



## ***The Challenge, Our Impact and the Future***

**Final Programme Meeting of the  
UK-China Agri-Tech in China Newton Network Programme**

**4-8 March 2019  
Beijing, China**

## AGENDA - Monday 4 March

Meeting Room 5-219, College of Resources and Environmental Science, CAU - West Campus

<b>08:30</b>	<b>Coach:</b> from the Holiday Inn Beijing Haidan to CAU
<b>09:30</b>	<b>Opening ceremony</b>
09:30	<b>CAU Welcome address and Reflections on Chinese participation</b> Prof Weifeng Zhang, China Agricultural University
10.00	<b>Reflections from NSFC</b> Mr Zhaotian ZHAO, Director General - Information Sciences Department
10.10	<b>Reflections from RADl</b> Prof Zhengqiang LI, Director of Remote Sensing Calibration and Validation Laboratory
10.20	<b>Reflections form NERCITA</b> Prof Guijun YANG
<b>10:30</b>	<b>Coffee Break</b>
11:00	<b>Reflections from the UK Embassy</b> Alistair Hamilton, UK Embassy, Beijing
11:10	<b>Reflections from UKRI</b> Ms Grace LANG, Director UKRI China
11:20	<b>Reflections from STFC (UK funder)</b> Dr Hugh MORTIMER, Principal Investigator of the STFC Agritech Programme in China
<b>11.40</b>	<b>Panel Discussion:</b> What have we learnt - How to we go forward?
<b>12.30</b>	<b>Buffet Lunch</b> To be held in the Peixun Restaurant, CAU
<b>14:00</b>	<b>Programme Highlights</b>
14:00	<b>Precision Agriculture for Family farms in China (PAFiC)</b> Prof Zhenhong LI, University of Newcastle (UK Project Lead)
14:10	<b>Enabling Wide Area Persistent Remote Sensing for Agriculture Applications</b> Dr Cunjia LIU, University of Loughborough <i>on behalf of</i> Prof Wen-Hua Chen (UK Project Lead)

14:20	<b>Integrating Advanced Earth Observation and Environmental Information for Sustainable Management of Crop Pests and Diseases</b> Dr Belinda LUKE, CABI (UK Project Lead)
14:40	<b>Regional crop monitoring and assessment with quantitative remote sensing and data assimilation</b> Prof Zhongxin Chen (China Project Lead) <i>on behalf of</i> Prof Philip LEWIS, University College London (UK Project Lead)
14:50	<b>Synthesis of remote sensing and novel ground truth sensors to develop high resolution soil moisture monitoring in China and the UK</b> Dr Iain GOULD, University of Lincoln <i>on behalf of</i> Prof Simon Pearson (UK Project Lead)
15:00	<b>A Novel Data Infrastructure and hosting service.</b> Prof Richard TIFFIN, University of Reading
15.10	<b>Agri-Tech in China Newton Network+</b> Prof John CRAWFORD, Rothamsted Research (UK Project Lead)
<b>15:40</b>	<b>Coffee Break</b> followed by
<b>16.15</b>	<b>Showcase Event</b> Demonstrations and Display Stands from projects funded by the UK-China Agri-Tech in China Newton Network Programme
<b>17:30</b>	<b>Meeting Ends</b>
<b>17:45</b>	<b>Coach:</b> from CAU to the Holiday Inn Beijing Haidan

## AGENDA - Tuesday 5 March

Meeting Room 5-219, College of Resources and Environmental Science, CAU - West Campus

08:00	<b>Coach:</b> from the Holiday Inn Beijing Haidan to CAU
09:00	<b>Welcome</b>
09:15	<b>Reports from Newton projects</b>
09:15	<b>Precision Agriculture for Family farms in China (PAFiC)</b> Prof Zhenhong LI, University of Newcastle (UK Project Lead)
09:35	<b>Synthesis of remote sensing and novel ground truth sensors to develop high resolution soil moisture monitoring in China and the UK</b> Dr Iain GOULD, University of Lincoln <i>on behalf of</i> Prof Simon Pearson (UK Project Lead)
09:55	<b>Regional crop monitoring and assessment with quantitative remote sensing and data assimilation</b> Prof Zhongxin Chen (China Project Lead) <i>on behalf of</i> Prof Philip LEWIS, University College London (UK Project Lead)
10:15	<b>Integrating Advanced Earth Observation and Environmental Information for Sustainable Management of Crop Pests and Diseases</b> Dr Belinda LUKE, CABI (UK Project Lead)
10:35	<b>Enabling Wide Area Persistent Remote Sensing for Agriculture Applications</b> Dr Cunjia LIU, University of Loughborough <i>on behalf of</i> Prof Wen-Hua Chen (UK Project Lead)
10.55	<b>A Novel Data Infrastructure and hosting service.</b> Prof Richard Tiffin, University of Reading
11.10	<b>Coffee Break</b>
11:40	<b>Reports from Agri-Tech in China: Newton Network projects</b>
11:40	<b>Vertical Looking Radar and Aerial Ecology Summer School</b> Dr Jason LIM, Rothamsted Research (UK Project Lead)
11:55	<b>Applying remote sensing to improve nitrogen use efficiency for potato breeding and commercial production</b> Prof Xiangming XU, The National Institute of Agricultural Botany (NIAB) (UK Project Lead)
12:10	<b>Scoping an Information Management System for Chinese Agriculture</b> Dr Lucy WILSON, RSK ADAS Ltd (UK Project Lead)

12:25	<b>Cloud-based, Mobile-enabled, Data-Driven Approach for Automatic Crop Disease Detection</b> Prof Liangxiu HAN, Manchester Metropolitan University (UK Project Lead)
12:40	<b>Space Robotic Technologies for Plant Grafting</b> Prof Xiu T YAN, University of Strathclyde (UK Project Lead)
12:55	<b>Insights and Impacts from the Newton programme, including the Quzhou Agri-Tech Integration Programme</b> Prof John CRAWFORD, Rothamsted Research (UK Project Lead) Prof Weifeng ZHANG, China Agricultural University (China Project Lead)
13:10	<b>Buffet Lunch</b> To be held in the Peixun Restaurant, CAU
14:30	<b>Themed Sessions</b> ( <i>see next page for details</i> ) 1. Farm Scale Technologies for Sustainable Intensification 2. Regional Scale Crop Monitoring for Food Security 3. Enabling Technologies
16:30	<b>Conclusions</b>
17:30	<b>Coach:</b> CAU to Sichuan and Zhejiang Restaurant  Sichuan and Zhejiang Restaurant, Shichuang Commercial Service Center, Information Road No. 19, Haidian District, Beijing 北京市海淀区信息路 19 号实创商服中心 Tel: (010) 62982323, (010) 62983232
21:30	<b>Coach:</b> from Sichuan and Zhejiang Restaurant to the Holiday Inn Beijing Haidan

## AGENDA - Tuesday 5 March

### Themed Session 1: Farm Scale Technologies for Sustainable Intensification

*chaired by Dr Lucy Wilson, RSK ADAS Ltd*

**Meeting Room 5-219**

<b>Presentations from project leads:</b>	
<b>Automated image analysis and processing using UAV-deployed remote sensors</b>	Dr Ji ZHOU, Earlham Institute (UK Project Lead)
<b>NeWMap: Enhanced farm-specific NutriEnt and Water Stress Maps</b>	Prof Wei SU, China Agricultural University (China Project Lead) <i>on behalf of Dr Jinghao XUE, University College London (UK Project Lead)</i>
<b>GIS systems to support in-field manure systems</b>	Dr Kate Smith, RSK ADAS Ltd <i>on behalf of Mr John Williams (UK Project Lead)</i>
<b>Diagnosis, data assimilation and decision-making systems for precision management of water and nitrogen in the Southern China</b>	Prof. Mathew WILLIAMS, University of Edinburgh (UK Project Lead)
<b>Achieving Sustainable Intensification using Remote Sensing: Evidence from STB and Yangxin County, Shandong Province</b>	Prof Wantao YU, University of Roehampton <i>on behalf of Assoc Prof Francisco AREAL, University of Reading (UK Project Lead)</i>
<b>Data innovations and sustainability in agri-food supply chains: Evidence from Henan Province.</b>	Prof Wantao YU, University of Roehampton (UK Project Lead)
<b>Scoping a Crop Intelligence System for China</b>	Dr Lucy WILSON, RSK ADAS Ltd <i>on behalf of Dr Daniel Kindred (UK Project Lead)</i>
Followed by:	
<b>Discussions on conclusions and future pathways</b>	

## AGENDA - Tuesday 5 March

### Themed Session 2: Regional Scale Crop Monitoring for Food Security

*chaired by Dr Nicola Pounder, Assimila Ltd*

**Meeting Room 5-116**

<b>Presentations from project leads:</b>	
<b>Wheat Rust and Wheat Growth Modelling Workshop</b>	Dr Belinda LUKE, CABI (UK Project Lead)
<b>Management zone delineation and decision support system for small scale farming at village level in North China Plain</b>	Dr Davide CAMMARANO, James Hutton Institute (UK Project Lead)
<b>Assessing the reliability of RS data to predict crop disease</b>	Prof Xiangming XU, The National Institute of Agricultural Botany (NIAB) (UK Project Lead)
<b>UAV tracking system for pollinators</b>	Dr Paul CROSS, Bangor University (UK Project Lead)
<b>Yield forecasting systems and early blight detection of potato crops in China</b>	Dr Lily ZHANG, The National Institute of Agricultural Botany (NIAB) <i>on behalf of Dr Bo LI (project lead), NIAB (UK Project Lead)</i>
<b>VIP-STB Farm: Scale up from Village to County/Province Level to Support STB Programme for Innovation of Chinese Household-Based Small Farms</b>	Prof Jinchang REN, University of Strathclyde (UK Project Lead)
<b>A roadmap to improve precise soil management by linking crop modelling and remote sensing images via data assimilation: Feasibility study</b>	Dr Xiaoxian ZHANG, Rothamsted Research (UK Project Lead)
Followed by:	
<b>Discussions on conclusions and future pathways</b>	

## AGENDA - Tuesday 5 March

### Themed Session 3: Enabling Technologies

*chaired by Prof Bruce GRIEVE, Manchester*

**Meeting Room 4-206**

<b>Presentations from project leads:</b>	
<b>“China Robot Harvest++”</b>	Prof Mick FULLER, University of Plymouth (UK Project Lead)
<b>Autonomous vehicle delivery of more precise pesticide application</b>	Dr Cunjia LIU, Loughborough University <i>on behalf of</i> Dr Sujit BALIYARASIMHUNI, Loughborough University (UK Project Lead)
<b>Highly Efficient Intelligent Irrigation Systems</b>	Dr Cunjia LIU, Loughborough University <i>on behalf of</i> Prof Wen-Hua CHEN (project lead), Loughborough University
<b>An exploration of how the internet of things technologies can transform the after-sales services and improve the efficiency of machine manufacturers in China</b>	Dr Po YANG, Liverpool John Moores University (UK Project Lead)
<b>Using Sentinel data for drought monitoring</b>	Dr Huazhong REN, Peking University (China Project Lead) <i>on behalf of</i> Prof Kevin TANSEY, University of Leicester (UK Project Lead)
<b>Improving satellite-based models using new satellite data</b>	Prof Pengxin WANG, China Agriculture University (China Project Lead) <i>on behalf of</i> Prof Kevin TANSEY, University of Leicester (UK Project Lead)
<b>Autonomous vehicle or UAV-mounted sensing systems</b>	Prof Bruce GRIEVE, University of Manchester (UK Project Lead)
Followed by:	
<b>Discussions on conclusions and future pathways</b>	



## Wednesday 6 March

### Visit 1: China Agricultural University

Topic: User Applications

Meeting Room 5-219, College of Resources and Environmental Science, CAU - West Campus

<b>08:00</b>	<b>Coach:</b> from Holiday Inn Beijing Haidan to CAU
<b>09:00</b>	Tour of Facilities
<b>12:00</b>	<b>Buffet Lunch</b> to be held in the Peixun Restaurant, CAU
<b>13:30</b>	Meeting: next steps ready to report back on Thursday (UK and Chinese chair)
<b>17:10</b>	<b>Buffet Dinner</b> to be held in the Peixun Restaurant, CAU
<b>18:30</b>	<b>Coach:</b> from CAU to the Holiday Inn Beijing Haidan

### Visit 2: National Engineering Research Center for Information Technology in Agriculture (NERCITA)

Topic: Precision Farming

Venue TBC

<b>08:00</b>	<b>Coach:</b> from Holiday Inn Beijing Haidan to NERCITA
<b>09:00</b>	Tour of facilities followed by
	Meeting: next steps ready to report back on Thursday (UK and Chinese chair)
TBC	<b>Coach:</b> from NERCITA to the Holiday Inn Beijing Haidan

### Visit 3: Institute of Remote Sensing and Digital Earth (RADI)

Topic: Regional scale monitoring

Venue TBC

<b>08:00</b>	<b>Coach:</b> from Holiday Inn Beijing Haidan to RADI
<b>09:00</b>	Tour of facilities followed by
	Meeting: next steps ready to report back on Thursday (UK and Chinese chair)
TBC	<b>Coach:</b> from RADI to the Holiday Inn Beijing Haidan

## Thursday 7 March

Meeting Room 5-219

College of Resources and Environmental Science, China Agricultural University - West Campus

<b>08:00</b>	<b>Coach:</b> from Holiday Inn Beijing Haidan to CAU
<b>09:00</b>	<b>Future focus</b>
	<b>Next steps: opportunities, challenges, solutions</b> Chinese and UK leads to report back on discussions from Tuesday/Wednesday
	<b>Establishment of a UK-China Joint Venture in Agri-tech</b> Prof John Crawford, Rothamsted Research and Claire Urry, Executive Director - Service Delivery, China Britain Business Council (CBBC)
<b>12:00</b>	<b>Conclusions</b>
<b>12:30</b>	<b>Buffet Lunch</b> to be held in the Peixun Restaurant, CAU
<b>14:00</b>	<b>Meeting Ends</b>

## Optional Trip to Quzhou STB farms, Handan, Hebei.

### Thursday 7 March

<b>14:00</b>	<b>Coach:</b> from CAU to Quzhou
<b>19:00</b>	Dinner at Quzhou Yi'e Hotel

### Friday 8 March

<b>7:30</b>	Breakfast at Yi'e Hotel
<b>8:00</b>	Visit to Quzhou STB farms
<b>12:30</b>	Lunch at Yi'e Hotel
<b>14:00</b>	<b>Coach:</b> from Quzhou to Holiday Inn Beijing Haidan