## Curriculum Vitae

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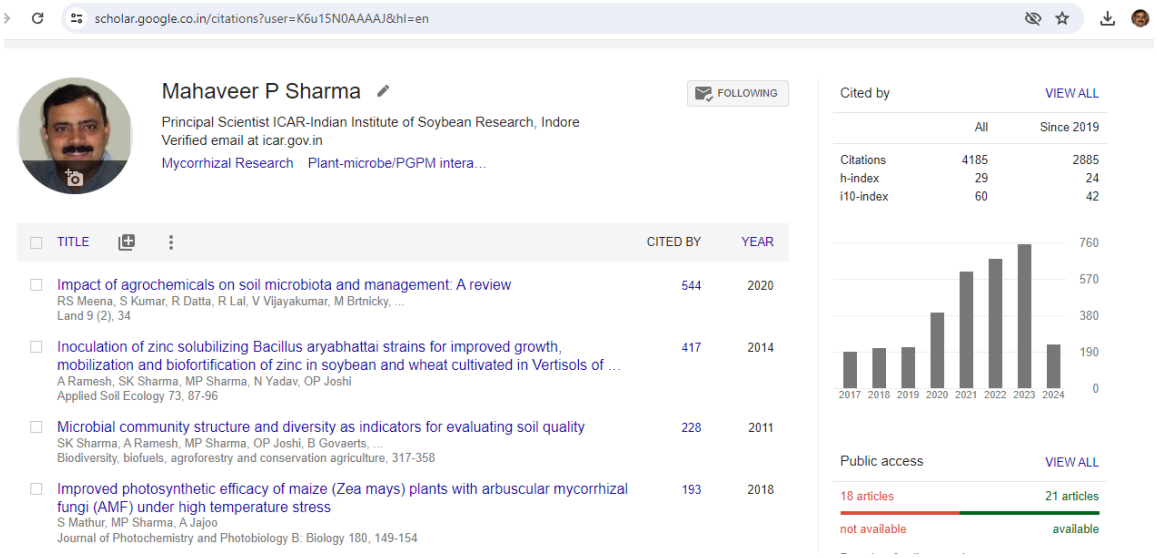
| **Name** | **Dr Mahaveer Prasad Sharma** |
| **Current Affiliation & Address** | Principal Scientist (Agri. Microbiology), Incharge, Plant Protection Section and Incharge/Head, Agribusiness Incubation Centre and Institute Technology Management Unit<br>ICAR-Indian Institute of Soybean Research (Erstwhile; Directorate of Soybean Research), Khandwa Road, Indore (M.P), Mobile 09926012261<br>**E mail: mahaveer620@gmail.com/ Mahaveer.Sharma@icar.gov.in** |
| **Age** | **57 Years** |
| **Academic & professional scientific social networks** | **Orcid id:** https://orcid.org/0000-0001-5331-2081<br>**Google scholar Citation profile:**<br>**https://scholar.google.co.in/citations?user=K6u15N0AAAAJ&hl=en**<br>  |
| **Area of specialization** | • Plant-microbe-mycorrhizal interactions, Plant protection, Soil-plant health, Signature fatty acid biomarkers |
| **Educations** | • **Postdoc Fellowship** (DBT CREST 2013-2014)-USDA-ARS, BARC, Beltsville, MD, USA (Signature fatty acids biomarkers for plant soil health assessment)<br>• **Ph. D (Microbiology)** 1996-2002, TERI New Delhi & Jiwaji University, Gwalior, M.P<br>• **M.Sc .(Agriculture) Nematology,** 1988-91 **(Gold medalist),** Rajasthan Agricultural University, Campus Udaipur, Rajasthan<br>• **B.Sc. (Agriculture)** 1984-88, Rajasthan Agricultural University, Campus Jobner, Rajasthan<br>• **DAFEX** (A six-month correspondence course on Design and Analysis of MPTS field experiments) 1993 Winrock International Institute for Agriculture Development, Kesetsart, Bangkok, Thailand.<br>• **PGD-IPR-**Post graduate Diploma in Intellectual property rights 2009 (approved by WIPO, Geneva), Indra Gandhi National Open University, New Delhi. |

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| **Professional Engagements** | • May 1992 to May 1993- Project Fellow in USDA project on VAM relationships of arid zone trees in India at Department of Botany, University of Delhi, Delhi, INDIA.<br>• June 1993 to August 1993- Research Fellow in Winrock International F/FRED project on VAM in the establishment of fuel wood/fodder tree legumes in arid zones at Department of Botany, University of Delhi, Delhi, INDIA.<br>• 13th April 1994 to 2nd June 2004-Research Associate Centre for Mycorrhizal Research Bioresources & Biotechnology Division, The Energy and Resources Institute (TERI), Habitat Place, Lodhi Road, New Delhi 110 003, INDIA<br>• 3rd June 2004 to 7th Feb 2006 - Fellow, Centre for Mycorrhizal Research, Bioresources & Biotechnology Division & Adjunct faculty TERI School of Advanced Studies, TERI, Lodhi Road, New Delhi 110 003, INDIA<br>• 8th Feb 2006-7th Feb 2012-Senior Scientist (Microbiology) Directorate of Soybean Research (ICAR), Khandwa Road, Indore (M.P)-452001, INDIA<br>• 8th Feb 2012-till date- Principal Scientist (Microbiology) Directorate of Soybean Research (ICAR), Khandwa Road, Indore (M.P)-452001, INDIA |
| **Awards, recognition & visited abroad** | • **Gold medal award** by the Rajasthan Agriculture University on having stood first during Master's degree programs (1998)<br>• **Best paper poster award** for the contribution entitled "Metabolic diversity of root nodulating soybean rhizobia…….of Central" during First Asian PGPR Congress for sustainable Agriculture held at ANGARAU, Hyderabad (21-24 June 2009) authors (Sharma et al.)**.**<br>• **Best paper award** for the contribution entitled "Soil carbon sequestration through glomalin production by arbuscular mycorrhizal fungi…….organic and inorganic farming practices" presented during National Workshop *on* Carbon Sequestration in Forest and Non Forest Ecosystems (February 16-17, 2015) at JNKVV, Jabalpur; Authors (Agnihotri, Sharma and others ).<br>• **Best paper award** (Thirumalachar young scientist award) for the contribution entitled "Glomalin: A potential soil carbon sequestrator…….. soybean-based cropping system" during National conference on fungal biotechnology and 43rdAnnual Meeting of Mycological Society of India held at BISR, Jaipur from Nov 16-18, 2016 (Authors: Agnihotri, Sharma and others).<br>• **Best paper poster award** for the contribution on "application of moisture tolerant rhizobia……in a field trial" during National conference on enhancing productivity of oilseed in changing climate scenario conference held at ICAR- Directorate of Groundnut Research. Junagarh, Gujarat from 7- 9 April, 2018 (Bharti, Sharma and others).<br>• **Best paper poster award** for the contribution on "Coordination of crop and soil management practices……in the rhizosphere of soybean in a long field trial" during National Conference on organic waste management for food and environment security held during Feb 8-10, 2018 held at ICAR-IISS, Bhopal (Authors- Agnihotri, Sharma and others)<br>• **Awarded DBT-CREST Overseas Award 2012-13** to work on signature fatty acid biomarkers in USDA-ARS, USA.<br>• **Awarded competitive travel grants (three times) from SERB, DST Govt. of India** for visiting **Australia, Portugal** & **USA** to present research work in Rhizosphere 3 International Conference and International Symbiosis Congress held in Perth, Lisbon and Oregon during 2011, 2015 &2018 respectively**.**<br>• Visited MIDI, Sherlock's Microbial Identification INC. Newark, Delaware, USA and participated in 9th International Symbiosis Congress in Oregon State University, Corvallis, Oregon, USA from July 12-26, 2018.<br>• Visited Research Institute of organic Agriculture, Frick, Switzerland, Swiss Federal Institute of |

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| | Technology (ETH) and Agroscope, Zurich, Switzerland for developing linkages in mycorrhizal research and soil nutritional aspects from July 21-23, 2015.<br>• Participated in 8th International Symbiosis Congress in University of Lisbon, Portugal from July 12-18, 2015.<br>• Deputed abroad by ICAR-DARE Govt of India under DBT-CREST Overseas award at USDA- ARS, BARC, Beltsville, MD, USA from Oct 2013 to April 2014 and worked fatty acid biomarkers.<br>• Participated in Rhizosphere 3 International conference in Perth,, Australia from Sept 25-30, 2011 and made a oral presentation during the modeling and up-scaling session.<br>• Deputed by TERI under a MoU agreement to organize a training on basic aspects of mycorrhizal research for Agricultural scientists at Soil and Water Research Institute, Ministry of Agriculture, Republic of Iran in Tehran (Feb 21st-9th March 2001).<br>• Awarded certificate of reviewing by Elsevier for outstanding contribution in reviewing papers of Elsevier journals (European J Soil Biology, Ecological Engineering, Applied Soil Ecology, Bioresource technology, Progressive Agriculture etc.).<br>**Members of Expert panel/advisory committees and professional societies**<br>• Expert member, National Scientific Advisory Board of the Long-term farming systems comparison (SysCom) project executed by FiBL, Frick, Switzerland at Bio Re India, Kasrawad, Khargone, MP, India (2020-continue)<br>• Member Secretary, Research Advisory Committee, ICAR-IISR Indore (07.06.2020 to 06.06.2023)<br>• Member, Institute Management Committee, ICAR-NBAIM, Mau (2023-2026)<br>• Elected Fellow, Mycological Society of India, Chennai (2020).<br>• Awarded Senior Scientist Award, Microbiologists Society, India<br>• Expert member of project approval committee- MP Biotechnology Council, Bhopal, Department of Science and Technology, Govt of MP, Bhopal (2015-2018).<br>• Elected as Secretary, Society for Soybean Research and Development, Indore (2020-2023 & 2023-2026)<br>• Nominated as member, Board of studies in life sciences, Mandsour University, MP, India during 2016-2019).<br>• Nominated as member, Board of studies, SAGE University, Indore, MP, India (2020-2023).<br>• Associate Editor-Frontiers in Microbiology & European J soil Science (Wiley Publishers, UK), Member<br>• Member of Editorial board-Indian Journal of Agricultural Research, ARPN Journal of Agricultural and Biological Sciences (aprnjournals.com), Journal of Agriculture and Crop Sciences. |
| **Current project grants, salient achievements and technologies developed** | 1. Development of Environmentally Friendly Controlled-Release P-fertilizer and its Evaluation with Plant Growth Promoting Microbes on Soybean Productivity and Soil Microbial Health; collaborative project with IISER, Bhopal and TERI New Delhi (2022-2025); Funded by DBT, Govt of India<br>2. ICAR funded project-AMAAS Network subproject- Biopolymer coating of soybean seeds with microbial consortia for improved productivity of soybean and soil health (2023-2026); Funded by AMAAS Network project ICAR-NBAIM, Mau.<br>3. Agri-Business Incubator-incubation of start-ups and entrepreneurs involved in production of microbial biofertilizers, soy food processing and seed business sectors (Feb 2020 onwards; Funded by ICAR HQ)<br>4. Interaction effect of phytohormones and AMF for enhanced nodulation, growth, yield of soybean with improved AMF symbiosis in the rhizosphere under Institute funded IRC, ICAR- |

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| | IISR, Indore (2020-ongoing)<br>• The AM fungal strain *Rhizophagus irregularis* was identified as the predominant species and developed technology for its mass production and commercialized to **M/s Biome technologies through Agrinnovate India (Current Microbiology NAAS 8.34)**<br>• Characterized 15 PGPR strains (N-fixing rhizobia, zinc, and P-solubilizing strains), acquired NCBI gene sequences, and cultures deposited to microbial repositories.<br>• **Executed 04 externally funded projects** (DBT, DST, NBAIM-AMAAS network project) through which identified potential moisture stress tolerant rhizobial strains; ***B. daqingense*** as a novel strain reported for the first time from Indian soybean.<br>• Developed a method for higher recovery of glomalin (AM fungi-mediated soil protein) from the soil for the assessment of soil carbon and heavy metal sequestration **(JHM, ScTE, EnRes, EJSB; NAAS 20.22, 16.75; 14.43, 9.32 resp).**<br>• Through DBT-CREST postdoc fellowship (USDA, USA), established FAME facility for characterizing microbes and phospholipid fatty acids analysis in soil for **soil microbial health assessment (EnRes, ASE, NAAS 14.43; 11.50).**<br>• As PI-Microbiology-AICRPS contributed to the identification of microbial consortia (AM fungi and bacteria) as POP and notification of three soybean varieties **(NRC 130, NRC 136, and NRC 128).**<br>• As In-charge-ITMU (Since 2014), executed **MOUs/commercialized 13** institute technologies to Industries.<br>• Set up ABI center at IISR, Indore, and created hand holdings of Agri-startups **(12)** for manufacturing and popularizing microbial biofertilizers and soy food products.<br>• **Institute building activities and resource generation:** as chairman-works committee, executed works of worth more than Rs 300 lakhs through CPWD; as chairman-consultancy processing cell executed contract research trials of worth more than 200 lakhs; as PI mobilized more than Rs 200 lakhs funds through external funding agencies (DST, DBT, ICAR).<br>• Coordination and formulation of programmes: Incharge crop protection division (microbiology, plant pathology and entomology sections), ITMU, and ABI Centre. Formulated collaborative programme and developed projects/linkages with NBRI, Lucknow, IISER, Bhopal, IIT-Guwahati, etc., and undertaken joint research projects on soil-plant health management aspects of soybean.<br>• Organized/conducted a short-term training on basic techniques of AM fungi for biofertilizer industry production staff from June 14-17, 2011 at DSR, Indore.<br>• Organized two research industry-interface meets on "opportunities for Agri-Startups and entrepreneurs in soy food processing, value addition and soybean production technologies during March 2021 and Feb 2024. |
| **Important Publications** | 1. Chourasiya D, Ramesh A, Maheshwari HS, Anil Prakash, Drijber R, and **Sharma MP** (2024) Mass production of arbuscular mycorrhizal fungi on the sorghum plants inoculated with *Burkholderia arboris* using soybean mill waste and vermicompost-amended soil-sand substrate. Current Microbiology 81:129; https://doi.org/10.1007/s00284-024-03662-4<br>2. Jaiswal S, Bhatt J, Rajput L, Maheshwari H, Vennampally N, Kumar S, Pandey V & **Sharma, MP** (2023). Soybean Bacterial Endophytes *Bacillus subtilis* (EB-1) and *Bacillus amyloliquefaciens* (EB-2) against anthracnose survival in leaf and soil. Biological Forum-An International Journal 15(10): 1305-1309.<br>3. Khalili A, Khalofah A, Ramesh A, **Sharma MP** (2024) Temporal synchronization of nitrogen and sulfur fertilization: Impacts on nutrient uptake, use efficiency, productivity, and relationships with other micronutrients in soybean. Agronomy **2024**, 14, 570. https:// |

doi.org/10.3390/agronomy14030570.

4. Khalili A, Ramesh A, **Sharma MP** (2023) Effect of nitrogen and sulfur applications on growth, chlorophyll content and yield of soybean (*Glycine max* L.) Merrill. E-Planet, 21: 29–34.
5. Bhattacharjya S, Ghosh V, Sahu A, Agnihotri R, Pal N, Sharma P, Manna MC, **Sharma MP,** and Singh AB (2024) Utilizing soil metabolomics to investigate the untapped metabolic potential of soil microbial communities and their role in driving soil ecosystem processes: A review. Applied Soil Ecology, Vol. 195, 105238, https://doi.org/10.1016/j.apsoil.2023.105238.
6. Laad P, Patel P, Guruprasad KN, **Sharma MP** and Kataria S, Brestic C (2023) Effect of UV exclusion and AMF inoculation on photosynthetic parameters of *Glycine max*. DOI Photosynthetica 61 (Special Issue): 236-243; Doi: https://10.32615/ps.2023.014
7. Bharti A, Maheshwari HS, Garg S, Anwar K, Pareek A, Satpute G, Prakash A and Sharma MP (2023) Exploring potential soybean bradyrhizobia from high trehalose-accumulating soybean genotypes for improved symbiotic effectiveness in soybean. International Microbiology 26: 973–987. doi:10.1007/s10123-023-00351-3.
8. Shanmugaiah V, Gauba A, Hari SK, Ram Prasad, Ramamoorthy V and Sharma MP (2023) Effect of silicon micronutrient on plant's cellular signaling cascades in stimulating plant growth by mitigating the environmental stressors. Plant Growth Regulation. **100:** 391-408 https://doi.org/10.1007/s10725-023-00982-6.
9. Suresh P, Rekha M, Gomathinayagam S, Ramamoorthy V, Sharma MP, Sakthivel P, Sekar K, Valan Arasu M, Shanmugaiah V (2022). Characterization and Assessment of 2, 4-Diacetylphloroglucinol (DAPG)-Producing *Pseudomonas fluorescens* VSMKU3054 for the Management of Tomato Bacterial Wilt Caused by *Ralstonia solanacearum*. *Microorganisms*. 10 (8):1508. https://doi.org/10.3390/microorganisms10081508.
10. Agnihotri R, Gujre N, Mitra S and Sharma MP (2022). Decoding the PLFA profiling of microbial community structure in soils contaminated with municipal solid wastes. Environmental Research 219:114993doi: https://doi.org/10.1016/j.envres.2022.114993 (Press)
11. Agnihotri R, Sharma MP, Bucking H, Dames J and Bagyaraj DJ (2022). Methods for assessing the quality of AM fungal bio-fertilizer: Retrospect and future directions. World Journal of Microbiology and Biotechnology 38(6):97 DOI: 10.1007/s11274-022-03288-3
12. Neha, Bhardwaj Y, Sharma MP, Pandey J and Dubey SK (2022) Response of crop types and farming practices on soil microbial biomass and community structure in tropical agro-ecosystem by lipid biomarkers. J Soil Science & Plant Nutrition. **22**, 1618–1631 https://doi.org/10.1007/s42729-022-00758-3.
13. Mathur S, Agnihotri R, Sharma MP, Reddy VR, and Jajoo A (2021). Effect of High-Temperature Stress on Plant Physiological Traits and Mycorrhizal Symbiosis in Maize Plants. J. Fungi 2021, 7, 867. https://doi.org/10.3390/jof7100867
14. Agnihotri R, Sharma MP, Prakash A, Ramesh A, Bhattacharjya S, Patra AK, Manna MC, Kurganova I, Kuzyakov Y (2021). Glycoproteins of arbuscular mycorrhiza for soil carbon sequestration: Review of mechanisms and controls. Sci Total Environ. Vol 806 (2), 150571 doi: 10.1016/j.scitotenv.2021.150571.

15. Gujre N, Mitra S, Agnihotri R, Sharma MP, Gupta D (2021). Novel agrotechnological intervention for soil amendment through areca nut husk biochar in conjunction with vetiver grass. Chemosphere. doi: 10.1016/j.chemosphere.2021.132443.
16. Agnihotri R, Pandey A, Bharti A, Chourasiya D, Maheshwari HS, Ramesh A, Billore SD and Sharma MP (2021). Soybean processing mill waste plus vermicompost enhances arbuscular mycorrhizal fungus inoculum production. Current Microbiology. 78 (7): 2595-2607; 10.1007/s00284-021-02532-7
17. Anand V, Kashyap M, Sharma MP, Bala K (2021). Impact of hydrogen peroxide on microalgae cultivated in varying salt-nitrate-phosphate conditions. J of Environment Chemical Engineering. 9(9):105814; https://doi.org/10.1016/j.jece.2021.105814
18. Gujre N, Agnihotri R, Rangan L, Sharma MP, Mitra S (2021) Deciphering the dynamics of glomalin and heavy metals in soils contaminated with hazardous municipal solid wastes. J. of Hazardous Materials; DOI: 10.1016/j.jhazmat.2021.125869.
19. Chourasiya D, Gupta MM, Sahni S, Oehl F, Agnihotri R, Buade R, Maheshwari HS, Prakash A and Sharma MP (2021). Unraveling the AM fungal community for understanding its ecosystem resilience to changed climate in agro-ecosystems. Symbiosis 84: 295–310. https://doi.org/10.1007/s13199-021-00761-9.
20. Agnihotri, R., Bharti, A., Ramesh, A., Prakash, A., Sharma, M.P. (2021). Glomalin related protein and C16:1ω5 PLFA associated with AM fungi as potential signatures for assessing the soil C sequestration under contrasting soil management practices. European. J. Soil Biology 103: 103286. https://doi.org/10.1016/j.ejsobi.2021.10328 (Press).
21. Sharma MP (2021) Appraisal of native AM fungi in improving the plant productivity, soil health and sequestering soil carbon in agro-ecosystems. Kavaka 56:13-21. doi: 10.36460/Kavaka/56/2021/13-21.
22. Buade R, Chourasiya D, Prakash A and Sharma MP (2020). Changes in arbuscular mycorrhizal fungal community structure in soybean rhizosphere soil assessed at different growth stages of soybean. Agric Res **10:** 32–43 (2021). https://doi.org/10.1007/s40003-020-00481-4
23. Sharma MP, Grover M, Chourasiya D, Bharti A, Agnihotri R, Maheshwari HS, Pareek A, Buyer JS, Sharma SK, Schütz L, Mathimaran N, Singla-Pareek SL, Grossman JS and Bagyaraj DJ (2020) Deciphering the role of trehalose in tripartite symbiosis among rhizobia, arbuscular mycorrhizal fungi and legumes for enhancing abiotic stress tolerance in crop plants (Review). Front. Microbiol. 11:509919. doi: 10.3389/fmicb.2020.509919.
24. Meena RS, Kumar S, Datta R, Lal R, Vijayakumar V, Brtnicky M, **Sharma MP**, Yadav GS, Jhariya MK, Jangir C, Pathan S, Dokulilova T, Pecina V and Marfo TD (2020) Impact of Agrochemicals on Soil Microbiota and Management: A Review. Land, 9: 34, pages 1-22; doi:10.3390/land9020034
25. Manna MC, Sahu A, De N, Thakur JK, Mandal A, Bhattacharjya S, Ghosh A, Rahman MM, Naidu R, Singh UB, Dakhli R, **Sharma MP** and Misra S (2020) Novel bio-filtration method for the removal of heavy metals from municipal solid waste. Environmental Technology Innovation, 17, 100619 https://doi.org/10.1016/j.eti.2020.100619.
26. Karmegham N, Vellasamy S, Natesan B, Sharma MP, Al Farraj DA, Elshikh MS. Characterization of antifungal metabolite phenazine from rice rhizosphere fluorescent pseudomonads (FPs) and their effect on sheath blight of rice. Saudi J Biol Sci. 27:3313-3326. doi: 10.1016/j.sjbs.2020.10.007.
27. Padhana K, Bhattacharjya S, Sahu A, Manna MC, **Sharma MP,** Singh M, Wanjari RH, Sharma RP, Sharma GK, Patra AK (2020) Soil N transformation as modulated by soil microbes in a 44 years long term fertilizer experiment in a sub-humid to humid Alfisol. Applied Soil Ecology Vol. 145, 103335. DOI: 10.1016/j.apsoil.2019.09.005

28. Bhardwaj Y, Sharma MP, Pandey J and Dubey S (2019) Variations in microbial community in a tropical dry deciduous forest across the season and topographical gradient assessed through signature fatty acid biomarkers. Ecological Research 35:139-153. DOI: 10.1111/1440-1703.12066.
29. Mathura S, Sharma MP and Jajoo A (2018) Improved photosynthetic efficacy of maize (*Zea mays*) plants with arbuscular mycorrhizal fungi (AMF) under high temperature stress. Journal of Photochemistry & Photobiology, B: Biology 180: 149–154.
30. Mathimaran N, Sharma MP, Mohan Raju and Bagyaraj DJ (2017) Arbuscular mycorrhizal symbiosis and drought tolerance in crop plants. Mycosphere 8: 361–376.
31. Nisar A. Bhat, Amritbir Riar, Aketi Ramesh, Sanjeeda Iqbal, Mahaveer P. Sharma, Sanjay K. Sharma and Gurbir S. Bhullar (2017) Soil biological activity contributing to phosphorus availability in Vertisols under long-term organic and conventional agricultural management. Frontiers in Plant Science Volume 8 No. 1523 doi: 10.3389/fpls.2017.01523.
32. Khande R, Sharma SK, Ramesh A and Sharma MP (2017) Zinc solubilizing Bacillus strains that modulate growth, yield and zinc biofortification of soybean and wheat. Rhizosphere 4: 126–13*8*
33. Sharma SK, Gupta AK, Shukla AK, Ees Ahmad, Sharma MP and Ramesh A (2016) Microbial Conservation Strategies and Methodologies: Status and Challenges. Indian J. Plant Genetic Resources 29(3): 340-342; DOI 10.5958/0976-926.2016.00062.0
34. Sharma MP and Buyer JS (2015) Comparison of biochemical and microscopic methods for quantification of mycorrhizal fungi in soil and roots. Applied Soil Ecology 95: 86-89
35. DJ Bagyaraj, Sharma , MP and Maiti D (2015) Phosphorus nutrition of crops through arbuscular mycorrhizal fungi Current Sci. Vol 108 (7): 1288-1293
36. Harikrishnan H, Shanmugaiah V, Nithya K, Balasubramanian N, Sharma MP, Gachomo EW and Kotchoni SO (2015) Enhanced Production of phenazine-like metabolite produced by *Streptomyces aurantiogriseus* VSMGT1014 against rice pathogen, *Rhizoctonia solani.* Journal of Basic Microbiology 55:1-9
37. Sharma MP and Adholeya A (2015) Parameters for selecting efficient arbuscular mycorrhizal fungi for plants under microcosm conditions. Proceedings of National academy of Sciences: Series B Biological Sciences 85(1):77–83;DOi 10.1007/s40011-013-0263-x
38. Harikrishnan H, Shanmugaiah V, Balasubramanian N and Sharma Mahaveer P (2014) Antagonistic potential of native strain *Streptomyces aurantiogriseus* VSMGT1014 against sheath blight of rice disease. World Journal of Microbiology and Biotechnology 30: 3149-3161.
39. Aketi Ramesh, Sushil K. Sharma**, Mahaveer P. Shar**ma, Namrata Yadav and Om P. Joshi. (2014). Plant Growth-Promoting Traits in *Enterobacter cloacae* subsp. *dissolvens* MDSR9 Isolated from Soybean Rhizosphere and its Impact on Growth and Nutrition of Soybean and Wheat Upon inoculation. *Agricultural Research* 3(1):53-66.
40. Aketi Ramesh, Sushil K. Sharma, Mahaveer P. Sharma, Namrata Yadav, and Om P. Joshi (2014). Inoculation of zinc solubilizing *Bacillus aryabhattai* strains for improved growth, mobilization and biofortification of zinc in soybean and wheat cultivated in Vertisols of central India. Applied Soil Ecology 73:87-96
41. Mahaveer P Sharma, Komal Jaisighani, Sushil K. Sharma and VS Bhatia (2012) Effect of native soybean rhizobia and AM fungi in the improvement of nodulation, growth, soil enzymes and physiological status of soybean under microcosm conditions. Agricultural Research 1(4):346–351 (DOI 10.1007/s40003-012-0038-2
42. Mahaveer P. Sharma, Sonam Gupta, Sushil K. Sharma and AK Vyas (2012) Effect of tillage

and crop sequences on arbuscular mycorrhizal symbiosis and soil enzyme activities in soybean (*Glycine max* L. Merril) rhizosphere. Indian J. Agricultural Sciences 82: 25-30.

43. Sushil K. Sharma**, Mahaveer P. Sharma,** A. Ramesh and OP Joshi (2012) Characterization of Zinc-Solubilizing *Bacillus* isolates and their Potential to Influence Zinc Assimilation in Soybean Seeds. Journal of Microbiology and Biotechnology 22: 352-359.
44. Mahaveer P. Sharma and Alok Adholeya (2011) Developing prediction equations and optimizing production of three AM fungal inocula under on-farm conditions. Exp. Agriculture 47 (3): 529-537
45. Mahaveer P Sharma, A.N. Sharma and S. S. Hussaini (2011) Entomopathogenic Nematodes a Potential Microbial Biopesticide: Mass Production and Commercialization Status-A Mini Review. Archives of Phytopathology and Plant Protection 44 (9):855-870.
46. Mahaveer P Sharma, Ubbara Gangi Reddy and Alok Adholeya (2011) Response of arbuscular mycorrhizal fungi on wheat (*Triticum aestivum* L.*)* grown conventionally and on beds in a sandy loam soil. Indian J Microbiology 51: 384-389 (**DOI 10.1007/s12088-011-0134-1).**
47. Sushil K. Sharma, M.P. Sharma and A. Ramesh (2010) Biofortification of crops with micronutrients through agricultural approaches. Indian Farming May Issue Pages 7-12.
48. Mahaveer P. Sharma, Khushboo Srivastava and Sushil K. Sharma (2010) Biochemical characterization and metabolic diversity of soybean rhizobia isolated from Malwa region of Central India. Plant Soil Environ. 56:375-383.
49. Manoharan, PT., Shanmugaiah, V., Balasubramanian N., Gomathinayagam, S., **Sharma MP.,** and Muthuchelian, K. (2010) Influence of AM fungi on the growth and physiological status of E*rythrina variegata* Linn. grown under different water stress conditions. European J Soil Biology 46:151-156.
50. Mahaveer P Sharma**,** Sushil K Sharma, GK Gupta, AN Sharma, AK Vyas and OP Joshi (2009) Effect of Wellgro-soil application on nodulation, yield and soil biological health in soybean grown in Vertisols of Malwa region of Madhya Pradesh. Soybean Research, 7: 21-29.
51. Subhash Bhargava, **Mahaveer P. Sharma**, Rakesh Pandey and HN Gour (2008). Suppression of plant parasites including nematodes by AM fungi induced resistance in plants. Rev. Plant Pathol. Vol. 4: 421-466.
52. Mahaveer P Sharma and Alok Adholeya (2005) Optimization of carbofuran 3G in the clean multiplication and maintenance of arbuscular mycorrhizal fungi in pot cultures on *Zea mays* L. as trap plant. Phytomorphology 55 (1&2): 55-64.
53. Mahaveer P Sharma and Alok Adholeya (2004). Influence of arbuscular mycorrhizal fungi and phosphorus fertilization on the *post-vitro* growth and yield of micropropagated strawberry in an alfisol. Can J. Botany 82 (3): 322-328.
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