

Scientist Profile

Dr. J. K. Thakur



Designation: Scientist
Division of Soil Biology
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Research specialization:

After graduating in Microbiology from Indian Agricultural Research Institute New Delhi, in my scientific carrier, I worked on assessment of soil microbial activity and diversity under various resource management practices. Exploring and utilization of vast microbial diversity for crop production, plant protection, improving nutrient use efficiency and plant growth promotion (PGP) has always been at the centre of my work. My research also includes exploring unusual habitats such as endophytic niches for deciphering microbial diversity and understanding soil-plant-microbial interaction in rhizosphere for colonization and ascertaining their role in such ecological niches.

Professional Experience:

- Scientist (P) from 20.04.2010 at National Academy of Agricultural Research Management (NAARM)
- Working as Scientist (Agril. Microbiology) at ICAR-Indian Institute of Soil Science since 27th Aug 2010.

Top Ten publications:

1. Baghel, V., **Thakur, J.K.**, Yadav, S.S., Manna, M.C., Mandal, A., Shirale, A.O., Sharma, P., Sinha, N.K., Mohanty, M., Singh, A.B. and Patra, A.K. (2020). Phosphorus and potassium solubilization from rock minerals by endophytic Burkholderia sp. strain FDN2-1 in soil and shift in diversity of bacterial endophytes of corn root tissue with crop growth stage. *Geomicrobiology Journal*, <https://doi.org/10.1080/01490451.2020.1734691>

2. Mandal, A., Sarkar, B., Owens, G., **Thakur, J.K.**, Manna, M.C., Niazi, N.K., Jayaraman, S. and Patra, A.K. (2020). Impact of genetically modified crops on rhizosphere microorganisms and processes: A review focusing on Bt cotton. *Applied Soil Ecology*, 148, p.103492.
3. Lenka, N.K., Lenka, S., **Thakur, J.K.**, Yashona, D.S., Shukla, A.K., Elanchezian, R., Singh, K.K., Biswas, A.K. and Patra, A.K. (2020). Carbon dioxide and temperature elevation effects on crop evapotranspiration and water use efficiency in soybean as affected by different nitrogen levels. *Agricultural Water Management*, 230, p.105936.
4. Manna, M. C., Sahu, A., De, N., **Thakur, J. K.**, Mandal, A., Bhattacharjya, S., Ghosh, A., Rahman, M.M., Naidu, R., Singh, U.B. & Dakhli, R. (2020). Novel bio-filtration method for the removal of heavy metals from municipal solid waste. *Environmental Technology & Innovation*, 100619.
5. **Jyoti Kumar Thakur**, Sangeeta Paul, Manjunath, BS, M.S. Rathi (2019). Influence of Aromatic Hydrocarbons on Growth, Plant Growth Promoting Activities and Survival in Soil of *Azotobacter chroococcum* strain. JL104. *Bioremediation Journal*. 23(2):94-106.
6. Bandeppa, S., Paul, S., **Thakur, J. K.**, Chandrashekar, N., Umesh, D. K., Aggarwal, C., & Asha, A. D. (2019). Antioxidant, physiological and biochemical responses of drought susceptible and drought tolerant mustard (*Brassica juncea* L) genotypes to rhizobacterial inoculation under water deficit stress. *Plant Physiology and Biochemistry*, 143, 19-28.
7. Abhay Omprakash Shirale, Bharat Prakash Meena, Priya Pandurang Gurav, Sanjay Srivastava, Ashis Kumar Biswas, **Jyoti Kumar Thakur**, Jayaraman Somasundaram, Ashok Kumar Patra, Annangi Subba Rao. (2019). Prospects and challenges in utilization of indigenous rocks and minerals as source of potassium in farming. *Journal of Plant Nutrition*. 42(19): 2682-2701.
8. Asha Saha, M.C. Manna, Sudeshna Bhattacharjya, **J.K. Thakur**, A. Mandal, Mohammad Mahmudur Rahman, U.B. Singh, V.K. Bhargav, S. Srivastava, A.K. Patra, S.K. Chaudharie, S.S. Khanna. (2019). Thermophilic ligno-cellulolytic fungi: The future of efficient and rapid biowaste Management. *Journal of Environmental Management*. 244: 144–153
9. Asit Mandal, **Jyoti Kumar Thakur**, Asha Sahu, Madhab Chandra Manna, Annangi Subba Rao, Binoy Sarkar & Ashok Kumar Patra (2018) Effects of Bt-cotton on biological properties of Vertisols in central India. *Archives of Agronomy and Soil Science*, DOI: 10.1080/03650340.2018.1520978
10. **Jyoti Kumar Thakur**, Sangeeta Paul, Nishant K Sinha, Maheshwar Singh Rathi. (2018). Optimization of factors affecting decolourization of sulphonated Azo Dye Red HE7B *in vitro* by *Bacillus* sp. Azo1. *Current Science*. 115(3):505.