

CURRICULAM VITAE



Assistant Professor
Institute of Environment and Sustainable Development
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Dr. Rajeev Pratap Singh

Professional Synopsis

Research professional with more than seven years of experience in the field of R&D on various fields including waste management, Sustainable Agriculture, air pollution etc. A tenacious and committed science researcher experienced at working effectively in teams and independently. Proven expertise at both applied and basic research, managing projects and solving problems.

Career Objective

fostering creativity, with many learning opportunities. I have interpersonal skills, good work ethic and the ability to work well in a team and individual environment.

Educational credentials

B.Sc. in Botany, Chemistry and Zoology from Purvanchal University (1st class)-1997 securing 68 % marks.

P.G.D.E.P.L. in Environmental Protection Laws from Lucknow University, Lucknow, India (1st class)-1999 securing 64 % marks.

M.Sc. in Environmental Science from Lucknow University, Lucknow, India (1st class)-1999 securing 63 % marks.

M.Phil. in Energy and Environment from Devi Ahilya University, Indore, India (1st class) – 2002 securing 84 % marks.

Ph.D. (2008) on “**Land application of Sewage sludge: appraisal of potential effects on plants**” from Botany Department, B. H. U., Varanasi, India under supervision of Prof. M. Agrawal.

IT Skills: Sigma Plot-8, SPSS-10, office automation and internet applications

Date of Birth: 10.07.1977

Professional Experience

- i) Currently working as Assistant Professor at Institute of Environment and Sustainable Development, Banaras Hindu University, India from 28th Feb, 2011 to till date.
- ii) Worked as Visiting Researcher at **School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia** from 7th May to 5th July, 2013.
- iii) Worked as Post Doctoral Fellow at **School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia** from 15 June, 2009 to 27th Feb, 2011.
- iv) Worked as **Council of Scientific and Industrial Research Senior Research Fellow (CSIR-SRF)** from 1Feb, 2009 to 10 June, 2009 in Civil Engineering Department, IIT Delhi, New Delhi under supervision of Dr A. K. Mittal.
- v) Worked as **Council of Scientific and Industrial Research Senior Research Fellow (CSIR-SRF)** from 1 April, 2008 to 31 Jan, 2009 in Botany from Banaras Hindu University, Varanasi under supervision of Prof. Madhoolika Agrawal.

vi) Worked as Project Fellow in University Grants Commission, New Delhi sponsored project “**Crop loss assessment under ambient air pollution around Varanasi**” from 27 Jan 2006 upto 31 March, 2008.

vii) Worked as Research Assistant and did Industrial survey activities in Varanasi as a part of **DFID, U. K. Project activities** at Varanasi under a consultancy Toxics Link, New Delhi.

Publications

Publications = 30 (International = 27; National = 2; Article= 1), Book Chapter = 6, Conference Proceedings = 6 and Book = 1

Citations: 501, h Index: 11

International Journals

1. **R. P. Singh** and M. Agrawal. (2007) Effects of sewage sludge amendment on heavy metal accumulation and consequent responses of *Beta vulgaris* plants. *Chemosphere* 67: 2229-2240.
2. **R. P. Singh** and M. Agrawal. (2008) Potential benefits and risks of land application of sewage sludge. *Waste Management* 28: 347 - 358.
3. **R. P. Singh** and M. Agrawal. (2009). Use of sewage sludge as fertilizer supplement for *Abelmoschus esculentus* plants: Physiological, biochemical and growth responses. *International Journal of Environment and Waste Management* 3: 91-106.
4. Ademir Sérgio Ferreira de Araújo, Wanderley José de Melo, **Rajeev Pratap Singh**. (2010) Municipal Solid Waste compost in agricultural soil: changes in soil microbial biomass. *Reviews in Environmental Science and Bio/technology* 9: 41-49.
5. **R. P. Singh**, M. Hakimi Ibrahim, Norizan Esa and M. S. Iliyana. (2010) Composting of waste from palm oil mill: A sustainable waste management practice. *Reviews in Environmental Science and Biotechnology* 9:331–344.
6. **R. P. Singh** and M. Agrawal. (2010). Variations in heavy metal accumulation, growth and yield of rice plants grown at different sewage sludge amendment rates. *Ecotoxicology and Environmental Safety* 73: 632–641.
7. **R. P. Singh** and M. Agrawal. (2010). Biochemical and physiological responses of Rice (*Oryza sativa* L.) grown on different sewage sludge amendments rates. *Bulletin of Environmental Contamination & Toxicology* 84: 606-612.
8. Jayara D. C. Silva, Tamara T. B. Leal, Ademir S.F. Araújo, Raul M. Araujo, Regina L. F. Gomes, Wanderley J. Melo, **Rajeev P. Singh** (2010). Effect of different tannery sludge compost amendment rates on growth, biomass accumulation and yield responses of Capsicum plants. *Waste Management*. 30:1976–1980.
9. **R. P. Singh** and M. Agrawal. (2010) Effect of different sewage sludge applications on growth and yield of *Vigna radiata* L. field crop: Metal uptake by plant. *Ecological Engineering* 36: 969–972.
10. **R. P. Singh**, A. K, Gupta, M. Hakimi Ibrahim, A. K. Mittal. (2010) Coal fly ash utilization in agriculture: its potential benefits and risks. *Reviews in Environmental Science and Biotechnology* 9: 345–358.
11. Parveen Fatemeh Rupani, **Rajeev Pratap Singh**, M. Hakimi Ibrahim and Norizan Esa (2010) Review of Current Palm Oil Mill Effluent (POME) treatment methods: Vermicomposting as a sustainable practice. *World Applied Science Journal* 11(1), 70-81.
12. **R. P. Singh**, Asha Embrandiri, M. Hakimi Ibrahim and Norizan Esa (2011) Management of biomass residues generated from palm oil mill: Vermicomposting a sustainable option. *Resources, Conservation & Recycling*. 55 (4), 423-434.

13. **Rajeev Pratap Singh**, Pooja Singh, Ademir S. F. Araujo, M. Hakimi Ibrahim, Othman Sulaiman (2011) Management of urban solid waste: Vermicomposting a sustainable option. *Resources, Conservation & Recycling* 55(7), 719-729.
14. **Rajeev Pratap Singh**, Pooja Singh, M. Hakimi Ibrahim, Rokiah Hashim (2011) Land Application of Sewage Sludge: Physico-chemical and Microbial Response. *Reviews of Environmental Contamination and Toxicology* 214, 41-61.
15. **R. P. Singh**, Richa Kothari, V. V. Tyagi, Tanu Allen, M. Hakimi Ibrahim (2011) An Overview for Exploring the Possibilities of Energy Generation from Municipal Solid Waste (MSW) in Indian Scenario. *Renewable and Sustainable Energy Reviews* 15 (9), 4797-4808.
16. Asha Embrandiri, **Rajeev P. Singh**, Hakimi M. Ibrahim, Azhani A. Ramli (2012) Land application of biomass residue generated from palm oil processing: its potential benefits and threats. *Environmentalist* 32 (1), 111-117.
17. Joseany Andrade Santos, Luís Alfredo Pinheiro Leal Nunes , Wanderley José de Melo, Marcia Barreto do Vale Figueiredo, **Rajeev Pratap Singh**, Antônio Aécio Carvalho Bezerra & Ademir Sérgio Ferreira de Araújo (2011). Growth, Nodulation and Nitrogen fixation of Cowpea in soils amended with composted tannery sludge. *R. Bras. Ci. Solo*, 35:1865-1871.
18. Asha Embrandiri, **Rajeev P. Singh**, Hakimi M. Ibrahim and Anisa B. Khan (2012) An Epidemiological Study on the Health Effects of Endosulfan Spraying on Cashew Plantations in Kasaragod District, Kerala, India. *Asian Journal of Epidemiology*. 5 (1) 22-31.
19. Pooja Singh, Othman Sulaiman, Rokiah Hashim, Leh Cheu Peng and **Rajeev Pratap Singh** (2012) Biodegradation study of Pycnoporou *sanguineus* and its effect on structural and chemical features on Oil Palm biomass chips. *Lignocellulose*. 1 (3), 210-227.
20. Pooja Singh, Othman Sulaiman, Rokiah Hashim, Leh Cheu Peng, **Rajeev Pratap Singh** (2013) Using biomass residues from oil palm industry as a raw material for pulp and paper industry: potential benefits and threat to the environment. *Environment, Development and Sustainability*. 15:367–383.
21. Pooja Singh, Othman Sulaiman, Rokiah Hashim, Leh Cheu Peng, **Rajeev Pratap Singh** (2013). Evaluating biopulping as an alternative application on oil palm trunk using the white-rot fungus *Trametes versicolor*. *International Biodeterioration & Biodegradation*. 82: 96-103.
22. Asha Embrandiri, Mahammad H Ibrahim, **Rajeev P Singh**. (2013). Palm oil mill waste utilization: Sustainability in Malaysian context. *International Journal of Scientific and Research Publications*, Volume 3, Issue 3, March 2013, ISSN 2250-3153.
23. Asha Embrandiri, **Rajeev P Singh**. Mahammad H Ibrahim. (2013). Biochemical, Morphological and Yield responses of Lady's Finger plants to varying ratios of palm oil mill waste(Decanter cake) application as bio-fertilizer. *International Journal Of Recycling of Organic Waste in Agriculture*, 2:2-7.
24. Silva Maria Doroteia Marcal, Ademir Sergio Ferreira Araujo, Luis Alfredo Pinheiro Leal Nunes, Wanderley Jose de Melo, and **Rajeev Pratap Singh** (2013). Metals in cowpea (*Vigna unguiculata* L.) after amendment of composted tannery sludge, *Chilean Journal of Agricultural Research*. 73 (3):282-287.
25. **Rajeev Pratap Singh**, Bhavisha Sharma, Abhijit Sarkar, Chandan Sengupta, Pooja Singh, Mahamad Hakimi Ibrahim (2014) Biological Responses of Agricultural Soils to Fly-Ash Amendment. *Reviews of Environmental Contamination and Toxicology*. 232
26. Shlrene Quaik, **Rajeev Pratap Singh**, Mahamad Hakimi Ibrahim (2014) Growth impact, photosynthetic pigments and heavy metal contents of *Coleus Aromaticus*: A vermiponic approach. *Journal of Sustainability Science and Management* 9 (1): 49-55.

27. Vaibhav Srivastava, Sultan Ahmed Ismail, Pooja Singh, **Rajeev Pratap Singh** (2014) Urban solid waste management in the developing world with emphasis on India: challenges and opportunities. Reviews in Environmental Science and Biotechnology, DOI 10.1007/s11157-014-9352-4

National Journal

1. **R. P. Singh**, K. K. Srivastava and S P Singh. (2006) Wastewater minimization in process industry through pinch technology: a case study” in a Journal of Industrial Pollution Control, 22 (1), 107-116.
2. **Rajeev Pratap Singh**, Asha Embrandiri, Mahamad Hakimi Ibrahim and Pooja Singh (2013) Effect of different Palm Oil Mill Effluent (POME) concentrations on Seed Germination, Seedling Growth and Physiological response of Kidney bean (*Phaseolus vulgaris*). Journal of Environmental Science and Sustainability (JESS) Vol. 1 (3): 97 – 102, 2013.

Article

1. A. S. Raghubanshi, **R. P. Singh** and B. Sharma (2013) Biomass to Energy. Akshay Urja. February, 2013, 6 (4): 13-15. A bi-monthly newsletter of the Ministry of New and Renewable Energy, Government of India.

Book

- “**Organic Fertilizers: Types, Production and Environmental Impact**” edited by Rajeev Pratap Singh, published by Nova Science Inc., New York. **ISBN: 978-1-62081-422-2**
- “**Waste Management: Challenges, Threats and Opportunities**” edited by Rajeev Pratap Singh and Abhijit Sarkar, published by Nova Science Inc., New York. **ISBN: 978-1-63482-150-6** (in process).
https://www.novapublishers.com/catalog/product_info.php?products_id=53769

Book Chapter

1. Kaviraj Pradhan, **R. P. Singh** and Shweta Kaushik (2003) “**ENERGY PLANTATION AND WASTE LAND UTILIZATION IN INDIA**” published in a book **Energy Technologies for Sustainable Development / Editors: Dr. Upender Pandel and Dr. M. P. Poonia. 1st ed. Ghaziabad, Prime Publishing House. 2004.**
2. Amit K. Gupta, **Rajeev Pratap Singh**, Anita Singh and M. Hakimi Ibrahim “**EFFECTS OF HEAVY METAL AND METALLOID CONTAMINATION ON THE SOIL MICROBIAL RESPONSE: AN OVERVIEW**” published in the book “Microbial Ecology of Tropical Soils” edited by Dr. Ademir S. F. Araújo and Dr. Márcia B. V. Figueiredo and published by Nova Science Inc., New York. **ISBN: 978-1-61728-505-9**
3. **Amit K Gupta, Rajeev Pratap Singh, M. Hakimi Ibrahim, Byeong-Kye (2012)** “**AGRICULTURAL UTILIZATION OF FLY ASH AND ITS CONSEQUENCES**” published in the book “Sustainable Agriculture Reviews” edited by Dr. Eric Lichtfouse and published by Springer in volume 8, pp269-286.
4. P. S. Chauhan, A. Singh, **R. P. Singh**, and M. H. Ibrahim (2012) “**ENVIRONMENTAL IMPACTS OF ORGANIC FERTILIZERS USAGE IN AGRICULTURE**” published in book “Organic Fertilizers: Types, Production and Environmental Impact” edited by Rajeev Pratap Singh and published by Nova Science Inc., New York. **ISBN: 978-1-62081-422-2**
5. **Rajeev Pratap Singh**, Sonu Singh, Anita Singh, Puneet Singh Chauhan (2012) “**RECLAMATION OF DEGRADED LAND THROUGH FORESTRY PRACTICES**” published in book “Land Management” edited by Surinder Suthar and published by Nova Science Inc., New York. **ISBN: 978-1-62081-421-5.**
6. **Rajeev Pratap Singh**, Parveen Fatemeh Rupani, Anita Singh, Asha Embrandiri, Mahamad Hakimi Ibrahim (2012) Towards Sustainable Palm Oil Production: Minimizing The

Environmental Damage From Palm Oil Processing **published book “Waste management: New Research”** edited by Dr. Ademir S. F. Araújo and published by Nova Science Inc., New York. **ISBN: 978-1-62081-955-1.**

Publication in proceeding

1. **Rajeev P. Singh**, M. Agrawal (2013). **Agricultural utilization of sewage sludge: HM uptake, biochemical, physicochemical and growth responses of Mung bean (*Vigna radiata* L.) plant grown at different amendment rates, pages 74-87.** International conference on waste, wealth and health (ICWWH – 2013), 15th – 17th February, 2013, jointly organized by MPCST, Bhopal and Vijnana Bharti.
2. Shlrene Quaik, Asha Embrandiri, Parveen F. Rupani, **Rajeev P. Singh**, Mahamad H. Ibrahim (2012). **Effect of Vermiwash and Vermicomposting Leachate in Hydroponics Culture of Indian Borage (*Plectranthus ambionicus*) Plantlets.** UMT 11th International Annual Symposium on Sustainability Science and Management 09th – 11th July 2012, Terengganu, Malaysia.
3. Asha Embrandiri, Parveen Rupani, Shlrene Quaik, Hakimi Ibrahim, **Rajeev Singh** (2012). **Palm oil mill wastes (Decanter cake) as soil amendments; heavy metal analysis AND SEM studies and *Abelmoschus Esculentus* (LADY’S FINGER) plants.** Proceeding of an International conference organized by **Universiti Sains Malaysia, Penang, Malaysia from 30 May- 1 June, 2012, pages 412-416.**
4. **Rajeev Pratap Singh**, Mahamad Hakimi Ibrahim, Pooja Singh, Othman Sulaiman (2012). **Towards A sustainable Future: Waste management and vermicomposting in Environmental Education for school children.** Proceeding of an International conference organized by **Universiti Sains Malaysia, Penang, Malaysia from 30 May- 1 June, 2012, pages 497-501.**
5. Azhani Ramli, **Rajeev Pratap Singh**, M. Hakimi Ibrahim (2012). **Use of Decanter cake from palm oil mill as fertilizer supplement: Heavy metal accumulation on leafy vegetables grown at different amendment ratios.** Proceeding of an International conference organized by **Universiti Sains Malaysia, Penang, Malaysia from 30 May- 1 June, 2012, pages 417-420.**
6. **Rajeev Pratap Singh**, Mahamad Hakimi Ibrahim, Asha Embrandiri and Azhani Atifah(2011) **Effect Of Palm Oil Mill Effluent (POME) On Seed Germination, Seedling Growth, Total Chlorophyll And carotenoid Content Of Mung Bean Plant.** INESCO-2011, USM, Penang, Malaysia, 14-16 Oct, 2011.
7. **R. P. Singh**, M. Agrawal and M. Hakimi (2010). **Land application of sewage sludge and fly ash: Single and interactive effects on heavy metal accumulation and yield of mung bean plant.** Proceeding of an International conference organized by **Universiti Sains Malaysia, Penang, Malaysia from 2-4 June, 2010.**

Projects undertaken

1. Funded by University Grants Commission, New Delhi on topic **“Land application of Fly ash and Sewage sludge: Single and Interactive Effects on soil and plants grown”**.
2. Funded by Department of Science and Technology (DST), New Delhi on topic **“Quantification and Characterization of Municipal Solid Waste produced in Varanasi city and composting/ vermicomposting as its sustainable management options”**.

Awards

1. Green Talent – 2011 given by Federal Ministry of Education and Research (BMBF), Germany on 16th December at Berlin, Germany
2. Prosper.Net Scopus Young Scientist award-2012, 1st Runner Up in area of Sustainable Consumption and Production- Award is jointly given by Prosper.Net (United Nations), Humboldt foundation Germany, Scopus and Elsevier.

MPhil dissertation guided

- Guided M.Phil. dissertation to Ms Barkha Vaish on topic entitled “**Agricultural Utilization of Urban Solid Waste Vermicompost: A Sustainable Waste Management Option**”

Seminar / Conference / Workshop Attended

1. Presented a paper titled “ **Energy plantation and Wasteland Utilization in India**” in a international conference on Energy and Environmental Technologies for Sustainable Development, organized by M.N.I.T., Jaipur from 8-10 Oct, 2003.
2. Presented a poster titled “**Effect of sewage sludge amendment on yield and heavy metal accumulation in *Beta vulgaris* plants**” in a third International conference on plant and Environmental pollution (ICPEP-3), organized by International Society of Environmental Botanists (ISEB), N.B.R.I., Lucknow from 29th Nov - 2 Dec, 2005.
3. Presented a poster titled “Use of sewage sludge amendment as fertilizer supplement for wheat.” in TROPICAL ECOLOGY CONGRESS -2007, organized by International Society of Tropical Ecology, B.H. U., Varanasi from 2nd - 5th Dec, 2007.
4. Agrawal M, and Singh, R. P., 2009. **Effect of Sewage Sludge Amendment on Growth, Biomass, Heavy Metal Accumulation and Yield of Mung Bean, Rice and Wheat Plant**, in a 24th **International Conference on Solid Waste Technology and Management** held at **Philadelphia, PA, USA, 15-18 Mar, 2009**.
5. Presented a research paper entitled “**Land application of sewage sludge and fly ash: Single and interactive effects on heavy metal accumulation and yield of mung bean plant**” in an International conference organized by **Universiti Sains Malaysia, Penang, Malaysia from 2-4 June, 2010**.
6. Participated in International Summer School, **BLISS (Building Learning in Sustainability Science)**, 15-19th July, 2013, Organized by TERI University, New Delhi, India.
7. Participated in workshop on “**Alternative Sustainable Processes**” Organized by UGC Networking Resource Centre, Department of Chemical Engineering, Institute of Chemical Technology, Mumbai from 14-18, March, 2012.
8. Participated in workshop on “**Metabolomics: Basics and Application to Plant Sciences**” Organized by The Energy and Research Institute, New Delhi and Universiteit Leiden, Neitherland, from 19-23 November 2012.
9. Participated in workshop on “**Green and Sustainable Technologies**” Organized by The Energy and Research Institute, New Delhi and DST, New Delhi, from 19-22 November 2013.
10. Delivered an invited lecture on “in a Research Seminar in School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia on 5th June, 2013.

11. Delivered an Invited lecture in BRIDGES-2015, organized by DST-Centre for Policy Research, B. B. A. University, (Central University), Lucknow, U.P., India.
12. Chaired a session in the National Conference on “**Sustainable Water Resources Management: Challenges & Opportunities**” on January 20-21, 2015 Organized by Department of Biological Science & University Institute of Management & Commerce (UIMC), Rani Durgavati University, Jabalpur-482001 (M.P.), India.

Training programme attended

- Environment Management System (E.M.S.) at **Hindustan Motors Ltd. Pithampur, Indore, M.P.**
- **Reclamation of degraded land through forestry practices under supervision of Dr. H.M. Behl, Dy. Director and Head Tree biology and biomass section N.B.R.I. Lucknow.**
- **Physico-chemical properties of Dairy effluent and E.T.P. ,** under guidance of **Shri Lal Sahab Singh, Factory Manager, PARAG DAIRY, Varanasi**
- **Water pollution and its management (Legal aspect), under guidance of Shri Vinod Singh, U.P. COLLEGE, Varanasi**
- **Waste water minimization in process industry through pinch technology. Prof. K.K. SRIVASTAVA, Head, Chemical Engineering Dept.I.T. BHU, VARANASI.**

Members of designated societies

- Life member, International Society of Tropical Ecology , B.H. U., Varanasi
- Life member, International Society of Environmental Botanists, N.B.R.I., Lucknow.
- Life member, Asia-Pacific Chemical, Biological& Environmental Engineering Society (APCBEEES), Hongkok.
- Life member, Indian Science Congress Association (ISCA), Kolkata, India.
- Life member, Prof. H. S. Srivastava Foundation for Science and Society, Lucknow.
- Life member, Indian Society of Chemists and Biologists, CDRI, Lucknow

Research interests

Waste management, Sustainable Agriculture, Heavy metal Toxicity, Phytoremediation, Ecotoxicology etc