

Qirong Shen

Professor of Plant Nutrition

Address: D512 Administrative North Building

Phone Number: 025-84396291

Email: shenqirong@njau.edu.cn

Education:

- Ph.D. in Plant Nutrition, Nanjing Agricultural University, Nanjing, China, 1985;
- M.S. in Plant Nutrition, Nanjing Agricultural University, Nanjing, China, 1981;
- B.S. in Plant Nutrition, Nanjing Agricultural University, Nanjing, China, 1978;

Research interests and expertise:

Prof. Shen, the academic committee director of Nanjing Agricultural University, mainly engaged in soil science and soil microbiology. To date, more than 450 papers on SCI have been published and more than 10 thousand times have been cited in Web of Science, and the H-index is 50, which located in front of the world. He primarily proposed the theory for the regulation of soil microbial community and developed a series of organic fertilizer products (organic fertilizer, organic and inorganic compound fertilizer, bioorganic fertilizer) to regulate the soil microbial community all over the world.

- Revealing the biological process during organic fertilizer production and its transformation mechanism after application in soil;
- Revealing the mechanism of beneficial microorganisms in rhizosphere and forming the regulation system of rhizosphere microbial community;
- Developing new technologies for production of *Trichoderma* spp. spawn and organic fertilizer with crop straw.

Current projects:

- Jiangsu Provincial Organic Solid Waste Resource Collaborative Innovation Center, Construction of The Platform, 20,000,000 yuan, 2013-2017;
- Study on Mechanism Model of Biofilm in Rhizosphere Bacteria in The Crop's Root's Surface, Key Project of the National Science Foundation, 3,120,000, 2014 -2018;
- Jiangsu Provincial Key Laboratory of Solid Organic Fertilizer utilization, Project for Upgrading, 5,000,000 yuan, 2014-2018.
- Integrated control technology of crop wilt disease. National Research in Public Service Sectors (Agriculture), 23,700,000 yuan, 2015-2019;
- Soil Microflora Characteristics and Regulation of High-yield and High-efficiency Soils for Crops. The state plan for development of basic research in key areas, 33,980,000, 2015 -2019;
- Study of the key technologies for regulating soil microbial community and their mechanisms. The natural science foundation of Jiangsu Province, 1,000,000 yuan, 2015-2018.

Current teaching:

- Plant nutrition, undergraduate students of agricultural resources and environment, autumn term;
- Advanced Plant Nutrition, graduate students of plant nutrition, autumn term;
- Graduates 'English Academic Writing, graduate students of NAU, autumn term.

Selected publications:

- Xiong W, Guo S, Jousset A, Zhao QY, Wu HS, Li R, Kowalchuk GA, **Shen QR** (2017) Bio-fertilizer application induces soil suppressiveness against Fusarium wilt disease by reshaping the soil microbiome, *SOIL BIOL BIOCHEM*, 114: 238-247
- Yu GH, Xiao J, Hu SJ, Polizzotto ML, Zhao FJ, McGrath SP, Li H, Ran W, **Shen QR** (2017) Mineral Availability as a Key Regulator of Soil Carbon Storage, *ENVIRON SCI TECHNOL*, 51(9): 4960-4969
- Wang JC, Ni L, Song Y, Rhodes G, Li J, Huang QW, **Shen QR** (2017) Dynamic Response of Ammonia-Oxidizers to Four Fertilization Regimes across a Wheat-Rice Rotation System, *FRONTIERS IN MICROBIOLOGY*, 8: 630
- Miao YZ, Li P, Li GQ, Liu DY, Druzhinina IS, Kubicek CP, **Shen QR**, Zhang RF (2017) Two degradation strategies for overcoming the recalcitrance of natural lignocellulosic xylan by polysaccharides-binding GH10 and GH11 xylanases of filamentous fungi, *ENVIRON MICROBIOL*, 19(3): 1054-1064
- Shen ZZ, Penton CR, Lv N, Xue C, Yuan XF, Ruan YZ, Li R, **Shen QR** (2018) Banana Fusarium Wilt Disease Incidence Is Influenced by Shifts of Soil Microbial Communities Under Different Monoculture Spans, *MICROB ECOL*, 75(3): 739-750

Prizes, awards, honors:

- The project “Production of solid sporn and Trichoderma-based organic-inorganic-microbial mixed fertilizers by using straw and animal waste proteins” won the first prize of the Science and Technology Progress Award of Dabeinong Technology Group Co., Lts in 2017 (Certificate No.2017-DBNSTA-ZWYY-SHARE-No1-01-D1, Granted to Qirong Shen, etc.);
- The project “Organic Fertilizer and Soil Microbiology Group” won the first prize of the Science and Technology Progress Award of the Ministry of Agriculture and Rural Affairs of the people’s Republic of China in 2015 (Certificate No.TD2015-R-024-01, Granted to Qirong Shen, etc.);
- The project “Treatment of dead livestock and poultry without pollution and harmless and high value-added resource utilization technology” won the patent excellence award of State Intellectual Property office of the People’s Republic of China in 2017 (Certificate No.ZL201410429510.0, Granted to Qirong Shen, etc.).