individual recruitment lead for informal enquiries

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www.rothamsted.ac.uk

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