

Chen Xiaomin

Professor of Soil Science

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Education:

- Ph.D. Nanjing Agricultural University, P.R. China, 1999
- MSc Wageningen Agricultural university, Netherlands, 1991
- BSc Nanjing Agricultural University, P.R. China, 1982

Research interests and expertise:

- 1) Soil/water/plant relationships, physical properties & processes in unsaturated soil, transport and accumulation of water, gases, heat and solutes in soil, availability of soil water and water extraction by roots, soil physical condition and plant growth.
- 2) The development of efficient computer models to describe solute transport soils characterization techniques, and field studies of solute transport.
- 3) The description of soil structure produced by tillage and natural processes.
- 4) Salinity control, salt balance and leaching requirement of irrigated soil, saline soil improvement, effect of sodium on soil physical behaviors, crop growth affected by salinity and sodicity and microelements fertilizer in soil.
- 5) Qualitative land evaluation, land degradation and conservation.

Current projects:

1. The National Key Research and Development Program of China (2016YFD0800306). Source Identification and Contamination Characteristics of Heavy Metals in Agricultural Land and Products. 2016-2020
2. The National Key Research and Development Program of China (2016YFD0200305). Mechanism and regulation of cultivated soil fertility affecting fertilizer nutrient Utilization, 2016-2020

Current teaching:

- Soil Science, BS course, spring term
- Soil physics, MSc course, autumn term

Selected publications:

1. Jianqiang Deng, Xiaomin Chen, Rui Wang, Jiangkuan Nan, Zhenjie Du, 2017, LS-SVM data mining analysis: how does biochar influence soil net nitrogen mineralization in the field? Journal of Soils and Sediments, 17:827–840
2. Zhenjie Du, Xiaomin Chen, Xuebin Qi, Zhongyang Li, Jiangkuan Nan, Jianqiang Deng, 2016, The effects of biochar and hoggerly biogas slurry on fluvo-aquic soil physical and hydraulic properties: a field study of four consecutive wheat–maize rotations, Journal of Soils and Sediments, 16:2050-2058
3. Zuxiang Liu, Xiaomin Chen, Yan Jing, Qiuxia Li, Jiabao Zhang, Qianru Huang, 2014,

Effects of biochar amendment on rapeseed and sweet potato yields and water stable aggregate in upland red soil, *CATENA*, 123:45-51.

4. Yong Zhang, Xiaomin Chen, Congcong Zhang, Genxing Pan, Xuhui Zhang, 2014, Availability of soil nitrogen and phosphorus under elevated [CO₂] and temperature in the Taihu Lake region, China, *Journal of Plant Nutrition and Soil Science*, 177, 343–348.

5. Xiaomin Chen, Huashan Wu, and Fei Wo.2007. Nitrate vertical transport in the main paddy soils of Tai Lake region, China, *Geoderma*, 142 : 136-141