

1. Name : Ramesh Chandra Tripathi

2. Date of Birth : 15.01.1962

3. Current Position and Address:

Sr. Principal Scientist/ Asst. Professor (AcSIR),
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4. Educational Qualification (Graduation and above)

Degree	University	Year	Class	Subject
B.Sc.	Bundel Khand University, Jhansi (U.P.)	1981	Ist	Maths, Physics, Chemistry
M.Sc. (Mathematics)	Bundel Khand University, Jhansi (U.P.)	1983	Ist	Mathematics
B.Tech (Chem. Tech.) (BioChem.Engg.)	H.B.T.I., Kanpur (Kanpur University, U.P.)	1986	Ist	-
M.Tech (Biotechnology)	Jadavpur University, Calcutta	1988	Ist	-

5. Work experience

Designation	Institute / Company	From	To	Name of the Institution
Research Associate	Jadavpur Univ, Kolkata	1-09-1988	31-05-1989	Planning and execution of the project work
Scientist-B	Central Fuel Research Institute, Dhanbad	19-06-1990	18-06-1995	R&D in solid waste management, Fly ash utilization in agro-forestry sector, GHG mitigation, Ecological reclamation of waste/ degraded lands, ash ponds, mine over burdens, low lands, soil contaminants, occupational health hazards, Atmospheric Biopollution, biomass ash/biochar based slow release K-fertilizer, Bioslubilisation of lignite to humic acid
Scientist-C	-Do-	19-06-1995	18-06-2000	
Scientist-E-I	-Do-	19-06-2000	18-06-2006	
Scientist-E-II	Central Institute of Mining and Fuel Research, Digwadih Campus, Dhanbad	19-06-2006	18-06-2012	
Senior Principal Scientist	-Do-	19-06-2012	To date	

6. Area of specialization

Solid Waste Management (Utilization of fly ash/pond ash in agro-forestry), GHG Mitigation, Bio-reclamation of wasteland/OB dump/Ash pond/Mine spoil/Low lying area, Bio processing of low rank coal.

7. Honors and Awards

- i. CFRI Golden Jubilee Technology Award (Technology Category), 1995-96
- ii. Russell-Ackoff Award for best paper entitled “Solid waste management in TPPs: Environmental impacts of abandoned ash ponds and their biological reclamation”, Proc. Fourteenth International Conference on Solid Waste Technology and Management, Session 10A, 1998, Philadelphia, PA, USA. (joint authorship).
- iii. Begged Two awards for writing scientific papers in Hindi by Rajbhasha Section, CFRI, Dhanbad in September, 1997 (jointly).

8. Fellowship/Scholarship : UGC Fellow ship (M. Tech)

9. No. of Research Publications

- i. Paper in journals: 40
- ii. In conference proceedings: 80
- iii. Invited/keynote addresses: -
- iv. List of best five (5) publications
 1. L.C. Ram, N.K. Srivastava, R.C. Tripathi, S.K. Jha, R.R.P. Roy, A.K. Sinha, G. Singh and V. Manoharan (2006). Management of mine spoil for crop productivity with lignite fly ash and biological amendments. *J. Environmental Management* 79:173-187.
 2. L.C. Ram, N.K. Srivastava, S.K. Jha, A.K. Sinha, R.C. Tripathi, R.E. Masto (2007). Management of lignite fly ash through its bulk use via biological amendments for improving the fertility and crop productivity of soil. *Environmental Management* 40: 438-452.
 3. Ramesh C. Tripathi, Reginald E. Masto and Lal C. Ram (2009) Bulk use of pond ash for cultivation of wheat–maize–eggplant crops in sequence on a fallow land. *Resources, Conservation and Recycling*, 54(2) : 134-139.
 4. R. C. Tripathia; S. K. Jha ; L. C. Ram (2010) Impact of Fly Ash Application on Trace Metal Contents in Some Root Crops, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 32: 6, 576 — 589.

5. R. C. Tripathi¹, S. K. Jha¹, L. C. Ram¹ and V. Vijayan (2013) Fate of radionuclides present in Indian fly ashes on its application as soil ameliorant, Radiation Protection Dosimetry, pp. 1–9 (doi:10.1093).

10. No. of Book authored/ edited - 3

- I. Chapter “A Case Study of Sequestration of Carbon through Afforestation in Agriculture, Forestry and Natural Ecosystems, N.K. Srivastava, L.C. Ram, S.K. Bharati, S.K. Thakur, Joshy George, **R.C. Tripathi** and G. Singh, Published by NATCOM, UNDP & MoEF, Chapter-12 pp. 143-155, 2004.
- II. Editing of National Seminar on Utilisation of Fly ash in agriculture and for Value-added Products, 15-16 Nov, 1999, Editors: L. C. Ram, **R. C. Tripathi**, S. K. Jha, N. K. Srivastava, G. Singh (ISBN No. 81-7525-184-O).
- III. Editing of Proceedings “One Day Techno-fest on Rain Water Harvesting cum Mosquito Control, 24 April 2002.

11. (a) No. of Patents granted/ applied- 2

- i. A synergistic fly ash based soil conditioner cum fertiliser composition, G. Singh, L. C. Ram, S. K. Jha, R. C. Tripathi, N. K. Srivastava, Patent No. 031 NF 2002.
- ii. A process for the manufacture of fly ash –based soil conditioner cum fertilizer, G. Singh, L. C. Ram, S. K. Jha, R. C. Tripathi, **N. K. Srivastava** (Patent number: 230555; Application number 211/DEL/2002; Journal date 2009-03-13).

(b) Technologies developed, licensed and /or commercialized- 1

Developed Fly Ash Soil Amendment Technology (FASAT) for Agro-forestry applications in varying soil types and different agro-climatic conditions. Commercialized in different farmers’ fields for soil amendment, increase in crop yields via improving soil fertility, management of waste/degraded lands, mine over burdens, low lying area, etc. in an eco-friendly manner.

12. Foreign visits:

Was deputed to Poland in August, 1999 for two weeks under CSIR-PAS Scientist’ Bilateral Exchange Protocol, to work in Programme 10 and 11 in the area of (1) Biological Reclamation of Coal Mining/Preparation/Solid

Wastes/Refuse and Coal Combustion solid Waste (Fly Ash); Evaluation of Soil fertility Status or Coal Mining areas, and (2) Microbial and Radiolytic Desulphurisation of High-Sulphur Coals (CFRI in association with RRL, Bhubaneswar).

13. Details of Professional memberships

Reviewer of the following national/ International Journals

- i. International Journal of Agricultural Policy and Research
- ii. Environmental Technology, Taylor and Francis
- iii. African Journal of Agricultural Research
- iv. Journal of Radioanalytical and Nuclear Chemistry
- v. *Sky Journal of Soil Science and Environmental Management*

14. Major contributions (Max. 150 words):

The fly ash soil amendment technology (FASAT) developed by CIMFR (erstwhile CFRI) was demonstrated in farmers fields (>100 fields) in the vicinity of Koradi, Khaparkhera and Chandrapur TPPs (Maharashtra). The results obtained from the field trials for cultivation of different crops such as paddy, wheat, gram, maize, soybean, sugarcane, cotton, onion, brinjal, tomato, etc. are promising especially in respect of growth performance and crop yields (10-40% increase over control) with no adverse effect on the characteristics of soil, crop produce, field and ground water particularly in terms of toxic trace/heavy metals, and radionuclides. The results obtained from the field demonstration trails carried out in the FBC ash filled area (8m depth; 8.9 acre), Jamadoba for growing different wood value, oil yielding, fruit bearing, ornamental plants; developing lawn, floriculture and growing various vegetable crops, have shown encouraging growth performance. The demonstration site has shown improvement in its physico chemical and biological properties with progress of the plant and reclamation period. India is having vast amount of crop residues and agricultural wastes which can be sustainably converted into bio-char otherwise unutilized and burnt causing serious soil and atmospheric pollution. This bio-char will not only act as a sink for carbon in soil but also improve soil productivity in terms of water and nutrients retention and boost biological activity of the soil.

Assessment of soil pollution is usually difficult since its impacts vary in view of land use, soil type, climatic conditions, population characteristics, and the contaminant contact or ingestion rate. Assessment of risk for population in industrial area is more complex and needs establishment of human toxicological & eco-toxicological intervention values as

well as exposure rates over various periods. Major health problems observed in coal based industrial areas are gastro intestinal disorders, arthritis, asthma, skin disorders and headache.

The technology developed on Biosolubilisation of lignite to humic acid using different microbial strains isolated from coal mining areas.

Development of seasonal calendar for prevalence of bio-allergens in coalfields for ascertaining the health status of the workers and people living in and around coalfields so that precautionary measures could be prior to the occurrence of health diseases caused by coalfield specific allergens.

15. Technologies and products/ services

- (a) Developed : 2
- (b) licensed : -
- (c) commercialized: 1

16. Design and prototype developed: -

17. Honours and awards won for technological contributions or sociological impact of R&D: -

Signature