

Profile of Dr Rinku Dey

Name Rinku Dey
Designation Principal Scientist
Discipline Microbiology (Plant Sciences)
Date of joining ICAR 10/01/1997
Date of joining NIASM 26/12/2023
Contact Address (Official) ICAR-National Institute of Abiotic Stress Management,
Malegaon (Kh.), Baramati, Pune – 413 115 (Maharashtra)
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Research Specializations Molecular basis of PGPR-Plant interaction; Development of biofertilizer packages for enhancement of growth, yield and nutrient uptake in crop plants; Endophytic microorganisms and alleviation of abiotic stresses in plants

Education (Post-Graduation onwards & Professional Career)

Sl No.	Institution	Place	Degree Awarded	Field of Study
1	Indian Agricultural Research Institute	New Delhi	M.Sc. Microbiology in 1993	Antibiotic resistant mutants of phosphate 1olubilizing microorganisms
2	Indian Agricultural Research Institute	New Delhi	Ph.D Microbiology in 1997	Rhizobacteria in relation to growth and nutrition of wheat

Position and Employment (Starting with the most recent employment)

Sl No.	Institution	Position	From (date)	To (date)
1	ICAR-National Institute of Abiotic Stress Management, Baramati	Principal Scientist	26-12-2023	Till date
2	ICAR-Directorate of Groundnut Research, Junagadh	Principal Scientist	30-9-2011	22-12-2023
3	Directorate of Groundnut Research, Junagadh	Senior Scientist	30-9-2005	29-9-2011
4	National Research Centre for Groundnut, Junagadh	Scientist (Senior Scale)	10-01-2001	29-9-2005
5	National Research Centre for Groundnut, Junagadh	Scientist	10-01-1997	09-01-2001

Awards/Prize/Certificate/Honour:

1. Awarded **best paper** award for research paper in international conference “Biodiversity, Bioresource and Biotechnology” held at Mysore from 30-31st January 2014.
2. Awarded **first prize** for poster presentation during the National Symposium “Enhancing productivity of groundnut for food and nutritional security” held at National Research Centre for Groundnut, Junagadh, Gujarat, India from 11-13th October, 2004.
3. Awarded **BOYSCAST Fellowship** from DST, Govt. of India during 2005-06.
4. Received DST ‘**Young Scientist Program**’ project on ‘Development of a microbial consortia for enhancing nutrient use efficiency and production of groundnut under low input system’, Department of Science and Technology, Govt. of India (10.92 lakhs)
5. Awarded the **first prize** for research paper during the 2nd International Agronomy Congress held at New Delhi in November, 2002.
6. Agricultural Research Service-National Eligibility Test qualification for lectureship in Agricultural Universities in 1995.
7. Council for Scientific and Industrial Research-University Grants Commission fellowship and National Eligibility Test qualification for lectureship in general universities in 1994.
8. Senior Research Fellowship by Indian Agricultural Research Institute (IARI), New Delhi during 1993-97.
9. Junior Research Fellowship by Indian Agricultural Research Institute (IARI), New Delhi during 1991-93.

Member of Professional Societies:

1. Life member of the Indian Society of Oilseeds Research (ISOR), Hyderabad, India
2. Life member of the Indian Science Congress Association (ISCA), Calcutta, India.
3. Life member of the Association of Microbiologists’ of India (AMI)

Research Grants:

1. Identification and evaluation of biopesticides effective against the storage pests of groundnut bruchid beetle (*Caryedon serratus*) Olivier by Council of Scientific and Industrial Research, Govt. of India and completed in March, 2002 (Rs. 20.75 lakhs).
2. Identification of efficiently nodulating and nitrogen fixing strains of *Bradyrhizobium* in Gujarat and their application by Department of Science and Technology, Govt. of India and completed in November, 2002 (Rs. 11.63 lakhs).
3. Formulation of mixed biofertilizers and testing in cropping systems, Indian Council of Agricultural Research, duration from 01.04.2004 to 31.03.2007 (2.25 lakhs)
4. Network project on AINP-Biofertilizer from 1.04.2008 to 31.12.2012 (17.0 lakhs)
5. Exploring Microbial Diversity in Kutch Ecoregion of Gujarat for Agricultural and Industrial Applications (1.04.2007 to 31.12.2014); ICAR; 70 lakhs
6. Diversity analysis of *Bacillus* and other predominant genera in extreme environments and its utilization in Agriculture from 07.01.2009 to 31.12.2013 (NAIP; 63.65 lakhs)

7. Bioprospecting of novel genes and allele mining for abiotic stress tolerance from 9th May, 2009 to 30.06.2014 (NAIP; 73.65 lakhs)
8. Unraveling the biochemical and molecular basis of bacterial and fungal endosymbiosis for abiotic stress tolerance in crop plants from 1st June, 2011 to 31.05.2016 (NFBSFARA; 249.2692 lakhs)
9. Role of Archaeobacteria in Alleviation of Salinity and Moisture Stress in Plants from 1st July, 2012 to 30.06.2015 (NFBSFARA; 54.4347 lakhs)
10. Network project on AINP-Soil Biodiversity-Biofertilizers from 1.04.2014 to 31.12.2017 (30.0 lakhs)
11. Exploring the diversity of extreme halophiles by functional and comparative genomics for isolating novel genes and alleles for affording salinity tolerance to crop plants from 01.04.2014 to 31.03.2017 under AMAAS (50.0 lakhs)
12. Alleviation of moisture-deficit stress in groundnut, soybean, chickpea, and pigeon pea by application of endophytic bacteria from 01.01.2016 to 31.03.2017 under Extramural project of ICAR (80 lakhs)
13. Development of a microbial consortia for enhancing nutrient use efficiency and production of groundnut under low input system, Department of Science and Technology, Govt. of India (10.92 lakhs)

Technologies Commercialized:

- Commercial production of enzyme cellulase from groundnut shell by microbial fermentation
- Commercial production of enzyme protease from de-oiled groundnut cakes by microbial fermentation

Seminar/Symposium/Workshop/Training Attended:

1. **Training programme** “MDP on Priority setting, Monitoring and Evaluation (PME) of Agricultural Research Projects” at ICAR-NAARM from 17-22 December, 2018
2. National Conference on ‘Enhancing productivity of Oilseeds in changing climate scenario’, Jointly organized by the Indian Society of Oilseeds Research, Hyderabad and ICAR-DGR Junagadh at ICAR-DGR, Junagadh, 7-9th April, 2018
3. 13th International Conference on Development of Drylands, CAZRI, Jodhpur, 11-14 February 2019
4. National Conference of Plant Physiology, Junagadh, Gujarat, 13-16 December, 2013.
5. Attended 'General Management Programme for Scientists' at Administrative Staff College of India (ASCI), Hyderabad from 17-28 September 2012.
6. National Symposium “Resource Utilization through integrated farming system and biodiversity conservation in dryland” Kukma, Bhuj, 20-22 December, 2011
7. 4th World Congress on Conservation Agriculture, New Delhi, 4-7th February, 2009
8. Attended learning programme “Safe vegetable production” at AVRDC, ICRISAT, Hyderabad from 1st – 7th October, 2007.
9. National Symposium at National Research Centre for Groundnut, Junagadh, Gujarat, India from 11-13th October, 2004.

10. ICAR sponsored training “Techniques in Biochemistry and Molecular Biology” held at Indian Agricultural Research Institute, New Delhi from 1st Nov. 21st Nov., 2003.
11. 6th Agricultural Science Congress held at CIAE, Bhopal from 14-15TH February, 2003.
12. International symposium on molecular approaches for improved crop productivity and quality held at Coimbatore, Tamil Nadu, India from 22-24th May, 2002.
13. 41th Annual conference of Association of Microbiologists of India (AMI) held at Jaipur in 2001.
14. TCDC International workshop on application of biotechnology in biofertilizer and biopesticides, held at New Delhi from 15-18th October, 1997.

Publications

In Journals:

1. Pal, K. K., **Rinku Dey**, Bhatt, D. M. and Chauhan, S. (1999). Enhancement of groundnut growth and yield by plant growth promoting rhizobacteria. *International Arachis Newsletter* 19: 51-53.
2. Pal, K. K. and **Dey, R.** (1999). A simple, rapid and non-destructive method for screening aluminium toxicity tolerance in groundnut. *International Arachis Newsletter* 19: 44-46.
3. **Rinku Dey**, Pal, K. K., Chauhan, S. and Bhatt, D. M. (1999). Deleterious rhizobacteria associated with groundnut. *International Arachis Newsletter* 19: 47-50.
4. **Dey, R.**, Pal, K. K., Chauhan, S. M. and Bhatt, D. M. (2000). Field evaluation of plant growth promoting rhizobacteria of groundnut. *International Arachis Newsletter* 20: 77-79.
5. Pal, K. K., Tilak, K. V. B. R., Saxena, A. K., **Dey, R.** and Singh, C. S. (2000). Monitoring of a biocontrol rhizobacterium *Pseudomonas glumae* EM85 using Tn5:: *lacZ* marker. *Indian Journal of Microbiology* 40: 21-24.
6. Pal, K. K., Tilak, K. V. B. R., Saxena, A. K., **Dey, R.** and Singh, C. S. (2000). Enhancement of phosphate solubilization and siderophore production by Tn5 mutagenesis of a biocontrol rhizobacterium *Pseudomonas* sp. EM85. *Journal of Microbial World* 2: 9-15
7. Pal, K. K., Tilak, K. V. B. R., Saxena, A. K., **Dey R.** and Singh, C. S. (2000). Antifungal characteristics of a fluorescent *Pseudomonas* strain involved in the biological control of *Rhizoctonia solani*. *Microbiological Research* 155: 233-242.
8. Pal, K. K., **Dey, R.**, Bhatt, D. M. and Chauhan, S. M. (2000). Plant growth promoting fluorescent pseudomonads enhanced peanut growth, yield and nutrient uptake. Auburn University Web Site Available: <http://www.ag.auburn.edu/argentina/pdfmanuscript/pal.pdf> [Accessed 11.24.2000] 12 pages
9. Pal, K. K., Tilak, K. V. B. R., Saxena, A. K., **Dey, R.** and Singh, C. S. (2001). Suppression of maize root diseases caused by *Macrophomina phaseolina*, *Fusarium moniliforme* and *Fusarium graminearum* by plant growth promoting rhizobacteria. *Microbiological Research* 156: 209-223
10. **Dey, R.**, Pal, K. K. and Kavimandan, S. K. (2001). Effect of wheat rhizobacteria on its growth under gnotobiotic conditions. *Journal of Microbial World* 3: 1-10.
11. **Dey, R.**, Pal, K. K., Chauhan, S. M., Bhatt, D. M. and Misra, J. B. (2001). Cellulolytic and groundnut shell decomposition potential of some microorganisms. *Indian Journal of Microbiology* 42: 165-167.

12. Pal, K. K., **Dey, R.** and Bhatt, D. M. (2004). Groundnut (*Arachis hypogaea* L.) growth, yield and nutrient uptake as influenced by inoculation of plant growth promoting rhizobacteria. *Journal of Oilseeds Research* **21**(2): 284-287.
13. **Dey, R.**, Pal, K. K., Bhatt D. M. and Chauhan, S. M. (2004). Growth promotion and yield enhancement of peanut (*Arachis hypogaea* L.) by application of plant growth promoting rhizobacteria. *Microbiological Research* **159**(4):371-394
14. Tilak, K.V.B.R., Ranganayaki, N., Pal, K.K., **Dey, R.**, Saxena, A.K., Nautiyal, C.S., Mittal, S., Tripathi, A.K. and Johri, B.N. (2005). Diversity of plant growth and soil health supporting bacteria. *Current Science* **89** (1): 136-150.
15. **Dey, R.**, Pal, K. K. and Tilak, K.V.B.R. (2011). Influence of soil and plant types on diversity of rhizobacteria. Proceedings of National Academy of Sciences, India Section B: Biological Sciences. DOI 10.1007/s40011-012-0030-4.
16. Thomas M., Pal, K. K., **Dey, R.**, Saxena, A. K., and Dave, S. R. (2012). A novel haloarchaeal lineage widely distributed in the hypersaline marshy environment of little and great Rann of Kutch in India. *Current Science*, 103(9): 1078-1084.
17. Pal, K.K., **Dey, R.**, Sherathia, D., Dalsania, T., Savsani, K., Patel, I., Thomas, M., Ghorai, S., Vanpariya, S., Rupapara, R., Acharya, N., Rawal, P., Joshi, P., Sukhadiya, B., Mandaliya, M., and Saxena, A.K. (2013). Draft genome sequence of *Salinibacillus aidingensis* strain MSP4, an obligate halophilic bacterium isolated from a salt crystallizer of the Rann of Kutch, India. *Genome Announc.* 1(4):e00253-13. doi:10.1128/genomeA.00253-13.
18. Pal, K.K, **Dey, R.**, Thomas, M., Sherathia, D., Dalsania, T., Patel, I., Savsani, K., Ghorai, S., Vanpariya, S., Sukhadiya, B., Mandaliya, M., Rupapara, R., Rawal, P., and Saxena, A.K. (2013). Draft genome sequence of *Bacillus* sp. strain SB47, an obligate extreme halophilic bacterium isolated from a salt pan of the Little Rann of Kutch, India. *Genome Announc.* 1(5):e00816-13. doi:10.1128/genomeA.00816-13.
19. **Dey, R.**, Pal, K.K., Sherathia, D., Dalsania, T., Savsani, K., Patel, I., Thomas, M., Ghorai, S., Vanpariya, S., Rupapara, R., Rawal, P., Sukhadiya, B., Mandaliya, M., and Saxena, A.K. (2013). Draft genome sequence of *Bacillus* sp. strain NSP9.1, a moderately halophilic bacterium isolated from salt marsh of the Great Rann of Kutch, India. *Genome Announc.* 1(5):e00835-13. doi:10.1128/genomeA.00835-13.
20. **Dey, R.**, Pal, K.K., Sherathia, D., Dalsania, T., Savsani, K., Patel, I., Sukhadiya, B., Mandaliya, M., Thomas, M., Ghorai, S., Vanpariya, S., Rupapara, R., Rawal, P., and Saxena, A.K. (2013). Draft genome sequence of *Bacillus* sp. strain NSP2.1, a nonhalophilic bacterium isolated from salt marsh of the Great Rann of Kutch, India. *Genome Announc.* 1(5):e00909-13. doi:10.1128/genomeA.00909-13.
21. Pal, K.K, **Dey, R.**, Thomas M, Sherathia D, Dalsania T, Patel I, Savsani K, Ghorai S, Vanpariya S, Sukhadiya B, Mandaliya M, Rupapara R, Rawal P. (2013). Draft genome sequence of the extremely halophilic *Bacillus* sp. strain SB49, isolated from a salt crystallizer pond of the Little Rann of Kutch, India. *Genome Announc.* 1(5):e00869-13. doi:10.1128/genomeA.00869-13.
22. Pal, K.K., **Dey R.**, Sherathia D, Sukhadiya B, Dalsania T, Patel I, Savsani K, Thomas M, Vanpariya S, Mandaliya M, Rupapara R, Rawal P, Ghorai S, Bhayani S, Shah A, Saxena AK. (2013). Draft genome sequence of an obligate and moderately halophilic bacterium, *Thalassobacillus devorans* strain MSP14, the first draft genome of the genus *Thalassobacillus*. *Genome Announc.* 1(6):e01103-13. doi:10.1128/genomeA.01103-13.
23. **Dey R.**, Pal, K.K., Sherathia D, Vanpariya S, Patel I, Dalsania T, Savsani K, Sukhadiya B, Mandaliya M, Thomas M, Ghorai S, Rupapara R, Rawal P. (2013). Draft genome sequence of

the obligate halophilic *Bacillus* sp. strain NSP22.2, isolated from a seasonal salt marsh of the Great Rann of Kutch, India. *Genome Announc.* 1(6):e01104-13. doi:10.1128/genomeA.01104-13.

24. Ghorai, S., Pal, K. K., **Dey, R.** and Jasrai, Y. T. (2013). A comparative study of effect of rhizobacteria onto seedling vigour of groundnut in in vitro conditions isolated from Kutch region. *Scholars Academy Journal of Biosciences.* 1(5):179-182.
25. Pal, K.K., **Dey R.**, Sherathia D, Vanpariya S, Patel I, Dalsania T, Savsani K, Sukhadiya B, Mandaliya M, Thomas M, Ghorai S, Rupapara R, Rawal P, Shah A, Bhayani S. (2014). Draft genome sequence of a moderately halophilic *Bacillus megaterium* strain, MSP20.1, isolated from a saltern of the Little Rann of Kutch, India. *Genome Announc.* 2(1):e01134-13. doi:10.1128/genomeA.01134-13.
26. **Dey R.**, Pal, K.K., Sherathia D, Sukhadiya B, Dalsania T, Patel I, Savsani K, Thomas M, Vanpariya S, Mandaliya M, Rupapara R, Rawal P, Ghorai S, Bhayani S, Shah A, Saxena AK. (2014). Insight into the first draft genome sequence of the genus *Sediminibacillus*, *Sediminibacillus halophilus* strain NSP9.3. *Genome Announc.* 2(1):e01133-13. doi:10.1128/genomeA.01133-13.
27. Pal, K.K., **Dey, R.**, Thomas, M., Ghorai, S., Sherathia, D., Vanpariya, S., Rupapara, R., Rawal, P., Mandaliya, M., Sukhadiya, B. and Saxena, A.K. (2014). Draft genome sequence of an extreme Haloarchaeon 3A1-DGR isolated from a saltern crystallizer of the Little Rann of Kutch, India. *Indian Journal of Microbiology* 54 (4): 471-473.
28. Yadav, A.N., Verma, P., Kumar, M., Pal, K.K., **Dey, R.**, Gupta, A., Padaria, J.C., Gujar, G.T., Kumar, S., Suman, A., Prasanna, R. and Saxena, A.K. (2015). Diversity and phylogenetic profiling of niche-specific bacilli from extreme environments of India. *Ann. Microbiol.* 65(2):611-629.
29. Ghorai, S., Pal, K. K. and **Dey, R.** (2015). Alleviation of salinity stress in groundnut by application of PGPR. *International Research Journal of Engineering and Technology*, 2(3): 742-750.
30. Yadav, A.N., Sharma, D., Gulati, S., Singh, S., **Dey, R.**, Pal, K. K., Kaushik, R. and Saxena, A.K.(2015). Haloarchaea endowed with phosphorus solubilization attribute implicated in phosphorus cycle. *Nature Sci. Rep.* 5, 12293; doi, 10.1038/srep 12293.
31. Ghorai, S., Pal, K. K. and **Dey, R.** (2016). Evaluation of the wild type and Tn5:: gusA mutants of *Enterobacter* sp. R29 and *Pseudomonas aeruginosa* AMAAS57 on growth and yield of groundnut. *International Research Journal of Engineering and Technology*, 2(9): 2649-2655.
32. Sherathia, D., **Dey, R.**, Thomas, M., Dalsania, T, Savsani, K. and Pal, K. K. (2016). Biochemical and molecular characterization of DAPG-producing plant growth-promoting rhizobacteria (PGPR) of groundnut (*Arachis hypogaea* L.). *Legume Research*, 39(4): 614-622.
33. Bhaduri, D., Mandal, A., Chakraborty, K., Chatterjee, D. and **Dey, R.** (2017). Interlinked chemical-biological processes in anoxic waterlogged soil – A review. *Indian J. Agricultural Sciences* 87(12): 1587-1599
34. Holajjer P., **Dey, R.**, Pal K.K., Chakraborty K., Harish G., Nataraja M.V., Deepak, E. (2018). Assessment of nematicidal properties of fluorescent pseudomonads using peanut root-knot nematode, *Meloidogyne arenaria*. *Journal of Biological Control*, 32(3): 193-202.
35. Yadav, A.N., Gulati, S., Sharma, Singh, R. N., Rajawat, M. V. S., Kumar, R., **Dey, R.**, Pal, K.K., Kaushik, R. and Saxena, A. K. (2019). Seasonal variations in culturable archaea and their plant growth promoting attributes to predict their role in establishment of vegetation in Rann of Kutch. *Biologia*, doi.org/10.2478/s11756-019-00259-2.

36. Pal KK, **Dey R**, Sherathia DN, Devidayal, Mangalassery S, Kumar A, Rupapara RB, Mandaliya M, Rawal P, Bhadania RA, Thomas M, Patel MB, Maida P, Nawade BD, Ahmad S, Dash P and Radhakrishnan T (2021). Alleviation of salinity stress in peanut by application of endophytic bacteria. *Front. Microbiol.* 12:650771. doi: 10.3389/fmicb.2021.650771
37. Reddy KK, **Dey R**, Bhadania RA, Ladumor KB, Ahmad S, Dash P and Pal KK (2021). Enhancing uptake of K and Zn and improving yield of groundnut by application of K- and Zn-solubilizing bacteria. *Legume Research*. DOI:10.18805/LR-4778 vol. 46 (5): 592-598
38. Pal KK and **Dey R**. (2022). Interlinking soil microbial diversity and rhizodeposition for enhancing nutrient uptake and productivity. *Indian J. Plant Genet. Resour.* 35(3): 360-364.
39. Ananth Kurella, **Rinku Dey**, Harish G, Nataraja Maheshala, Harshil Parmar, Padavi R D and Praharaj C S. (2022). Response of Groundnut (*Arachis hypogaea* L.) Varieties to Leaf Spot Diseases. *Frontiers in Crop Improvement Journal*. Vol. 10, 2022. , pages 1620-22
40. Sushmita Singh, Amrit Lal Singh, Kamal Krishna Pal, Kiran K Reddy, Gangadhara K, **Rinku Dey**, M K Mahatma, Aman Verma, Narendra Kumar, CB Patel, Lokesh Kumar Thawait, Suhail Ahmed, Radha Navapara, Kirti Rani and Praveen Kona (2023). Accumulation of resveratrol, ferulic acid and iron in seeds confer iron deficiency chlorosis tolerance to a novel genetic stock of peanut (*Arachis hypogaea* L.) grown in calcareous soils. *Physiology and Molecular Biology of Plants* <https://doi.org/10.1007/s12298-023-01321-9>.
41. KK Pal, **Rinku Dey**, K Chakraborty, R Bhadania, MK Mahatma, AL Rathnakumar, B Nawade, P Dash, Ajay BC, Suhail Ahmad, Narendra Kumar, S Acharya and Radhakrishnan T (2023). DGRMB5 (IC0637587; INGR21060), a Groundnut (*Arachis hypogaea*) germplasm tolerant to salinity. CAM (Crassulacean Acid Metabolism) variant. *Indian J. Plant Genetic Resources* 36(1): 172-173.
42. KK Pal, **Rinku Dey**, K Chakraborty, R Bhadania, MK Mahatma, AL Rathnakumar, B Nawade, Ajay BC, Suhail Ahmad, S Acharya, Narendra Kumar, P Dash, and Radhakrishnan T (2023). DGRMB19 (IC0637588; INGR21061), a Groundnut (*Arachis hypogaea*) germplasm tolerant to salinity. CAM (Crassulacean Acid Metabolism) variant. *Indian J. Plant Genetic Resources* 36(1): 173-174.

Book

Tilak, K. V. B. R., Pal, K. K. and **Dey, R**. (2010). *Microbes for sustainable agriculture*. IK International, New Delhi

Book Chapters

1. Ghosh, P. K., **Dey, R.**, Pal, K. K. and Mathur, R. K. (2000). Groundnut. *In: Techniques and Management of Field Crop Production* (Ed. P. S. Rathods). Agrobios India, pp. 153-177.
2. **Dey, R.**, Pal, K. K. and Tilak, K. V. B. R. (2004). Interaction of plant growth promoting rhizobacteria and AM fungi: present status and future prospects (Eds. Gopi K. Podila and Ajit K. Varma), IK International Pvt. Ltd., New Delhi, pp. 83-110.
3. Pal, K. K., **Dey, R.** and Kulkarni, J. H. (2004). Biofertilizers for enhancing groundnut production. *In: Groundnut Research in India* (Eds. M. S. Basu and N. B. Singh), NRCG, Junagadh, pp. 339-387.

4. **Dey, R.**, Pal, K. K. and Misra, J. B. (2004). Groundnut byproducts and their utilization. *In: Groundnut Research in India* (Eds. M. S. Basu and N. B. Singh), NRCG, Junagadh, pp. 468-476.
5. Pal, K.K., **Dey, R.** and Tilak, K.V.B.R. (2013). Microbiology education for biotechnology industries. In 'Evolving Corporate Education Strategies for Developing Countries: The Role of Universities', IGI Global Publications (Eds. BPR Narasimarao, KS Rangappa and TU Fulzele), pp. 209-227.
6. Sharma, M., Prasad, R. D., Pal, K. K. and **Dey, R.** (2014). Application of AM fungi for improving productivity of major annual oil-seed crops in "Mycorrhizal Fungi: Use in Sustainable Agriculture and Forestry", edited by Zakaria M. Solaiman, Lynette K. Abbott and Ajit Varma. Springer
7. **Dey R.**, Pal, K.K. and Tilak, K.V.B.R. (2014). Ecology, diversity and application of plant growth promoting rhizobacteria. In 'Trends in Soil Ecology', Studium Press LLC, USA (Series editors – DP Singh and HB Singh), pp. 115-140.
8. **Dey R.**, Pal, K. K. and Tilak, K. V. B. R. (2014). Plant Growth Promoting Rhizobacteria in Crop Protection and Challenges. In 'Future Challenges in Crop Protection Against Fungal Pathogens', Springer (Eds. C. Manoharachary and Akash Goyal).
9. Pal, K. K., **Dey, R.** and Tilak, K. V. B. R. (2014). Fungal Diseases of Groundnut: Control and Future Challenges. In 'Future Challenges in Crop Protection Against Fungal Pathogens', Springer (Eds. C. Manoharachary and Akash Goyal).
10. Sharma, M.P., Sharma, S.K., Prasad, R.D., Pal, K. K., **Dey, R.** (2014). Application of arbuscular mycorrhizal fungi in production of annual oilseed crops. *Mycorrhizal Fungi: Use in Sustainable Agriculture and Land Restoration*. (Editors: Solaiman Z.M., Abbott L.K. and Varma, A.K.). *Soil Biology* 41, DOI 10.1007/978-3-662-45370-4_8. Springer-Verlag Berlin Heidelberg, pp. 119-148.
11. Pal, K.K. and **Dey, R.** (2017). Application of endophytic microorganisms for alleviation of abiotic stresses in crop plants. In: *Microbes for Plant Stress Management* (Editors: D.J. Bagyaraj and Jamaluddin). New India Publication Agency, New Delhi, India, pp. 161-181.
12. **Dey, R.**, Pal, K. K., Thomas M., Sherathia D. N., Mandaliya, V. B., Bhadania, R. A., Patel, M. B., Maida, P., Mehta, D. H., Nawade, B. D., Patel, S. V. (2018). Endophytic Microorganisms: future tool to climate resilient agriculture. In: *Microbes for Climate Resilient Agriculture* (Editors: PL Kashyap, A. Srivastava and S. Kumar). John Wiley & Sons, pp. 235-253.
13. Thomas, M., Pal, K.K. and **Dey R** (2018). Archaeal community structure: Resilience to climate change. In: Kashyap PL, Srivastava AK, Tiwari SP and Kumar S (Ed.) *Microbes for Climate Resilient Agriculture*, pp. 191-203. John Wiley & Sons

Training Manual

1. K. K. Pal & **Rinku Dey** (2009). *Molecular Techniques in Rhizobial Characterisation*. Directorate of Groundnut Research, Junagadh. Pp. 1-25.

Proceeding Papers

1. Pal, K. K., **Dey, R.**, Chauhan, S. M. and Bhatt, D. M. (2000). Groundnut growth and yield as influenced by soil inhabiting plant growth promoting rhizobacteria. Extended summary:

International Conference on Managing Natural Resources for Sustainable Agricultural Production in the 21st century, New Delhi, India, February, 14-18, Volume 2, pp. 670-671.

2. **Dey, R.**, Pal, K. K. and Bhatt, D. M. (2002). Rhizosphere competent pseudomonads as potential biofertilizer for groundnut. International symposium on molecular approaches for improved crop productivity and quality. Coimbatore, India, May 22-24, Extended Summary, pp. 31-32.
3. Pal, K. K., **Dey, R.** and Bhatt, D. M. (2002). Plant growth promoting rhizobacteria as bioinoculants for groundnut. 2nd International Agronomy Congress, New Delhi, 26-30 November, 2002, Extended Summary, Volume 2, pp. 903-904.
4. Pal, K. K., **Dey, R.**, Bhatt, D. M. and Chauhan, S. M. (2003). Groundnut yield as influenced by application of plant growth promoting rhizobacteria. National Seminar on Stress Management in Oilseeds for Attaining Self-reliance. Hyderabad, January 28-30, pp. 174-175.
5. Pal, K. K., **Dey, R.**, Bhatt, D. M. and Chauhan, S. M. (2003). Growth promotion and yield enhancement of peanut by application of plant growth promoting rhizobacteria. 6th International PGPR workshop to be held at Calicut, Kerala, India from 6-10th October, 2003.
6. Pal, K. K., **Dey, R.**, Basu, M. S., Bhatt, D. M., Singh, S. P. and Dash, P. (2004). Application of PGPR for enhancing yield of bold seeded groundnut. National Symposium on "Enhancing Productivity of Groundnut for Sustaining Food and Nutritional Security", held at NRCG, Junagadh, Gujarat from 11-13th October, 2004. Short papers, pp. 186-188
7. **Dey, R.**, Pal, K. K., Chauhan, S. M. and Misra, J. B. (2004). Potential of producing proteases from de-oiled groundnut cake by microbial fermentation. National Symposium on "Enhancing Productivity of Groundnut for Sustaining Food and Nutritional Security", held at NRCG, Junagadh, Gujarat from 11-13th October, 2004. Short papers, pp. 221-223.
8. Pal, K. K. and **Dey, R.** (2005). Basis of growth promotion and yield enhancement of peanut by fluorescent pseudomonads. XV International Plant Nutrition Colloquium, Sept. 14-19, 2005. Beijing. The People's Republic of China. C. J. Li et. al. (Eds.), Plant Nutrition for food security, human health and environmental protection. Short paper, pp. 818-819.
9. Abhi Shah, Sharmila Bhayani, Pal K. K., **R. Dey**, A. L. Rathnakumar, and H. B. Lalwani (2013). Diversity of phyllosphere bacteria as influenced by groundnut genotypes. National Conference of Plant Physiology on "Current Trends in Plant Biology Research", 13-16 December 2013, Junagadh. Pp. 721-722.
10. D. Sherathia, **R. Dey** and Pal K. K. (2013). Isolation and characterization of DAPG-producing fluorescent pseudomonads for plant growth promoting and biocontrol traits. National Conference of Plant Physiology on "Current Trends in Plant Biology Research", 13-16 December 2013, Junagadh. Pp. 342-343.
11. Pal K.K., **R. Dey**, S.P. Singh, P. Dash, V. Parmar, A. Chudasama and S.M. Chauhan (2013). Enhancing growth and yield of groundnut by application of competitive strains of groundnut rhizobia. National Conference of Plant Physiology on "Current Trends in Plant Biology Research", 13-16 December 2013, Junagadh. Pp. 719-720.
12. M. Thomas, Pal K. K. and **R. Dey** (2013). Understanding the mechanisms of osmotolerance in the archaeobacterium *Haloferax volcanii* H1 for isolating osmolerant genes. National Conference of Plant Physiology on "Current Trends in Plant Biology Research", 13-16 December 2013, Junagadh. Pp. 500-501

13. M. Mandaliyaa, R. Rupapara, N. Acharyaa, K. Hudkaa, **R. Dey**, Devidayal, Arvindkumar, Ravi, A. B., D. Sherathia, M. Thomas, P. Rawal, B. Sukhadiya, S. Vanpariya, Pal K. K. (2013). Studying the diversity of endophytic bacteria in groundnut for possible application in alleviation of abiotic stresses. National Conference of Plant Physiology on “Current Trends in Plant Biology Research”, 13-16 December 2013, Junagadh. Pp. 502-503.
14. **R. Dey**, Pal K. K., S. P. Singh, P. Dash, V. Parmar, A. Chudasma, and S. M. Chauhan (2013). Application of DAPG-producing fluorescent pseudomonads for suppressing stem rot pathogen and enhancing yield of groundnut. National Conference of Plant Physiology on “Current Trends in Plant Biology Research”, 13-16 December 2013, Junagadh. Pp. 329-330.
15. R. Rupapara, N. Acharya, K. Hudka, M. Mandaliya, **R. Dey**, Devidayal, Arvindkumar, Ravi, A. B., D. Sherathia, M. Thomas, P. Rawal, B. Sukhadiya, S. Vanpariya, Pal K. K. (2013). Alleviation of salinity stress in groundnut by application of endophytic bacteria. National Conference of Plant Physiology on “Current Trends in Plant Biology Research”, 13-16 December 2013, Junagadh. Pp. 504-505.
16. S. Vanpariya, Pal K. K. and **R. Dey** (2013). Quest for isolating salinity tolerant gene(s) from extreme halophilic fungus *Aspergillus sydowii* BF5. National Conference of Plant Physiology on “Current Trends in Plant Biology Research”, 13-16 December 2013, Junagadh. Pp. 506-507
17. Sharmila Bhayani, Abhi Shah, Pal K.K., **R. Dey**, P. Dash, S.M. Chauhan, Vinod Parmar and Ashwin Chudasama (2013). DAPG-producing fluorescent pseudomonads for enhancing growth and yield of groundnut. National Conference of Plant Physiology on “Current Trends in Plant Biology Research”, 13-16 December 2013, Junagadh. Pp. 818-819.

Popular Articles

1. Pal, K. K., **Dey, R.**, J. P. Singh and B. H. Joshi. (2000). Biological control of groundnut bruchid: A serious storage pest of groundnut. *SAIC Newsletter* 10(1): 4&8.
2. Pal, K. K., Singh, J. P., Joshi, B. H. and **Dey, R.** (2001). Mungphali ke bhandaran keet bruchid bhringe (*Caryedon serratus*) ka jaivik niantran. *Krishi Chayanika* (Oct. – Dec.), pp. 12-13.
3. **Dey, R.** and Pal, K. K. (2006). Enhancement of plant growth by beneficial bacteria. The State Agricultural Technologists’ Service Association, West Bengal, *Satsa Mukhopatra* 10: 29-34.

Technical Bulletin

1. Misra, J. B., **Dey, R.**, Pal, K. K., Chauhan, S., Girdhar, V and Jain, V. K. (2006). Nutritious and delicious groundnut preparations: some recipes. National Research Centre for Groundnut, Junagadh-362 001, India. 26 pages.
2. Pal, K. K. and **Dey, R.** (2014). Mungphali ki paidavar mein vridhi ke liya jaiv-urvarakon ka prayog. ICAR-Directorate of Groundnut Research, Junagadh 362001, India. 26 pages.
3. **Dey, R.** and Pal, K. K. (2014). Biofertilizers for enhancing groundnut productivity. ICAR-Directorate of Groundnut Research, Junagadh 362001, India. 32 pages.

MSc Dissertation/Thesis Guided:

1. Amitha, M. B. (2007). Improvement of protease production potential of *Bacillus* strain by mutagenesis. J. J. College of Arts and Science, Pudukkattai, Kerela.
2. Safi M. A. (2007). Creating deficient and overproducing mutants of *Pseudomonas fluorescens* ACC7 by mutagenesis. J. J. College of Arts and Science, Pudukkottai, Kerela.
3. Kinjal Savsani (2008). Production of proteases from de-oiled groundnut cake by solid substrate fermentation. M. B. Patel Science College, S. P. University, Anand, Gujarat.
4. Sherathia, D. N. (2010). Characterisation and evaluation of DAPG-producing groundnut rhizobacteria”. Ashok and Rita Institute of Integrated Study and Research in Biotechnology and Allied Sciences, New Vallabh Vidyanagar, Gujarat