Effects of *Pinus Massonian* Plantations on Soil Macroarthropods in Degraded Ultisol, Subtropical China – Chengchen Ding, Feng Hu, Jing Zhou, Zhihong Cao, Huixin Li, Zhengkai Dai

Summary

In the degraded red soil of subtropical China, restoration activities during the last century have mainly relied on extensive plantations of *Pinus massonian*. We analyze the changes in the soil macroarthropods in *P. massonian* plantations and the possible relationships between these changes and soil chemical parameters. The study revealed significant differences in the abundance of soil macroarthropods between the *P. massonian* plantations and the natural regenerated mesophilous herbosa (N1). The sharply differentiated pattern of soil macroarthropods seems closely linked to soil chemistry. Significant correlations of the abundance of soil macroarthropods with soil parameters suggest that their populations could have been affected by *P. massonian*. The total abundance, the abundance of Hymenoptera and Termite were less in the *P. massonian* plantations when compared to the natural regenerated mesophilous herbosa (N1). This survey showed that *P. massonian* could adversely affect the decomposer community which could lower the nutrient cycling rate, thus *P. massonian* may not be an ideal plantation for restoration of eroded Ultisol, Subtropical China.