BASIC Add.: Columbia, Missouri, USA

INFORMATION Email: grxmq@missouri.edu

ResearchGate: https://www.researchgate.net/profile/Guojie-Ruan

RESEARCH Precision nitrogen management INTERSETS Agroecosystem remote sensing

Cropland soil health Plant phenotyping

EDUCATION University of Missouri, Columbia, USA 2024-2028

Precision and Automated Agriculture Lab

PhD student in Plant Science

Nanjing Agricultural University, Nanjing, China 2020-2023

National Engineering and Technology Center for Information Agriculture M.Sc., Crop Cultivation and Farming, "Double First-class" disciplines Thesis: Winter wheat smart nitrogen recommendation algorithms based on multi-source data fusion

South China Agricultural University, Guangzhou, China 2016-2020

B.Sc., Agronomy (Ding Ying Innovation Class), "Double First-class" disciplines

Overall GPA: 4.04/5.0

RESEARCH EXPERIENCE

Completing the Graduation Project of Undergraduate

- Project name: Comparative study on Seed Storability of Chinese Soybean Landrace Population.
- Advisor: Professor Cunyi Yang
- Conducted controlled deterioration treat using 364 soybean varieties.
- Collected germination index of seed vigor and provided data for GWAS.

Participating in Jiangsu Provincial Key R&D Program

- Project name: Precision Design and Engineering Implementation of Intelligent Production Management Prescriptions for Rice and Wheat.
- Advisor: Professor Qiang Cao
- Developed data-driven based winter wheat topdressing nitrogen management framework with proximal sensing, meteorological, and soil information.
- Writing project applications and research papers.
- Led a 'College Students' Innovative Entrepreneurial Training Plan Program' undergraduate team and obtained national funding.

JOURNAL PUBLICATIONS

Publication Metrics: 73 citations in total, accessed on 28 November 2024.

- 1. **Ruan, G.**, Li, X., Yuan, F., Cammarano, D., Ata-UI-Karim, S. T., Liu, X., Tian, Y., Zhu, Y., Cao, W., Cao, Q.*, 2022. Improving wheat yield prediction integrating proximal sensing and weather data with machine learning. *Computers and Electronics in Agriculture*, 195, 106852. Doi: 10.1016/j.compag.2022.106852 (IF₅=8.3, Q1)
- 2. **Ruan, G.**, Schmidhalter, U., Yuan, F., Cammarano, D., Liu, X., Tian, Y., Zhu, Y., Cao, W., Cao, Q.*, 2023. Exploring the transferability of wheat nitrogen status estimation with multisource data and Evolutionary Algorithm-Deep Learning (EA-DL) framework. *European Journal of Agronomy*, 143, 126727.

Doi: 10.1016/j.eja.2022.126727 (IF₅=5.9, Q1)

3. **Ruan, G.**, Cammarano, D., Ata-UI-Karim, S. T., Liu, X., Tian, Y., Zhu, Y., Cao, W., Cao, Q.*, 2024. Investigating data-driven approaches to optimize nitrogen recommendations for winter wheat. Computers and Electronics in Agriculture, 220, 108857. Doi: 10.1016/j.compag.2024.108857 (IF₅=8.3, Q1)

2022
2023
2020
2021
2018
2023
2024

SKILLS

AWARDS

Language: Chinese (Native), English, Cantonese (Native)

Computer Programming: Python, R Software: ENVI, ArcGIS, SPSS Statistics

Interests: Photography, Swimming