# UK China Agricultural Cooperation Bulletin

中英农业合作通报

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## The Sustainable Rice Programme (UK, China, Thailand, Philippines, Vietnam)

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- The Transmissive Critical Zone: Understanding the Karst Hydrology-Biogeochemical Interface for Sustainable Management

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## International Agricultural Development

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## Agri-food Trade Development
Preface

Welcome to the UK-China Agricultural Cooperation Bulletin.

The link between UK and China in the agriculture and food sector is becoming increasingly strong and diverse.

With the recent signing of the MoU between UK Department of Environment, Food and Rural Affairs (DEFRA) and Chinese Ministry of Agriculture and Rural Affairs, and the joint innovation strategy between UK Department for Business, Energy & Industrial Strategy (BEIS) and Chinese Ministry of Science and technology (MOST), mechanisms for long-term cooperation are in place. The appointment of an Agriculture Counsellor at the British Embassy in Beijing has been a major boost to the UK’s efforts to develop long-term relationships in the agri-food sector with China. Joint researches supported by Newton Fund and China partners offer new opportunities for project innovations. The UK Prime Minister Theresa May’s recent visit to the Chinese Academy of Agricultural Sciences (CAAS) further highlighted the importance of agricultural cooperation between two countries.

In order to enhance communication and engagement amongst existing initiatives and stakeholders to maximize synergies and support policy development, and to promote cross-disciplinary collaboration and foster new cooperative partnerships, the UK China Knowledge Sharing and Mutual Learning Platform was established with the support from Prosperity Fund and Defra. The Resource Centre of the Platform provides comprehensive and updated source of information on cooperative projects, published documents, organizations and experts in agriculture, environment and food sectors in both UK and China. The UK China Agricultural Cooperation Bulletin forms part of the Platform.

This issue of the Bulletin provides an inventory of existing and recent cooperation initiatives in agriculture, food and the broader environment sector. It will help UK and Chinese academic and business professionals to understand the current cooperation initiatives, and facilitate the information sharing and communication amongst existing initiatives and stakeholders.

This issue of Bulletin was compiled by Yuelai Lu with inputs and advice from Andrew Benton, Paul Hallett, Zhenhong Li, Karen Morgan, Venugopal Nair, David Norse, Kirsty Roberts, Yongxiu Yao, Feng Zhang. The information of each individual projects were collected from projects websites or provided by project leaders.

We hope you find this Bulletin useful. For any feedback, please contact: y.lu@uea.ac.uk.

Production of this report was supported by Defra (SAIN), British Embassy in Beijing (Prosperity Fund), STFC-Newton Agri-Tech Fund (AgriTech in China Network+), and BBSRC/NERC-Newton Fund (N-Circle Virtual Joint Centre). For more information about SAIN, please visit: http://www.sainonline.org.
UK-China Sustainable Agricultural Innovation Network (SAIN)

The UK-China Sustainable Agriculture Innovation Network (SAIN) was established in 2008 by Chinese Ministry of Agriculture and Rural Affairs (formerly Ministry of Agriculture, MoA), and the UK’s Department for Environment, Food and Rural Affairs (Defra).

The main objectives of SAIN are to:

- Support UK-China cooperation in sustainable agriculture and food security
- Stimulate innovative thinking and research on all aspects of sustainable agriculture and its relation to the local, national and global economy
- Communicate information on environmentally sustainable agriculture issues and opportunities for change, and disseminate best practices to key audiences
- Contribute to global sustainability through wider sharing of expertise between developed and emerging economies.

At the fourth UK-China Economic and Financial Dialogue in 2011, the both governments agreed to make full use of UK-China Sustainable Agriculture Innovation Network (SAIN) to promote sustainable agricultural development of the two countries, and contribute to strengthening global food security.

In the past years, SAIN has implemented over 10 joint research projects (see the projects entries below), published over 100 academic journal papers, 16 Policy Briefs, and over 150 bilingual newsletters.

Contact:
Yuelai Lu (SAIN Secretariat, y.lu@uea.ac.uk)

Website: http://www.sainonline.org/English.html
Project title
Knowledge, Policy and Practice for Sustainable Nutrient Management and Water Resources Protection in UK and Chinese Agro-Ecosystems

Brief profile
This project formed part of the SAIN.

The objectives of the project were to achieve more sustainable management of nitrogen and phosphorous in agro-ecosystems through developing and exchanging innovation in the fields of knowledge, practice, policy and governance, with focus on specific activities on regional examples that capture key farming systems within both the UK and China.

Partners
UK: School of Oriental and African Studies (SOAS), University of London; Lancaster University; Plant Nutrition Consulting, British Geological Survey.
China: Agro-Environmental Protection Institute (AEPI), Ministry of Agriculture; Northwest A&F University; China Agricultural University.

Project web-link

Project status
Completed (2013-2016)

Contact
Prof Laurence Smith: l.smith@soas.ac.uk

Funder
Defra/MoA

Project title
Biochar: Socio-Economic and Biophysical “Fit”

Brief profile
This project formed part of the SAIN.

This project addressed the current weak understanding of the socio-economic context of biochar in developing countries and in China. This work built on the knowledge of the biophysical characteristics of biochar, attempted to integrate this with a deeper understanding of the socio-economic context relevant for biochar deployment.

Partners
UK: University of East Anglia; University of Edinburgh;
China: Chinese Academy of Agricultural Engineering (CAAE); China Agricultural University (CAU)
Ghana: Council for Scientific and Industrial Research (CSIR)

Project web-link

Project status
Completed (2011-2014)

Contact
Dr John McDonagh: j.mcdonagh@uea.ac.uk

Funder
Dfid/MoA
Project title
Manure Use in China

Brief profile
This project formed part of the SAIN.

The project assessed to what extent the nutrients in livestock manure, composted manure and anaerobic digestate are taken account of when applied to soil in selected provinces in China when planning nutrient supply to a range of crops. It recommends future investment to reduce these barriers and maximise use of nutrients in these organic resources, thus reducing reliance on inorganic fertiliser use.

Partners
UK: Rothamsted Research (North Wyke)
China: Nanjing Agricultural University; China Agricultural University; Northwest A & F University

Project web-link

Project status
Completed (2010-2013)

Contact
Prof David Chadwick: d.chadwick@bangor.ac.uk

Funder
Defra/MoA

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Project title
Improved Nutrient Management in Agriculture - a Key to the Low Carbon Economy

Brief profile
This project formed part of the SAIN.

The project estimated greenhouse gas (GHG) emissions associated with the manufacture and use of N fertilizer in China; assessed improved means of communicating information on rational use of N fertilizers and manures to farmers and extension staff; and Provided information to policy makers on the GHG savings possible from improved management of nitrogen in agriculture and the ways of achieving this.

Partners
UK: Rothamsted Research; University College London; University of East Anglia (UK);
China: China Agricultural University; Centre for Chinese Agricultural Policy, Chinese Academy of Sciences.

Project web-link

Project status
Completed (2010-2013)

Contact
Prof David Powlson: david.powlson@rothamsted.ac.uk

Funder
Foreign and Commonwealth Office (through Prosperity Fund)
**Project title**
Estimates of Future Agricultural Greenhouse Gas Emissions and Mitigation in China

**Brief profile**
This project formed part of the SAIN.

The project team examined how greenhouse gas (GHG) emissions vary with different cropping systems in different regions, and how climate mitigation potential varies between practices and regions including gap analysis and priorities for future research. The team also carried out an economic assessment of the marginal abatement cost of agricultural GHG mitigation in China; identified the barriers to implementation, through social science survey.

**Partners**
**UK:** University of Aberdeen; Rothamsted Research (North Wyke), University of Aberystwyth, Scotland’s Rural College (SRUC).

**China:** Nanjing Agricultural University, Zhejiang University, Shen Yang Agricultural University, Peking University, China Agricultural University and Lanzhou University.

**Project web-link**

**Project status**
Completed (2010-2013)

**Contact**
Prof Pete Smith: pete.smith@abdn.ac.uk

**Funder**
Defra/MoA

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**Project title**
Conservation for Enhanced Utilization of Crop Wild Relative Diversity for Sustainable Development and Climate Change Mitigation

**Brief profile**
This project formed part of the SAIN.

The purpose of this three-year project is to develop conservation and use strategies for crop wild relative (CWR) species of China to secure and provide access to the genetic diversity of the most important wild plant resources needed for food security and sustainable development in China—in particular to mitigate the impact of climate change.

**Partners**
**UK:** University of Birmingham; Rothamsted Research;

**China:** China Agricultural University; Chinese Academy of Sciences; Chinese Academy of Agricultural Sciences; Fudan University.

**Project web-link**

**Project status**
Completed

**Contact**
Shelagh Kell: s.kell@bham.ac.uk

**Funder**
Defra/MoA
**Project title**  
ADMIT: Harmonising Adaptation and Mitigation for Agriculture and Water in China

**Brief profile**  
This project formed part of the SAIN.  
This project estimated of the ‘carbon cost’ of future agricultural water use responses for adaptation to climate change.

**Partners**  
**UK:** University of East Anglia; University of Cranfield;  
**China:** Chinese Academy of Agricultural Sciences; Centre for Chinese Agricultural Policy, Chinese Academy of Sciences; Energy Institute, National Development and Reform Commission.

**Project web-link**  

**Project status**  
Completed (2010-2012)

**Contact**  
Prof Declan Conway: d.conway@lse.ac.uk

**Funder**  
Defra/MoA

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**Project title**  
Addressing Vulnerabilities and Building Capacity for Adaptation of Agriculture to Climate Change in China

**Brief profile**  
This project formed part of the SAIN.  
Climate change is a key driver of change in agricultural systems in China and is closely linked to the causes and alleviation of poverty. Through a structured programme of knowledge exchange and bilateral research, this project addressed the skills needs of two major stakeholder groups – adaptation researchers in China and farming communities vulnerable to climate change.

**Partners**  
**UK:** Walker Institute for Climate System Research, University of Reading; University of Leeds; Rothamsted Research; Met Office Hadley Centre; CABI.  
**China:** Institute of Environment and Sustainable Development on Agriculture, Chinese Academy of Agricultural Sciences; Anhui Academy of Agricultural Sciences; Inner Mongolia Academy of Agricultural Sciences; Oil Crops Research Institute.

**Project web-link**  

**Project status**  
Completed (2010-2013)

**Contact**  
Prof. Lin Erda: linerda@caas.cn

**Funder**  
Defra/MoA
UK China Joint Centres

Name of the centre
UK-China Centre of Excellence for Research on Avian Diseases (CERAD)

Brief profile
Led by the Pirbright Institute in the UK and the Shandong Binzhou Animal Science and Veterinary Medicine Academy in China, the CERAD will act as a virtual centre for the state of the art research and training for UK and Chinese scientists and students through establishment of joint research projects, exchange visit for training and education on new technologies for disease control and organizing international conferences.

Partners
UK: The Pirbright Institute;
China: Shandong Binzhou Animal Science and Veterinary Medicine Academy

Project web-link
http://www.uk-china-cerad.org

Project status
On-going (2015 – 2020)

Contact
Prof Venugopal Nair OBE
venugopal.nair@pirbright.ac.uk

Funder
BBSRC

Name of the centre
UK-China Joint Centre for Sustainable Intensification in Agriculture (CSIA)

Brief Profile
The primary purpose of the UK-China Joint Centre for Sustainable Intensification in Agriculture (CSIA) is to address issues relating to food security and the environmental sustainability of food production in China.

Partners
UK: Rothamsted Research;
China: Chinese Academy of Agricultural Sciences; China Agriculture University; Nanjing Agricultural University and Northwest Agriculture & Forestry University.

Project web-link
http://www.rothamsted.ac.uk/international/international-partnerships/china/csia

Project status
On-going (2015-)

Contact
Dr Simon Vaughan
simon.vaughan@rothamsted.ac.uk

Funder
BBSRC
Name of the centre
UK-China Joint Centre for Probiotics Research

Brief profile
The Centre builds on long term collaboration between Jiangnan University, and Quadram Institute. It will allow the researchers to work together to tackle challenges facing both China and the UK in the probiotic arena, and joint research projects are planned with funding from both Chinese and UK sources.

Partners
UK: The Quadran Institute Bioscience;
China: Jiangnan University

Project web-link
https://quadram.ac.uk/uk-china-joint-centre-for-probiotics-research

Project status
On-going (2016 - )

Contact
Prof. Arjan Narbad
arjan.narbad@quadram.ac.uk

Funder
BBSRC

Name of the centre
The CAS-JIC Centre of Excellence for Plant and Microbial Science (CEPAMS)

Brief Profile
CEPAMS brings together three world-leading laboratories in the UK and China to tackle the global challenges of food security and sustainable health care. The Centre nurtures excellent science and focuses on the improvement of food crops and the production of high-value, beneficial products from plants and microbes.

Partners
UK: The John Innes Centre (JIC)
China: Chinese Academy of Sciences (the Institute of Genetics and Developmental Biology and the Institute of Plant Physiology and Ecology).

Project web-link
http://www.cepams.org/home

Project status
On-going (2014 - )

Contact
Mr Christopher Darby
christopher.darby@jic.ac.uk

Funder
BBSRC, CAS
Name of the centre
Sino-UK Strawberry Innovation R&D Centre

Brief profile
This joint research centre focuses on strawberry breeding and genetics and was originally signed in March 2012 between the Beijing Academy of Agriculture Forestry Sciences (BAAFS) and East Malling Research (EMR).

EMR will assist in BAAFS in breeding strawberry cultivars specifically for China, combining desirable traits from both Chinese and European genetics resources. In the long-term, availability of such cultivars will help to improve production efficiency and provide health benefit to consumers, in addition to increased profit for growers.

Partners
UK: NIAB-EMR
China: Beijing Academy of Agriculture Forestry Sciences (BAAFS)

Project web-link
http://www.emr.ac.uk/news-articles/sino-uk-agreement-extended

Project status:
On-going (2012 to present)

Contact
Prof. Xiangming Xu: xiangming.xu@emr.ac.uk

Funder
BBSRC, BAAFS

Name of the centre
The MoA-CABI Joint Laboratory for Bio-safety

Brief Profile:
The Chinese Ministry of Agriculture (MoA) – CABI Joint Laboratory for Bio-safety is located in the Institute of Plant Protection (IPP) of the Chinese Academy of Agricultural Sciences (CAAS), Beijing. It functions as a platform for research collaboration and technology transfer and as a centre of excellence for training and scientific exchanges. Together, the partners work mainly on integrated pest management technologies and biological control, prevention and control of invasive alien species, development of biological pesticide, reduction of pesticide residues, and environmental safety research of transgenic organisms.

Partners:
UK: CABI
China: Chinese Ministry of Agriculture; Institute of Plant Protection, Chinese Academy of Agricultural Sciences.

Project web-link:
http://en.ippcaas.cn/International/2015/6/3bhpla8rt1.htm

Project status:
On-going (2008 to present)

Contact:
Dr Feng Zhang: f.zhang@cabi.org

Funder:
Chinese Ministry of Agriculture and Rural Affairs, CABI
UK-China Virtual Joint Centres in Agricultural Nitrogen

The two UK-China Virtual Joint Centres (VJC) in Agricultural Nitrogen, N-CIRCLE: Virtual Joint Centre for Closed-Loop Cycling of Nitrogen in Chinese Agriculture, and UK-China Virtual Joint Centre for Improved Nitrogen Agronomy (CINAG), are established to explore the ways to sustain or improve current levels of crop production with lower energy inputs and reduced environmental impacts. The key aims of the VJC are:

- To support innovative basic, strategic or applied research that will enable crop production to be enhanced in ways that make appropriate use of fertilizers (or potential alternative sources of nitrogen) to optimize yields, while maintaining the quality of soil, water and air, and reducing adverse impacts on terrestrial, freshwater and marine ecosystems;

- To optimize farm practices and soil management to make more effective use of fertilizers and reduce losses of reactive nitrogen to the environment;

- To improve the efficiency of nitrogen uptake or metabolism by plants;

- To enhance nitrogen fixation in legumes or exploiting the potential of biological nitrogen fixation in non-leguminous plants.

The publications of these two UK China VJC are hosted at SAIN Knowledge Sharing and Mutual Learning Platform.

For more details about the VJC programme, see BBSRC website.
**Name of the centre**

**N-CIRCLE: Virtual Joint Centre for Closed-Loop Cycling of Nitrogen in Chinese Agriculture**

**Brief profile**

N-Circle will set an agenda for ‘closing’ agricultural cycling of nitrogen in China by employing ensemble modelling to estimate N inputs, transformations, transfers and emissions for China’s principal farming systems, and by identifying points for technological intervention, so to set targets for innovation.

**Partners**

**UK:** University of Aberdeen, University of Cambridge, University of East Anglia, Scotland’s Rural College, and ADAS.

**China:** Chinese Academy of Agricultural Sciences, China Agricultural University, Chinese Academy of Sciences, Beijing Normal University, Capital Normal University, Nanjing Agricultural University, Nanjing Normal University, and Zhejiang University.

**Project web-link**

http://www.abdn.ac.uk/ncircle

**Project status:**

On-going (2016-2019)

**Contact**

Prof Pete Smith (pete.smith@abdn.ac.uk) in the UK; Prof Liu Hongbin (liuhongbin@caas.cn), Prof. Ju Xiaotang (juxt@cau.edu.cn) in China.

**Funder:**

BBSRC-NERC Newton Fund

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**Name of the centre**

**The UK-China Virtual Joint Centre for Improved Nitrogen Agronomy (CINAg)**

**Brief profile**

The UK-China Virtual Joint Centre for Improved Nitrogen Agronomy (CINAg) aims to increase the adoption of sustainable nitrogen management practices in China and the UK through: the development of novel indicators of nitrogen use efficiency (NUE) based on metrics of soil health and quality (an improved fundamental understanding of N cycling); the use of these indicators and other emerging knowledge and tools to test practices and systems leading to sustainable intensification (e.g. innovative fertilisers, novel sensors, crop varieties, manure management); the translation of these developments to farmers.

**Partners:**

**UK:** Rothamsted Research, the Centre for Ecology and Hydrology, Bangor University;

**China:** China Agricultural University, Chinese Academy of Agricultural Sciences, Chinese Academy of Sciences.

**Project web-link**

http://www.rothamsted.ac.uk/international/international-partnerships/china/cinag

**Project status**

On-going (2016-2019)

**Contact**

Dr Tom Misselbrook: tom.misselbrook@rothamsted.ac.uk

**Funder:**

BBSRC-NERC Newton Fund
STFC Newton AgriTech in China Programme

The Science Technology Facilities Council (STFC) Newton Agri-Tech in China is a joint cross disciplinary programme that aims to make use of the UK’s strengths in small satellite technologies and expertise in satellite derived data products to help provide facilities and technologies that will support research driven, decision making tools for farmers and policy makers in China as well as across the globe.

This 5-year (2014-2019) initiative aims to demonstrate the application of innovative technologies and techniques developed for space applications such as the use of remote sensing, data processing, modelling and simulation to address the needs of the Chinese agricultural community. As such programme focuses on areas where space science can directly impact and benefit agriculture, this includes: climate smart agriculture; monitoring and detecting pest and disease threats; sustainable intensification; precision agriculture; and enabling technologies.

Contact:

Dr Hugh Mortimer: hugh.mortimer@stfc.ac.uk

(AgriTech in China workshops. Photo 1, 2, 3 provided by Belinda Luke and Zhenhong Li)
Project title
Agri-Tech in China: Newton Network+

Brief profile
This project forms part of the STFC Newton Agri-Tech in China programme.

The Agri-Tech in China: Newton Network (ATCNN) was established to develop and support new UK-China partnerships to address the challenges facing modern agriculture.

The Network translates UK excellence in satellite imaging, remote sensing, smart sensors, robotics and data-intensive science into new space-enabled solutions for enhanced productivity and sustainability in rural China. The Network consists of a growing portfolio of projects and activities that bring together business with academia and end-users across the UK and China through joint development of innovative products, processes and services to enhance self-sustainability.

Partners
UK: Rothamsted Research, University of Edinburgh, Scotland’s Rural College (SRUC), University of East Anglia, University of Reading, CABI;
China: China Agricultural University

Project web-link
http://www.agritechinchina.org

Project status
On-going (2015 - 2019)

Contact
ACTNN: atcnn@rothamsted.ac.uk

Funder
The UK Science and Technology Facilities Council (STFC)

A selection of on-going pathfinder projects funded by ATCNN

- GIS systems to support in-field manure systems
  Contact: John Williams (John.Williams@adas.co.uk)
- Assessing the reliability of RS data to predict crop disease
  Contact: Xiangming Xu (Xiangming.Xu@emr.ac.uk)
- Automated image analysis and processing using UAV-deployed remote sensors
  Contact: Ji Zhou (Ji.Zhou@earlham.ac.uk)
- Using Sentinel data for drought monitoring
  Contact: Kevin Tansey (kjt7@le.ac.uk)
- Improving satellite-based models using new satellite data
  Contact: Kevin Tansey (kjt7@le.ac.uk)
- Autonomous vehicle or UAV-mounted sensing systems
  Contact: Bruce Grieve (Bruce.Grieve@manchester.ac.uk)
- Autonomous vehicle delivery of more precise pesticide application
  Contact: Sujit Baliyarasimhuni (s.p.baliyarasimhuni@lboro.ac.uk)
- UAV tracking system for pollinators
  Contact: Paul Cross (paul.cross@bangor.ac.uk)
**Project title**
Regional Crop Monitoring and Assessment with Quantitative Remote Sensing and Data Assimilation

**Brief profile**
This project forms part of the STFC Newton Agri-Tech in China programme.

The basic objective of the project is to apply advanced data assimilation techniques to multiple types of crop data—both survey-calibrated crop growth models and satellite imagery—to produce superior estimates of Chinese agricultural productivity than would be possible using any of these data sources by itself. In addition to making use of more advanced statistical methods than previous studies, this analysis will be among the first to make use of data from the forthcoming Sentinel and the Chinese Gaofeng (GF) satellites.

**Partners**
UK: University College London (Lead Research Organisation); Assimila Ltd
China: Beijing Normal University; Chinese Academy of Agricultural Sciences; Peking University.

**Project web-link**
http://gtr.rcuk.ac.uk/projects?ref=ST%2FN006798%2F1

**Project status**
On-going (2016-2019)

**Contact**
Prof Philip Lewis: p.lewis@ucl.ac.uk

**Funder**
STFC/National Natural Science Foundation of China (NSFC)

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**Project title**
Enabling Wide Area Persistent Remote Sensing For Agriculture Applications by Developing and Coordinating Multiple Heterogeneous Platforms

**Brief profile**
This project forms part of the STFC Newton Agri-Tech in China programme.

This project is to develop wide area, persistent remote sensing capability for agriculture applications by developing and coordinating a number of sensing platforms such as satellites, unmanned aerial vehicles, airships, and even ground unmanned vehicles. It is aimed to provide an unprecedented high density of spatial and temporal information required in sustainable agriculture.

**Partners**
UK: Loughborough University (Lead Research Organisation)
China: Beijing Aerospace Automatic Control Institute; Beihang University (BUAA).

**Project web-link**
http://gtr.rcuk.ac.uk/projects?ref=ST%2FN006852%2F1

**Project status**
On-going (2016-2019)

**Contact**
Prof Wen-Hua Chen: W.Chen@lboro.ac.uk

**Funder**
STFC/NSFC
**Project title**
PAFiC: Precision Agriculture for Family-Farms in China

**Brief profile**
This project forms part of the STFC Newton Agri-Tech in China programme.

This joint UK-China collaboration aims to improve the use efficiency of nutrients and agro-chemicals in crop production in China, by addressing key technological, agricultural and social or economic barriers to the use of precision agriculture methods in commercial family farms. The project will develop new technology and data sources for agricultural decision making, including the application of advanced hyperspectral cameras, able to measure many wavelengths of light and provide detailed information on crop health, and improved technology for precise spatial positioning within fields.

**Partners**
**UK:** Newcastle University (UK Lead Organisation), FERA Science Limited, RAL Space, AGspace
**China:** National Engineering Research Center for Information Technology in Agriculture (NERCITA, China Lead Organisation), Beihang University

**Project web-link**

**Project status**
On-going (2016-2019)

**Contact:**
Prof Zhenhong Li: [zhenhong.li@newcastle.ac.uk](mailto:zhenhong.li@newcastle.ac.uk)

**Funder:**
STFC/NSFC
**Project title**
Integrating Advanced Earth Observation and Environmental Information for Sustainable Management of Crop Pests and Diseases

**Brief profile**
This project forms part of the STFC Newton Agri-Tech in China programme.

The project aims to bring together and produce cutting edge research to provide pest and disease monitoring and forecast information, integrating multi-source (Earth Observation, meteorological and vertical looking radar) to support decision making in the sustainable management of insect pests and diseases.

**Partners**
UK: CABI, Assimila Ltd, Kings College London.
China: Institute of Remote Sensing and Digital Earth (RADI), Chinese Academy of Sciences.

**Project web-link**
http://gtr.rcuk.ac.uk/projects?ref=ST%2FN006712%2F1

**Project status**
On-going (2016-2019)

**Contact**
Belinda Luke: b.luke@cabi.org

**Funder**
SFTC/NSFC
The Sustainable Rice Programme (UK, China, Thailand, Philippines, Vietnam)

Rice is the staple food of over half the world's population. It is the predominant dietary energy source for 17 countries in Asia and the Pacific, 9 countries in North and South America and 8 countries in Africa. Rice provides 20% of the world’s dietary energy supply, while wheat supplies 19% and maize (corn) 5% (source: Rice is Life; Food and Agricultural Organisation of the United Nations. 2004).

Projects led by leading UK bioscience researchers and institutions include both bilateral and multilateral teams, involving research teams in China, the Philippines, Thailand, the UK and Vietnam.

The programme funded 13 projects (of which 6 involve UK-China teams), addressing a broad range of important issues such as rice quality, resource use and photosynthetic efficiency, resilience to biotic and abiotic stresses, and novel research tool and technology development, all of which will enhance the sustainable production of rice.

Chinese co-funders:
- Chinese Academy of Agricultural Sciences (CAAS)
- Chinese Academy of Sciences (CAS)

Further details of the programme, see: BBSRC website.
Project title
Super-Rice: a UK-China Collaboration to Improve Rice Nitrogen Use Efficiency

Brief profile
This project forms part of the Sustainable Rice Programme. The project fuses distinct UK/China expertise to improve rice nitrogen use efficiency (NUE). It retains the outstanding features of current rice GRVs (green revolution crop varieties), and transforms them into Super-Rice varieties that are high yielding and have enhanced NUE. Using a pioneering approach combining the discovery of natural genetic variants with marker-assisted breeding and ‘genome editing’, the project will create Super-Rice that will be high-yielding when grown with reduced nitrogen fertiliser inputs.

Partners
UK: University of Oxford,
China: Chinese Academy of Agricultural Sciences, Chinese Academy of Sciences

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=BB%2FN013611%2F1

Project status
On-going (2016-2018)

Contact
Prof Nicholas Harberd: nicholas.harberd@plants.ox.ac.uk

Funder
BBSRC

Project title
Climate Ready Rice: Optimising Transpiration to Protect Rice Yields under Abiotic Stresses

Brief profile
This project forms part of the Sustainable Rice Programme. The project aims to improve stress tolerance in rice, an important food crop both in Asia and around the world. The project directly addresses the following aims of the Newton Rice Research funding scheme:

- Greater resilience to abiotic stresses (in this project drought and heat stresses).
- Improved resource use efficiency (in this project enhanced water use efficiency).
- Novel research tool and technology development (in this project screening and characterisation of germplasm for gene and trait discovery).

Partners
UK: University of Sheffield
China: Chinese Academy of Agricultural Sciences

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=BB%2FN013646%2F1

Project status
On-going (2016 - 2019)

Contact
Prof Julie Gray: j.e.gray@sheffield.ac.uk

Funder
BBSRC
Project title
Rice Research Newton Fund: Exploiting a Cyanobacterial CO₂ Concentrating Mechanism to Increase Photosynthesis and Yield in Rice

Brief profile
This project forms part of the Sustainable Rice Programme.
The project will identify transgenic lines of rice with the required levels of carboxysome shell proteins, internal proteins, and cyanobacterial Rubisco, which can then be crossed to express all of the novel proteins in the same line; a combination of bicarbonate transporters will be installed in order to supply CO₂ to the engineered carboxysome. Finally the project will also reduce the expression of the chloroplast stromal carbonic anhydrase and endogenous rice Rubisco through RNA silencing technology.

Partners
UK: Lancaster University
China: Chinese Academy of Sciences

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=BB/N013662/1

Project status
On-going (2016 - 2018)

Contact
Prof Martin Parry: m.parry@lancaster.ac.uk

Funder
BBSRC

Project title
Maintaining Rice Reproduction under High Temperature Stress: Identifying Mechanisms and Germplasm to Increase Crop Resilience

Brief profile
This project forms part of the Sustainable Rice Programme.
This project will develop germplasm with enhanced resilience to temperature stress. It will also provide detailed understanding of the molecular and cytological changes occurring during reproduction under heat stress, and the mechanisms conferring resilience to high temperatures. Developing such resilience will allow expansion of the areas used for rice cultivation, but also the timing and frequency of rice planting. This will lead to higher rice yields, but also to more resilient yields regardless of environmental fluctuations and global climate changes.

Partners
UK: University of Nottingham
China: Chinese Academy of Agricultural Sciences, Shanghai Jiao Tong University

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=BB/N013700/1

Project status
On-going (2016 – 2018)

Contact
Zoe Wilson: zoe.wilson@nottingham.ac.uk

Funder
BBSRC
Project title
A 3D Model of Photosynthesis to Inform Breeding for Improved Rice Performance in a Changing Climate

Brief profile
This project forms part of the Sustainable Rice Programme.

The aim of this project is to provide plant breeders with information that will allow them to produce a more efficient rice plant and, moreover, a plant that is ready to cope with the challenges that climate change is going to throw at us. The project will create a 3D model of photosynthesis which takes into account the position and shape of each cell in a rice leaf. This will allow us to investigate the affect of altering the number, size and packing of cells on photosynthesis on a computer, without having to actually breed the plants.

Partners
UK: University of Sheffield;
China: Shanghai Inst of Biological Sciences, Institute of Soil Science

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=BB%2FN013719%2F1

Project status
On-going (Jan 2016 – Dec 2018)

Contact
Prof Andrew Fleming: a.fleming@sheffield.ac.uk

Funder
BBSRC

Project title
Large Scale Dynamic Integration of Proteomics and Genomics to Support Next-Generation Rice Research

Brief profile
This project forms part of the Sustainable Rice Programme.

At present, the public databases storing the rice genome and information known about gene/protein function are disconnected from experimental data (transcriptomics/proteomics) being collected in laboratories all over the world. The project partners are developing software tools for integrating and analysing these data in new ways, so that when laboratories submit their data to a public repository, it can be directly integrated and viewed alongside the genome. The project partners are also going to generate and analyse new data sets for several important rice varieties.

Partners
UK: University of Liverpool;
China: Beijing Genomics Institute (BGI)

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=BB%2FN013743%2F1

Project status
On-going (2016 - 2017)

Contact
Dr Andrew Jones: Andrew.Jones@liverpool.ac.uk

Funder
BBSRC
Swine and Poultry Research Initiative (UK-China-Philippines-Thailand)

Asia accounts for more than one-third of the world’s chicken meat production and is the leading pork producing region in the world. Diseases of livestock; such as foot and mouth, avian influenza and campylobacter result in huge economic losses. To reduce the economic and human health impact of these diseases, and to increase food security, research is required to develop rapid diagnostics, novel therapeutics and vaccines.

The Swine and Poultry Research Initiative brings together multiple countries to tackle core challenges for food security across regions.

Among the eleven funded projects, four of them are in partnership with China.

The Chinese funding partner is the National Natural Science Foundation of China.

For further information on this research programme, please visit the Newton Fund UK-China-Philippines-Thailand Swine and Poultry Research Initiative call for research proposals funding page.

(Photo: BBSRC website)
**Project title**  
UK-China partnership on Global Food Security: Combating avian tumor diseases for sustainable poultry production

**Brief profile**
This project forms part of the Swine and Poultry Research Initiative (UK-China). This project aims to obtain detailed comprehensive information on the molecular events to understand and predict the molecular pathways to ALV-J induced cancer. This includes non-coding RNA profiling for the role of non-coding RNAs in ALV-J induced oncogenesis, oncogene myc targetome identification and the role of myc-binding in maintaining the transformed phenotype and myc knockout by CRISPR/Cas9 system for the role of myc in maintaining the transformed phenotype. Synergistic mechanism of tumor virus co-infection, genetic resistant to ALV-J and rapid diagnostic kits will also be explored.

**Partners**
UK: The Pirbright Institute  
China: Yangzhou University

**Project web-link**
http://gtr.rcuk.ac.uk/projects?ref=BB%2FR012865%2F1

**Project status**
On-going (2018-2020)

**Contacts**
Dr Yongxiu Yao: yongxiu.yao@pirbright.ac.uk

**Funder**
BBSRC/NSFC

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**Project title**  
Discovery and characterization of swine host factors required to support swine influenza virus replication

**Brief profile**
This project forms part of the Swine and Poultry Research Initiative (UK-China). China is a major pig producer, where pigs are reared in large holdings under sometimes-crowded conditions, a perfect breeding ground for the evolution and emergence of new strains of virus. One future solution to these threats is to employ recent developments in gene editing to make a pig that is resistant to infection with influenza viruses. This project will identify the pig genes that are co-opted by swine influenza viruses to support their replication using a novel screening method, in pig cells with authentic swine influenza viruses typical of those circulating in China today.

**Partners**
UK: Imperial College London  
China: Huazhong Agricultural University, Wuhan

**Project web-link**
http://gtr.rcuk.ac.uk/projects?ref=BB%2FR013071%2F1

**Project status**
On-going (2018-2020)

**Contacts**
Prof Wendy Barclay: w.barclay@imperial.ac.uk

**Funder**
BBSRC/NSFC
**Project title**
Understanding antigenic diversity, zoonotic potential and immunological prevention of avian influenza viruses affecting poultry

**Brief profile**
This project forms part of the Swine and Poultry Research Initiative (UK-China). This research aims to gain insight into viral factors that contribute to vaccine failure which may enhance the ability of avian influenza viruses (AIVs) to cross species barriers from birds to mammals. The project team will utilise next-generation vaccination technologies and develop robust and effective vaccines that elicit strong and durable humoral and cellular immune responses against AIVs that cause severe economic losses in poultry.

**Partners**
UK: The Pirbright Institute

**Project web-link**
http://gtr.rcuk.ac.uk/projects?ref=BB%2FR012679%2F1

**Project status**
On-going (2018-2020)

**Contacts**
Prof Munir Iqbal: munir.iqbal@pirbright.ac.uk

**Funder**
BBSRC/NSFC

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**Project title**
China/UK/Thailand Program on Poultry Biosafety for Salmonella, E. coli and Campylobacter

**Brief profile**
This project forms part of the Swine and Poultry Research Initiative (UK-China). To understand the impact of anti-microbial resistance (AMR) in the poultry sector, the project team has established a network in North Thailand and mid-Eastern China (Shandong) and will undertake a comprehensive sampling strategy to examine key human food pathogens (Campylobacter, Salmonella and E. coli) in farms, the environment and community and infections. The project team will analyze at least 70 samples every 3 months to examine seasonal variation and sample from North Thailand and Shandong. Bacteria will be analyzed by basic microbiology techniques and selected to be whole genome sequenced where the team can interrogate the bacteria's whole DNA and compare it to other bacteria to see if they have spread from one sector (e.g. flies) to another (e.g. humans).

**Partners**
UK: Cardiff University
China: China Agricultural University, Beijing

**Project web-link**
http://gtr.rcuk.ac.uk/projects?ref=BB%2FR012776%2F1

**Project status**
On-going (2018-2020)

**Contacts**
Professor Timothy Walsh: walshr@cardiff.ac.uk

**Funder**
BBSRC/NSFC
Using Critical Zone Science to Understand Sustaining the Ecosystem Service of Soil & Water (CZO)

This is a joint programme between UK’s NERC and the National Natural Science Foundation of China (NSFC) to understand and seek ways to address the challenges faced for the delivery of China's ecosystems services in association with their agricultural production and urbanisation.

The programme aims to understand the role of soil and water within the framework of the critical zone (CZ), and use CZ science in the provisioning of China's key ecosystem services, including agriculture and climate mitigation. Within this framework the scientific objectives are to:

- Understand the importance of spatial variation and scale (from field to landscape) on the ability of soils and water within the CZ to perform their multiple functions;
- Development of modelling approaches and improvement of model skill, with the integration of wider disciplines, in the prediction of resilience; and
- Within the context of environmental stressors within China (e.g. erosion, pollutants, extreme weather, changing agricultural practices, and water availability), seek to understand and improve the resilience of soils and water to perturbations.

As part of the UK Newton Fund activities, NERC in collaboration with the NSFC have agreed to support five projects under the joint NERC-NSFC programme Using Critical Zone Science to Understand Sustaining the Ecosystem Service of Soil and Water.

For further details about the CZO programme, see NERC website.

(Photos: Paul Hallett)
Project title
SPECTRA: Soil Processes and Ecological Services in the Karst Critical Zone of Southwest China

Brief profile
This project forms part of the UK China “Using Critical Zone Science to Understand Sustaining the Ecosystem Service of Soil & Water (CZO)” programme. The SPECTRA programme seeks to enhance the sustainable development of one of the poorest regions of China, Guizhou, through cutting edge critical zone science undertaken by integrated, complementary and multidisciplinary teams of Chinese and UK scientists.

Partners
UK: University of Exeter; China: Tianjin University, Peking University, Chinese Academy of Sciences.

Project web-link
http://geography.exeter.ac.uk/spectra/

Project status
On-going (2016-2018)

Contacts
Prof Tim Quine: T.A.Quine@exeter.ac.uk

Funder
NERC/NSFC

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Project title
Red Soil CZ: From Natural to Anthropogenic Evolution of Red Soil and Its Impact on Ecosystem Function in the Critical Zone

Brief profile
This project forms part of the UK China “Using Critical Zone Science to Understand Sustaining the Ecosystem Service of Soil & Water (CZO)” programme. Red Soil CZ builds on China’s only international CZO (Sunjia) through a China/UK link that will provide a more in-depth understanding of soil processes that drive the ecosystem services delivered by this fragile resource. The project builds on existing monitoring of the Sunjia CZO by incorporating subsurface and atmospheric processes not included in the past. Further experiments in the lab and the field to explore impacts of environmental threats such as climate change, water scarcity and acid rain.

Partners
UK: University of Aberdeen, University of York; China: Institute of Soil Science of Chinese Academy of Sciences, Tianjin University, Nanjing University of Science and Technology, University of Science & Technology of China, Guangzhou Institute of Eco-Environmental & Soil Sciences

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=NE%2FN007611%2F1

Project status
On-going (2016-2018)

Contacts
Paul Hallett (UK): paul.hallett@abdn.ac.uk; Ganlin Zhang (China): glzhang@issas.ac.cn

Funder
NERC/NSFC
**Project title**  
Modelling and Managing Critical Zone Relationships between Soil, Water and Ecosystem Processes across the Loess Plateau

**Brief profile**  
This project forms part of the UK China “Using Critical Zone Science to Understand Sustaining the Ecosystem Service of Soil & Water (CZO)” programme.

The project combines experiments, modelling and remote sensing data in the Loess Plateau to understand the processes of soil water movement and soil erosion at different scales through observation and modelling; to investigate the effects of soil erosion and vegetative cover changes on soil carbon and nitrogen storage and fluxes and to identify optimal ecological services at local and regional scales supported by water and soil resources.

**Partners**  
**UK:** Rothamsted Research, Lancaster University, University of Leeds;  
**China:** Chinese Academy of Sciences, Northwest A&F University, Beijing Normal University

**Project web-link**  
http://gtr.rcuk.ac.uk/projects?ref=NE%2FN007433%2F1

**Project status**  
On-going (2016-2018)

**Contact**  
Dr Lianhai Wu: lianhai.wu@rothamsted.ac.uk

**Funder**  
NERC/NSFC

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**Project title**  
Using Critical Zone Science to Enhance Soil Fertility and Improve Ecosystem Services for Peri-Urban Agriculture in China

**Brief profile**  
This project forms part of the UK China “Using Critical Zone Science to Understand Sustaining the Ecosystem Service of Soil & Water (CZO)” programme.

This research project focuses on peri-urban farming areas in China. This agricultural base is essential to meet China's increasing food production demands but is under pressure from urban pollution inputs, soil and water pollution from farming practices - particularly extensive use of mineral fertilisers and pesticides, and urbanisation. The project will quantify the benefits and risks of a substantial step-increase in organic fertiliser application as a means to reduce the use of mineral fertiliser.

**Partners**  
**UK:** University of Sheffield, Croda Europe Ltd;  
**China:** Ningbo Academy of Agricultural Sciences, Chinese Academy of Social Sciences, Chinese Academy of Environmental Sciences; Chinese Academy of Sciences.

**Project web-link**  
http://gtr.rcuk.ac.uk/projects?ref=NE%2FN007514%2F1

**Project status**  
On-going (2016-2018)

**Contact**  
Steve Banwart: s.a.banwart@leeds.ac.uk

**Funder**  
NERC/NSFC
Project title
The Transmissive Critical Zone: Understanding the Karst Hydrology-Biogeochemical Interface for Sustainable Management

Brief profile
This project forms part of the UK China “Using Critical Zone Science to Understand Sustaining the Ecosystem Service of Soil & Water (CZO)” programme.

The research programme uses 'critical zone' research in an environment where the local residents face significant environmental challenges in rural China, an area of rapid growth and where many live under the poverty line. This research will focus on two of these challenges: water availability and quality, and how movement of water in the critical zone influences surface vegetation. Crucial to this research is that the underlying rock is mostly limestone.

Partners
UK: University of Glasgow, University of Aberdeen, University of Stirling, Scottish Universities Research and Reactor Centre, North Devon Biosphere, the Scottish Government, Natural England, Scottish Environment Protection Agency;
China: National Development & Reform Commission, Institute of Geochemistry - Chinese Academy of Sciences, Ho Hai University, Institute of Subtropical Agriculture - Chinese Academy of Sciences, Tianjin University

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=NE%2FN007425%2F1

Project status
On-going (2016-2018)

Contact
Prof Susan Waldron: susan.waldron@glasgow.ac.uk

Funder
NERC/NSFC
The Global Challenges Research Fund (GCRF) is a 5-year (2016-2021) £1.5Bn fund and a key component in the delivery of the UK Aid Strategy: tackling global challenges in the national interest. The fund aims to ensure that UK research takes a leading role in addressing the problems faced by developing countries through:

- challenge-led disciplinary and interdisciplinary research
- strengthening capacity for research and innovation within both the UK and developing countries
- providing an agile response to emergencies where there is an urgent research need.

The Global Challenges Research Fund is an initiative led by the Department for Business, Energy and Industrial Strategy (BEIS) which operates across a number of delivery partners, including the UK Research Councils, UK Higher Education Funding bodies, the Academy of Medical Sciences, Royal Society, British Academy, the Royal Academy of Engineering and UK Space Agency.

For further details about GCRF, please visit: [http://www.rcuk.ac.uk/funding/gcrf](http://www.rcuk.ac.uk/funding/gcrf)
Project title
Genomic Approaches to Increasing Resilience in Oilseed Rape Seedling Establishment in the Yangtze River Basin

Brief profile
The Global Challenges Research Fund. This project aims to exploit a new phenotyping platform at JIC which automates seed germination, root and shoot growth measurements and increases the frequency of scoring from the traditional once per day to once per hour. The research will optimize conditions on the platform to mimic the temperature regime and water potential of the Yangtze River catchment in September and screen oilseed rape varieties for germplasm with enhanced ability to germinate and establish effectively under stressful conditions.

Partners
UK: John Innes Centre
China: Oilseed Crops Research Institute, Chinese Academy of Agricultural Sciences

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=BB/P022677/1

Project status
On-going (2017-2019)

Contact
Dr Steven Penfield: steven.penfield@jic.ac.uk

Funder
BBSRC, Global Challenges Research Fund

Project title
DRIER-China: Drought Resilience in Ecosystem Services and Rural Communities in China

Brief profile
Drought is a major hazard in developing countries, especially in Asia and Africa, and in many countries is becoming a growing challenge as demand for water rises and the climate changes. In China, major droughts regularly occur over large areas of the country. This project aims to address these challenges, by building an international network of researchers and end-users from across a range of disciplines (including humanities and social sciences) to identify key research gaps and build a research plan for a large integrated research programme to build the resilience of rural communities in China to drought events.

Partners
UK: Newcastle University
China: National Engineering Research Center for Information Technology in Agriculture

Project web-link
http://gtr.rcuk.ac.uk/projects?ref=NE/P015484/1

Project status
Completed (2016-2017)

Contact
Dr Rachel Gaulton: rachel.gaulton@ncl.ac.uk

Funder
NSRC, Global Challenges Research Fund
### Project title
**Restoring Soil Function and Resilience to Degraded Grasslands**

**Brief profile**
The goal of the project is to restore fertility to degraded grassland soils of the Qinghai-Tibetan plateau and enhance their ability to buffer future climate change. The project builds on the research in UK grasslands where it has been demonstrated that soil health and resilience can be promoted through manipulating the diversity and make up of grassland plant communities. This project will test this approach for restoring the functioning and resilience of degraded grassland soils of the Qinghai-Tibetan plateau, thereby helping to increase food production and improve human welfare in this region.

**Partners**
**UK:** The University of Manchester, Lancaster University, CABI  
**China:** Grassland Research Institute, Chinese Academy of Agricultural Sciences; Northwest Plateau Institute of Biology, Chinese Academy of Sciences;

**Project web-link**
[http://gtr.rcuk.ac.uk/projects?ref=BB/P022987/1](http://gtr.rcuk.ac.uk/projects?ref=BB/P022987/1)

**Project status**
On-going (2017-2019)

**Contact**
Prof Richard Bardgett: richard.bardgett@manchester.ac.uk

**Funder**
BBSRC, Global Challenges Research Fund

### Project title
**Understanding and Reducing Lodging in Maize and Rice**

**Brief profile**
Severe weather can cause crops to become uprooted or their stems to break, a process called lodging. This project will use world leading UK expertise in lodging science to develop understanding and mitigation strategies that enable maize and rice producing regions to minimise lodging. This strategy will increase the resilience of maize and rice production systems to climate variability and produce safer food by reducing mycotoxin development in lodged crops.

**Partners**
**UK:** University of Birmingham  
**China:** Sinochem (International)

**Project web-link**
[http://gtr.rcuk.ac.uk/projects?ref=BB/P023282/1](http://gtr.rcuk.ac.uk/projects?ref=BB/P023282/1)

**Project status**
On-going (2017-2019)

**Contact**
Prof Mark Sterling: M.STERLING@bham.ac.uk

**Funder**
BBSRC, Global Challenges Research Fund
International Agricultural Development

Project title
Working in Partnership for Agricultural Technology Transfer (AgriTT)

Brief profile
The AgriTT programme is an innovative trilateral initiative between the UK Department for International Development (DFID), the Chinese Government and the Governments of Malawi and Uganda and the Forum for Agricultural Research in Africa.

The AgriTT programme adopted a whole value chain approach to innovation and technology transfer. This means linking producers, markets and consumers, and encouraging added-value services around new technologies. It also aimed to link the researchers with the policy makers and end users, ensuring that the research results and technical innovations move into use.

The AgriTT programme worked through:

- Pilot projects experimenting with Chinese technologies in partner low-income countries (Malawi and Uganda)
- A Research Challenge Fund to generate new thinking and practice for technology transfer, value chain enhancement
- Knowledge sharing and communication.

Partners
UK: Department for International Development (DFID)
China: Ministry of Agriculture

Project web-link

Project status

All the outputs of the programme are now hosted at UK China Knowledge Sharing and Mutual Learning Platform:

Funder
The UK Department for International Development (Dfid), Chinese Ministry of Agriculture

Contact
Elle Harrison
ElleH@landell-mills.com
Agri-food Trade Development

Key Facts about UK China Agri-food Trade

- In 2015, the UK government appointed the first Agriculture Counsellor, based at the British Embassy in Beijing. Ms Karen Morgan is responsible for representing the interests of the UK food and farming industry in China and for providing strategic direction in this important area.

- China is highlighted as a priority export market in the joint Government-Industry International Action Plan for Food and Drink.

- According to the statistics of UK Food and Drink Federation (FDF), China is the fastest grower among UK’s top 20 food and drink export markets. UK export to China grow 51% in 2016, reached £440 million.

- After rising to 9th of UK’s largest export market in 2016, China rose again to 8th in 2017.

- China was identified as one of the top three target markets that food and drink companies would like to target, according to a survey commissioned by FDF. In August 2017, a new export deal with China was agreed which will bring a £200 million boost to the UK food industry and support 1,500 jobs.

- In January 2018, during her official visit to China, Prime Minister Theresa May and Chinese Premier Li Keqiang reached an agreement to make progress on the lifting of the BSE ban on British beef exports within six months.

For more information on UK China agri-food trade, please contact: Karen Morgan (Karen.Morgan@fco.gov.uk)

(photos: Karen Morgan)
UK China Sustainable Agriculture Innovation Network (SAIN)
The UK-China Sustainable Agriculture Innovation Network (SAIN) is a unique mechanism established by the Chinese and UK Governments in 2008 to provide a coherent framework for carrying out sustainable agriculture cooperation activities. Its objectives are to: (i) stimulate innovative thinking and research on all aspects of sustainable agriculture; (ii) communicate information on sustainable agriculture issues and disseminate best practice to key audiences; and (iii) contribute to global sustainability through wider sharing of expertise between developed and emerging economies.

See more about SAIN at: [http://www.sainonline.org](http://www.sainonline.org)

UK China Knowledge Sharing and Mutual Learning Platform
The Knowledge Sharing and Mutual Learning Platform has been established to: (i) support the implementation of UK-China cooperation initiatives in agriculture, food and environment sectors; (ii) promote cross-disciplinary collaborations; (iii) enhance communication and engagement amongst existing initiatives and stakeholders to maximize synergies and support policy development; and (iv) foster new cooperative partnerships.

See more about the Knowledge Sharing and Mutual Learning Platform at: [http://knowledgeshare.sainonline.org](http://knowledgeshare.sainonline.org)

If you have any further enquiries, please contact: y.lu@uea.ac.uk.