


ICAR-Indian Institute of Sugarcane Research, Lucknow 226 002, Uttar Pradesh

Personal Information

Name	Dr. Ram Ratan Verma	
Designation	Principal Scientist (Soil Science)	
Division/section	Division of Crop Production	
Research area	1. GIS based soil properties mapping in sugarcane growing soils 2. Nutrient management in sugarcane 3. Climate change study 4. Irrigation water management in sugarcane	
Personal details		
Joining Date: In ICAR: 08 January, 2007 In IISR: 01 June, 2012 Official address: ICAR-Indian Institute of Sugarcane Research, Lucknow PO – Dilkusha, Lucknow – 226 006 (U.P.), India Tel. No.: 91-522-2480787 (O) and 9956423695 Fax No.: 91-522-2480787 (O) E-mail: Ram.Verma3@icar.gov.in and ratan.verma@rediffmail.com		
External funded projects		
1. Establishment of soil testing laboratory for soil health management and need based fertilizer recommendations to the growing crops aiming to enhanced productivity and profitability at farmers' fields in Lucknow district (Co-PI - RKVY funded Project) 2. Agri-consortia research platform on water (Co-PI - ICAR Funded Project) 3. Soil test and resource based integrated plant nutrient supply system for sustainable sugarcane production (Co-PI, AICRP on STCR Project)		
Publications		
Research papers (last five years): 1. Verma RR , Srivastava TK, Singh P, Manjunath BL, Kumar A. 2021. Spatial mapping of soil properties in Konkan region of India experiencing anthropogenic onslaught. PLoS ONE 16(2): e0247177. https://doi.org/10.1371/journal.pone.0247177 . NAAS Rating - 9.24 2. Verma RR , Srivastava TK and Singh P. 2019. Climate Change Impacts on Rainfall and Temperature in Sugarcane Growing Upper Gangetic Plains of India. Theoretical and Applied Climatology 135(1-2): 279-292. DOI: 10.1007/s00704-018-2378-8. NAAS Rating - 9.18 3. Verma RR , Manjunath BL, Singh NP, Kumar A, Asolkar T, Chavan V, Srivastava TK and Singh P. 2018. Soil mapping and delineation of management zones in the Western Ghats of coastal India. Land Degradation and Development 29: 4313-4322. DOI.org/10.1002/ldr.3183. NAAS Rating - 10.98 4. Singh I, Verma RR and Srivastava TK. 2018. Growth, Yield, Irrigation Water Use Efficiency, Juice Quality and Economics of Sugarcane in Pusa Hydrogel Application under Different Irrigation Scheduling. Sugar Tech. 20(1): 29-35. DOI:10.1007/s12355-		

017-0515-9. **NAAS Rating - 7.59**

5. Srivastava TK, Hasan SS and **Verma RR**. 2022. Mobile ‘app’ for precise irrigation scheduling in sugarcane cultivation under Indian subtropics. Sugar Tech 24: 822–831. <https://doi.org/10.1007/s12355-021-01100-4>. **NAAS Rating - 7.59**
6. Srivastava TK, and Singh P and **Verma RR**. 2022. Weather variability trends in Gangetic plains of Uttar Pradesh, India: influence on cropping systems and adaptation strategies. Environment, Development and Sustainability 24: 3588–3618. <https://doi.org/10.1007/s10668-021-01578-8>. **NAAS Rating - 9.22**
7. Mahajan, G, Manjunath BL, Singh NP, Ramesh R, **Verma RR**, Latore AM, D’Souza R, Natasha B and Kulkarni R. 2017. Effect of organic and inorganic sources of nutrients on soil microbial activity and soil organic carbon build up under rice in west coast of India. Archives of Agronomy and Soil Science 63 (3) 414-426. <https://doi.org/10.1080/03650340.2016.1213813>. **NAAS Rating - 9.09**
8. Mahajan GR, Desai S, Manivannan S, Manjunath BL, **Verma RR**, Das B, Murgaokar D, Desai AS, Morajkar S and Kulkarni RM. 2021. Soil and water conservation measures improve soil microbial activity and carbon sequestration: A study on high density cashew in West Coast region of India. Journal of the Indian Society of Soil Science, 69 (4): 378-388. DOI: 10.5958/0974-0228.2021.00059.1. **NAAS Rating - 5.31**
9. Mahajan GR, Das B, Manivannan S, Manjunath BL, **Verma RR**, Desai S, Kulkarni RM, Latore AM, Sale R, Murgaonkar D, Patel KP, Morajkar S, Desai A, Barnes N and Mulla H. 2021. Soil and water conservation measures improve soil carbon sequestration and soil quality under cashews. International Journal of Sediment Research 36(2):190-206. DOI:10.1016/j.ijsrc.2020.07.009. **NAAS Rating - 8.90**
10. Srivastava TK, Singh KP, Singh P, Suman A, Singh SR, **Verma RR**, Singh VK and Singh RK. 2018. Effects of bio-manures on soil quality, cane productivity and soil carbon sequestration under long-term sugarcane (*Saccharum officinarum*) plant - ratoon system in Indian sub-tropics. Indian Journal of Agricultural Sciences 88 (11): 1696–1703. **NAAS Rating - 6.37**

Proceeding edited:

1. Jain R, Swapna M, Joshi D, Nitya K, Visha V, Singh RK, Singh SN, **Verma RR**, Praksh and Singh A. 2013. Proceeding on national conference on women in sugarcane agriculture and industry 239p
2. **Verma RR**, Manjunath BL and Singh NP. 2012. Lecture Notes of National Seminar on Coir Pith Composting and Use of Geo Textiles, ICAR-Research Complex for Goa, Old Goa, Goa 403 402, Goa.50p

Training manual:

1. **Verma RR**, Singh SR and Srivastava TK. 2014. Training manual on soil analysis training for sugar mill personnel. ICAR-Indian Institute of Sugarcane Research, Lucknow.

Technical bulletin:

1. **Verma RR**, Manjunath BL and Singh NP. 2013. Low cost rain water harvesting technology (*Jalkund*), Technical Bulletin No.32, ICAR-Research Complex for Goa, Old Goa-403 402.
2. Mahajan GR, Das B, Manjunath BL, Reddy VK, Manivannan S, **Verma RR** and Singh NP. 2016. Weather trends of last fourteen years (2002-2015) at ICAR – Central Coastal Agricultural Research Institute, Old Goa. Technical Bulletin No 61, ICAR-Central Coastal Agricultural Research Institute, Old Goa-403 402, Goa, India.

Extension folder:

1. **Verma RR**, Hasan SS, Srivastava TK and Singh P. 2022. *Ikshu Kedar: Ganna Sichai Ke Liye Mobile App*. Indian Institute of Sugarcane Research, Lucknow.
2. Sah AK, Singh MR, Chandra A, Singh SN, Singh I and **Verma RR**. 2015. *Bihar Rajya*

<i>ke Liye Ganna Utpadan Takneek</i> , Indian Institute of Sugarcane Research, Lucknow.
Books published
<ol style="list-style-type: none"> 1. Singh P, Anam, Srivastava TK and Verma RR. 2022. Nanoparticles applications in agriculture. Scientific Publishers, Jodhpur. ISBN:97893911418229, 180p 2. Jain R, Swapna M, Joshi D, Nitya K, Visha V, Singh RK, Singh SN, Verma RR, Praksh and Singh A. 2013. Ikshu Women Marching Ahead 125p
Awards
<ol style="list-style-type: none"> 1. Best Poster Award for Poster “Climate change and climate resilient technologies for sugarcane in upper Gangetic plain of India” in “International Symposium Sucrosym 2017” held during September 18-21, 2017 at ICAR-SBI, Coimbatore, Tamil Nadu India. 2. Best Poster Presentation Award (IInd) in “4th International Agronomy Congress” held during 22-26 November, 2016 at New Delhi, India. 3. Best Poster Presentation (IInd) in “National Seminar on Women in Sugarcane Agriculture and Industry” held during 29-31st August, 2013 at ICAR-IISR, Lucknow.
Mobile app developed
<p>Developed a mobile app “Ikshu Kedar” for precise irrigation scheduling in sugarcane link: https://play.google.com/store/apps/details?id=in.gov.icar.iisr.irrigationmanagementinsugarcane&hl=en_IN&gl=US</p>