

**Dr. Rani B.**  
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**Soil Science and Agricultural Chemistry,**  
**College of Agriculture, Vellayani - 695522**

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## Summary

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- My broad area of specialization is soil fertility, nutrient dynamics and organic agriculture. I have completed my PhD programme from Kerala Agricultural University, Thrissur, Kerala, wherein my research problem was related to the "Dynamics of Potassium and Magnesium in laterite soils". My MSc research topic was "Effect of sulphur dioxide pollution in coconut". I have qualified ASRB-NET and was selected to the Agricultural Research Service. Carbon sequestration studies with special reference to Biochar, Potential impact of climate change and floods on Kerala soils, their mitigation and adaptive strategies, Long term effect of fertilization and integrated nutrient management in rice- rice cropping system, Ssubsoil acidity amelioration etc. are some of my major fields of research.
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## Research Highlights

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Worked on :

- Potassium- magnesium dynamics in laterite soils
  - Effect of sulphur dioxide pollution on coconut
  - Characterisation and management of secondary and micronutrients for agroecosystems of Kerala
  - Site specific nutrient management in rice
  - Long term effect of phosphorus fertilization in rice- rice cropping system
  - Long term effect of integrated nutrient management in rice- rice cropping system
  - Effect of boron fertilisation in rice
  - Organic manurial recommendation for amaranthus
  - Effect of substitution of potassium with sodium chloride in wetland rice
  - Effect of biochar application on nutrient dynamics in laterite and sandy soils and productivity of ginger
  - Production of biochar blended nitrogen and potassium fertilizers, their nutrient release pattern in sandy and laterite soils and effect on productivity of ginger
  - Secondary and micronutrient management of upland rice
  - Effect of flooding on AEU-12 of Kerala soils
  - Amelioration of subsoil acidity with biochar and co composted biochar
  - Potential impact of climate change and floods on Kerala soils- AEU wise mitigation and adaptive strategies
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## Experience

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Joined Kerala Agricultural University as Assistant Professor (Soil Science and Agricultural Chemistry) in January 1996

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## Education

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- Graduated in Agricultural Science from Kerala Agricultural University (1989)
  - Post Graduation in Soil Science from Kerala Agricultural University (1992)
  - Ph.D. in Soil Science from Kerala Agricultural University (2000)
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## Area of Specialization

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Soil fertility and nutrient management, Biochar, Organic agriculture

## Awards & Recognitions

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Cleared ASRB- NET

Selected for Agricultural Research Service

Best researcher award for the Network Project on characterisation and management of secondary and micronutrients for agroecosystems of Kerala AEU-1

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## Publications

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Journal Publications: 32

Books - 1

Book chapters- 10

Manuals – 2

Hand books – 2

Compendiums – 2

Popular Articles:3

## Student Guidance (Major Advisor/ Advisory Committee member)

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### M.Sc.

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|----------------------------|---------------|--------------|
| Major advisor :            | Completed - 5 | Ongoing -1   |
| Advisory committee member: | Completed- 36 | Ongoing - 14 |

### Ph.D.

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|----------------------------|---------------|--------------|
| Major advisor -            | Completed – 2 | Ongoing - 2  |
| Advisory committee member- | Completed- 9  | Ongoing - 19 |

## Other Institutional Responsibilities

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- Member of Board of Studies, KAU
- Chairman of Internal Complaints Committee, College of Agriculture, Vellayani
- Acting as Project Coordinator of the PC group Soil Health and Organic Farming of KAU
- Acting as Project Coordinator of the State Plan Project - Network project on "Potential impact of climate change and flood on Kerala soils : AEU wise mitigation and adaptive strategies"
- PI of RKVY project Establishment of a referral laboratory for standardization of quality control of organic manures with a budget allocation of Rs. 2.92 crores

- Expert member of State Level Executive Committee (SLEC) for the Centrally Sponsored Schemes Paramparagat Krishi Vikas Yojana (PKVY) and Bharatiya Prakritik Krishi Padhati (BPKP).
- Member of state level technical committee for Central Soil Plant Health Centre, Parottukonam, Thiruvananthapuram.
- Reviewer of the Journals of Agricultural Research Communication Centre (arccjournals).
- Referee for the Mysore Journal of Agricultural Sciences