Curriculum Vitae

PROF. KAMLESH NARAYAN TIWARI

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❖ Educational Attainments

Degree	*Institute*	*Year*
Ph. D.	IARI, New Delhi, India	1984
M. Sc. (Agril. Engg.)	IARI, New Delhi, India	1980
B. Tech. (Agril. Engg.)	College of Agril. Engg., J.N.K.V.V. Jabalpur (MP).	1978

❖ Professional Experience

Name of Employer	*Period*	*Position held*
IIT Kharagpur	18/08/2010 – Till Date	Professor (HAG), Land & Water Resources Engineering, Agricultural and Food Engineering Department, IIT, Kharagpur, India.
IIT Kharagpur	9/06/2003 - 17/08/2010	Professor, Land & Water Resources Engineering, Agricultural and Food Engineering Department, IIT, Kharagpur, India.
IIT Kharagpur	13/02/1998 – 8/06/2003	Associate Professor, Soil and Water Conservation Engineering, Agricultural and Food Engineering Department, IIT, Kharagpur, India.
IIT Kharagpur	24/05/1989 – 12/02/1998	Assistant Professor, Soil and Water Conservation Engineering, Agricultural and Food Engineering Department, IIT, Kharagpur, India.
IIT Kharagpur	4/02/1984 – 24/05/1989	Lecture, Soil and Water Conservation Engineering, Agricultural and Food Engineering Department, IIT, Kharagpur, India.

❖ Research & Teaching Areas of Interest

- Precision Farming
- Irrigation Water Management

- Microirrigation System Design
- Greenhouse and Protected Cultivation Technologies
- RS and GIS applications in Canal Water Management
- Solar Photovoltaic Operated Irrigation Systems

❖ **Research Guidance**

Sl. No.	*Level*	*No. of Students*	
		Completed	*Continuing*
1	Ph. D.	18	05
2	M. Tech.	95	03
3	B. Tech.	20	02

❖ **Patents/Copy Right**

Sl. No	*Item*	*Patent No.*
1	Automated Irrigation Controller	No. 6/ Cal/ 99 dated 04.01.99
2	Continuous Soil Moisture Recorder	No. 7/ Cal/ 99 dated 04.01.99
3	Granular Matrix Soil Moisture Sensor Application of Grafted Amylopectin	No. 705/ Cal/ 2000 dated 21.12.2000
4	In Reduction of Energy Requirement of Sprinkler Irrigation System	No. 187/ Cal/ 2001 dated 29.03.2001
5	Automated Irrigation System	No 198539 dated 15.05.2002
6	Flow-regulated Drip Emitter	Modifications Resubmitted, *Ref*: 284/KOL/2010 dated:22/03/2010
7	Sweat Irrigation System	Modifications Resubmitted, *Ref*: 285/KOL/2010 dated:22/03/2010

❖ **Books/Monograph**

Sl. No.	*Name(s) of Author(s)*	*Year*	*Title*	*Published/ Sponsored*
1	H.N. Verma & **K.N. Tiwari**	1995	Current Status and Prospects of Rain Water Harvesting.	Indian National Committee on Hydrology, N.I.H. Roorkee 247 667
2	N. K. Gontia & **K. N. Tiwari**	2010	Crop Water Stress Indices & Evapotranspiration Estimation (ISSN No. 978-3-8383-9455-8)	LAP LAMBERT Academic Publishing AG & Co. KG, Saarbrucken Germany
3	A. Sharma & **K. N. Tiwari**	2011	Hydrological Analysis of Maithon Catchment (ISSN NO. 978-3-8383-9236-3)	LAP LAMBERT Academic Publishing AG & Co. KG, Saarbrucken Germany
4	**K. N. Tiwari;** M. K. Jha; Chandranath Chatterjee; and Ashok Mishra	2016	Precision Farming and Resource Management (Editor, Section II: Natural Resource Engineering And Management)	EXCEL INDIA publishers, New Delhi–110 067

❖ **Technical Manual/Reports**

Sl. No.	*Name(s) of Author(s)*	*Year*	*Title*	*Published/ Sponsored*
1	K. N. Tiwari, Santosh D.T., R. Machavaram	2018	Greenhouse Technology	PFDC project sponsored by NCPAH, MOA & GOI, New Delhi.
2	K. N. Tiwari	2010	Research Achievements in Precision Farming	PFDC project sponsored by NCPAH, MOA & GOI, New Delhi.
3	K. N. Tiwari	2009	Protected Cultivation technologies	PFDC project sponsored by NCPAH, MOA & GOI, New Delhi.
4	K. N. Tiwari	2008	Pressurized Irrigation	PFDC project sponsored by NCPAH, MOA & GOI, New Delhi.
5	K. N. Tiwari	2006	Micro Irrigation for fruit crops	PFDC project sponsored by NCPAH, MOA & GOI, New Delhi.

❖ **Important Publications (National and International)**

Out of 100 Research Papers only 31 are listed here

1. Rajwade Y. A., Swain D. K., **Tiwari K. N**., Singh P. B. (2018) Grain Yield, Water Productivity, and Soil Nitrogen Dynamics in Drip Irrigated Rice under Varying Nitrogen Rates. American Society of Agronomy journal. (In press)
2. Singh, V.K., **Tiwari, K.N**. (2017) Prediction of Greenhouse Micro-Climate Using Artificial Neural Network, Applied Ecology and Environmental Research 15(1):767-778.
3. Nidhi, K., V. M. Chowdary, **K. N. Tiwari**, V. Shinde & V. K. Dadhwal (2016) Assessment of surface water potential using morphmetric & curve number based approaches. Geo Carto International:1-44 Taylor Francis
4. Singh, V.K., **Tiwari, K.N**., Santosh, D.T. (2016) Estimation of crop coefficient and water requirement of Dutch roses (Rosa hybrida) under green house and open field condition. Irrigation and drainage System Engineering.5(3):169
5. Rajwade, Y. A., D K Swain, **K N Tiwari** (2015) Subsurface Drip Irrigation for Wet Season Rice Production under Climate Variability in India, Agriculture: Towards a New Paradigm of Sustainability ISBN: 978-93-83083-64-0.
6. Sharma A., **K. N. Tiwari** (2014) A Comparative Appraisal of Hydrological Behavior of SRTM DEM at Catchment Level. Jl. Hydrology, 519: 1394-1404.
7. **Tiwari K. N**., M. Kumar, Santosh D. T., V. K. Singh, M. K. Maji and A. K. Karan (2014) Influence of Drip Irrigation and Plastic Mulch on Yield of Sapota (Achraszapota) and Soil Nutrients. Irrigation & Drainage Systems Engineering, 3 (1): 1-8.
8. Jena S.K, **K. N. Tiwari**, Pandey A. & Mishra S. K. (2012) RS and Geographical Information System–Based Evaluation of Distributed and Composite Curve Number Techniques Jl. Hydrol. Eng., 17(11): 1278–1286.
9. Kumar K.S., Madan K. Jha, **K.N. Tiwari**, Amanpreet Singh (2010) Modeling and

evaluation of greenhouse for floriculture in subtropics. Energy and Buildings, 42(7), : 1075-1083

10. Gontia N. K. and **Tiwari K. N**. (2010) Estimation of Spatially and Temporally distributed Crop Coefficient and Evapotranspiration of Wheat (Triticum aestivum) in an irrigation Command Using Remote Sensing and GIS. Water Resources Management, 24 (7): 1399-1414.
11. Kumar, K.S. , **K.N. Tiwari**, Madan K. Jha. (2009) Design and technology for greenhouse cooling in tropical and subtropical regions: A review. Energy and Buildings, 41(12) :1269–1275
12. Arabinda Sharma, **K.N. Tiwari** and Bhadoria P.B.S. (2009) Vertical accuracy of digital elevation model from Shuttle Radar Topographic Mission – a case study. Geocarto International, 25 (4), 257-267
13. Sharma S.K., **K.N. Tiwari** (2009) Bootstrap based artificial neural network (BANN) analysis for hierarchical prediction of monthly runoff in Upper Damodar Valley Catchment. Jl. Hydrology. Elsevier Publi. 374 :209–222
14. Gontia N.K. and **Tiwari K. N**. (2008) Development of crop water stress index of wheat crop for scheduling irrigation using infrared thermometry. Agricultural Water Management 95 (10): 1144-1152.
15. Singh, B. K., **K N. Tiwari**, S K Chourasia, S Mondal. (2007) Crop water requirement of Guava (Psidium guavajava L.)cv KG/KAJI under drip irrigation and Plastic Mulch. Acta Horticulture, 375, 399-405.
16. Singh, R., **K. N. Tiwari** and Mal B. C. (2006) Hydrological studies for small watershed in India using ANSWERS model. Jl. Hydrology. Elsevier Publi. 318: 184-199
17. Jena, S.K and **K.N. Tiwari** (2006) Modelling synthetic unit hydrograph parameters with geomorphologic parameters of watersheds. Jl. Hydrology. Elsevier Publi. 319 :1-14
18. Reddy, K. Y. and **K. N. Tiwari**., (2006) Economic pipe size selection based on optimal flow. International Jl. of Agril. Engg., 15 (2-3): 109-121
19. **Tiwari, K.N**. Singh A. and Mal P.K (2002) Effect of drip irrigation on yield of Cabbage (Brassica oleracea L. Var. Capitata) under mulch and non-mulch conditions. Agril. Water Management, Elsevier Pub. Vol.58: 19-28
20. Phukan S., Kumar P., Panda J., Nayak B. R., **K. N. Tiwari** and Singh R. P. (2001) Application of drag reducing commercial and purified guargum for reduction of energy requirement of sprinkler irrigation and percolation rate of the Soil. Agril. Water Manag., Elsevier Pub Vol.47:101-118.
21. Reddy K. Y., **K. N. Tiwari** and Ravindra V. (2000) Hydraulic analysis of trickle irrigation system for economic design. International Agril. Engg. Journal,Vol.9(2): 81 – 95
22. Noble, A. and **K.N. Tiwari** (1999) Modelling of hydrological processes in a hill slope watershed of humid tropics. Jl. Irrigation & Drainage Engg. ASCE Vol.125 (4):203- 211
23. Dalvi V.B., **K.N.Tiwari**, Pawade M.N. and Phirke P.S. (1999) Response surface analysis of tomato production under micro-irrigation. Agril. Water Manag., Elsevier Pub Vol.

41:11– 9.

24. **Tiwari, K.N**. Mal P.K., Singh R.M. and Chattopadhyay A. (1998) Response of Okra (Abelmoschus esculentus (L.) Moench.) to drip irrigation under mulch and non-mulch conditions. Agril. Water Manag. Elsevier Pub Vol.38 (2):91-102.
25. **Tiwari, K.N**., and Reddy K. Y. (1997) Economic analysis of trickle irrigation system considering plant geometry. Agril. Water Manag. Vol.34(2):195-206.
26. Dwivedi R.S., Kumar, A.B. and **K.N. Tiwari** (1997) The utility of multi-sensor data for mapping eroded lands. International Jl. Remote Sensing, Vol. 18, No. 11, pp: 2303 – 2318
27. Barua, G. and **K. N. Tiwari**. (1996) Ditch drainage theories for homogeneous anisotropic soil. Jl. Irri. & Drain. Engg. ASCE 122(5):276-284.
28. Barua, G. and **K. N. Tiwari**. (1996) Theories of ditch drainage in layered anisotropic soil. Jl. Irri. & Drain. Engg. ASCE., Vol 122(6) :321-330
29. Barua, G. and **K. N. Tiwari** (1995) Theories of seepage into auger holes in homogeneous anisotropic Soil. Jl. Hydrology. Elsevier Publi. Vol.67:1-22.
30. Barua, G. and **K. N. Tiwari** (1995) Analytical Solutions of seepage into ditches from ponded fields. Jl. Irri. & Drain. Engg. ASCE 121(6): 396-404
31. **Tiwari**, **K.N.,** Kumar P., Sebastian M. and Pal D.K. (1991) Hydrologic modelling for runoff determination through remote sensing techniques. International Jl. Water Resources Development. Butterworth - Heinemann publication. UK. Vol. 7(3): 178-184.

❖ **Research Project Management**

Sl. No	***Title***	***Sponsor***	***Amount (In Lakh)***	***Capacity***	***Status***
1	Improving Groundwater Levels and Quality through Enhanced Water Use Efficiency in Eastern Indian Agriculture	Information Technology Research Academy (ITRA)	111.41	P.I.	In progress
2	Development of e-Courses for B. Tech (Agricultural Engg.)	NAIP, ICAR	78.11	P.I.	Completed
3	Precision Farming Development Center	NCPAH, Min. of Agri.& FW, GOI	220.00 (5 year)	P.I.	In progress
4	Studies on Microalgal Triacyglycerols as a Source of Biodiesel	ICAR	170.29	Co P. I.	In progress
5	The Effect of Drag Reducing Polymers in Particle Size Distribution of Sprinkler Irrigation System and Long Term Effect of Drag Reducing Polymers in Soil Conditioning and Crop Growth	ICAR	16.73	P.I.	Completed
6	Water Resources Development & Management	DST FIST	78.00	Co P. I.	Completed

❖ Technology Transferred

Four workshops and about 260 short term courses on Micro Irrigation, Irrigation Water Management, Precision Application of Water and Nutrients in Protected Cultivation Structures, Rain Water Harvesting from Agricultural and Horticultural Cropped Fields, Storage and Conservation of Water in Lined Farm Ponds etc have been conducted. Officers of the Irrigation, Agriculture and Horticulture Departments, NGO's, Micro Irrigation system manufacturers and Farmers were the participants.

❖ Member of Professional Societies

1. Life Member of Indian Water Resources Society
2. Member of American Society of Agricultural and Biological Engineers
3. Life Member of Indian Society of Agricultural Engineers
4. Life Member of Indian Society of Remote Sensing
5. Member of Institution of Engineers (India)

❖ Professional Activities

1. Member, Joint Committee of Central Water Commission and ICAR for optimizing Water Resources (2005-06).
2. Member, West Bengal State Micro Irrigation Committee.
3. Member, Technical Advisory Committee of World Bank Funded Indian Institute WBADMI Project of West Bengal.
4. Member, Institute Management Committee, Indian Institute of Water Management (ICAR), Bhubaneswar (2010-12)
5. Member, Research Advisory Committee, Indian Institute of Water Management (ICAR), Bhubaneswar (2012-14).
6. Member, Joint Inspection Team, National Horticulture Mission, Govt. of India.
7. Member, BIS (India) and ISO (International Standards Organization, Switzerland) on Micro Irrigation.
8. Member Editorial Board from India: International Journal of Agricultural & Biological Engineering Published by Chinese Society of Agricultural Engineering & Association of Overseas Chinese Agril and Bio Engrs.
9. Reviewer: Agricultural Water Management, Published by Elsevier.
10. Reviewer: Journal of Hydrology, Published by Elsevier.
11. Reviewer: Water Resources Management, Published by Springer Publication.
12. Reviewer: National Academy of Agricultural Sciences Journal of Agricultural Research, Published by Springer Publication.
13. Reviewer: Handbook of Applied Hydrology, Published by McGrawHill New York.

❖ Awards and Fellowships

1. Eminent Water Resources Scientist Award 2016, awarded by Indian Water Resources Society, IIT Roorkee on Feb. 16, 2018.
2. Honored with prestigious Rafi Ahmed Kidwai Award of ICAR for outstanding research contribution in Agricultural Sciences (Natural Resources Management) for the year 2014. Awarded on July 25, 2015 in the foundation day function held at Patna.

3. Honored with Hari Krishna Shastri Memorial Award 2013 of IARI for his outstanding contributions in field of micro-irrigation.
4. Shankar Memorial Award 1998 by the Indian Society of Agricultural Engineering for excellence in research in the discipline of Soil and Water Engineering.
5. Commendation Medal by ISAE for excellent teaching in the field of teaching.
6. Fellow of National Academy of Agricultural Sciences (NAAS) India.
7. Fellow of National Academy of Sciences (NASc) India, Allahabad, India.
8. Fellow of Indian Society of Agricultural Engineers, India.
9. Fellow of India Water Resources Society, Roorkee, India.
10. UNESCO and DAAD Fellowships for Post Doctoral research studies in the area of water resources and environmental engineering.

Declaration

I hereby declare that the above information is correct to the best of my knowledge.

Date: 25.03.2018
Place: Kharagpur

(Signature)