

BASIC INFORMATION	Add.: Columbia, Missouri, USA	
	Email: grxmqq@missouri.edu	
	ResearchGate: https://www.researchgate.net/profile/Guojie-Ruan	
RESEARCH INTERSETS	Precision nitrogen management	
	Agroecosystem remote sensing	
	Cropland soil health	
	Plant phenotyping	
EDUCATION	University of Missouri, Columbia, USA	2024-Now
	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	Graduate Research Assistant, Division of Plant Science and Technology	
	• Advisor: Jianfeng Zhou	
	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.	
	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.	

**JOURNAL
PUBLICATIONS**

Publication Metrics: 89 citations in total, accessed on 29 April 2025.

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=8.4, 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=5.0, 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=8.4, Q1)

4. Song H.#, Zhuang T.#, Li X., **Ruan G.**, Schepers J., Wang D., Liu, X., Tian, Y., Zhu, Y., Cao, W., Cao, Q.*, 2025. Enhancing winter wheat growth indicator prediction with multi-task learning and multi-source data. *European Journal of Agronomy*, 168, 127629. Doi: 10.1016/j.eja.2023.127629 (IF₅=5.0, Q1)

AWARDS

National Scholarships, Ministry of Education, China	2022
Outstanding Graduate Student of NJAU	2023
Outstanding Graduate Student of SCAU	2020
First-Class Academic Scholarship of NJAU	2021
Third-Class Academic Scholarship of SCAU	2018
Excellent Master Dissertation Award of NJAU	2023
Excellent Master Dissertation Award of Jiangsu Province	2024

SKILLS

Language: Chinese (Native), English, Cantonese (Native)
Computer Programming: Python, R
Software: ENVI, ArcGIS, SPSS Statistics
Interests: Photography, Swimming