

Update

July - September 2012 (No 12)

Work in Progress

Professor Zhao Lixin, Meng Haibo and Ren Yawei of Chinese Academy of Agricultural Engineering visited the UK Biochar Research Centre at the University of Edinburgh, and Rothamsted Research in the late August, as part of the project activities.

Prof Zhu Yan and Lai Xin of Agri-Environmental Protection Institute (AEPI) visited SOAS, University of London on 19-22 September, held meetings with Dr Laurence Smith, co-chair of SAIN Working Group 4, and discussed the work plan for the next stage, building on the scoping study on the development of template for catchment management. It is planned 3-4 UK members of the working group will visit AEPI in early December. Prof David Norse, SAIN Governing Board member, and Dr Yuelai Lu of SAIN Secretariat participated the meeting.



Publications

Policy Brief No 6: Improving Manure Nutrient Management towards Sustainable Intensification in China

Key Messages:

- 3060 million tonnes (fresh weight) of livestock manure was generated in China in 2010. The N, P₂O₅ and K₂O content of these manures is estimated to represent *ca.* 14 million, 10.2 million and 12.0 million tonnes respectively, which worth *ca.* 201,300M RMB;
- Manure is commonly over-applied to horticultural crops, particularly greenhouse vegetables and fruit, which causes negative environmental impacts;
- The barriers for effective management of manure, compost and digestate include lack of labour to transport and apply to the field; lack of knowledge of the nutrient content and availability; and inadequate labelling of e.g. composted manure products;
- The pathways for improved manure nutrient management include:
 - Retaining nutrients through the manure management continuum
 - Using an integrated nutrient recommendation system
 - Generating knowledge of the nutrient content and nutrient availability of manure, compost and digestate
 - Ensuring CAFOs have manure nutrient management plans for utilisation in the local area (planning regulations)
 - Encouraging and incentivising improvements in other infrastructure, e.g. to facilitate mechanised transportation and spreading of manures

This *Policy Brief* is part of the output of SAIN project Manure Use in China (MUC), funded by Defra and MoA, led by Dr Dave Chadwick of Rothamsted Research North Wyke (david.chadwick@rothamsted.ac.uk) and Prof Shen Qirong of Nanjing Agricultural University (qirongshen@njau.edu.cn). Click [here](#) to read full paper.

UK-China Sustainable Agriculture Innovation Network (SAIN)

Huang, J., C. Xiang, X. Jia*, and R. Hu. 2012. **Impacts of Training on Farmers' Nitrogen Use in Maize Production in Shandong, China.** *Journal of soil and water conservation* 67(4):329-335. doi: 10.2489/jswc.67.4.329

Abstract: Inorganic fertilizer plays an important role in increasing Chinese food production. However, recent studies showed that Chinese farmers have been significantly overusing nitrogen (N) fertilizer. The overall goal of this study is to investigate the impact of delivering information and knowledge regarding appropriate N fertilizer use in maize production. Based on an experimental study, which provided training to farmers in maize production in the North China Plain, the present study finds that training does have a positive impact on farmer practices. Indeed, the training was effective in reducing overall N fertilizer use by 22%, though the N application after training was still higher than the level recommended by scientists. These findings have important implications for China's extension system, as well as its efforts to reduce nonpoint pollution and greenhouse gas emissions.

This paper is part of the output of SAIN project “*Improved Nutrient Management in Agriculture – a Key Contribution to the Low Carbon Economy*”, funded by FCO, led by Prof David Powlson of Rothamsted Research (david.powlson@rothamsted.ac.uk) and Prof Zhang Fusuo of China Agricultural University (zhangfs@cau.edu.cn). Further enquires about this paper please contact Dr Jia Xiangping of Centre for Chinese Agricultural Policy (jiexp.ccap@igsnr.ac.cn).

Other News

State Council meeting on "Grain for Green" programme and the “National Low Carbon Day”

19 September 2012. Premier Wen Jiabao chaired the executive meeting of the State Council, listened the work report on “grain for green”, discussed and approved the Project Plan Phase II for the Control of the Sand and Dust Sources for Beijing and Tianjin Area (2013-2022) and decided to establish “National Low Carbon Day”.

The meeting pointed out that the implementation of “Grain for Green Program” was a major decision of the CCCPC and the State Council to improve eco-environment at the beginning of this century. Relevant department shall identify the focus, continuously implement the program, and further consolidates the achievements of the program.

To disseminate the know-how of climate change, spread the concept and policy of low carbon development, encourage the public participation and promote the implementation of the emission reduction tasks of GHGs, the meeting decided that the third day of the Energy Conservation Publicity Week in June each year will be set as the “National Low Carbon Day”, start from 2013.

Click [here](#) for details.



RCUK celebrated five years of UK-China research success

Beijing, 24 September 2012, over 100 UK and Chinese delegates attended the event ‘RCUK China – Five Years and Beyond’ in Beijing, to celebrate the fifth anniversary of RCUK China.

Delegates heard about current successful RCUK-China collaborations and contributed to discussions to scope future areas for collaborative RCUK-China activity. A UK delegation of 23 key research figures, including

representatives from all seven UK Research Councils and leading academics, travelled to China to take part in the event. Representatives from a range Chinese funding organisations, leading Chinese research institutions, and UK organisations based in China also actively contributed to the day’s discussions.

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Since its launch in 2007, RCUK China has supported a range of activities to promote UK-China research collaborations and the team has also helped developed a significant multi-million pound programme of joint funding activities with key research funders in China in areas including healthcare, social sciences, food security and energy. Professor Paul Boyle, RCUK's International Champion, said: "International cooperation is a fundamental part of enhancing and stimulating the research we support in the UK, and China is a highly valued and important partner for us (*RCUK China*).

China Valuable Partner for Food Security

28th September, Rome. Speaking ahead of a five-day trip to China, the head of the United Nations Food and Agriculture Organization said China is playing a key role in the effort to reduce worldwide hunger, and called on the country to play an equally important role in helping to stabilize food prices.

The two topics, which FAO general director Jose Graziano da Silva said are inextricably linked, are among the central issues of focus for the Rome-based organization under Graziano's leadership.

Graziano, who spoke to Xinhua in an exclusive interview recently in his FAO office, will travel to China end-September after attending UN meetings in New York.

Graziano said China had been able to reduce the number of people suffering from hunger by 40 percent and the number of under nourished people by 50 percent. Now, Graziano says he wants to ask China to help with another problem that will help further reduce the number of hungry people in the world - stabilizing food prices and improving world food security.

Click [here](#) for more detail

FAO Project Officer visited SAIN Secretariat (China)

Mr. Liu Zhongwei, Project Officer of FAO, former director of the division for European Affairs of the international cooperation in Chinese Agriculture Ministry, visited SAIN secretariat (China) on July the 8th, 2012. Mr Liu communicated with the international cooperation division and executive deans from colleges of Northwest Agriculture and Forestry University, reported present situation of international cooperation in the field of agriculture of China, discussed the probability of Northwest Agriculture and Forestry University could take part in Africa cooperation (*Tong Yanan reports*).

British GM crop scientists win \$10m grant from Gates

A team of British plant scientists at the John Innes Centre won a \$10m (£6.4m) grant from the Gates Foundation to develop GM cereal crops. It is one of the largest single investments into GM in the UK and will be used to cultivate corn, wheat and rice that need little or no fertiliser.

Agricultural fertiliser is important for crop production across the globe. But the many of the poorest farmers cannot afford fertiliser - and it is responsible for large greenhouse gas emissions.

The John Innes Centre is trying to engineer cereal crops that could get nitrogen from the air - as peas and beans do - rather than needing chemical ammonia spread on fields.

Click [here](#) for details

For more information about SAIN, please visit: <http://www.sainonline.org/English.html>

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