भाकृअनुप-राष्ट्रीय प्राकृतिक रेशा अभियांत्रिकी एवं प्रौद्योगिकी संस्थान
12, रीजेंट पार्क, कोलकाता – 700 040, (आईएसओ 9001: 2015)
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PROFILE

Biodata of Dr. Tilak Mondal

Sl. No.	Content	Data
1	Photographs	
2	Name	Dr. Tilak Mondal
3	Designation	Scientist (Senior Scale)
4	Contact	8918063899
5	Email ID	tilak.mondal@icar.gov.in / tilakmondal1987@gmail.com
6	Research Interest	Pesticide Residue Chemistry, Soil Biology and Soil Chemistry, Grain and Water Quality analysis, Natural Fibre Chemistry, Nano-formulation and Polymer Chemistry
7	Major Research Accomplishments	❖ Design and Development of VL Solar Dryer for grain storage. ❖ Development of VL Poly-tunnel for healthy seedling nursery raising. ❖ Development of low cost poly-cement tank for water storage. ❖ Standardization and Method Validation of most common Insecticides found in Soil and Water bodies by Liquid Chromatographic Technique. ❖ Development of Chitosan and Na-alginate based Nano-carbendazim formulation and evaluated their antifungal activity against *Colletotricum capsici and Alternaria alternata.* ❖ Forage and grain quality evaluation of dual purpose wheat crop under fruit based agri-horti system.
8	Awards	• **Awarded Best Poster** for the poster presentation of Effect of different casing soil on yield and biological efficiency of *Agaricus bisporus*. In National Symposium on Mushroom: Trends and Innovations in Mushroom Science organized by Mushroom Society of India and ICAR-DMR during 27-28th April, 2017. • **Best Oral Presentation Award** for the research paper entitled

		"Development, Conformation and Evaluation of antifungal efficacy of Chitosan based Nano-carbendazim formulation against *Colletotricum capsici* under in-vitro and field condition" during National Symposium on "Recent trends in Phytopathology to address emerging challenges for achieving Food Security" during 21-22nd February, 2022. • **Best Oral Presentation Award** for the research paper entitled "Use of pine needles extracted oils and residues against management of soil born pathogen *Fusarium oxysporum* and Root knot nematode *Meloidogyne sp*" during National Symposium on "Recent trends in Phytopathology to address emerging challenges for achieving Food Security" during 21-22nd February, 2022. • **Best Oral Presentation Award** for Development and Evaluation of low cost solar operated vegetable cum Fruit garder for hilly area of Uttarakhand in International conference on Prospects and Challenges of environment and biological sciences in food production system for livelihood security of farmers (ICFPLS-2023) during September 18-20, 2023.
9	Training	Nil
10	Patents	Nil
11	Publications	Annexure -1

Annexure -1

List of Publications

Research Articles:

1. **Tilak Mondal***, R.P. Yadav, Vijay Singh Meena, M. Choudhury, Shyam Nath, J.K. Bisht, P.K. Mishra, S.K. Arya, A. Pattanayak, (2020) Biomass yield and nutrient content of dual purpose wheat in the fruit based cropping system in the North-Western mid-Himalaya ecosystem, India. *Field Crops Research*. 247: 107700. **NAAS Rating: 12.15**
2. **Tilak Mondal**, Ramen Kumar Kole, Ashish Kumar Singh, Vijay S Meena, Sovan Debnath, Lakshmi Kant, Manoj Parihar and Mahipal Choudhary (2023). Understanding the Relationship between Pesticide Residue and Rhizospheric Process in Soil Ecosystems. *Climate Change and Environmental Sustainability*, 10(2):123-131. **NAAS Rating: 5.28**
3. **Tilak Mondal*** and Irani Mukherjee (2018) Standardization and Validation of Method for Estimation of Four Insecticide Residues in Soil and Water Matricesby Liquid Chromatographic Technique. *Pesticide Research Journal.* 30(1): 78-84. **NAAS Rating: 5.49**
4. Sharma, L., **Mondal, T.***, Saha, S., Pushkar, S., Roy, S. and Chinnusamy, V. (2018). Standardization and validation of a LC-Method for Quantification of Indole-3-Acetic Acid in Rice Genotypes. *Pesticide Research Journal*, 30 (1): 16-23. **NAAS Rating: 5.49**
5. Mohd Ali, Yengkhom Bijen Kumar and **Tilak Mandal*** (2022). A Quick, Easy, Cheap, Effective, Rugged and Safe Method for Analysis of Nano Etofenprox in Tomato Fruit. *Scientist*,1(**3**):3569-3575. **NAAS Rating: 6.85**
6. Mukhejee, A., **Mondal, T*.**, Bisht, J.K. and Pattanayak, A. (2018). Farmers' preference of fodder trees in mid hills of Uttarakhand: a comprehensive ranking using analytical hierarchy process. *Range Management and Agroforestry*, 39 (1): 115-120. **NAAS Rating: 6.58**
7. Salej Sood, Tilak **Mondal**, Ramesh Singh Pal, Dinesh Chandra Joshi, Lakshmi Kant and Arunava Pattanayak (2023). Comparison of dehulling efficiency and grain nutritional parameters of two cultivated barnyard millet species (Echinochloa spp.) Heliyon, 9(11), e21594. https://doi.org/10.1016/j.heliyon.2023.e21594 **NAAS Rating: 9.78**
8. S. Samanta, A. Das, R. Rakshit, **T. Mondal**, S. Roy, P. Ganguly, S.R. Choudhury, A. Samanta and A. Hossain. (2022) Persistence and Exposure Assessment of Insecticide Indoxacarb Residues in Vegetables. *Frontiers in Nutrition*.9: 863519.doi: 10.3389/fnut.2022.863519. **NAAS Rating: 12.59**
9. Das, S.K., Ghosh, G.K., Avasthe, R., Choudhury U.B., **Mondal, T.,** Mishra, V.K., Kundu, M.C., Roy, A. and Lama, A. (2021). Organic nutrient sources and biochar technology on microbial biomass carbon and soil enzyme activity in maize-black gram cropping

system. *Biomass Conversion and Biorefinery*. https://doi.org/10.1007/s13399-021-01625-4. **NAAS Rating: 10.05**

10. Ashish Kumar Singh, Amit U Paschapur, **Tilak Mondal**, Manoj Parihar, K K Mishra and Lakshmi Kant (2022). Molecular characterization of necromenic nematode *Pristionchuspacificus*and associated bacteria: A new record. *Indian Journal of Agricultural Sciences*, 92 (**10**): 1253–1257. **NAAS Rating: 6.30**
11. M. Parihar, A. Kumar, J.K. Bisht, M.S. Bhinda, S. Nath, R.S. Meena, **T. Mondal**, D.C. Joshi, H. Bijarniya, S. Singh and L. Kant (2021). Reviving the forgotten food network of potential crops to strengthen nutritional and livelihood security in North Western Himalayas. *Indian Journal of Agronomy* 66(5th IAC SI): S44-S59. **NAAS Rating: 5.55**
12. Mahipal Choudhary, Vijay S. Meena, **Tilak Mondal,** Suresh C. Panday, Ram P. Yadav, Pankaj K. Mishra, Jaideep K. Bisht, ArunavaPattanayak, (2021). Long-term effects of organic manure and inorganic fertilization on biological soil quality indicators of soybean-wheat rotation in the Indian mid-Himalaya, *Applied Soil Ecology*. 157: 103754. **NAAS Rating: 11.51**
13. Yadav, R.P., Bisht, J.K., **Mondal, T**., Meena, V.S., Pandey, B.M., Mishra, P.K.,Pattanayak, A. and Kant, L. (2021). Diversified climate resilient pecan (Caryaillinoinensis(Wangenh.) K. Koch) based sustainable agroforestry improves livelihood and returns inIndian Himalaya. *Applied Ecology and Environmental Research*, 19(2):1309-1323. **NAAS Rating: 6.82**
14. R. K. Kole, K. Roy, B. N. Panja, E. Sankarganesh, T. Mondal and R. E. Worede (2019) Use Of Pesticides in Agriculture and Emergence of Resistant Pests. *Indian J. Anim. Hlth*. 58(2): 53-70. **NAAS Rating: 5.25**
15. Meena, V.S., **Mondal, T.,** Pandey, B.M., Mukhejee, A., Yadav, R. P., Choudhary, M., Singh, S., Bisht, J.K. and Pattanayak, A. 2018. Land use changes: strategies to improve soil carbon and nitrogen storage pattern in the mid-Himalaya ecosystem, India. *Geoderma*, 321: 69-78. **NAAS Rating:13.42**
16. Choudhary, M., Panday, S.C., Meena, V.S., **Mondal, T.,** Singh, S., Yadav, R. P., Mahanta, D., Bisht, J.K. and Pattanayak, A. 2018. Long-term effects of organic manure and inorganic fertilization on sustainability and chemical soil quality indicators of soybean-wheat cropping system in the India mid-Himalayas. *Agriculture, Ecosystems and Environment*, 257: 38-46. **NAAS Rating: 12.58**
17. Sarkar, S., Maity, A., **Mondal, T.,** Jose, S., Sangma, R.C., Khan, A.M., Kumar, S. and Jha, S.K. 2018. Participatory Agro-ecological and Socio-economic Analysis of Jute Cultivation in West Bengal. *Journal of Community Mobilization and Sustainable Development*, 13 (1): 43-51. **NAAS Rating: 5.67**

18. Vijay Singh Meena,**Tilak Mondal**, Suman Roy, Ram Prakash Yadav, Sanjay Kumar Arya, R. P. Yadav, Jaideep Kumar Bisht and Arunava Pattanayak (2019). Chemical Soil Quality Indicators in Relation to Topographic Positions in the North-Western Himalayas, India. *Climate Change and Environmental Sustainability*, 7(1):39-50. **NAAS Rating: 5.28**
19. M Choudhary, SC. Panday, VS. Meena, S. Singh, RP. Yadav, PK Mishra, **T. Mondal**, D. Mahanta, JK. Bisht and A. Pattanayak. (2018) Soil carbon pools, carbon and nitrogen storage pattern in a soybean-wheat cropping system based on 21-years field experiment of Indian Mid-Himalayas. *Tropical Ecology* 59(4): 691-699. **NAAS Rating: 7.33**
20. Das, S. and **Mondal, T. (**2014). Mode of action of herbicides and recent trends in development: A Reappraisal. *International Invention Journal of Agricultural and Soil Science*, 2 (3): 27-32. **NAAS Rating: 5.30**

Book Chapters:

1. Choudhary, M., Ghasal PC., Yadav, RP., Meena, VS., **Mondal, T** and Bisht, JK., (2018). Towards Plant-Beneficiary Rhizobacteria and Agricultural Sustainability. In Role of Rhizospheric Microbes in Soil (pp. 01-46). Springer Nature, Singapore.
2. RP Yadav, B Gupta, JK Bisht, R Kaushal, **T Mondal** and VS Meena (2019). Impact of Land Uses on Microbial Biomass C, N and P and Microbial Populations in Indian Himalaya. In Plant Growth Promoting Rhizobacteria for Agricultural Sustainability (pp. 233-255). Springer Nature, Singapore.
3. Dutta, B., Bhattacharjee, S., **Mondal, T** and Bhowmick, R (2023). Nanomaterial Impact on Genetic Transformation. In Biotic Stress Management of Crop Plants using Nanomaterials. Ed by Krishna Kant Mishra and Santosh Kumar (1st edition) CRC press.
4. Pal, SR., **Mondal, T.,** Dev, R., parihar, M., Sharma, D., Kumar, Amit and Kant, L (2023). Role of Enzyme-Mimicking Nanoparticles in Crop Plants .In Biotic Stress Management of Crop Plants using Nanomaterials. Ed by Krishna Kant Mishra and Santosh Kumar (1st edition) CRC press.
5. Yadav, R.P., Bisht, J.K., Gupta, B. and **Mondal, T.** 2016. Toward the C Sequestration Potential of Agroforestry Practices to Combat Climate Change in Kumaon Himalaya, India. ***In***: Bisht, J.K. *et al.*, (eds.), *Conservation Agriculture*, Springer Science + Business Media, Singapore. pp. 293-313.
6. Choudhary, M., Ghasal, P.C., Yadav, R.P., Menna, V.S. **Mondal, T.** and Bisht, J.K. 2018**.** Towards Plant-Beneficiary Rhizobacteria and Agricultural Sustainability, India Meena V.S. et al. (Eds.) *Role of Rhizospheric Microbes in Soil*, Springer Nature, Singapore. pp. 1-45.

Popular Article:

1. अमित कुमार, **तिलक मंडल**, आशीष कुमार सिंह, तरुण बिष्ट, जयदीप कुमार बिष्ट और लक्ष्मी कांत (2023) पादप पोषण सुरक्षा के लिए जैबिक खाद बनाने की बिभिन्ना बिधिया. कृषिवानी अलोक; p-56-60.
2. **Tilak Mondal**, Amit Kumar, J.K. Bisht and Lakshmi Kant (2023). Nanotechnology: An Important Tool for Increasing Nutrient Use Efficiency. Agriculture-24; 2(1), 62-67.
3. Yadav, R. P., Bisht, J. K., **Mondal, T.,** Meena, V. S., & Choudhary, M. (2021). Agroforestry in the context of improved production and climate change in Himalaya. *Indian Farming*, *71*(2), 08-10, February, 2021.
4. **Tilak Mondal**, Shyam Nath, Manoj Parihar, Jeevan B. Renu Sanwal, Jaideep Kumar Bisht and Lakshmi Kant. "बनोस्पति दारा फलो मे किट तथा रोग प्रबंधन". Marudhara Krishi. Jan-Feb, 2022 issue; 31-34.
5. **Tilak Mondal,** Shyam Nath, Rahul Dev, JP Gupta, Renu Sanwal, SC Panday and Lakshmi Kant. "mÙkjk[kaM ds ioZrh; {ks=ksa esaa dhoh Qy ls vk; l`tu". Agri Articles. Nov-Dec, 2022 issue; 40-43.
6. **Tilak Mondal,** Rahul Dev, Jitendra Kumar and Shyam Nath. "Polyhouse and their importance in Protected Cultivation" Indian Farming Digest. November 2022 Issue; 18-20.
7. **Tilak Mondal**, Amit Kumar, Sovan Debnath and SP Pachauri. Indian Technical Knowledges (ITKs) for soil fertility managements in NW Himalayas. Indian Farmers Digest. June 2022 issue; 28-31.
8. S. Debnath, S.P. Pachauri and **T. Mondal**. Low input-based traditional maintenance of soil fertility". Indian Farmer Digest. June 2022 issue; 39-42.
9. Choudhary, M., **Mondal, T.** and Menna, V.S. 2017. Soil Testing: a valuable tool for efficient and economic crop production. *Indian Farming*, 67 (11): 11-14.
10. **Mondal, T.,** Debnath, S., Mukhrjee, A. and Pachauri, S.P. 2015. Neem based botanical pesticides and its potential utilization. Indian Farmers Digest. 48 (08): 36-39.
11. Debnath, S., **Mondal, T.** and Bhatt, S.C. 2014. Application of radioactivity in the study of heavy-metals in soil-plant system. Agrobios Newsletter. XIII (03): 50-51.
12. Debnath, S., **Mondal, T.** and Bhatt, S.C. 2014. Carbon sequestration: potential of Indian soils. Agrobios Newsletter. XIII (02): 68-69.
13. Debnath, S., **Mondal, T.** and Bhatt, S.C. 2014. Chlorine: ANeglected Essential Nutrient and its Potential Roles in Plants. Agrobios Newsletter. XIII (03): 91-93.

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