

## Dr. Nandita Singh



**Presently – Consultant Scientist CSIR-NBRI**

**Former Senior Principal Scientist CSIR-NBRI & Professor AcSIR**

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CSIR-National Botanical Research Institute  
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**Qualification:** (Name of University; year of passing; field of specialization):

PhD Botany; Banaras Hindu University University (1981);

M. Sc.- Botany, Banaras Hindu University (1977);

M.Sc. – Environmental Impact Assessment and Auditing, University of East Anglia, U.K. (1998)

BSc- Chemistry, Botany & Zoology, Agra University (1975)

Name of the Labs./Instts.: **CSIR-National Botanical Research Institute, Lucknow**

### **Career progression chronologically:**

Consultant Scientist (Sept 2016 to date)

Senior Principal Scientist (2013-2016)

Principal Scientist (2008- 2013)

Scientist E-I (2004-2008)

Scientist C (1999-2004)

### **Broad Areas of Research**

- **Environmental Knowledge Base (Plants and Pollution)** – 2004-2016
- **Environmental Impact Assessment** – industries and development projects
- **Greenbelt Designing**
- **Ecotoxicology** – Heavy metal – Arsenic, Pesticides
- **Phyto/Bio remediation** – arsenic, Pesticides
- **Biofuel** – Jatropha, Pongamia
- **Bio-indicators** – air pollutants, arsenic
- **Climate Change**- C sequestration in forest ecosystem

### **Administrative & Management Experience**

1. AcSIR –Professor
2. Member of CSIR-NBRI Committees
3. Head of Department - DU-3 Plant Ecology and Environmental Sciences (2015-16)
4. UGC nominee - Governing body of Govt. College for Women Sambhasiva Peta, Guntur (A.P.) (2014-2019)
5. Member of Board of Studies - Deptt. of Environmental Sciences, Mohammad Ali Jauhar University, Rampur
6. UGC appointed Subject Expert in Board of Studies - Dept. of Botany and Environmental Sciences, Guru Nanak Dev University, Amritsar
7. Organizer of International Events-
  - International Workshop on Climate Change & its Impact on Flora in the South Asia Region (March 9-12, 2008) organised by NBRI and SACEP

- International Conferences on Plants and Pollution ICPEP-5 (Feb 24-27, 2015) at NBRI. Jointly organised by ISEB and NBRI
- International Conferences on Plants and Pollution ICPEP-6 (Nov 24-27, 2018) at NBRI. Jointly organised by ISEB and NBRI

#### Awards / Recognitions

1. **Fulbright Post-doc Fellowship (2002-2003)** from J. William Fulbright Foreign Scholarship Board and U.S. Department of State
2. **Joint Japan/World Bank Graduate Scholarship (1997-98)** from World Bank, USA
3. **Certificate of Merit in CSIR Leadership Development Program LDP-09-01**
4. **Scientist Pool (1990-1993)** Scholarship from CSIR, India
5. **Research Associateship (1985-1990)** from CSIR, India
6. **Post doctoral Fellowship (1981-1982)** from CSIR, India
7. **Junior and Senior Research Fellowship (1977-1981)** from CSIR, India
8. **B.H.U. Merit Scholarship (1977)** from B.H.U., Varanasi

#### Post-Doctoral Experience/Visit Abroad

Place	Duration	Purpose
School of the Environment, Nanjing University, China	Sept 3-5, 2018	Invited for Lecture and discussion with faculty members for collaborative project
Institute of Soil Sciences, Chinese Academy of Sciences, Nanjing, China	Sept 5, 2018	Invited lecture in Soil and Environmental Bioremediation Research Center on Phyto-remediation
College of Ecology and Soil and water conservation, Southwest Forestry University, Kunming, China	Sept 6 to 9, 2018	Invited for lecture and interaction with faculty and students on the perspectives of Phyt-remediation and micro-remediation
Eight International Phytotechnology Conference, Portland, USA	Sept 13 to 16, 2011	Participation and presentation of paper
International Symposium on Trace Elements and Health – Trace Elements in Agroecosystems and Human Health, Hangzhou, Zhejiang Province, China	Oct 8 to 14, 2004	Participation and presentation of paper
Fulbright Post Doc Fellow at University of Florida, Gainesville, USA Worked with Prof. Lena Q.Ma	Jan 27 to Sept 26, 2003	Research work on Phytoremediation of arsenic by plants
Department of Environmental Sciences, University of East Anglia, Norwich, U.K.	Sept 12, 1997 to Aug 1998	M.Sc. in 'Environmental Impact Assessment and Auditing' Sponsored through Joint Japan/World Bank Graduate Scholarship Program 1997/1998
Vth International Conference on Precipitation, Scavenging and Atmosphere Surface Exchange Process, Richland, Washington, USA	July 15 to 19, 1991	Participation and presentation of paper

#### 12. Invited Lectures National Level State/University/Industries

1. USEFI : Environmental Impact Assessment of Pollution from Agriculture 8-11 April, 2008, CRRRI Cuttack
2. 2<sup>nd</sup> Global Industrial R&D Conclave : India-Czech Technology Partnership for MSMEs , 11-12 May 2010, New Delhi
3. ETNSD 2014- International Conference on Environmental Technology & Sustainable Development: Challenges & Remedies 21-23 Feb, 2014, BBAU Lucknow
4. Current Status and New Horizons of Ecological Sciences and Environmental Biotechnology 1-3 Mar 2013, BHU Varanasi
5. HME 2013 – National Conference on Heavy Metals in the Environment 28-30 Nov 2013, Mahatma Gandhi

- University, Kottayam, Kerala
6. Workshop Climate Change and its Impact on Natural Disasters 5 June 2010 Regional Centre for Urban & Environmental Studies, Lucknow
  7. Ash utilization for sustainable development 4 July 2009, NTPC Korba C.G.

### 13. Research Projects Pursued

#### I. Environmental Impact Assessment Projects

<b>Title of the Project</b>	<b>Funding Agency</b>
EIA study of the proposed Graphic Era Hospital, Dehradun	Graphic Era University, Dehradun
Consultancy study for Expansion of Obra Thermal Power Plan by addition of 2x660 MW at Obra, Tehsil Robertsganj, District Sonebhadra, Uttar Pradesh	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd,
Consultancy work for environment impact study of Dhobhi Ghat improvement project	Tetra Tech India Ltd., New Delhi
Evaluation of floral and faunal diversity and soil microbial biomass in reclaimed sodic land after 10 years of reclamation under UPSLRP_I&II	U.P. Bhumi Sudhar Nigam, Lucknow
Study on impact of fly-ash on crops in the vicinity of Kahalgaon STPP, NTPC	NTPC, Kahalgaon, Bihar
Phytoremediation of coal ash dump site for plantation at FGUTPP, Unchahar	NTPC, Unchahar
Environmental Impact Assessment study of Fun Republic Mall at Gomti Nagar, Lucknow	E-City Entertainment (I) Pvt. Ltd, Lucknow
Consultancy for raising Jatropha curcas plantation at Kota on degraded and soil sites in and around the company premises for improving environmental quality of raising value added plant species as a sustainable system to produce biodiesel	Agrawal Pigments Pvt. Ltd, Kota, Rajasthan
Advisory consultancy on development of sustainable system with green cover, value added trees and shrubs over and at the slopes of Ash pond at adjoining area under HIL-RPD	HINDALCO Ind. Ltd., Sonebhadra, UP
Consultancy on green belt development	Asia Bioenergy (India) Ltd. (ABIL), Lucknow
Advisory consultancy of tree plantation for HIL_RPD, Sonebhadra, UP	HINDALCO Ind. Ltd., Sonebhadra, UP
Environmental impact assessment of IGCL fertilizer complex, Jagdishpur	IGCL, Jagdishpur, UP

#### II. R&D Projects

<b>Title of the Project</b>	<b>Funding Agency</b>
Plant Diversity: Studying adaptation biology and understanding/exploiting medicinally important plants for useful bioactives (SIMPLE)	CSIR (Net work project)
Integrated NextGen Approaches in Health Disease and Environmental Toxicity (INDEPTH)	CSIR (Net work project)
Pollution monitoring mitigation system and devices	CSIR (Net work project)
Biotechnological approaches for improvement of plant species with special reference to pulp and paper	CSIR (NMITLI)
Environmental contaminants - New screening technologies and effect on human health	CSIR (Net work project)
Remediation, eco-restoration & clean-up of contaminated ground and water resources	CSIR (Net work project)

Exploratory studies on climate change and adaptation of species complexes	CSIR (Net work project)
Enhancing water utilization efficiency in crop plants: prospecting plant diversity for genes and systems biology for drought tolerance	CSIR (Net work project)
Protected environment nursery for macropropagation of medicinal plants	FFDC, Kannauj
Wetland biodiversity study of selected wetlands in Etawah and Mainpuri districts.	RSAC U.P., Lucknow
Bioremediation of polluted water bodies of Lucknow	DoEN, U.P., Lucknow
Control of Parthenium hysterophorus through management and eco-friendly approach	DBT, New Delhi
Tactile garden at Rashtrapati Bhawan Estate - Phase II	MH&FW, New Delhi
Technology development for utilization of tobacco waste	Hiran Tobacco Factory Pvt. Ltd., Kanpur
Tree plantation for production of biomass for power generation	MNES, New Delhi
Production and demonstration of high quality planting material of Jatropha Curcas	DBT, New Delhi
Establishment of ENVIS center on Indicator of Plant Pollution in NBRI	ME&F, New Delhi
Genetic selection, improvement, evaluation and production of high yielding Jatropha curcas	NOVOD Board, Gurgaon
Optimization of waste utilization for viable product development	DST, New Delhi
Evaluation of floral and faunal diversity and soil microbial biomass in reclaimed sodic land after 10 years of reclamation under UPSLRP_I&II	U.P. Bhumi Sudhar Nigam, Lucknow
Multilocational trail of Jatropha curcas in different agroclimatic zones and study of agronomic practices	DBT, New Delhi
Studies on speciation of arsenic in contrasting lines (low and high As accumulating) of rice: minimization of the translocation of As in the upper parts using phosphate, selenium and iron.	DST, New Delhi
Remediation of endosulfan contaminated soils by using selected plant species and rhizospheric microbial strains	DST, New Delhi
Assessment of arsenic pollution & bioremediation of arsenic contamination from agricultural soils	DBT, New Delhi
Strategic knowledge for climate change on agriculture and forest ecosystem in Indo-Gangetic Plains (IGP) of UP	DST, New Delhi
Carbon sequestration in substrate-vegetation system of fly ash basins	SERB, New Delhi
Evaluation of floral bio-diversity and microbial biomass in Sodic Lands of Uttar Pradesh under the Sodic Land Reclamation Project Phase III	RSAC U.P., Lucknow
Development of bioaugmentation based safe cultivation practice for remediating arsenic contamination to paddy crop	DBT, New Delhi

#### 14. Details of Publications/patents/technologies

##### (A) Research publications : Total 121. Last five years (2015-2019)

S.No	Publication	IF
1.	Marwa,N., Singh, N., Srivastava, S., Saxena, G., Pandey, V., Singh,N. 2019. Characterizing the hypertolerance potential of two indigenous bacterial strains ( <i>Bacillus flexus</i> and <i>Acinetobacter junii</i> ) and their efficacy in arsenic bioremediation. J. Applied Microbiology 126: 1117-1127.	2.16
2.	V. Singh, A. Lehri, N. Singh 2019. Assessment and comparison of phytoremediation potential of selected plant species against endosulfan. International Journal of Environmental Science and Technology 16: 3231-3248 <a href="https://doi.org/10.1007/s13762-018-1880-y">https://doi.org/10.1007/s13762-018-1880-y</a>	2.037
3.	Singh, AK; Rai, A; Kushwaha, M ; Chauhan, PS ; Pandey, V; Singh, N 2018. Tree growth rate regulate the influence of elevated CO2 on soil biochemical	4.010

	responses under tropical condition. Journal of Environmental Management 231: 1211-1221.	
4.	Singh, AK; Rai, A; Banyal, R; Chauhan, PS; Singh, N 2018. Plant community regulates soil multifunctionality in a tropical dry forest. Ecological Indicators. 95: 953-963.	3.983
5.	Praveen A., Mehrotra S., Singh N., Pandey V. 2018. Nutrient Constraints in Arsenic Phytoremediation. Russian Journal of Plant Physiology 65: 15–22	0.816
6.	Praveen Ashish, Mehrotra Sonali, Singh Nandita , 2017. Rice planted along with accumulators in arsenic amended plots reduced arsenic uptake in grains and shoots. Chemosphere 184 : 1327-1333	4.208
7.	Singh A.K., Kushwaha, M., Rai, A., Singh, N. 2017 Changes in soil microbial response across year following a wildfire in tropical dry forest. Forest Ecology and Management. 391: 458-468.	3.064
8.	Singh A.K., Rai, A., Pandey V., Singh, N. 2017. Contribution of glomalin to dissolve organic carbon under different land uses and seasonality in dry tropics. Journal of Environmental Management 192 : 142-149	4.010
9.	Rai, A; Kumar, S; Baudhdh, K; Singh, N; Singh, RP 2017. Improvement in growth and alkaloid content of Rauwolfia serpentina on application of organic matrix entrapped biofertilizers (Azotobacter chroococcum, Azospirillum brasilense and Pseudomonas putida) Journal of Plant Nutrition 40:2237-2247.	0.565
10.	Mishra T., Singh, N.B., Singh,N. 2017. Restoration of red mud deposits by naturally growing vegetation. Int J. Of Phytoremediation. 19: 439-445.	2.085
11.	Mishra ,T., Pandey, V.C., Singh, P., Singh, N.B., Singh, N. 2017. Assessment of phytoremediation potential of native grass species growing on red mud deposits. Journal of geochemical exploration 182: 206-209	2.464
12.	Raj A., Shukla R., Singh, N., Sharma, Y.K. 2017. Arsenic Remediation Enhancement Techniques: A World Over Scenario. Current Environmental Engineering. \$: 25-41.	
13.	Rai, A., Singh, A.K., Pandey V.C., Ghosal, N., Singh, N. 2016. The importance of Butea monosperma for the restoration of degraded lands. Ecological Engineering. 97: 619-623.	2.914
14.	Singh, Namrata, Gupta S., Marwa, N., Pandey, V., Rathaur, S., Singh, Nandita. 2016. Arsenic mediated modifications in Bacillus aryabhatai and their biotechnological applications for arsenic bioremediation. Chemosphere. 164: 524-534.	4.208
15.	Pandey, V.C., Sahu, N., Behera, S.K., Singh, N. 2016. Carbon sequestration in fly ash dumps: Comaparative assessment of three plant association. Ecological Engineering, 95: 198-205.	2.914
16.	Chandra, L.R., Gupta, S., Pande, V., Singh, N. 2016. Impact of forest vegetation on soil characteristics: a correlation between soil biological and physic-chemical properties. 3 Biotech 6:188.	1.361
17.	Singh, V., Singh, P., Singh, N. 2016. Synergistic influence of Vetiveria zizaniodes and selected rhizospheric microbial strains on remediation of endosulfan contaminated soil. Ecotoxicology 25: 1327-1337.	2.329
18.	Srivastava, J., Chandra, H., Singh, N., Kalra, S.J.S. 2016. Understanding the development of Environmental resistance amongmicrobes: A review. CLEAN Soil Air Water 44: 901-908.	1.716
19.	Srivastava, P.K., Gupta, M., Shikha, Singh,N., Tewari, S.K. 2016. Amelioration of sodic soil for wheat cultivation using bioaugmented organic soil amendment. Land degradation & Development 27: 1245-1254.	8.145
20.	Singh, N., Srivastava S., Rathaur, S., Singh, N. 2016. Assessing the bioremediation potential of arsenic tolerant bacterial strains in rice rhizosphere interface. J. Environmental Sciences. 48:112-119.	2.937
21.	Singh, Ashutosh K., Rai, A., Singh, N. 2016. Effect of long term land use	2.855

	systems on fractions of glomalin and soil organic carbon in the Indo-Gangetic plain. <i>Geoderma</i> 277:41-50.	
22.	Rai, A., Singh, A.K., Ghosal, N., Singh, N. 2016. Understanding the effectiveness of litter from tropical dry forests for the restoration of degraded lands. <i>Ecological Engineering</i> . 93:76-81.	2.914
23.	Singh, N., Marwa, N., Mishra, S.K., Mishra, J., Verma, P.C., Rathaur, S., Singh, N. 2016. <i>Brevundimonas diminuta</i> mediated alleviation of arsenic toxicity and plant growth promotion in <i>Oryza sativa</i> L. <i>Ecotoxicology and Environmental Safety</i> 125:25–34.	3.130
24.	Pandey, V.C., Bajpai, O., Singh, N. 2016. Plant regeneration potential in fly ash ecosystem. <i>Urban Forestry &amp; Urban Greening</i> 15:40-44	2.006
25.	Pandey, V.C., Bajpai, O., Singh, N. 2016. Energy crops in sustainable phytoremediation. <i>Renewable and Sustainable Energy Reviews</i> . 54: 58-73.	6.798
26.	Chandra, L.R., Rai, A., Pande, V., Singh, N. 2015. Litter decomposition and nutrient cycling in temperate forest of Kumaun region. <i>Int. J. Fund. Appl. Sci.</i> 4:91-98	
27.	Pandey, V.C., Singh, N. 2015. Aromatic plants versus arsenic hazards in soils. <i>Journal of Geochemical Exploration</i> 157: 77-80.	2.464
28.	Kumar, R., Singh, N., Pandey, S.N. 2015. Potential of green synthesized zero-valent iron nanoparticles for remediation of lead-contaminated water. <i>Int. J. Environ. Sci. Technol.</i> 12:3943-3950.	2.190
29.	Singh, M., Srivastava, P. K., Verma, P. C., Kharwar, R. N., Singh, N., Tripathi, R. D. 2015. Soil fungi for mycoremediation of arsenic pollution in agriculture soils. <i>J. of Applied Microbiology</i> 119: 1278-1290.	2.156
30.	Gupta, M., Srivastava, P.K., Singh, S. B., Singh, N., Tewari, S.K. 2015. Organic Amendments with Plant-Growth-Promoting Fungi Support Paddy Cultivation in Sodic Soil. <i>Communications in Soil Science and Plant Analysis</i> 46: 2332-2341	0.309
31.	Singh, A., Tyagi, A., Tripathi, A.M., Gokhle, S.M., Singh, N., Roy, S. 2015. Morphological trait variations in the west Himalayan (India) populations of <i>Arabidopsis thaliana</i> along altitudinal gradients. <i>Current Science</i> 108:2213-2222.	0.833
32.	Raj, A., Jamil, S., Srivastava, P.K., Tripathi, R.D., Sharma, Y.K., Singh, N. 2015. Feasibility study of <i>Phragmites karka</i> and <i>Christella dentate</i> grown in West Bengal as Arsenic Accumulator. <i>Int J. Phytoremediation</i> . 17: 869-878	1.739
33.	Tripathi, V., Abhilash, V.C., Singh, H.B., Singh, N., Patra, D.D. 2015. Effect of temperature variation on lindane dissipation and microbial activity in soil. <i>Ecological Engineering</i> 79 : 54–59	2.914
34.	Srivastava, P. K., Singh, M., Gupta, M., Singh, N., Kharwar, R.N., Tripathi, R.D., Nautiyal, C.S. 2015. Mapping of arsenic pollution with reference to paddy cultivation in the middle Indo-Gangetic Plains. <i>Environmental monitoring and assessment</i> 189: 198(1-14).	1.679
35.	Pandey V.C., Bajpai O, Pandey D.N., Singh, N. 2015. <i>Saccharum spontaneum</i> : an underutilized tall grass for revegetation and restoration programs. <i>Genet Resour Crop Evol.</i> 62:443-450.	1.482
36.	Raj, A., Singh, N. 2015. Phytoremediation of Arsenic Contaminated Soil by Arsenic Accumulators: A Three Year Study. <i>Bulletin of environmental contamination and toxicology</i> 94 :308-313	1.255
37.	Edrisi, S.A., Dubey, R.K., Tripathi, V., Bakshi, M., Srivastava, P., Jamil,S., Singh, H.B., Singh, N., Abhilash, P.C. 2015. <i>Jatropha curcas</i> L.: A crucified plant waiting for resurgence. <i>Renewable and Sustainable Energy Review</i> . 41: 855-862.	5.901
38.	Pandey, V.C., Pandey, D.N., Singh, N. 2015. Sustainable phytoremediation based on naturally colonizing and economically valuable plants. <i>Journal of Cleaner Production</i> . 86 : 37-39.	3.844
39.	Pandey V.C., Prakash, P., Bajpai, O., Kumar, A., Singh, N. 2015. Phytodiversity	2.828

on fly ash deposits: evaluation of naturally colonized species for sustainable phytoremediation. Environ. Sci. Pollu. Res. 22: 2776–2787	
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## (B) Book Chapters

1. Pandey, V., Oksanen, E., Singh, N., Sharma, C. 2013. Impacts of Air Pollution and Climate Change on Plants: Implications for India. In: Global Dimension of Air Pollution as Part of Climate Change. Developments in Environmental Science, Vol. 13. <http://dx.doi.org/10.1016/B978-0-08-098349-3.00018-9>. The Elsevier, The Netherlands.
2. Singh, N., Srivastava, P.K., Tripathi, R.D., Srivastava, S. & Vaish, A. 2014. Microbial *in-situ* mitigation of arsenic contamination in plants and soils. In: In-Situ Remediation of Arsenic-Contaminated Sites. Series: [Arsenic in the environment](#). CRC Press. The Netherlands.
3. Nandita Singh and Lena Q. Ma, 2004. Assessing Plants for Phytoremediation of Arsenic contaminated soils. In: **Phytoremediation: Methods and Reviews** (Ed) Neil Willey Humana Press, USA, 319-348.
4. Shanta Mehrotra and Nandita Singh, 2002. Role of NBRI in the upliftment of Economic Status of Rural Women . In **Conference of Women Scientists and Technologists: Role in National Development**. DBT and Dept. of Women and Child Development. Govt. of India pp 113-117.
5. Nandita Singh and M. Yunus, 2000. Environmental Impact of fly-ash. In: **Environmental Hazards – Plant and People** (Eds.) M. Iqbal, P.S. Srivastava and T.O. Siddiqui, pp 60-79, CBS publishers and Distributors, New Delhi.
6. M. Yunus, Nandita Singh and M. Iqbal, 1996. Global status of air pollution. In **Plant Response to Air Pollution**. Pp 1-34 (Eds.) M. Yunus and M. Iqbal, John Wiley, UK.
7. Nandita Singh, Anjum Farooqui, Vivek Pandey, Jyoti Misra, Kamla Kulshreshtha, Kanti Srivastava, S.N. Singh, M. Yunus and K.J. Ahmad, 1993. Heavy metals and plants. **Applied Botany Abstract** Vol. 13, 41-56.

## (c) List of Books/Journal Edited

1. **Environmental Stress: Indication, Mitigation and Eco-conservation** (Eds.) M. Yunus, N.Singh and L.J de Kok. Kluwer Academics
2. **State-of-Art:** Prepared the State-of-art Report on “**Identification of degraded ecosystems and Processes for their restoration**” under The World Bank Project on Capacity Building for Ministry of Environment and Forests, New Delhi.
3. **International Journal of Plant and Environment - Editor. ISSN No. 2454-1117 (Print), 2455-202X (Online)**

## (d) Patents

### Patent Granted

1. Contaminant Removal by Additional ferns US Patent 7,065,920 (June 27, 2006)
2. Behl, H.M.; Kumar, Vishal; Chandrashekar, K.; Lehri, Alok; Singh, Nandita; Sidhu, O.P.; Shukla, Vinod Kumar. A herbal insecticidal composition for controlling insects pests and a process for the preparation thereof India Patent 253066 (June 21, 2012)
3. Behl, H.M.; Sinha Arpita; Singh Nandita; Chandrashekar, K.; Sidhu, O.P.; Kumar, Vishal; Shukla, Vinod Kumar; A novel soil improving synergistic composition useful for the reclamation of degraded lands/soil. Indian Patent 284657 (June 28, 2017)
4. Behl, H.M.; Tewari, Kalpana; Singh, Nandita; Sidhu, O.P.; Kumar, Vishal; Chandrashekar, K.; Tuli, Rakesh; A novel stress tolerant bacterial strain *Bacillus pantothenicus* and novel biocontrol composition. Indian Patent 294818 (March 23, 2018).

### **Patent filed:**

1. 0196 NF 2006. Behl, H.M.; Tewari, Kalpana; Singh, Nandita; Sidhu, O.P.; Chandrashekhar, K.; Kumar, Vishal; Singh, Ajit; An organic Weedicide formulation. (Indian)
2. 0232 NF 2006. Behl, H.M.; Kumar, Vishal; Chandrashekhar, K.; Lehri, Alok; Singh, Nandita; Sidhu, O.P.; Bajpai, Jyoti; Shukla, Vinod Kumar. Insecticidal composition for stored grain insect pest. (Indian)

### **(F) Ph.D. Thesis Guided**

#### **Awarded - 15**

1. **Mr. Jatin K. Srivastava 2008**- Sustainable Mitigation of pollution from pond ecosystem through Aquatic Plants and Microbial Intervention **Lecture in college at Kanpur**
2. **Mr. Abhilash P.C.** 2009- Interaction of Persistent Pesticides in the plant system and their Phytoremediation **Assistant Professor BHU**
3. **Ms. Sarah Jamil** 2011–Bioremediation of fly ash - role of plants, microbes and metal chelators **Senior Technical Office NBRi resigned Postdoc USA**
4. **Ms. Shubhi Srivastava** 2013 - Microbe-assisted bioremediation of arsenic pollution **Kothari Fellow Kolkata**
5. **Mr. Pankaj K. Srivastava** 2013 - Evaluation of Carbon Fixing Potential of *Jatropha curcas* (L.) under varying soil conditions **Post Doc ICAR- Water and Soil Research Institute Dehradun**
6. **Ms. Amita Singh** 2014 – “Comparative performance and restoration potential of *Jatropha curcas* and *Pongamia pinnata* on degraded soil of North India. **Environmentalist Metro Lucknow**
7. **Ms. Anshita Raj** 2014 - Approaches/ Strategies for the Phytoremediation of Arsenic from Polluted Environment Soil/Water **Consultancy Lucknow**
8. **Ms. Vandana Singh** 2014 - Bioremediation of endosulfan contaminated soils by using selected plant species and rhizospheric microbial strains **Women Scientist NASI at NBRI**
9. **Ms. Shailza Singh** 2015- Bioremediation of Arsenic Toxicity in Rice and Wheat **Consultancy Lucknow**
10. **Ms. Namrata Singh** 2017 - Plant and Microbes assisted remediation of arsenic from soil for safe grain yield of rice and wheat
11. **Mr. Apurve** 2018 - Evaluation of Litter dynamics of *two tropical tree species* under changing climate (CEE)
12. **Mr. Ashutosh Singh** 2018 - Study of Climatic Influence on Soil Carbon Pools and Fluxes in a Tropical Dry Forest
13. **Ms. Lovy Raj Chandra** 2018 – Role of Rhizosphere on soil nutrient dynamics and microbial activity in temperate and dry deciduous forests of North India **Teacher in Govt Inter College**
14. **Mr. Ashish Praveen** 2018 - Phytoremediation of arsenic contaminated soil and water for arsenic-safe crop yield
15. **Ms. Tripti Mishra** 2018 - Biofortification of Iron & Zinc From Industrial Waste Sludges Using Bioremediation Technique .

#### **Submitted -2**

16. **Ms. Naina Marwa** 2019 – Enhancement of phytoextraction in arsenic accumulator plants through nutrient and microbial intervention
17. **Ms. Minakshi Kushwaha** 2019 - Contribution of Microbial Diversity in Soil Organic Matter (SOM) Pool in a Tropical Dry Deciduous Forest