Li Mengxiao

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Address: Chengdu City, Sichuan Province, China

EDUCATION BACKGROUND

Sichuan Agricultural University *Sep. 2017 – Jun. 2020*

College of Resources Master of Agriculture

Soil Science

GPA: 3.5/4.0

Core courses: Progress in Agricultural Resources and Environment Science(88/100), Plant Nutrition Diagnosis and Fertilization(87/100), Agriculture Information Processing and Analysis(88/100), Biogeochemistry(83/100), Plant Nutrition and Environmental Ecology(84/100), Land Information topics(90/100)

Thesis: Study on mechanism of nitrogen regulation measures on key nitrogen conversion process in calcareous purple soil

Sichuan Agricultural University *Sep.* 2012 – *Jun.* 2016

College of Resources and Environment Bachelor of Engineering

Land Resource Management

Core courses: Soil Science(88/100), Soil Scienc(Practical Teaching)(88/100), Remote Sensing Foundation and Application(90/100), Geological basis(82/100), Land Use management(87/100), Land planing(90/100)

PUBLICATIONS

- **Li M**, He J, Chen X, et al. Interactive effects of microplastics and cadmium on soil properties, microbial communities, and bok choy growth. *Science of the Total Environment* (accepted).
- He X, **Li M**, Zhou M, et al. Gross nitrogen transformations and ammonia oxidizers affected by nitrification inhibitors and/or organic amendments in a calcareous soil: A ^{15}N tracing study[J]. *Applied Soil Ecology*, 2023, 188: 104926.
- Lan T, **Li M**, He X, et al. Effects of exogenous carbon and nitrification inhibitors on denitrification rate, product stoichiometry and *nirS*/*nirK*-type denitrifiers in a calcareous soil: evidence from ^{15} N anaerobic microcosm assays[J]. *Journal of Soils and Sediments*, 2023, 23(3): 1217-1232.
- Lan T, **Li M**, He X, et al. Effects of synthetic nitrification inhibitor (3, 4-dimethylpyrazole phosphate; DMPP) and biological nitrification inhibitor (methyl 3-(4-hydroxyphenyl) propionate; MHPP) on the gross N nitrification rate and ammonia oxidizers in two contrasting soils[J]. *Biology and Fertility of Soils*, 2022, 58(3): 333-344.
- Lan T, **Li M**, Han Y, et al. How annual CH_4, N_2O, and NO emissions from rice-wheat system are affected by nitrogen fertilizer rate and type?[J]. *Applied Soil Ecology*, 2020, 150: 103469.

RESEARCH EXPERIENCE

Lan Ting's Research Team in Sichuan Agricultural University *Dec. 2023 – Jul. 2024*

Research Assistant

- Collated and analyzed data; utilized Python to visualize results and conduct correlation analyses to identify key relationships within datasets

- Leveraged proficiency in R to perform comprehensive data analyses, including ANOVA for data assessment, PCoA for investigating bacterial and fungal diversity, and Mantel tests to reveal correlations between microbial diversity and physicochemical factors
- Authored a scientific paper titled "*Interactive Effects of Microplastics and Cadmium on Soil Properties, Microbial Communities, and Bok Choy Growth"* , which which has been accepted by *Science of the total envoriment*

Study on the characteristics of nitrogen transformation in purple soil *Jul. 2018 – Jan. 2020*

In Transfer Process and Loss Control Mechanism of Fertilizer Nitrogen project

(National key R & D Plan project 2017YFD0200100)

Key Memeber

- Assisted in designing the experimental protocol for incubation experiments to investigate the effects of nitrogen regulation on nitrification, denitrification processes, and N_2O emissions in alkaline soil, while also exploring changes in bacterial and fungal diversity
- Conducted aerobic and anaerobic cultivation experiments using ^{15}N isotope tracing to analyze nitrogen transformation in alkaline soil
- Analyzed data using one-way ANOVA in SPSS and visualized results with Origin software

Exchange Programme at the Nanjing Normal University on the Isotope Tracer method *Dec. 2018*

Research Assistant

- Mastered the microdiffusion method and completed the collection of $^{15}NO_3^-$ and $^{15}NH_4^+$
- Coordinated equipment setup and project planning for the implementation of the microdiffusion method in our laboratory experiment

Study on the Evolution of Nitrogen Transformation Processes *Nov. 2017 – Jun. 2018*

during the Development of Purple Soil

(National Natural Science Foundation of China, Grant No. 41501243)

Research Assistant

- Assisted in the preparation and customization of experimental equipment in the early stages
- Participated in cultivation experiments using ^{15}N isotope tracing to compare the effects of synthetic and biological nitrification inhibitors on nitrification, denitrification, and N_2O emissions in acidic and alkaline soils

WORKING EXPERIENCE

Wekemo Tech Group Co., Ltd. Shenzhen, China *Jul. 2020 – Jul. 2023*

Pre-sales technical & sales

- Introduced researchers to relevant knowledge in microbiomics and metabolomics
- Offered advice and guidance on researchers' study proposals while aligning with product services
- Provided guidance and recommendations for researchers' sample collection efforts

TECHNICAL SKILLS

Language: English (fluent), Mandarin (native)

Programming Language: Python, R(basic)

Software: Origin, Microsoft office, SPSS, Adobe Illustrator

Hobbies: Reading, Swimming, Pilates, Painting