

# *Curriculum vitae*

**Awanish Kumar**

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## **Education**

- 2017**     **Ph.D. (Soil Science and Agricultural Chemistry)** Collage of Agriculture, IGKV, Raipur (CG); ICAR-Indian Institute of Soil Science, Bhopal (M.P.) **Course Work - CGPA: 7.75.**
- 2006**     **M.Sc. (Soil Science and Agricultural Chemistry)** VBSP University, Jaunpur (UP) - First Division with **70.8%** marks.
- 2004**     **B.Sc. (Agriculture)** VBSP University, Jaunpur (UP) - First Division with **65.0%** marks.
- 2000**     **10+2 (Agriculture)** U.P. Board, Allahabad (UP) - First Division with **64.2%** marks.



## **Professional Experience**

- 2019- onward as **Assistant Professor**, Institute of Agricultural Science, Bundelkhand University, Jhansi (U.P.)
- 2017-2018: **Senior Research Fellow**, ICAR- Indian Grassland and Fodder Research Institute, Jhansi, UP.
- 2016-2017: **Senior Research Fellow**, ICAR- Indian Institute of Soil Science, Bhopal, MP.
- 2011-2013: **Senior Research Fellow**, College of Agriculture, IGKV, Raipur, CG.
- 2008-2011: **Assistant Professor**, MDS Agriculture College, Ambikapur, CG.
- 2007-2008: **Agri-Consultant**, Hydric Farm Inputs Ltd., Faizabad, UP.

## **Research Interests**

Physical, chemical and biological parameter analysis of soil, Soil Micronutrient, Soil Microbiology and soil quality index, Quantify the carbon sequestration in soil.

## **Awards and Recognition**

- **Best Doctoral Thesis Award – 2018.** (GUARD Society, Hyderabad)
- **Outstanding Achievement Award – 2017.** (BHU, Varanasi)
- **Mahima Young Scientist Award - 2015.** (BHU, Varanasi)
- **Awarded 3<sup>rd</sup> Prize** in College Faculty during B.Sc. second year.
- Got selected in **Krishi Upaj Mandi Parishad (UP. Govt.) Scholarship** under Post Graduate degree programme.

- NSS “B” IGKV, Raipur (2014-15).
- Project Completion Report (GPS-GIS based on soil fertility mapping in selected district of India)

### Advisor

- 08 students Guided as major advisor for M.Sc. (Ag.) Soil Science and Agricultural Chemistry

### Research Publications

- (1) **Awanish Kumar\***, V.N. Mishra, A.K. Biswas and J. Somasundaram (2018). Soil organic carbon, dehydrogenase activity and fluorescein diacetate as influenced by contrasting tillage and cropping systems in Vertisols of Central India. *Journal of Environmental Biology*. Volume 39 (2018). (NAAS- 6.70)
- (2) Hansa Baradwal, Avijit Ghosh, **Awanish Kumar**, Prashant D Singh, Manjanagouda S Sannagoudar, Safik Ahamad, Pramod Jha, Amit K Singh, Ranjan Bhattacharyya, M C Manna, Sunil Kumar and R V Kumar (2022). Ecological restoration of degraded lands with alternate land use systems improves soil functionality in semi-arid tropical India. *Land degradation and development*. <https://doi.org/10.1002/ldr.4225>. (NAAS- 10.98).
- (3) Hansa Baradwal, Avijit Ghosh, **Awanish Kumar**, Prashant D Singh, Manjanagouda S Sannagoudar, Safik Ahamad, Pramod Jha, Amit K Singh, Ranjan Bhattacharyya, M C Manna, Sunil Kumar and R V Kumar (2022). Alternate land use systems improve land restoration capacity and soil functionality in semi-arid tropical India. *Restoration Ecology*. Accepted (NAAS- 9.40).
- (4) J. Somasundarama, R.S. Chaudharya, **Awanish Kumar**, A.K. Biswas, N. K. Sinha, M. Mohanty, K.M. Hati, P. Jha, M. Sankar, A. K. Patra, R. Dalal and S. K. Chaudhari (2018). Effect of contrasting tillage and cropping systems on soil aggregation, carbon pools and aggregate-associated carbon in rainfed Vertisols. *European Journal of Soil Science*, doi: 10.1111/ejss.12692. (NAAS- 9.46)
- (5) **Awanish Kumar**, Anusuiya Panda, VN Mishra and LK Srivastava (2017). Short-Term Effect of Conservation Tillage on Carbon Pools under Rainfed Cropping Systems of Central India. *International Journal of Current Microbiology and Applied Sciences*.7(1).2040-2053. (NAAS- 5.38)
- (6) L.K. Shrivastava, **Awanish Kumar\***, S.S. Senger, V.N. Mishra and Anusuiya Panda (2017). Influence of zypmite on productivity and nutrient uptake of chickpea (*Cicerarietinum* L.) crop under rainfed condition Chhattisgarh plain region. *Legume Research*. Print ISSN:0250-5371 / Online ISSN:0976-0571. pp 1-7. (NAAS- 6.12)

- (7) **Awanish Kumar**, Anusuiya Panda, LK Srivastava and VN Mishra (2017) Effect of conservation tillage on biological activity in soil and crop productivity under rainfed *Vertisols* of central India. *International Journal of Chemical Studies*. 5 (6):1939-1946. **(NAAS- 5.31)**
- (8) **Awanish Kumar**, LK Srivastava, Rakesh Banvasi and VN Mishra 2017. Current status of major nutrients (Av. N, P and K) deficiencies in soils of koria district of Chhattisgarh. *Journal of Pharmacognosy and Phytochemistry*. 6(6): 2583-2587. **(NAAS- 5.21)**
- (9) Anusuiya Panda, Pramod Jha, **Awanish Kumar** and RK Bajpai (2017). Impact of organic residues application as a soil amendment on response in soil acidity. *International Journal of Chemical Studies*. 5:1-5. **(NAAS- 5.31)**
- (10) **Awanish Kumar**, J Somasundaram, AK Biswas, Nishant K Sinha, VN Mishra, R.S.Chaudhary, M. Mohanti, K.M. Hati, R. Saha, and A.K. Patra (2017). Short-term effect of conservation agriculture practices on soil quality of a vertisol in central India. *Applied Biological Research*. 26:26-34. **(NAAS- 5.07)**
- (11) **Awanish Kumar**, LK Srivastava, VN Mishra and Rakesh Banvasi (2017). Major and micro nutrient status of rice-chickpea grown in soil of Chhattisgarh plain region of India. *Indian Journal of Agricultural Research*. 51:1-8. **(NAAS- 4.86)**
- (12) Sanjay K. Dwivedi, **Awanish Kumar**, Ashok Pal, LK Srivastava and Mayur kumar Meshram. (2016). Effect of seaweed saps on growth, nutrient uptake and yield of potato (*Solanum tuberosum* L.). *Applied Biological Research*. 18:1-7. **(NAAS- 4.86)**
- (13) **Awanish Kumar**, VN Mishra and LK Srivastava (2015). Evaluation of soil fertility status of available N, P and K in *Inceptisol* of Raipur district of Chhattisgarh. *International Journal of Interdisciplinary and Multidisciplinary Studies*. 2: 98-104.
- (14) **Awanish Kumar**, LK Srivastava, Rakesh Banvasi and R.C. Bhagat (2014). Status of available zinc in soils of Kabirdham district in Chhattisgarh. *Journal of Agriculture Issues*. 19: 78-79. **(NAAS- 3.19)**
- (15) Anusuiya Panda, **Awanish Kumar** and RK Bajpai (2017). Effect of organic resources and Subabul (*Leucaena leucocephala*) biochar on competitive ability of barley crop in acidic soil. *Journal of Pharmacognosy and Phytochemistry*. 6(6): 2430-2432. **(NAAS- 5.21)**
- (16) Anusuiya Panda, **Awanish Kumar** and RK Bajpai (2017). Ameliorating Chemical Properties of Acid Soils with Biochar- A Review. *International Journal of Chemical Studies*. 5(6):1947-1950. **(NAAS- 5.31)**

- (17) **Awanish Kumar**, LK Srivastava, VN Mishra and Rakesh Banvasi (2014). Evaluations of soil Fertility Status of Available Major Nutrients (N,P & K) and Micro Nutrients (Fe, Mn, Cu & Zn) in Vertisol of Kabeerdham District of Chhattisgarh, India. *International Journal of Interdisciplinary and Multidisciplinary Studies*. 1:72-79.
- (18) Prem Shankar Tiwari, V.K. Dubey, **Awanish Kumar** and Ajay Tiwari (2014). Comptative Feeding Behavior of BHP in Different Plant Derived Products. *Trends in Biociences*. 7: 2179-2183. (NAAS- 3.94)
- (19) Ram Chandra Bhagat, Santosh Kumar Sahu, Ashok Pal and **Awanish Kumar** (2013). Effect of crop residue and the green manure incorporation in wheat on growth, nutrients uptake and yield under rice based cropping system. *Journal of Plant Development Sciences*. 5: 183-186. (NAAS- 5.57)
- (20) Anusuiya Panda, **Awanish Kumar**, R.K. Bajpai and L.K. Shrivastava,(2018) Effect of crop residues as liming materials on soil pH in Alfisols of Ranchi. *International Journal of Fauna and Biological Studies*. ISSN: 2347-2677
- (21) **Awanish Kumar**, LK Srivastava, VN Mishra and Girijesh Sharma (2015). Soils of Chhattisgarh: A Study. *Global journal of multidisciplinary studies*. 4:83-89.
- (22) Anusuiya Panda, **Awanish Kumar**, R. K. Bajpai, L.K. Shrivastava (2018). Influence of crop residues as liming resources on change soil pH and Phosphorus availability in acid soils. *International Journal of Fauna and Biological Studies*. ISSN: 2347-2677, 5(1): 203-205

### **Book**

- (1) **Awanish Kumar**, L.K. Shrivastava, V.N. Mishra and Rakesh Banwasi, *Mardha Prikshan Prayogik Margdarsika 2017, ISBN- 978-93-87072-28-2, AkiNik Publication, Rahani Delhi.*

### **Book chapters/articles**

- (1) **Awanish Kumar**, A. K. Biswas, Sanjay K. Dwivedi, J. Somasundaram, L. K. Srivastava and V.N. Mishra 2015, *Conservation Agriculture: Concept, Principles And Methodologies Global Journal Of Multidisciplinary Studies*, Volume-4, Issue-9, August 2015., 138-160 ISSN: - 2348-0459.
- (2) J. Somasundaram, Mohanti, R. S. Chaudhary, K. M. Hati, A.K. Biswas and **Awanish Kumar** 2015. *Conservation Agriculture for carbon Sequestration and Sustaining Soil Health. Compendium of MTC on Climate Change and Conservation Agriculture 2015 pp 46-53.*

- (3) Mishra, D. M., **Kumar, Awanish**. And Sirothia, Pawan. (2014). Management of Crop Residue in Conservation Agriculture Prospective. *Agrobios: 13(5): 71*(ISSN: 972-7027).
- (4) **Awanish Kumar**, Anusuiya panda and D. M Mishra., Algae: A Biohydrogen Producing Plant. *Agrobios: 14(1): 49*(ISSN: 972-7027).
- (5) Rakesh Giri Goswami, **Awanish Kumar** and Ashish Kumar Singh (2014). Importance of Carbon Sequestration and Conservation Agriculture in Hilly Region. *Asian Journal of Multidisciplinary Studies. 2:230-232*.
- (6) **Awanish Kumar and Anusuiya Panda (2018)**. Bone Meal: An Soil Organic Amendments. *Biomolecule Reports*.
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### Conference Presentations

- (1) **Kumar A.**, Pal A., Patangray A.J. and Rathore A.K. 2014. Assessment of Soil Fertility Status of Noticeable Red and Yellow Soils of Korea District of Chhattisgarh for Sustainable

Agriculture. *In:* National Conference on Sustainable Resource Development and Management at Pt. Ravishankar Shukla University Raipur, January 20-22, 2014.

- (2) **Awanish Kuamr**, J. somasundaram, A. K. Biswas, Nishant K. Sinha, V. N. Mishra, R. S. Chaudhary, M. Mohanty, K. M. Hati, J. K. Thakkur, and A. K. Patra 2016. Soil organic carbon, dehydrogenase activity and Fluorescein diacetate as Influenced by contrasting tillage and cropping systems in *Vertisol* of Central India. 81<sup>st</sup> Annual Convention : October 20-23, 2016. Indian Society of Soil Science.
- (3) Awanish Kumar and V. N. Mishra. Evaluation of soil fertility status in Inceptisol of Kabirdham distric of Chhattisgah. National Seminar on Climate Resilient Rice Production under rainfed ecosystem.
- (4) **Awanish Kuamr**, A. K. Biswas, J. somasundaram, Anusuiya Panda, V. N. Mishra and L. K. Srivastava, Contrasting tillage and cropping Systems impact on soil organic carbon, dehydrogenase activity and Fluorescein activity in black soil of Central India. International Conference : 2018, 14-17 Febraury Kanpur India.
- (5) **Awanish Kuamr**, J. somasundaram, A. K. Biswas, Anusuiya Panda, V. N. Mishra, Nishant K. Sinha, K. M. Hati, R. S. Chaudhary and A. K. Patra. Short term effect of conservation agriculture management practices on available major nutrients and yield response in black soils of Central India. 1<sup>st</sup> Asian Conference water and land management for food and livelihood Security January, 20-22, 2011.
- (6) **Awanish Kuamr**, J. somasundaram, A. K. Biswas, Nishant K. Sinha, K. M. Hati, M. Mohanty, Anusuiya Panda, J. Thakur, L. K. Srivastava and V. N. Mishra. Effect of conservation tillage on biological soil properties and crop yields in *Vertisols* of Central India. National Conference at Kanpur, 2017
- (7) **Awanish Kuamr**, Anusuiya Panda, V. N. Mishra and L. K. Srivastava, A Documantation on changing of soil pH and soluble salt by crop residue managements under conservation agriculture in rainfed *Vertisol* of Central India. NSRT-2018, IGKV, Raipur, Chhattisgarh.
- (8) Anusuiya Panda, Pramod Jha, R. K. Bajpai, Awanish Kumar, Manoj Kumar Dev and Veni Kashyap. Impact of biochar application as a soil amendment on response in degraed soil of Eastern India. 1<sup>st</sup> Asian Conference water and land management for food and livelihood Security January, 20-22, 2011.

- (9) Anusuiya Panda, Awanish Kumar, Purbasha Priyadarshini Padhi and R. K. Bajpai. Evaluation of biochar for their liming efficacy in acid soil. International Conference- 2018, 14-17 February 2018, Kanpur, India.
- (10) Anusuiya Panda, Pramod Jha, Awanish Kumar and R. K. Bajpai Agricultural residues impact on soil pH and exchangeable aluminium an *Alfisol* of Northwest India. National Conference at Kanpur, 2017
- (11) Anusuiya Panda, R. K. Bajpai, Awanish Kumar and Purbasha Priyadarshini Padhi. Evaluation of Crop Residues for their liming efficacy in acid soils. NSRT-2018, IGKV, Raipur, Chhattisgarh.
- (12) Priti R. Shirsatm, Ommala Kuchanwar, A. J. Patangray, D. M. Ransing and Awanish Kumar. Sustainable use of integrated nutrient management for increasing yield of Tuberose.
- (13) Prem Shankar Tiwari, V. K. Dubey, Awanish Kumar and Ajay Tiwari. Comparative feeding behavior of BPH in different plant derived products. National Seminar on Technologies for Sustainable Production through climate resilient agriculture. JNKVV, Jabalpur.
- (14) Anoop Kumar Rathore, Rituja Jain, A. J. Patangray, Yogendra Shriwas and Awanish Kumar. Influence of sustainable nutrient management approach and genotypes on productivity, quality as well as soil fertility status in Sugarcane.
- (15) Awanish Kumar, L K Srivastava, Anurag J. Patagray and Anoop Kumar Rathore. GPS –GIS based soil fertility mapping of noticeable soils of Raigarh District of Chhattisgarh. RREAS, 2014.
- (16) Anoop Kumar Rathore, Rituja Jain, Anurag J. Patagray, D. M. Ransingh and Awanish Kumar. Effect of Nitrogenous Fertilizer on quality of ground water RREAS-2014.
- (17) Anurag J. Patagray, Anoop Kumar Rathore, Awanish Kumar, D. M. Ransingh and Rituja Jain. Study on Chemical Composition and quality of irrigation water. RREAS-2014.
- (18) Bhagat R.C., **Kumar A** and Pal A. 2013. Management of crop in wheat under rice based cropping system. *In* : 15<sup>th</sup> Indian Agricultural Scientist & Farmers Congress on Agriculture and Global Climate Change at Bioved Research Institute of Agriculture & Technology, Allahabad, February 22-24, 2013.
- (19) Pal A., Dwivedi S.K., **Kumar A.** and Meshram M.R. 2014. Response of seaweed saps on yield, nutrient uptake and soil fertility improvement of potato (*Solanum tuberosum* L.) *In* : National Conference on Sustainable Resource Development and Management at Pt. Ravishankar Shukla University Raipur, January 20-22, 2014.

- (20) Pal A., Meshram M.R., Dwivedi S.K. and **Kumar A.** 2013. Integrated nutrient management (INM) to increase yield and nutrient use efficiency in Turmeric (*Curcuma longa* L.) production. *In: National Seminar on Non-Timber Forest Produce, Medicinal, Aromatic Plant & Spices: Innovation for Livelihood Security at Indira Gandhi Krishi Vishvavidyalaya, Raipur, December 23-24, 2013.*

### **Skilled Areas (Experience)**

#### **➤ Soil Physical Parameters:**

- Soil Moisture, Soil Temperature, Bulk density, Penetration Resistance, Soil aggregation, Aggregate carbon and Nitrogen, Water holding capacity of soil, Infiltration rate and Soil consistency.

#### **➤ Soil Physico-chemical Methods:**

- Soil pH, EC and Organic Carbon (OC)
- Primary nutrients (N, P, K), Secondary nutrients (Ca, Mg, S) and Micronutrients (Zn, Cu, Mn, Fe, B) etc.

#### **➤ Biological Methods:**

- SMBC, LC, DHA and FDA
- Preparation and production of biofertilizer of native strain of bacteria (Azotobacter and Phosphate Solubilizing Bacteria)

#### **➤ Plant Analysis:**

- Total major and Micronutrients

#### **➤ Data Analysis and Interpretation:**

- MS Excel for data entry and analysis.
- SPSS software.

### **Instruments Handled**

Working knowledge of Centrifugation unit, Flame Photometer, Atomic Absorption Spectrophotometer, U. V. Visible Spectrophotometer, MID spectroscopy, GHG analyzer, Penitologer etc.

### **Professional Trainings**

- #### **➤ National Training course on “Climate Change, Carbon Sequestration and Carbon Trading in Agriculture” under NAIP (ICAR) dated on 23<sup>rd</sup> August to 5<sup>th</sup> September 2013 at IISS, Bhopal.**



- National Seminar on Recent Researches in Earth and Atmospheric Sciences. Organized by school of Studies in Geology and WRM, at Pt. Ravishankar Shukla University, Raipur during 24-26 February 2014.
- National Research Seminar 23-24 December 2011, Role of Technology and management in Development of Rural Area sponsored by Chhattisgarh Council of Science and Technology Raipur.
- National Seminar on Soil Health Assessment with Mridaparikshak organized by ICAR-IISS, Bhopal, Nov 4-5, 2016.
- Training Conducted under Agri- Clinics and Agri-business Centres Scheme of Government of India. 19.09.2005 to 18.11.2005.
- Workshop cum training program on Crop Simulation Models in Climate Change Impact Assessment. 14-18 February, 2017
- National Conference on Sustainable Resource Development and Management 20-22 January, 2014. Organized by CG cost.
- National Seminar on Changing Environment and its impact on biodiversity. 11-12 October, 2012. Sponsored by UGC-CRO-Bhopal and CG COST held at Deptt of Botany.
- International Conference on Emerging Challenges and Issues in Environmental Protection Sponsored by Chhattisgarh Council of Science and technology.
- Participated in Kisan-Mela 22-25 February, 2014.
- ICAR Short Course on **“Advances in Nutrient Dynamics in Soil-Plant-Atmosphere system for Improving Nutrient Use Efficiency”** under Education Division- ICAR, New Delhi dated on 02-11 Sep.2014 at IISS, Bhopal.
- ICAR Winter School Model Training Course on **“Compendium of MTC on Climate Change and Conservation Agriculture”** 28 Jan. to 4 Feb, 2015. Division of Soil Physics, ICAR-IISS, Bhopal.
- National Training course on **“Quality Seed Production in Forage Crops”** under ICAR-Seed Project dated on 21-23<sup>rd</sup> March 2018 at ICAR-IGFRI, Jhansi.
- Got training conducted under **Agriclinics and agribusiness centres, Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India.**
- Got selected for training for **“Community Development Scheme”** under **HRD ministry, Govt. of India.**
- Participated in the Camp of **fruit and vegetable preservation** held by **Department of Horticulture and Food Preservation. 12.05.2014 – 21.05.2014**
- Training Programme on Soil Testing and Preparation of Soil Health Card, February 8-12, 2016. Organized by IISS, Bhopal.
- Voluntary participation in **educational program for poor children runs by AdarshVidyarthi Sangatan.**

### **Personal Information**

**Date of Birth:** May 24, 1983  
**Gender:** Male  
**Nationality:** Indian  
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