



Season's Greetings from Secretariat

SAIN Policy Brief No 9 & 10 Released

SAIN Policy Brief No 9

Technical options to reduce greenhouse gas emissions from croplands and grasslands in China

- Technical mitigation potential of different management practices that could reduce GHG emission from Chinese agriculture system were estimated using a bottom up assessment of mitigation potential i.e. Meta-analysis of peer reviewed published data from China.
- Mitigation measures with greatest mitigation potential for rice agriculture were water saving irrigation and shifting from mid season drainage to more intermittent irrigation, conservation tillage, integrated rice-fish or duck farming, N- inhibitor application, use of Ammonium sulphate instead of urea, recycling of organic manure such as livestock manure and biogas residue with more controlled irrigation, avoid straw application to rice field and biochar application. Reducing N application to rice field had less potential but it is an important measure as overuse of N fertilizer has other environmental implications and reducing N fertilizer demand would reduce indirect GHG emission due to fertilizer manufacture.
- For upland grain crops combined application of chemical and organic fertilizer, practice of conservation tillage, reduction in N fertilizer application, N inhibitor use and biochar application could be mitigation measures with huge mitigation potential. Though straw return to upland crops could be a potential mitigation measure, due to plant protection needs, as well as labor unavailability, straw return is becoming increasingly limited in croplands.
- Reduced N fertilizer application and N inhibitor use are great mitigation measures for vegetable crops as current practice of excess and inefficient use of N fertilizer in vegetable crop is worst.
- Grassland degradation either due to overgrazing or conversion to other land uses such as croplands is the major cause of current soil carbon loss from grasslands of China. Restoration of these degraded grassland either by reseedling, reducing grazing intensity, grazing exclusion or conversion of low yielding croplands to grassland are mitigation measures with great mitigation potential.

Click [here](#) to read full article

SAIN Policy Brief No 10

Technical options for reducing enteric methane emissions from livestock production

- A wide range of mitigation options have been surveyed, with varying degrees of effectiveness at mitigating methane emissions
- For Chinese livestock production, where poor quality forage is commonly fed, improving grazing management can reduce methane emissions by 11% on average and improving diet quality can significantly reduce methane emissions by 5% on average.

UK-China Sustainable Agriculture Innovation Network (SAIN)

- Dietary supplements can reduce methane emissions further, with the addition of tannins or saponins reducing methane emissions by 11% on average and the addition of lipids giving an average reduction of 15%.
- The greatest mitigation potential is seen from adding chemical inhibitors to the rumen, with an average reduction of 31%. However, these are potentially toxic chemicals which raises concerns for food safety.

Click [here](#) to read full article

SAIN project is making good progress

Project title: “Knowledge, policy and practice for sustainable nutrient management and water resources protection in UK and Chinese agro-ecosystems”, funded by Defra and Chinese Ministry of Agriculture for three years, launched in June 2013.

9-19th October, project members from SOAS, University of Lancaster, AEPI, NWUAF and CAU paid a visit to the pilots of project - “Knowledge, policy and practice for sustainable nutrient management and water resources protection in UK and Chinese agro-ecosystems”, the rice-wheat rotation system in Suzhou, Jiangsu Province, the maize-wheat rotation system in Huantai, Shandong Province, and the fruit system in Zhouzhi, Shaanxi Province.

During the visit in Suzhou, the UK experts engaged the discussions with local government officers, technology extension officers and farmers on the sustainable development of the agriculture.

The UK experts were impressed by the progress made by Chinese partners and a project workshop is planned in the UK next year.

9-17th November, the SAIN WG4 Chinese members from AEPI visited the UK as part of the project’s methodology development activities. During the period, they visited SOAS, Lancaster University, BGS and UEA.

Chinese visitors visited the Demonstration and Test Catchment (DTC) in Eden, ground water survey, and discussed with UK colleagues on the cooperation in the future. Meanwhile they introduced the AEPI and Chinese current agricultural environment situation. The project will hold a workshop next February in China and another workshop next September in UK.

(Provided by Xin Lai)



UK-China Sustainable Agriculture Innovation Network (SAIN)

Presentations at International Conference

2-4th October, Dr Yuelai Lu was at Second Global Conference on Land-Ocean Connections (GLOC-2) and gave a presentation on “*Nutrient management challenges of China*”. Click [here](#) to view the slides.

18-22th November, Prof David Powlson was at the 6th International Nitrogen Conference and delivered a presentation on “Management and Policy Changes in China to Overcome N Fertilizer Mismanagement for Environmental and Economic Gains”.

Visits

11月 18-28日, Prof Liu Guodao, Vice President of Chinese Academy of Tropical Agricultural Sciences (CATAS), Prof Li Kaimian, Chief Scientist of China's Cassava Industry System were in the UK for academic visits. During in the UK, they held meetings with colleagues of SAIN Secretariat, International Development Training Programme at University of East Anglia, and Natural Resource Institute (NRI) at University of Greenwich. Prof Liu said the CATAS will fully use SAIN as a platform to carry out cooperation with the UK organisations.

Other News

DFID and ESRC announce £4.5 million collaboration to support research into China's development lessons and engagement with Africa

The Department for International Development (DFID) and the Economic and Social Research Council (ESRC) announced a dedicated programme of research to investigate in comparative perspective the economic development impact of China's engagement in sub-Saharan Africa. The programme aims to critically evaluate what lessons China's own economic development transformation can offer other developing countries - in particular in low-income Africa.

It is expected that research projects under this call to either take as a starting point a developmental challenge facing Africa and examine possible solutions linked to recent experience from China's own economic development, or to build understanding of an aspect of China's engagement with Africa relevant to the continent's economic development.

The programme encourages academics from developing and developed countries to work together in any configuration of their choosing, and principal investigators can be from anywhere in the world.

Grants will be for a maximum of four years and with a full Economic Cost (fEC) value of between £200,000 and £2 million. It is expected to fund a mixed portfolio of small (in the region of £200,000 to £500,000) and larger (£500,000 and above) research projects under this call. UK-based researchers will be funded at 80 per cent fEC, whilst non-UK researchers will receive 100 per cent of the direct costs of the research, plus a variable overhead. The total budget for this call will be £4.5 million.

The full specification and other relevant documents can be found below. Deadline for applications: **16.00 UK time, 13 March 2014.**

Click [here](#) for further information on funding specification and application procedures.

Editor: Yuelai Lu, SAIN Secretariat (UK). If you have any enquiries, please contact Yuelai Lu at: y.lu@nca.ac.uk; for more information about SAIN, please visit: <http://www.sainonline.org/English.html>.