

## iSQAPER PhD Student Research Information

### Research Title

Major driving factors contributing to soil acidification in typical regions of southeast China

### Abstract

Soil acidification is commonly known as one of the serious global ecological environmental problems in the world. In China, the issue of soil acidification is also extremely urgent, especially in red soil, which distribute in southeast of China, accounting for 22.7% of national territory area. However, in China, most studies have been focused on farmland soil acidification, and less on natural ecosystem like forest and grassland. Moreover, on the issue of farmland soil acidification, more individual factor like acid rain, fertilizer application, parent material and vegetation have been studied widely, but the contribution rate of these factors driving soil acidify are still not very clear, especially in natural ecosystems.

### Objectives of the research

The purpose of this study is to clarify the acidification rate and the contributions of driving factors in typical regions of southeast China. The results will help to controlling the soil acidification rate in various ecosystems.

### iSQAPER Study Site / Work Package

We choose Yujiang county of Jiangxi Province, and Zhongshan county of Guangdong Province as typical regions. Soil profile samples (0-20cm, 20-40cm, 40-60cm, 60-100cm) with different utilizations, vegetation and parent materials will be collected by 3\*3 km<sup>2</sup> frame design. Soil pH, cation exchange capacity, exchangeable acid, organic matter and so on which related to soil acidification, and plant production will be measured. Combining with some short and long-term experiments and historical survey in these areas, we will clarify the red soil acidification rate and the contribution of driving factors (acid rain, fertilizer application, parent material and vegetation, etc.).

### Partners in this research

Professor Minggang Xu, Professor Jianwei Li, Professor Boren Wang

### Contact Details

<i>Name:</i>	Fangfang Song	
<i>Institute:</i>	Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences	
<i>Address:</i>	No 12 Zhongguancun South Street, Haidian District, Beijing 100081, P.R. China	
<i>Contact:</i>	E-mail address: songfang422@163.com Phone number: +86-18911879643	