

# Curriculum Vitae

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**NAME: SUBHASH CHANDRA TIWARI, Ph.D.**



## OCCUPATION/ AFFILIATION

- Professor, Department of Forestry, Wildlife & Environmental Sciences, Guru Ghasidas, Vishwavidyalaya (A Central University), Bilaspur-495009, Chhattisgarh, India.  
**Mob.** 09425225790, 9770042779  
**E-mail:** [sct\\_in@yahoo.com](mailto:sct_in@yahoo.com), [subash.chandra@ggu.ac.in](mailto:subash.chandra@ggu.ac.in)
- Nature of Work – Teaching, Research and Consultancy

## ADDRESS

- Permanent - C/O Shri B.P.Tiwari, Village-Kundra, P.O. Dakhalipur, District-Auraiya, U.P., Pin-206244, India
- Present – D-263, Rama Green City, Phase II, Khamtarai Road, Bilaspur-495006, Chhattisgarh, India

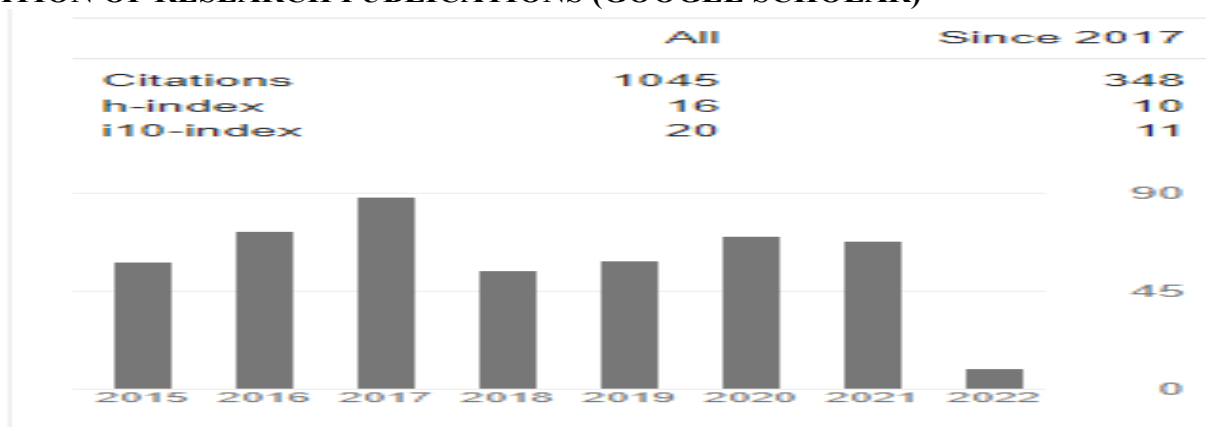
## PERSONAL HISTORY

- Born on September 01.9.1961 at Kundra, Auraiya, UP, India
- Citizenship - Indian by birth; Category - Unreserved
- Sex - Male; Marital status – Married
- Passport No: JO219249 dated 23-03-2011

## ACADEMIC QUALIFICATIONS

- **B. Sc.** from Kanpur University, Kanpur with 1<sup>st</sup> division (Year of passing 1980)
- **M. Sc.** (Botany) from Kanpur University, Kanpur with 1<sup>st</sup> division (Year of passing 1983)
- **M. Phil.** Course work from North-Eastern Hill University, Shillong with “A” Grade (Year of passing 1986)
- **Ph. D.** in Botany (Soil-Microbe-Interactions) from North-Eastern Hill University, Shillong (Year of award 1988)

## CITATION OF RESEARCH PUBLICATIONS (GOOGLE SCHOLAR)



### RESEARCH EXPERIENCE: 36 years

- As JRF, SRF, Research Associate and Senior Research Associate (Pool Officer), CSIR

### TEACHING EXPERIENCE: 28 years

- As Institute/ University faculty (Lecturer, Senior Lecturer, Reader, Associate Professor and Professor).

### AT GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR, CHHATTISGARH, INDIA

- In-Charge, Dean, School of Natural Resources, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- Member, School Board, Natural Resources, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- Member, Academic Council, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- Head, Department of Forestry, Wildlife & Environmental Sciences, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- Chairman, Board of Studies, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- Chairman, DRC, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- Member, CECCMC, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- Member, Departmental Store Purchase Committee, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India.
- Member, Examination Committee, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India.
- Member, Campus Plantation Committee, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India.
- Member, Horticulture Committee, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India.

- Nodal Officer, National Water Award, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India.
- Assistant Editor, Chhattisgarh Journal of Science and Technology, CCOST, Raipur, Chhattisgarh, India.
- Assistant Center Superintendent and Center Superintendent, UTD Examination, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India.
- Course Coordinator, Orientation Programme, UGC-Academic Staff Collage, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- Coordinator, Equal Opportunity Cell, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India
- Coordinator, Refresher Course, UGC, HRDC, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India.
- Coordinator, UI Green Metric World University Rankings, Guru Ghasidas, Vishwavidyalaya, Bilaspur, Chhattisgarh, India.

#### **AREAS OF SPECIALIZATION**

- Soil Science, Bioprospecting of Natural dyes, Climate Resilient Forestry.

#### **SPONSORED RESEARCH PROJECTS**

- **Completed a CSIR Scheme entitled** *"Assessment and monitoring of soil degradation in humid tropics of Arunachal Pradesh using biological and biochemical techniques"* in the year 1999. Fund received **RS. 5,00,000.**
- **Completed a** Grant-in Aid proposal received from Indian Council of Forestry Research and Education (ICFRE), Dehra Dun in the year 2000 for strengthening the research and teaching facilities in Forestry. Fund received **RS. 10, 98,000.**
- **Completed a DST Project** on *"Evaluation and selection of efficient strains of Frankia for Sea buckthorn (Hippophae spp.) growing in Eastern Himalayas* in the year 2004. Fund received **RS. 17, 06,800.**
- **Completed a DST project as Coordinator of Indo-Polish Programme** of cooperation in Science & Technology on "Wastewater flooding and its consequences on microbial communities and their activities in rhizosphere of trees" in the year 2004. Fund received **RS. 3,00,000.**
- **Completed ICAR (NBPGR) project as a Co-Investigator** on setting up a Bamboo Arboretum in the year 2003. Fund received **Rs. 5, 65,000.**

- **Completed** sponsored research project entitled, “Genomic and Proteomic studies of *Aspergillus oryzae* and *Aspergillus flavus* exhibiting microbial lipase enzyme production”. A project funded by MHRD, New Delhi. Fund received **Rs. 7, 00,000**.
- **Completed a DBT project** entitled, “Documentation, study and restoration of traditional dyes of Arunachal Pradesh and elucidating the structures of the colorants”, Fund received **RS. 20.83 lakh**. (Co-Investidator, Dr. Padma Wankar, IIT, Kanpur).
- **ICAR project** entitled “Development of Bio-diversity inventories of underutilized indigenous food crops at Arunachal Pradesh, North Eastern India”, Fund received **Rs. 9, 51,500**. **This project was surrendered because of change of job from Itanagar to Bilaspur.**

#### **RESEARCH PROJECT SUBMITTED**

- All India Coordinated Project on Livelihood improvement of forest dependent communities through resources survey, sustainable harvesting and market linkages of commercially important NTFPs. In collaboration with TFRI Jabalpur Submitted to MoEF and Climate Change, Government of India.
- Mapping and Geocoding of Natural Water Bodies of Protected Area of Chhattisgarh, Central India. Submitted to DST, Government of India.

#### **CONSULTANCY SERVICES:**

**National Highways Authority of India:** (RS. 4 Lakh during the year 2021).

#### **DOCTORAL THESIS SUPERVISED (07)**

Studies on microbial communities and their activities in degraded and undegraded forest soils of Arunachal Pradesh, (Jointly with Dr. M.S. Dkhar) North Eastern Hill University, Shillong, 2003, S. Suresh Kumar Singh.

Isolation, identification and characterization of *Frankia* strains associated with seabuckthorn (*Hippophae* sp.) (Jointly with Dr. A.K. Mishra), Rajiv Gandhi University, Itanagar, Arunachal Pradesh, 2005, Hridip Kumar Sarma.

Eco-biological studies of seabuckthorn symbiosis (Jointly with Dr. A.K. Shukla), Rajiv Gandhi University, Itanagar, Arunachal Pradesh, 2007, Bipin Kumar Sharma.

Natural dye yielding plant resources and indigenous knowledge systems of dye preparation associated with the ethnic tribes of Arunachal Pradesh (Jointly with Dr. A.K. Das), Rajiv Gandhi University, Itanagar, Arunachal Pradesh, 2009, Debojit Mahanta.

Extraction pattern of non-timber forest products and its effect on regeneration of important Tree species in Achanakmar-Amarkantak Biosphere, Guru Ghasidas Vishwavidyalaya, Bilaspur, 2013, Shabbir Ahmad Bhatt.

Lichens as indicators of forest status in Achanakmar-Amarkantak Biosphere Reserve, Guru Ghasidas Vishwavidyalaya, Bilaspur, 2014, Arvind Prajapati

Study of Soil Organic Carbon Stocks under different land use land cover in Bilaspur District of Achanakmar Amarkantak Biosphere reserve, Guru Ghasidas Vishwavidyalaya, Bilaspur, 2016, Sheikh Iqbal.

### **DOCTORAL STUDENTS UNDER SUPERVISION (03)**

Carbon storage dynamics of forest growing stock around National Thermal Power Plant, Sipat, Bilaspur, Chhattisgarh, Central India. Guru Ghasidas Vishwavidyalaya, Bilaspur, 2020, Harshita Singh.

Growth and yield attributes of selected varieties of Khus grass (*Chrysopogan zizaniodes* L. Robert) under different levels of FYM, NPK and irrigation regimes in a sandy-loam soil of Chhattisgarh, Guru Ghasidas Vishwavidyalaya, Bilaspur, 2022, Ankit Pandey.

Mapping and Monitoring of Water Bodies of Achanakmar-Amarkantak Biosphere Reserve (AABR), Using Remote Sensing and GIS Techniques, Guru Ghasidas Vishwavidyalaya, Bilaspur, 2022, Gayatri Devi.

### **CONFERENCES/SEMINARS/WORKSHOPS ATTENDED AND LECTURS**

#### **DELIVERED:**

- **International: (Abroad 03)**
- **National & International: (India 25)**

#### **SHORT TERM COURSES ATTENDED: (05)**

#### **CONFERENCES/SEMINARS ORGANIZED: (05)**

#### **VISITS ABROAD**

- Visited University of Bodekultur, Vienna, Austria from September 2-6, 1991 to attend the 3<sup>rd</sup> ISRR conference on "*Root Ecology and its Practical Application*".
- Visited Institute of Agrophysics, Lublin, Poland during June1- August 31, 2000 under the scientific collaborative programme of Indian National Science Academy, New Delhi and

Polish Academy of Science, Warsaw. A numbers of institutions namely; Catholic University, Technical University and UMCS, Lublin were also visited during this visit.

- Visited Institute of Agrophysics, Lublin, Poland during June 9- August 8, 2003 under the framework of Indo-Polish Cooperation in Science & Technology to investigate the effects of wastewater flooding on microbial activities.
- Visited Institute of Botany, Jagiellnian University, Cracow during INSA visit to Poland.
- Visited Forest Research Institute, Department of Forest and Phytopathology, Warsaw during INSA and PAS, visit to Poland.
- Visited Napier University and Edinburgh University, Edinburgh, UK during 18<sup>th</sup> Commonwealth Forestry Conference, 2010
- Visited La Rochelle University, La Rochelle, France during ISEND, 2011 Symposium.

## **EMPLOYMENT**

- Lecturer (Assistant Professor) in Forestry at North-Eastern Regional Institute of Science & Technology (NERIST), Nirjuli (Itanagar), Arunachal Pradesh from Jan. 24, 1996 to Jan. 24, 2000 in the pay scale of Rs.8000-275-13,500/-
- Senior Lecturer in Forestry at North-Eastern Regional Institute of Science & Technology (NERIST), Nirjuli (Itanagar), Arunachal Pradesh from Jan. 01, 2000 to November, 29, 2005 in the pay scale of RS 10,000-325-15,200.
- Reader in Forestry, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, since November 30, 2005 to November 29, 2008.
- Associate Professor, Department of forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, w.e.f. November 30, 2008.
- Professor, Department of forestry, Wildlife and Environmental Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, w.e.f. November 30, 2011.

## **PROFESSIONAL RECOGNITION**

- Fellow of International Society for Conservation Natural Resources (FNRS), Varanasi.
- Fellow of Biotech Research Society (FBRS) of India
- Recognized as TSBF Scientist under Tropical Soil Biology & Fertility Programme of UNESCO for South Asian Regional Network countries.
- Expert Project Evaluation Committee, TFRI, Jabalpur, M.P.
- Member, RRC, TFRI, Jabalpur, M.P.

## LIST OF PUBLICATIONS

(Professor. S.C. Tiwari)

### BOOKS PUBLISHED

Natural Resources' Conservation and Management for Mountain Development, Editors **S.C. Tiwari** and P. P. Dabral, International Book Distributors and Publishers, Dehra Dun, 2000, 604 pp.

Microbial Diversity: Status and Potential Applications, Editors **S.C. Tiwari** and G.D. Sharma, Scientific Book Centre and Publishers, Guwahati, 2002, 235 pp.

Ethnoforestry: The Future of Indian Forestry, Editor **S.C. Tiwari**, Bishen Singh and mahendra Pal Singh Publisher, Dehra Dun, 2010, 524pp.

### TECHNICAL REPORTS

Assessment and monitoring of soil degradation in humid tropics of Arunachal Pradesh using biological and biochemical techniques- Submitted to CSIR, New Delhi

Evaluation and selection of efficient strains of Frankia for Seabuckthorn (*Hippophae* spp.) growing in eastern Himalayas-Submitted to DST, New Delhi.

Genomic and proteomic studies of *Aspergillus oryzae* and *Aspergillus flavus* exhibiting microbial lipase enzyme Production-Submitted to MHRD, New Delhi.

Documentation, study and restoration of traditional dyes of Arunachal Pradesh and elucidating the structures of the Colorants-Submitted to DBT, New Delhi.

### RESEARCH PUBLICATIONS:

#### PAPER PUBLISHED INCLUDING GOOGLE SCHOLAR

Title of the research paper	Number of citations	Year of publication	Impact factor of the journal
Temporal and depth-wise variations in CO <sub>2</sub> evolution and microbial population in pineapple-plantation soils <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Journal of Soil Biology &amp; Ecology, 6 (2) 67-76.</b>		1986	

The influence of moisture regimes on the population and activity of soil microorganisms <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Plant and Soil 101 (1), 133-136</b>	35	1987	<b>4.19</b>
Temporal and depth-wise variation in dehydrogenase and urease activities and bacterial population in pineapple plantation soils. <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Proceeding Indian National Science Academy B53 No. 2 pp- 173-176.</b>	11	1987	
Enzyme activities in soils: effects of leaching, ignition, autoclaving and fumigation. <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Soil Biology and Biochemistry, 20 (4), 583-585</b>	34	1988	<b>7.6</b>
Microbial populations, enzyme activities and nitrogen-phosphorus-potassium enrichment in earthworm casts and in the surrounding soil of a pineapple plantation. <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Biology and Fertility of Soils, 8 (2), 178-182</b>	214	1989	6.4
Microbial community, enzyme activity and CO <sub>2</sub> evolution in pineapple orchard soil. <b>SC Tiwari, BK Tiwari, RR Mishra.</b> <b>Tropical Ecology, 30 (2), 265-273</b>	21	1989	<b>0.85</b>
Microbial decomposition of pineapple ( <i>Ananas comosus</i> L.) litters. <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Acta Oecologica Oecologia Plantarum, 10(3): 329-339.</b>	2	1989	<b>1.67</b>
Phosphatase activity and microbial population in pineapple ( <i>Ananas comosus</i> L.) orchard soils. <b>RR Mishra, BK Tiwari, SC Tiwari</b> <b>Journal of Soil Biology &amp; Ecology, 8 (2):83-89</b>		1989	
Microfungal species associated with the gut content and casts of <i>Drawida assamensis</i> Gates. <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Proceedings: Indian Academy of Science (Plant Sciences). 100 (6), 379-382</b>	14	1990	
Seasonal variation of microfungal population in pineapple ( <i>Ananas comosus</i> L.) orchard soils. <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Acta Botanica Indica, 19: 55-61.</b>	2	1991	
Relationship between seasonal population of earthworm and abiotic factors in pineapple plantations. <b>SC Tiwari, BK Tiwari, RR Mishra</b>	6	1992	



<b>Proceedings-National Academy of Sciences India, 62 (B-II) 223-226.</b>			
Variation in Some Physicochemical Characteristics of Pineapple Orchard Soils of North-Eastern India. <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Journal of the Indian Society of Soil Science, 40 (1), 204-208</b>	5	1992	<b>0.42</b>
Fungal abundance and diversity in earthworm casts and in uningested soil. <b>SC Tiwari, RR Mishra</b> <b>Biology and Fertility of Soils 16 (2), 131-134</b>	96	1993	<b>6.4</b>
Effects of organic manure and NPK fertilization on earthworm activity in an Oxisol. <b>SC Tiwari</b> <b>Biology and Fertility of Soils 16 (4), 293-295</b>	35	1993	<b>6.4</b>
Succession of microfungi associated with the decomposing litters of pineapple ( <i>Ananas comosus</i> L.) <b>SC Tiwari, BK Tiwari, RR Mishra</b> <b>Pedobiologia,38: 185-192.</b>	20	1994	<b>1.81</b>
Prospects of Pineapple ( <i>Ananas comosus</i> L.) Cultivation in Meghalaya: A Case study. <b>SC Tiwari</b> <b>Indian Biologist, 26 (1): 19-24.</b>		1994	
Seasonal variation in the microfungal communities of pineapple ( <i>Ananas comosus</i> L.) plantation soil. <b>Tiwari, S.C., R.R. Mishra</b> <b>Journal Soil Biology and Ecology (India) 14(1):17-24.</b>		1994	
Seasonal variation in dehydrogenase and urease activity in hilly soils under grasslands and forests. <b>SC Tiwari, RR Mishra</b> <b>Journal of the Indian Society of Soil Science 43 (4), 689-690</b>	4	1995	<b>0.42</b>
Earthworm density, biomass and production of cast in pineapple orchard soil. <b>SC Tiwari, RR Mishra</b> <b>Pedobiologia 39 (5), 434-441</b>	1	1995	<b>1.81</b>
Effects of <i>Boletus edulis</i> , <i>Laccaria laccata</i> , <i>Pisolithus tinctorius</i> and <i>Rhizopogon luteolus</i> on the growth performance of <i>Pinus kesiya</i> Royle ex. Gordon in north-east India. <b>Tiwari, S.C., R.R. Mishra</b> <b>Indian Journal of Forestry, 18 (4): 293-300.</b>		1995	
Nodulation status of <i>Alnus nepalensis</i> seedlings in pure stands. <b>Tiwari, S.C., R.R. Mishra</b>		1995	

<b>Journal of Tree Sciences 14(2): 49-54.</b>			
Distribution of dehydrogenase, urease and phosphatase enzymes in sandy loam soil profile. <b>Tiwari, S.C.</b> <b>Journal of Hill Research 9(2): 321-324.</b>		1996	
Effect of organic manure and NPK fertilization on enzyme activities and microbial population in an oxisol. <b>Tiwari, S.C.</b> <b>Journal of Hill Research 9(2): 334-340.</b>		1996	
Relationship between enzyme activities, microbial population and soil respiration in some Indian soil. <b>Tiwari, S.C.</b> <b>Journal of Soil Biology and Ecology 16(1): 17-26.</b>		1996	
Altitudinal variation in dehydrogenase and urease activity and microbial population in soils of Eastern Himalayan highlands. <b>Tiwari, S.C., G.D. Sharma</b> <b>Journal of Hill Research: 11(1): 22-25.</b>		1998	
Influence of <i>Casuarina equisetifolia</i> 's plantation on soil properties raised in Arunachal Pradesh. <b>Tiwari, S.C.</b> <b>Mycorrhiza News 10 (2): 13-14.</b>		1998	
<i>Phoebe goalparensis</i> (Bonsum): A potential species for soil amelioration. <b>Tiwari, S.C. Das, J.K., L. Bebija and S.S. Singh</b> <b>Arunachal Forest News : 17(1 &amp; 2):1-7.</b>		1999	
Mushroom: A promising crop for nutritional security and employment generation for indigenous people of Nagaland. <b>Swu, O. B., Tiwari, S.C.</b> <b>Journal of North Eastern Council: 20(3): 37-48.</b>		2000	
Vesicular-Arbuscular Mycorrhizal Association of Tree Species in Humid Tropical Forests of Arunachal Pradesh. <b>SC Tiwari</b> <b>Ecology Environment And Conservation 7, 21-23</b>		2001	
Modern techniques in microbial diversity research. <b>Tiwari, S.C., Singh, S.S.</b> <b>Arunachal University Research Journal (India) 4 (1): 27-34.</b>		2001	
Influence of <i>Tectona grandis</i> and <i>Duabanga grandiflora</i> plantations on soil properties in humid tropics of Arunachal Pradesh, North Eastern India. <b>Singh, E.N., Angila, N, Singh, S.S., Tiwari S.C.</b> <b>Indian Journal of Forestry: 24(2): 135-142.</b>		2001	

Vesicular-arbuscular mycorrhizal association of tree species in humid tropical forest of Arunachal Pradesh. <b>SC Tiwari,</b> <b>Eco. Envi. &amp; Cons., 7 (1): 21-23.</b>		2001	
Evaluation of soil degradation using physico-chemical, biochemical and biological parameters in humid tropics of Arunachal Pradesh. <b>Singh, S.S., Tiwari, S.C. and M.S. Dkhar</b> <b>Annals of Forestry: 9(2): 287-292.</b>		2001	
Modified wet sieving and decanting technique for enhanced recovery of VAM fungi from forest soils. <b>Singh, S.S., Tiwari, S.C.</b> <b>Mycorrhiza News: 12(1):12-13.</b>		2001	
Soil degradation affects microbial biomass carbon and dehydrogenase activity in humid tropical hilly forest soils. <b>Singh, S.S., S.C.Tiwari, M.S. Dkhar, R.R. Mishra</b> <b>Asian Journal of Microbiology, Biotechnology and Environmental Sciences 4(1):143-148.</b>		2002	
Effect of physico-chemical treatments on the germination efficiency of seabuckthorn ( <i>Hippophae salcifolia</i> D.Don) under laboratory conditions. <b>Singh, N.D., S.S. Singh, Tiwari S.C.</b> <b>Environmental Biology and Conservation, 7: 21-24.</b>		2002	
Species diversity of vesicular- arbuscular mycorrhizal (VAM) fungi in jhum fallow and natural forest soil of Arunachal Pradesh, North Eastern India. <b>Singh, S.S., Tiwari, S.C., Dkhar M.S.</b> <b>Tropical Ecology: 44 (2): 205-213.</b>		2003	0.85
A novel calcimycine antibiotic from Gram-positive actinomycete <i>Frankia</i> microsymbiont. <b>Sharma, Hridip Kumar, Bipin Kumar Sarma</b> <b>Tiwari, S.C.</b> <b>Current Science: 85 (10): 1401-1403.</b>		2003	1.10
Natural dye-yielding plants and indigenous knowledge on dye preparation in Arunachal Pradesh, northeast India. <b>D Mahanta, SC Tiwari</b> <b>Current science:88 (9): 1474-1480</b>	133	2005	<b>1.10</b>
Studies on soil properties under three different ages of tea ( <i>Thea assamica</i> ) plantations in Assam, North Eastern India. <b>Tiwari S.C., B.K.Sharma, D.Lyngdoh</b>		2005	0.42

<b>H.Larchhuakmawia</b> <b>Journal Indian Society of Soil Science: 53 (2): 260-264.</b>			
Truncated hemoglobin.: A single structural motif with versatile functions in bacteria, plants and unicellular eukaryotes. Hridip Kumar Sarma, Bipinn Kumar Sharma and <b>Tiwari, S.C.</b> <b>Symbiosis 39: 151-158.</b>		2005	<b>2.26</b>
Studies on soil properties under tea clones in Assam, North Eastern India. <b>Victoria Huidrom, D.N.Kaul, Tiwari, S.C.</b> <b>Journal of Hill Research: 18(1):40-42.</b>		2005	
Variation of enzyme activities, CO <sub>2</sub> evolution and redox potential in an Eutric Histosol irrigated with wastewater and tap water <b>M Brzezinska, SC Tiwari, Z Stepniewska, M Nosalewicz, RP Bennicelli</b> <b>Biology and Fertility of Soils 43 (1), 131-135</b>	41	2006	<b>6.4</b>
Polymorphic distribution and phenotypic diversity of <i>Frankia</i> strains in nodule lobes of actinorhizal plant ( <i>Hippophae salicifolia</i> D.Don). <b>Hridip Kumar Sarma, Bipin Kumar Sharma, Satya Shaila Singh, S.C.Tiwari, Arun Kumar Mishra</b> <b>Current Science : 90(11):1516-1521.</b>		2006	<b>1.10</b>
Ethnological observations on fermented food products of certain tribes of Arunachal Pradesh <b>SC Tiwari, D Mahanta</b> <b>Indian Journal, of Traditional Knowledge, Vol. (6)1 106-110</b>	28	2007	<b>0.75</b>
Characterization of the colorants from leaves of <i>Bischofia javanica</i> . <b>PS Vankar, R Shanker, S Dixit, D Mahanta, SC Tiwari</b> <b>International Dyer 192 (3), 31-37</b>	10	2007	
Variation in some Physico-chemical properties of soil under natural stands of Seabuckthorn in Sikkim. <b>Bipin Kumar Sharma, Hridip K. Sarma, Tiwari S.C.</b> <b>Journal of Indian Society of Soil Science : 55(2):215-217.</b>		2007	0.42
Ecofriendly sonicator dyeing of cotton with <i>Rubia cordifolia</i> L. using biomordant. <b>PS Vankar, R Shanker, D Mahanta, SC Tiwari</b>	163	2008	<b>4.88</b>

<b>Dyes and Pigments, 76 (1), 207-212</b>			
Sonicator dyeing of modified cotton, wool and silk with <i>Mahonia napaulensis</i> DC. and identification of the colorant in Mahonia <b>PS Vankar, R Shanker, S Dixit, D Mahanta, SC Tiwari</b>	41	2008	<b>5.64</b>
<b>Industrial Crops and Products 27 (3), 371-379</b>			
Sonicator dyeing of cotton with the leaves extract <i>Acer pectinatum</i> Wallich <b>PS Vankar, R Shanker, S Dixit, D Mahanta, SC Tiwari</b>	24	2008	<b>1.16</b>
<b>Pigment &amp; Resin Technology, 37 (5): 308-313.</b>			
Sonicator dyeing of natural polymers with <i>Symplocos spicata</i> by metal chelation <b>PS Vankar, R Shanker, S Dixit, D Mahanta, SC Tiwari</b>	24	2008	
<b>Fibers and Polymers 9 (2), 121-127</b>			
Natural dye-yielding plants and indigenous knowledge of dye preparation in Achanakmar-Amarkantak Biosphere Reserve, Central India <b>SC Tiwari, A Bharat</b>	23	2008	
<b>Natural Product Radiance Vol. 7 (1) 82-87.</b>			
Variation in Phosphatase Enzyme Activity in a Eutric Histosol irrigated with Pre-treated Wastewater and Normal Tap Water <b>SC Tiwari, M Pastelan, M Brzezińska, Z Stêpniewska</b>	1	2008	0.42
<b>Journal of the Indian Society of Soil Science 56 (2), 233-235</b>			
Sonicator dyeing of cotton with the leaves extract <i>Beilschmiedia fagifolia</i> . Colourage): <b>Padma S.Vankar, Rakhi Shankar, Shalini Dixit, Debajit Mahanta, Tiwari, S.C</b>		2008	
<b>Vol LV No.11, 82-86.</b>			
Influence of organic manure and NPK fertilizers on growth performance of cowpea ( <i>Vigna chinensis</i> ) under greenhouse conditions. <b>Tiwari, S.C., Sharma, B.K., Sarma ,H.K., Singh, N.D.</b>		2008	
<b>Life Science Bulletin (India): 5(2):215-218.</b>			
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JOURNAL NAME	IMPACT FACTOR
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Plant & Soil (The Netherlands)	4.19
Biology & Fertility of Soils (Germany)	6.43
Pedobiologia (Germany)	1.81
Acta Oecologia (France)	1.67
Symbiosis (Israel)	2.26
Dyes and Pigments (South Korea)	4.88
Journal Indian Society of Soil Science (India)	0.42
Industrial crops and Products (The Netherlands)	5.64
Fibres & Polymers (South Korea)	2.15
Pigment & Resin Technology (UK)	1.5
Current Science (India)	1.10

## RESEARCH CONTRIBUTIONS OF PROFESSOR S.C. TIWARI

Professor Tiwari has investigated different aspects of microbial ecology, i.e., physico-chemical, biological and biochemical properties of forest and agricultural soils, biodegradation of organic residues and growth performance of forest tree species in forest nursery using mycorrhizal and actinorhizal bio inoculants during his doctoral and post-doctoral tenure. Salient findings of his research are:

- Viable cells account for most of the dehydrogenase and urease soil enzymes while extracellular enzymes absorbed on clay-humic colloids are responsible for a major part of the phosphatase soil enzyme.
- Moisture content of soil plays a significant role in the regulation of enzymatic activities and microbial diversity in soil.
- Leaf litter of pineapple decomposed more rapidly than that of roots. The time required for 95% of leaf and root litters to decompose were 1911 and 2576 days respectively.
- The continued maintenance of pineapple plantation over a period of 10 years has little or no adverse effect on the physico-chemical characteristics of soils. This suggests that the practice of pineapple cultivation is ecologically sustainable.

After submission of Ph. D. thesis in 1988, Dr. Tiwari was awarded Senior Research Fellowship and subsequently Research Associate and Senior Research Associate (Pool officer) to extend his research in the area of forest nursery technology using microbial inoculums (Mycorrhizae and Actinorhiza). Salient findings are:

- The growth performance of *Alnus* and *Casuarina* seedlings can be enhanced by inoculating the seedlings with mycorrhizae and *Frankia* in combination in forest nursery.
- The placement of these bio inoculants as close to the root system fastens the growth of seedlings in forest nursery.

In January 1996, Dr. Tiwari was selected as Lecturer in the Department of Forestry, NERIST, Nirjuli (Itanagar). Immediately after joining NERIST he has been sanctioned a research scheme by CSIR to assess and monitor the rate of soil degradation in Arunachal Pradesh. Soil organic carbon and dehydrogenase enzyme activity were identified as important soil parameters to assess the degree of soil degradation. During his stay at GGV, Bilaspur Professor Tiwari and his team has investigated livelihood patterns of forest dwellers residing in core and buffer zone of Biosphere Reserves, Lichen diversity in Biosphere Reserves and effect of land use land cover change on carbon sequestration mitigation potential of Biosphere forest soils.

Later, Dr. Tiwari was awarded SERC fellowship in the year 1996-97 by DST, New Delhi to work on molecular biology of mycorrhizae and *Frankia* strains. In the year 2000, 2003 he has been nominated for the bilateral exchange programme of Scientists of INSA, New Delhi to Visit-Institute of Agrophysics, Lublin, Poland. He has collaborated with scientists in IAPN, especially, on studies pertaining to the influence of wastewater flooding on microbial community composition and their activities in an organic soil.

At present his attention is on value addition of forest products (natural dyes, khus grass oil etc.), feasibility study of application of natural dyes in photo voltaic cells, in textile dying and also to determine the carbon sequestration and carbon storage potentials of forest trees and forest soils for climate resilient forestry programmes in central India.