

## SCIENTIST PROFILE



1. Name & Designation : Dr. Rahul Tripathi  
Scientist
  2. Date of Birth : 15<sup>th</sup> July, 1983
  3. Date of joining ICAR : 10<sup>th</sup> February, 2009
  4. Date of joining the present post : 10<sup>th</sup> February, 2009
  5. Qualification ( highest degree) : Ph.D
  6. Post Doctoral Research Experience/  
Training : 4 year post doctoral research experience.
    - Formulated and presented the project entitled “Mapping of saline rice growing areas of east coast of India using RS and GIS” in IRC 2009 and got approved as PI.
    - Formulated and presented the project entitled “Management of Problem Soils for Enhancing productivity of Rice” in IRC 2012 and got approved as PI.
    - Handled a project as PI on conservation agriculture entitled "Zero, reduced and optimum tillage for improved soil physical conditions and productivity of rice based cropping systems".
- Training Attended*
- GIS: Attended four week training programme in NRSC Hyderabad in year 2010.
  - Remote Sensing: Attended four courses and four month long training programme in a campus outreach programme in IIRS, Dehradun.
  - Forecast Modelling in Crops: Attended 21 days training in IASRI, New Delhi in 2012.
7. Area of Specialization/research interest:
    - Soil Science/Soil Physics/Soil & water conservation, Remote Sensing, GIS, Crop Modelling
  8. Significant Contribution including products and patents (Five bullets):
    - Developed a five panel customized leaf colour chart (CLCC) for N management in rice for different ecologies
    - Validation of MODIS LAI product (MOD15 V5) over trans Gangetic Plains of India
    - Technology for Predicting Crop Biophysical Parameters using Inversion of Radiative Transfer Model for precision farming
    - Vegetation Health Index developed for crop growth monitoring and precision farming
    - Optimum tillage for improved soil physical condition and productivity of rice based cropping system
    - Soil salinity and fertility map developed for coastal saline areas of Odisha
  9. Awards/Honours:
    - Awarded the "ISRS Speck Award" by Indian Society of Remote Sensing in the year 2008 for best oral presentation. A certificate along with Rs. 2000 in cash was awarded.
    - Awarded with CSIR-JRF NET with Scholarship by Council of Scientific and Industrial Research in the year 2008. I was among the top candidates who were shortlisted to appear in interviews for SPM award
    - Acted as reviewer for highly rated International journals such as International Journals like Australian Journal of Crop Science, International Journal of Remote sensing, IEEE Transactions on Geosciences and Remote sensing, Computer and

Electronics in Agriculture etc.

- Awarded best poster award (co-author) for the research paper entitled " Effect of IW/CPE Ratio Based Irrigation Scheduling on Growth and Yield of Aerobic Rice" in ARRW national symposium on "Sustainable Rice Production System under Changed Climate" held in November 27-29, 2010. Cuttack, Odisha, India
- Oral presentations in Seminar/Symposium conducted by Indian Society of Remote Sensing and Indian Society of Geomatics Sponsored by department of space, ISRO and DST in year 2012 and 2010.
- Oral presentation in 2012 in National Seminar/Symposium in OUAT, Chiplima, Sambalpur, Odisha.
- Best Oral Presentation: International conference on "Bio-Resource and Stress Management" held in Kolkata, India from February 06-07, 2013. Adaptation Strategies for Sustainable Livelihood in Terminal Flood Situation" (Co-author).
- Awarded best poster award in ARRW Golden Jubilee International Symposium, Held in CRRI, Cuttack from March 02-05, 2013. Effect of spatiotemporal Variability in Meteorological Drought at Block Level Rice Productivity in Eastern State of Odisha (Co-author).
- Qualified the ARS-NET conducted by Indian Council of Agricultural Resaechr in 2007 in the first attempt and got selected for Scientist.

10. Publications (10 best):

- i. **Tripathi Rahul**, Sahoo RN, Gupta VK, Sehgal VK and Sahoo PM (2013). Retrieval of Leaf Area Index using IRS-P6, LISS-III data and validation of MODIS LAI product (MOD15 V5) over Trans Gangetic Plains of India. **Indian Journal of Agricultural Sciences** 83 (4): 380-385.
- ii. **Tripathi Rahul**, Sahoo RN, Gupta VK, Sehgal VK and Sahoo PM (2013). Developing vegetation health index from biophysical variables derived using MODIS satellite data in the Transgangaic plain of India. **Emirates Journal of Food and Agriculture** 25(5): 376-384.
- iii. Bhattacharyya P, Nayak AK, Mohanty S, **Tripathi R**, Shahid Mohammad, Kumar Anjani, Raja R, Panda BB, Roy KS, Neogi S, Dash PK, Shukla AK and Rao KS (2013). Greenhouse gas emission in relation to labile soil C, N pools and functional microbial diversity as influenced by 39 years long-term fertilizer management in tropical rice. **Soil and Tillage Research** 129: 93-105.
- iv. Bhattacharyya P, Neogi S, Roy KS, Dash PK, **Tripathi R** and Rao KS (2013). Net ecosystem CO<sub>2</sub> exchange and carbon cycling in tropical lowland flooded rice ecosystem. **Nutrient Cycling in Agroecosystems** 95(1): 133-144.
- v. Shahid Mohammad, Nayak AK, Shukla AK., **Tripathi Rahul**, Kumar Anjani, Mohanty Sangita, Bhattacharya Pratap, R Raja and Panda BB (2013). Long-term effects of fertilizer and manure applications on soil quality and yields in a sub-humid tropical rice-rice system. **Soil Use and Management** (DOI: 10.1111/sum.12050).
- vi. Nayak AK, Lal B, Shahid Mohammad, Panda BB, **Tripathi R**, Raja R and Mohapatra T (2013). Fertilizer best management practices in rice for higher productivity. **Indian Journal of Fertilizers** 9(4): 54-66.
- vii. Mishra VK, Nayak AK, Singh CS, Jha SK, **Tripathi Rahul**, Shahid Mohammad, Raja R and Sharma DK (2013). Changes in soil aggregate-associated organic carbon and nitrogen after ten years under different land use and soil management systems in Indo-Gangetic sodic soil. **Communications in Soil Science and Plant Analysis** (Accepted).
- viii. Kumar Anjani, Nayak AK., Shukla AK, Panda BB, Raja R, Shahid Mohammad, **Tripathi Rahul**, Mohanty Sangita and Rath PC (2012). Microbial biomass and

carbon mineralization in agricultural soils as affected by pesticide addition. **Bulletin of Environmental Contamination and Toxicology** 88: 538–542.

- ix. **Tripathi Rahul**, Sahoo RN, Sehgal VK, Tomar RK, Chakraborty D and Nagarajan S (2012). Inversion of PROSAIL Model for Retrieval of Plant Biophysical Parameters. **Journal of Indian Society of Remote Sensing** 40(1): 19-28.
- x. **Tripathi Rahul**, Sahoo RN, Sehgal VK, Gupta VK and Bhattacharyya KK (2009). Remote Sensing Derived Composite Vegetation Health Index Through Inversion of PROSAIL for Monitoring of Wheat Growth in Trans Gangetic Plains Of India. In ISPRS Archives XXXVIII-8/W3 Workshop *Proceedings: Impact of Climate Change on Agriculture*.p319-325.