Ning Ling

Associate Professor of Plant nutrition

Address: D203 North Administration Building
Phone Number: +86-25-84396853
Email: nling@njau.edu.cn

Education:

- Sep.2007—Jun.2012 Ph.D. in Plant Nutrition and Soil Science, Nanjing Agricultural University, China； Supervisor: Prof. Qirong Shen
- Sep.2003—Jun.2007 BS in Agricultural resources and environment, Nanjing Agricultural University, China

Research interests and expertise:

I am a Soil Ecologist interested in soil microbiome and bio-fertilizer. To study this, I use culture independent and dependent approach to investigate microbial communities (bacteria, fungal and archaeal) in agroecosystem. Currently, I have advanced my research to environmental sampling and field experiments to bridge the gap between laboratory and natural environments. I am specifically interested how abiotic and biotic factors determine the species interactions within soil microbial community, and how the soil microbial diversity, community structure and interaction might feedback and change the stability and ecosystem functioning of soil. I am also interested in how changes in microbial communities affect the fitness and productivity of crops. For example, crop root-associated microbial communities often form the first line of defense against invading pathogens and also play very important role for the nutrient supply.

I welcome interest from prospective research students and postdoctoral fellows from a variety of backgrounds who are interested in studying the soil ecology and interested in developing new technologies for soil microbiome research.

Current projects:

- How the stock-scion interaction impacts the coupling of chemicals and microbiome in rhizosphere, Natural Science Foundation of China (31772398), 2018-2021, 600,000 RMB.
- The formation mechanism of disease-suppressive soil microbiome on watermelon, National “973” program, 2015-2019, RMB 780,000 RMB.

Current teaching:

- Soil and fertilizer Science
- Rhizospheric biology

Selected publications:

- Luo G, Rensing C, Chen H, Liu M, Wang M, Guo S, **Ling N*,** Shen QR (2018) Deciphering the associations between soil microbial diversity and ecosystem multifunctionality driven by long-term fertilization management. **Functional Ecology** 32: 1103-1116. **(*Corresponding author)**
- Luo G, Friman V-P, Chen H, Liu M, Wang M, Guo S, **Ling N*,** Shen Q (2018) Long-term fertilization regimes drive the abundance and composition of N-cycling-related prokaryotic groups via soil particle-size differentiation. **Soil Biology and Biochemistry** 116: 213-223. **(*Corresponding author)**
- Zhu C, Tian GL, Luo GW, Kong YL, Wang M, Guo SW, Guo S, Ling N*, Shen QR (2018) N-fertilizer-driven association between the arbuscular mycorrhizal fungal community and diazotrophic community impacts wheat yield. **Agriculture, Ecosystems and Environment** 254: 191-201. **(*Corresponding author)**
- **Ling N,** Zhu C, Xue C, Chen H, Duan YH, Peng C, Guo SW, Shen QR. 2016, Insight into how organic amendments can shape the soil microbiome in long-term field experiments as revealed by network analysis. **Soil Biology & Biochemistry**. 99: 137-149
- **Ling, N.,** Chen, D., Guo, H., Wei, J., Bai, Y., Shen, QR., Hu, S.J, 2017. Differential responses of soil bacterial communities to long-term N and P inputs in a semi-arid steppe. **Geoderma** 292, 25-33.
- **Ling N**, Sun YM, Guo JJ, Zhu P, Peng C, Yu GH, Ran W, Guo SW, Shen QR.2014, Response of the bacterialdiversity and soil enzyme activity in particle-size fractions of Mollisol after different fertilization in a long-term experiment. **Biology and Fertility of Soils**. 50: 901-911