

## Dr. M. Vassanda Coumar



Designation: Scientist  
Division of Environmental Soil Science

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**Research specialization:** Environmental pollutant monitoring and remediation of contaminated soil; Soil quality assessment; Fertilizer use efficiency; Carbon sequestration; Remote Sensing and Arc GIS

**Professional Experience:** Dr. M. Vassanda Coumar presently working as scientist in the Division of Environmental Soil Science, ICAR-Indian Institute of Soil Science(ICAR-IISS), Bhopal, India. He did his MSc and PhD with specialization in Soil Science and Agricultural Chemistry from ICAR-Indian Agricultural Research Institute, New Delhi. Prior to joining the ICAR-IISS, he worked as a Lecturer (Birla Institute of Technology, Mesra, Ranchi), Research Officer (Rashtriya Chemicals and Fertilizer Ltd, Mumbai) and Postdoctoral Fellow (Global Centre for Environmental Remediation, The University of Newcastle, Callaghan, Australia). Dr. Vassanda has supervised more than 10 postgraduate students and published more than 35 research papers in peer reviewed National and International Journal. He has also contributed research article as author/co-author for several book chapter, books and bulletins.

### Awards and Honours:

1. **Postdoc (Endeavour Research Fellow) - 2016**, Global Centre for Environmental Remediation (GGER), The University of Newcastle, Callaghan, Australia.
2. **Best Paper Award of Indian Society of Soil Science 2011.**
3. **Third Prize for Best Poster Presentation 2012.**
4. Member, **Research Advisory Committee (RAC), IIFM, Bhopal- 2016 -2019**
5. **Secretary, Bhopal Chapter of Indian Society of Soil Science 2016 - 2020.**
6. **Treasurer, Bhopal Chapter of Indian Society of Soil Science 2015 2016**
7. Councilor -The Clay Minerals Society of India (CMSI)- 19-20

### Top Ten publications:

1. Vassanda Coumar, M., Kundu, S., Saha, J.K., Rajendiran, S., Dotaniya, M.L., Karthikeyan, K. and Patra, A. K. Soil carbon dynamics, carbon budget and its relationship with crop yield under different cropping systems in a Vertisols of Central India, Madhya Pradesh, Indian Journal of Agricultural Sciences, 90(1): 123-127.
2. Vassanda Coumar, M., Kundu, S., Rajendiran, S., Saha, J.K., Biswas, A.K., Tapan Adhikari, Patra, A.K. (2017). Effect of Soil Amendments on Microbial Resilience Capacity of Acid Soil Under Copper Stress. Bulletin of Environmental Contamination and Toxicology, DOI 10.1007/s00128-017-2173.

3. Vassanda Coumar, M., Parihar, R.S., Dwivedi, A.K., Saha, J.K., Rajendiran, S., Dotaniya, M.L. and Kundu, S. (2016). Impact of Pigeon Pea biochar on cadmium mobility in soil and transfer rate to leafy vegetable spinach. *Environmental Monitoring and Assessment*, 188:31. (DOI: 10.1007/s10661-015-5028-y).
4. Saha, J. K., Panwar, N.R. and Vassanda Coumar, M. (2013). Effect of methods of preparation on distribution of heavy metals in different size fractions of municipal solid waste composts. *Environmental Monitoring and Assessment* 185(11): 8815-21 (DOI 10.1007/s10661-013-3214-3)
5. Vassanda Coumar, M., Parihar, R.S., Dwivedi, A.K., Saha, J.K., Brij Lal Lakaria, Rajendiran, S., Dotaniya, M.L., Biswas, A.K. and Kundu, S. (2016). Pigeon Pea biochar as a soil amendments to repress copper mobility in soil and its uptake by spinach. *BioResources*, 11(1): 1585-1595.
6. S. K. Joshi, R. K. Bajpai, Prahalad Kumar, Alok Tiwari, Vinay Bachkaiya, M. C. Manna, Asha Sahu, S. Bhattacharjya, Mohammad Mahmudur Rahman, R. H. Wanjari, Muneshwar Singh, Vassanda Coumar, Ashok K. Patra, and S. K. Chaudhari (2017). Soil Organic Carbon Dynamics in a Chhattisgarh Vertisol after Use of a Rice–Wheat System for 16 Years. *Agronomy Journal*, doi:10.2134/agronj2017.04.0230
7. Dotaniya, M. L. Saha J. K. Rajendiran S. Vassanda Coumar, M. Meena, V. D. Das, H., Ajay Kumar and Patra, A. K. (2019) Reducing chromium uptake through application of calcium and sodium in spinach. *Environ Monit Assess* (2019) 191: 754.
8. Dotaniya, M. L., Rajendiran, S., Meena, V. D., Coumar, M. V., Saha, J. K., Kundu, S., & Patra, A. K. (2018). Impact of Long-Term Application of Sewage on Soil and Crop Quality in Vertisols of Central India. *Bulletin of Environmental Contamination and Toxicology*. doi:10.1007/s00128-018-2458-6
9. Somasundaram, J. Salikram, M. , Sinha, N. K., Mohanty, M., Chaudhary, R. S., Dalal, R. C., Mitra, N. G., Blaise, D., Coumar, M. V., Hati, K. M., Thakur, J. K., Neenu, S., Biswas, A. K., Patra, A. K. and Chaudhari, S. K.(2019). Conservation agriculture effects on soil properties and crop productivity in a semiarid region of India. *Soil Research*, 57, 187–199.
10. Rajendiran, S., Vassanda Coumar, M., Kundu, S., Ajay, Dotaniya, M.L. and Subba Rao, A. (2012). Role of Phytolith occluded carbon of crop plant for enhancing soil carbon sequestration in agro-ecosystems. *Current Science*, 103 (8) :911-920.