CURRICULUM VITAE

P r o f (Dr) Vivak M Arya, Ph.D. (NET)

Professor, Division of Soil Science and Agricultural Chemistry, Faculty of Agriculture

Sher-e-Kashmir University of Agricultural Sciences and Technology-Jammu, Chatha, Jammu

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SUMMARY

- Teaching and Research Experience: 15 years 07 month since 08.07.2008 (contd.)
- Extramural funding till date – **05 Cr as PI; 13.0 Cr as Co-PI**
- **59** Research papers;**16** research papers during the assessment period (**6** papers > **10** NAAS rating; **06** papers > 4.0 **Impact factor**)
- Visiting Scholar at "**Texas A&M University**" **(TAMU)**, **Texas, USA.**

EDUCATION

- **Ph.D. Soil Science**, Sher-e-Kashmir University of Agricultural Sciences & Technology, Jammu, 2008
- **M.Sc. (Agri.) Soil Science, Indira Gandhi Krishi Vishwavaidyalaya, Raipur**, Chhattisgarh, 2003

PERSONAL DETAILS

- Date of Birth: 18-03-1979
- Languages: English, Hindi, Dogri, Pahadi & Urdu,
- Residential address: House No. 518, Sec. - C, Sainik Colony, Jammu, Jammu & Kashmir, 180011, India

EXPERIENCE

- Professor, Division of Soil Science and Agricultural Chemistry
- Associate Professor, Division of Soil Science and Agricultural Chemistry
- Assistant Professor, Division of Soil Science and Agricultural Chemistry SKUAST-J from 01-02-2012 to 08-07-2017
- Subject Matter Specialist(Soil Science) KVK-Kathua, SKUAST-J from 08-07-08 to 30-01-2012
- Invigilators for CET,UG and PG exams since 2012 on regular basis
- Attracted **05 Cr** in Project funds from different funding agencies like DST, DBT, MIDH,ICAR, NABARD JKST&IC etc. **as PI** and **13.0 Cr as Co-PI,** this **excludes Rs. 92.95 Cr** project on "Jammu and Kashmir Soil and Land Information System supported from Government of J&K" under **HADP.**

Teaching Experience

- Teaching Soil Science to Undergraduate and graduate students {13 years (U.G & P.G. Classes) since February, 2012, contd.}
- Developed e modules for SOIL-604, SOIL-504, SSAC-111
- **Major Advisor**: Advisor to **06 Masters** and **02 PhD** students, Co-advisor/member- **46** students.
- Former Academic In charge of Division
- In charge **ICAR, ARS** preparation classes

- Flipped classroom - providing e notes & PPTs two days in advance.
- Incorporating digital tools in the learning process such as Chatgpt 4.0, Soros, AI module etc.
- **Ms. Japneet Kour Kukal** (PG student) was selected for **Ph.D with fellowship in prestigious University of Idaho USA.**
- **Two** students qualified ICAR, **NET** examination

Research

- Research & Extension Experience: 15 years since 8.07.2008 (contd.)
- Popularized the usage of **Leaf Colour Chart** (LCC), **Green Seeker** for real time nitrogen management under the climate smart agriculture practices (CSAP) for maintaining soil quality
- Phosphorus and Nitrogen dynamics studies in subtropical zone of Jammu in Rice wheat system
- Soil Conservation studies and Erosion mapping in the Shivaliks
- Revival of Village Ponds under DST networking project

Recommendation generated

1. Saving of urea by using Leaf Colour Chart (LCC) is 25 to 28 kg ha^{-1} for *coarse* variety *Jaya,* 10 to 12 kg ha^{-1} for *Pusa 1121* & 06 to 08 kg ha^{-1} for *Ranbir Basmati.-*
2. P application can be omitted in Paddy where available P is medium to high if P application in wheat is done as per POP.
3. SQI improvement was established where INM modules along with water conservation techniques were adopted
4. Full moon water harvesting structure gave highest value of soil moisture (15.1 %) as compared to control (11.5 %).
5. Use of black plastic mulch (BM) of 100-150 micron thickness was recommended for moisture conservation in orchards.

Member of professional societies

Soil Conservation Society of India **(Life Member)**
Indian Society of Soil Science **(Member)**
Indian Meteorological Society **(Life Member)**
Indian Society of Agronomy **(Life Member)**
Indian Ecological Society **(Life Member)**
Indian Association of Soil and Water Conservationists. **(Life Member)**
Academy of Natural Resource Management (ANRCM) **(Life Member)**
Society for Integrated Development of Agriculture, Veterinary and Ecological Sciences **(Life Member)**

- Organized conferences/training programmes/workshops etc. as Co-organizing Secretary (6^{th} J&K Agricultural Science Congress).
- **Secretary, (**Jammu Chapter**) Indian Society of Soil Science, New Delhi**
- **Councilor**, (Jammu Chapter) **Soil Conservation Society of India, New Delhi**
- Delivered guest lecture at "Texas A&M AgriLife Research and Extension Center" at **Uvalde**

- Soil erosion risk mitigation & carbon sequestration potential of climate resilient agriculture practices in foot hills. **(ICAR)**
- Demonstration of Technologies for Improving Productivity of Rainfed Area in Jammu District. **(DST)**
- Modeling the effect of land use changes on soil organic carbon dynamics using geospatial technologies. (**SERB)**
- Strengthening Institutional Capacities for Delivering Competent Skilled Professionals **(NAHEP, IDP, ICAR-World Bank)**
- Mobilization of farmers through development of Bee village for collective marketing of organic honey" **(NABARD)**
- Development of J&K Soil and Land Resource Information System (JKSLRI) for planning and Soil Health Management. (**HADP, JK-Govt)**

PROJECTS as PI & Co PI

S.No	Title	Funding agency
1.	Up scaling of Leaf Colour Chart usage for real time nitrogen management for enhancing farmer profitability in Rajouri and Poonch districts of J&K	**JKDST**
2.	Technological Interventions and Capacity Building to Promote Entrepreneurship and Enhance Income in Agricultural Sector in Outer Himalayas of Jammu region of Jammu and Kashmir(UT).	**DBT-GoI**
3.	Training and demonstration of LCC for real time nitrogen management under the climate smart agriculture practices (CSAP) for maintaining ecological integrity through KVKS.	**NABARAD**
4.	Refinement & improvement of soil quality & water productivity enhancement technology in rainfed orchards of Jammu region..	**DST**
5.	Networking project on revival of village ponds through scientific intervention	**ICAR**
6.	Up scaling of Leaf Colour Chart (LCC) usage for real time nitrogen management for enhancing farmer profitability in Jammu and Samba districts of J&K.	**JKST&IC**
7.	Phosphorus dynamics and use efficiency in Rice Wheat cropping systems under IPNS.	**IF-RCM**
8.	National Initiative on climate resilient agriculture	**ICAR**

As Co PI

- Soil erosion risk mitigation & carbon sequestration potential of climate resilient agriculture practices in foot hills. **(ICAR)**
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Selected Journal/Research Articles

Nabi Z, Manzoor S, Nabi SU, Wani TA, Gulzar H, **Arya VM**, Baloch FS, Vladulescu, Popescu SM, Mansoor S. 2024. Pattern-triggered immunity and effector-triggered immunity: crosstalk and cooperation of PRR and NLR-mediated plant defense pathways during host–pathogen interactions. *Physiology and Molecular Biology of Plants.* **30**, 587–604.

Sharma T, **Arya VM**, Sharma V, Bhat MIJ, Bath G. 2024. Changes in soil nitrogen and phosphorus pools with different cropping intensities in Himalayan plains of Chenab- Ravi basin. *Journal of King Saud University – Science*.

Chadha D, Sharma V, Kour S, Arya VM, Sharma D, Pooniyan S. 2024. Revitalizing Salt- Affected Soils: Harnessing the Power of Halophilic Microorganisms for Bioremediation. *Communications in Soil Science and Plant Analysis. https://doi.org/10.1080/00103624.2024.2416544*

Sharma D, Sharma V, Buttar TS, Sharma A, **Arya VM**. 2023. Edge-of-field monitoring to assess the effectiveness of conservation practices in the reduction of carbon losses from the foothills of the Himalayas. ***Catena*** 225: 107030.

Popescu SM, Mansoor S, Wani OA, Kumar SS, Sharma V, **Arya VM**, Sharma A, Kirkham MB, Hou D, Bolan N and Chung YS. 2024. Artificial intelligence and IoT driven technologies for environmental pollution monitoring and management. ***Frontiers in Environmental Science*** 12:1336088. doi: 10.3389/fenvs.2024.1336088.

Hussain S, Sharma V, **Arya VM**, Sharma KR & Rao S. 2019. Total organic and inorganic carbon in soils under different land use/land cover systems in the foothill Himalayas. ***Catena*** 182, 104104.

Arya VM. 2023. Impact of resource conservation techniques on soil properties in sub montane north western Himalayas. ***International Journal of Plant & Soil Science****,* 35(17): 337-347.

Sharma A, **Arya VM**, Rai P. 2020. Distribution of various forms of potassium in soils representing intermediate zone of Jammu region. ***Journal of the Indian Society of Soil Science***, 57(2): 205-207.

Arya VM, Sharma V, Vaid A, Sharma A, Bharat R, Sharma R, Jalali VK and Kukal SS. 2016. Phosphorus Adsorption and Desorption in Agro-climatically Disparate Soils Representing Foothills of Northwest Himalayas. ***Indian Journal of Ecology***. 43: 697-705.

Arya VM, Yadav M, Sharma V, Bharat R, Bhat MIJ, Hussain A and Shabir H. 2023. Uncovering the impact of erosion conservation techniques on soil attributes in Shivaliks of lower Himalayas of Jammu. ***International Journal of Plant & Soil Science****,* 35(17): 220-230.

Menia M, Sharma BC, Singh AP, **Arya VM**, Sharma MK, Kumar S, Vaid A, Gupta V, Sharma N. 2022. Performance of Diversified Legume Entailing Ultra High Intensity Rice based Cropping System Models for Higher Productivity, Profitability and Sustainability. ***Legume Research- An International Journal***, DOI: 10.18805/LR-

4960.

Arya VM, Yadav M, Sharma V, Bharat R, Iqbal MJB. 2022. Impact of erosion control modules on physical attributes of clay loam soil in lower Shivaliks of district Kathua of Jammu, ***Indian Journal of Ecology***, 328-329.

Sharma T, **Arya VM**, Sharma V, and Sharma, Laskar YA. 2022. Integrated nutrient management: A long-term approach towards sustainability, ***International Journal of Plant & Soil Science***, 34(20): 433-446.

Manhas S, Sharma V, **Arya VM**, Chaubey A. 2022. Production and purification of L-asparaginase obtained from *Enterobacter asburiae* isolated from black gram rhizospheric soil sample. ***Indian Journal of Ecology****,* 12*:* 303-306.

Yadav NK, Sharma V, **Arya VM**, Choudhary RS. 2022. Effect of different organics amendments on some soil physical properties in a paddy-berseem cropping system. ***Journal of Soil and Water Conservation***, 21(2):127-132.

Awards and Recognitions

- **Lead lecture** and keynote presentations in International conferences, Indian Science congress, JK Science Congress and International seminars
- **Gold Medal by Soil Conservation Society, New Delhi**
- **Leadership Awrad by Soil Conservation Society, New Delhi**
- **Best Scientist Award by GEWS India**

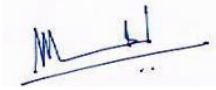
PATENT: 02

S.No.	Title of the Patent	Design no	Date
1.	Agriculture and Aquaculture Managing AI-Machine	403047-001	26-12-2023
2.	Waste sorting robot	421346-001	27/06/2024

VISION

As an academician deeply rooted in the field of Soil Science and Agriculture, I am dedicated to addressing the complex challenges confronting food systems and natural resources. Through interdisciplinary research, innovative education, and community engagement, I aim to develop sustainable solutions that promote food security, environmental health, and socio-economic well- being. By advancing scientific knowledge, nurturing the next generation of agricultural leaders, and fostering partnerships across sectors, I aspire to cultivate a future characterized by resilient soils, thriving ecosystems, and inclusive, equitable food systems.

My vision for managing agricultural research is one that is collaborative, inclusive, and responsive to the needs of farmers and the environment. It is mission-driven, equitable, and innovative. It is a vision that recognizes the interconnectedness of agriculture with other sectors Together, through collaborative efforts, we can work towards building a more sustainable and resilient society for generations to come.



Dr. Vivak M Arya
Professor
Division of Soil Science & Agricultural Chemistry

Place: Jammu

TEXAS STATE- USA, Corn Research Farm-Temple USA

Demonstration of Leaf Colour Chart (LCC) to Honorable Chancellor Sh. N. N. Vorha Sir

With PhD scholars in my laboratory at SKUAST- Jammu