



**Dr M L Dotaniya**

Senior Scientist

(Soil Science & Agricultural Chemistry)

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1. Date of Birth : June 30, 1982
2. Education Qualification : Ph.D. (Soil Science & Agricultural Chemistry), ICAR-IARI, New Delhi (2011); M. Sc. (Soil Science), GBPUA&T, Pantnagar (2006); B. Sc. (Ag), SKN COA, Jobner (2004)
3. Joining Date in ICAR : 20-04-2010
4. Joining Date in DRMR : 28-06-2018
5. Discipline/Specialization : Natural Resource Management
6. Training/advance exposure in the area of work : Obtained training on “Bioremediation of heavy metal and hazardous wastes contaminated soil and water ecosystem” during 1-14<sup>th</sup> Dec., 2011 at Tamil Nadu Agricultural University, Coimbatore.

### 7. Contribution to the scientific advancement

- ✓ Sustainable soil health management for mustard production.
- ✓ Computed Geo-accumulation Index for tannery contaminated soil.
- ✓ Identified chromium toxicity level in soil for microbial biomass C & enzymatic activities.
- ✓ Long- term impact of sewage irrigation on C sequestration and soil quality.
- ✓ Interactive effect of chromium and cations on plant phytotoxicity.
- ✓ Assessment of biochar potential for remediation of heavy metal contaminated soil.
- ✓ Application of industrial waste for minimizing heavy metal toxicity.
- ✓ Identification of mustard potential for heavy metal removal.

### 8. Current Research Projects & Future planning of research

- Identification of rapeseed-mustard potential for heavy metal remediation.
- Identification and management of saline- alkaline soil for improving mustard crop yield.

### 9. Awards/ Recognition's

- 🏆 Dr P R Verma Young scientist award-2024 by SRMR.
- 🏆 Best Poster Award-2023.
- 🏆 Excellence in Research Award-2020 by Society for SDA&T, Meerut.
- 🏆 DRMR Best Scientist Award-2020.
- 🏆 The Golden Jubilee Commemoration Young Scientist Award-2019 Indian Society of Soil Science, New Delhi.
- 🏆 Young Scientist Award-2016 by Venus International Foundation, Chennai.

- ✚ Young Scientist Award-2016 by Samgra Vikas Welfare Society, Lucknow.
- ✚ Young Scientist Award-2017 by Astha foundation, Meerut.
- ✚ Young Scientist Award-2017 by Academic Brand Award.
- ✚ Best Oral Paper Presentation Award-2015 in International conference organized by Search & Research Society, Bhopal.
- ✚ Excellence in Research Award-2015 by 3rd Faculty Branding Awards, Noida.
- ✚ Session Co-Chaired in International Conference (ICWEES-2016) organized by AISECT University, Bhopal and A & M University, Texas, USA on Energy and Environment during 15-18 March, 2016.
- ✚ Guest Editor-Bioremediation of Agricultural Soil from Contamination" MDPI
- ✚ Editor-Journal of PLOS ONE
- ✚ **Councillor**-Indian Society of Soil Science, New Delhi for the year 2021-22 and 2022-2023; Executive Council of Arid Zone Research Association of India Jodhpur for the biannium 2022-2023.
- ✚ **Fellowships**-Junior Research Fellowship-2004 (Physical Science) for M. Sc (Ag); IARI Fellowship-2006 for Ph. D. (Soil Science & Agricultural Chemistry); CSIR-NET (JRF)-2005 in Earth, Atmospheric, Ocean and Planetary Sciences; JNU Fellowship-2004 for M.Sc. (Ag) Biotechnology.

## 10. Publication (Best Research Paper)

S. No.	Authors	Title	Year	Publisher	NAAS score
1.	Dotaniya ML, Rajendiran S, Elanchezian R, Dotaniya CK, Saha JK	Effect of chromium and cations concentration on stress enzymes in spinach crop grown under vertisol of central India	2024	J Agric Food Res 15: 100969	9.80
2.	Dotaniya ML, Nagar MC, Sharma Amita, Dotaniya CK, Doutaniya RK	Pressmud subdue phytoremediation indices in lead-contaminated soils: a human health perspective	2024	Bull Environ Contam Toxicol 112: 16	8.70
3.	Dotaniya ML, Meena MD, Choudhary RL, Meena MK, Singh HV, Dotaniya CK, Meena LK, Dotaniya RK, Meena KN, Jat RS, Rai PK	Management of plant nutrient dynamics under alkaline soils through graded application of pressmud and gypsum	2023	PLOS ONE 18(8):e0288784	9.10
4.	Dotaniya ML, Nagar MC, Sharma Amita, Dotaniya CK, Rajendiran S, Singh VB, Doutaniya RK, Saha JK	Management of acid and alkaline phosphatase, dehydrogenase activity by sugarcane industry waste under lead contamination- A case study of Indian Vertisol	2023	PLOS ONE 18(5): e0286223	9.10
5.	Dotaniya ML, Sharma Amita, Nagar MC, Dotaniya CK, Doutaniya RK, Saha JK	Can application of pressmud mediated plant nutrient dynamics under lead contaminated soils of Indian Vertisol ?	2023	Bull Environ Contam Toxicol 110: 44	8.70
6.	Dotaniya ML, Rajendiran S, Saurabh Kirti, Saha JK, Dotaniya CK, Patra AK	Immobilization of chromium bioavailability through application of organic waste to Indian mustard ( <i>Brassica juncea</i> ) under chromium contaminated Indian soils	2022	Environ Monit Assess 31:195	9.00
7.	Dotaniya ML, Meena MD, Choudhary RL, Meena MK, Singh HV, Meena VD, Meena LK, Dotaniya CK, Jat RS, Rai PK	Sulphur availability in saline soil mediated by Bentonite delivery through FYM	2022	Natl Acad Sci Lett 45: 473-475	7.10
8.	Dotaniya ML, Meena VD, Saha JK, Dotaniya CK, Mahmoud AED, Meena BL,	Use of poor quality water for sustainable crop production in changing scenario of climate change	2022	Environ Develop Sustain 25:7345-7376	10.90

	Meena MD, Sanwal RC, Meena RS, Doutaniya RK, Solanki P, Lata M, Rai PK				
9.	<b>Dotaniya ML</b> , Nagar MC	Can pressmud improve nickel availability in lead contaminated soils ?	2022	Natl Acad Sci Lett 46 (1)-47-51	7.10
10.	Nagar MC, Dotaniya ML, Sharma Amita, Dotaniya CK, Doutaniya RK, Saha JK	Pressmud overcome lead toxicity by improving spinach biomass in lead contaminated soils	2022	Environ Monit Assess 107:195	9.00
11.	<b>Dotaniya ML</b> , Piplal JS, Jain RC, Rajendiran S, Gupta SC, Vyas MD, Coumar MV, Sahoo S, Saha JK, Kumar A	Nickel-mediated lead dynamics and their interactive effect on lead partitioning and phytoremediation indices in spinach	2022	Environ Monit Assess 194:334	9.00
12.	Minhas PS, Saha JK, <b>Dotaniya ML</b> , Saha A, Saha M	Wastewater irrigation in India: Current status, impacts and response options	2021	Sci Total Environ 808:1-17	15.80
13.	Meena MD, <b>Dotaniya ML</b> , Meena MK, Meena BL, Meena KN, Doutaniya RK, Meena HS, Moharana PC, Rai PK	Maturity indices as an index to evaluate the quality of sulphur enriched municipal solid waste compost using variable byproduct of sulphur.	2021	Waste Manage 126:180-190	14.10
14.	<b>Dotaniya ML</b> , Saha JK, Rajendiran S, Coumar MV, Meena VD, Das H, Kumar A, Patra AK	Reducing chromium uptake through application of calcium and sodium in spinach	2019	Environ Monit Assess 191: 754	9.00
15.	<b>Dotaniya ML</b> , Saha JK, Rajendiran S, Coumar MV, Meena VD, Kundu S, Patra AK	Chromium toxicity mediated by application of chloride and sulphate ions in Vertisol of Central India	2019	Environ Monit Assess 191: 429	9.00
16.	<b>Dotaniya ML</b> , Rajendiran S, Meena VD, Coumar MV, Saha JK, Kundu S, Patra AK	Impact of long-term application of sewage on soil and crop quality in Vertisols of Central India	2018	Bull Environ Contam Toxicol 101: 779-786	8.70
17.	<b>Dotaniya ML</b> , Piplal JS	Soil enzymatic activities as influenced by lead and nickel concentrations in a Vertisol of Central India	2018	Bull Environ Contam Toxicol 101(3):380-385	8.70
18.	Piplal JS, <b>Dotaniya ML</b>	Interactive effects of lead and nickel contamination on nickel mobility dynamics in spinach	2018	Intl J Environ Res 12(5): 553-560	8.48
19.	<b>Dotaniya ML</b> , Rajendiran S, Coumar MV, Meena VD, Saha JK, Kundu S, Kumar A, Patra AK	Interactive effect of cadmium and zinc on chromium uptake in spinach grown on Vertisol of Central India	2017	Intl J Environ Sci Tech 15(2): 441-448	9.10
20.	<b>Dotaniya ML</b> , Meena VD, Rajendiran S, Coumar MV, Saha JK, Kundu S, Patra AK	Geo-accumulation indices of heavy metals in soil and groundwater of Kanpur, India under long term irrigation of tannery effluent	2017	Bull Environ Contam Toxicol 98(5): 706-711	8.70

### **Other information**

Google scholar- <https://scholar.google.co.in/citations?user=6F3UE7cAAAAJ&hl=en>

Researchgate - [https://www.researchgate.net/profile/M\\_Dotaniya](https://www.researchgate.net/profile/M_Dotaniya)

Book: <https://www.springer.com/in/book/9789811042737>