

DR. RITIKA GAUTAM

Soil Scientist | Sustainable Agriculture Researcher | Nano-Fertilizer Technology Specialist

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PROFESSIONAL SUMMARY

Results-driven agricultural research scientist with a Ph.D. in Soil Science (OGPA 8.85) and 6+ years of research experience in sustainable farming systems, nano-fertilizer technologies, and soil-plant nutrient dynamics. Proven track record in designing field experiments, publishing 7 peer-reviewed research articles and book chapters, and presenting at national and international conferences. Seeking a research, teaching, or advisory role in a forward-thinking institution to drive impactful agricultural innovation.

CORE COMPETENCIES

Soil and Plant Nutrient Analysis | Nano-Fertilizer Technology | Natural Farming Systems | Field Experiment Design | Intercropping Systems | Carbon Sequestration | Scientific Writing and Publication | Data Analysis | Extension and Outreach | Research Communication | MS Office | Team Leadership

RESEARCH EXPERIENCE

Ph.D. Research Scholar 2022 - 2026

Dr. YSP University of Horticulture and Forestry, Nauni, Solan, HP, India

Thesis: Yield potential of finger millet with nano and conventional fertilizers in leguminous intercrops in mid hills of Himachal Pradesh

- Designed and conducted multi-season field trials comparing nano and conventional fertilizer regimes across leguminous intercrop systems in mid-hill conditions of Himachal Pradesh.
- Generated publishable datasets contributing to 5 co-authored journal articles and book chapters in indexed publications.
- Collaborated with cross-disciplinary teams of agronomists, plant physiologists, and extension specialists.
- Conducted soil and plant sample analysis and mentored junior research scholars in laboratory and field protocols.

M.Sc. Research Scholar 2020 - 2022

Dr. YSP University of Horticulture and Forestry, Nauni, Solan, HP, India

Thesis: Studies on the effect of natural farming practices on productivity, nutrient uptake and economics of pea (Pisum sativum L.)

- Evaluated the agronomic and economic impact of liquid organic manures (Jeevamrit, Ghanjeevamrit) on pea productivity and nutrient uptake under natural farming conditions.
- Awarded Best Thesis at the International Conference on Advances in Agriculture and Allied Sciences (March 2025).
- Secured SPIU Research Fellowship under Prakritik Kheti Khushal Kisan Yojna (PK3Y), Dept. of Agriculture, HP, for merit and societal relevance of research.

EDUCATION

Ph.D. - Soil Science 2022 - 2026

Dr. YSP University of Horticulture and Forestry, Nauni, Solan, HP

OGPA: 8.85 / 10.00

M.Sc. (Agriculture) - Soil Science 2020 - 2022

Dr. YSP University of Horticulture and Forestry, Nauni, Solan, HP

OGPA: 8.41 / 10.00 | Merit Certificate Recipient

B.Sc. (Hons.) Forestry 2017 - 2020

Dr. YSP University of Horticulture and Forestry, Nauni, Solan, HP

OGPA: 7.01 / 10.00

PUBLICATIONS

7 peer-reviewed research articles and book chapters

1. Gautam R, Singh U, Chauhan S, Kumar A, Priyanshu and Riya. (2026). Sustainable Productivity and Profitability Enhancement through Liquid Organic Manures in a Pea, Spinach and Coriander Cropping Sequence. *Journal of Scientific Research and Reports*, 32(3), 406-413.
2. Gautam R, Priyxit, Mahajan S and Sharma A. (2023). Carbon Sequestration in Agricultural Soils of India. In: *Recent Trends in Agriculture*, Volume 6, pp. 107-127.
3. Niharika, Bharat NK, Sultanpuri A, Das S, Thakur A, Verma R, Thakur P, Kant C, Gautam R and Sharma A. (2026). When seeds breathe their last: Unmasking the saboteurs of aging and preservation. *Plant Archives*, 26(1), 663-673.
4. Chauhan S, Singh U, Sharma U, Gautam R, Mandela Y and Pathania N. (2025). Quality Improvement in Tomato through Integrated Application of Nano and Conventional Fertilizers in Mid-Hill Conditions of HP, India. *Asian Journal of Soil Science and Plant Nutrition*, 11(2), 438-446.
5. Chauhan S, Singh U, Sharma U, Kumar N and Gautam R. (2025). Effect of Nano-fertilizers on Growth and Yield Performance of Cauliflower (*Brassica oleracea* var. botrytis L.). *International Journal of Plant and Soil Science*, 37(7), 86-95.
6. Parmar D and Gautam R. (2026). Climate Smart Agriculture and Adaptation Strategies. In: *Frontiers in Agricultural Research - Emerging Innovations, Technologies, and Sustainable Practices*, pp. 191-201.
7. Sharma A, Sharma JC, Gautam R, Gautam KL and Sharma D. (2022). Effect of organic and inorganic fertilization on NPK contents, their uptake and economics on cauliflower. *The Pharma Innovation Journal*, 11, 2209-2213.

CONFERENCES, SEMINARS AND TRAININGS

Oral and Poster Presentations

- Oral - Economics of pea improved through natural farm inputs in spinach and coriander-based crop sequencing. International Conference on Sustainable Food Systems through Natural Farming, Dr. YSPUHF, Solan (Sep 2024).
- Poster - Enhancing soil microbiological health in pea cultivation through natural farming in a spinach-coriander cropping system. International Conference on Advances in Agriculture and Allied Sciences (Mar 2025).
- Poster - Enhancing Growth, Quality and Yield of Pea through Natural Farming Practices in Himachal Pradesh. International Conference on Sustainable Food Systems through Natural Farming, Dr. YSPUHF (Sep 2024).

Conference and Seminar Participation

- National Seminar on Alternative Fertilizers for Environmental Smart Agriculture, IARI, New Delhi (Sep 2024).
- National Seminar on Precision Farming Technologies for Improving Production and Productivity of Horticultural and Forestry Crops, Dr. YSPUHF, Nauni, Solan (Oct 2024).
- International Conference on Advances in Agriculture and Allied Sciences: Challenges and Solutions (Mar 2025).

Trainings and Workshops

- 10-Day Training on Food and Nutritional Security through Nutri Cereals, Dept. of Agriculture and 360 Research Foundation (Jun 2024).
- 3-Day International Workshop on Millets Mahotsav, Just Agriculture Education Group and SKUAST Kashmir (Mar 2023).
- 7-Day Online Training on Protected Agriculture and Natural Farming (NAHEP-CAAST), ICAR-IARI, New Delhi (Mar 2023).

AWARDS AND FELLOWSHIPS

- Best Thesis Award for M.Sc. research on natural farming practices in pea cultivation. International Conference on Advances in Agriculture and Allied Sciences (Mar 2025).
- SPIU Research Fellowship under Prakritik Kheti Khushal Kisan Yojna (PK3Y), Dept. of Agriculture, HP - awarded during M.Sc. for conducting research under natural farming.
- University Ph.D. Scholarship (Stipend) awarded for academic merit during doctoral studies.
- Merit Certificate in M.Sc. (Soil Science), Dr. YSPUHF, 2022.

LANGUAGES

Hindi (Native) | English (Proficient - Read, Write, Speak)