

**Dr. Ghanshyam Agrawal**  
Associate Professor



Specialization: Agricultural Engineering, Hydrological Modelling, Watershed Management, Soil & Water Conservation Engineering, Irrigation & Drainage Engineering

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### Ongoing research projects

- Precision farming Development Centre, (As-PI) funded by NCPAH, Ministry of Farmers' Welfare and Agriculture, GOI (₹50 lakh per annum; Long term)
- Physico-chemical and biological properties of soil and water due to application of mulch material and stored irrigation water in horticultural crops, (As-PI) funded by Dr YSP University of Horticulture, Nauni, Solan through Govt. of HP (₹5.5 lakh; May 2023 – May 2024).
- Precision farming technologies for enhancing yield and quality of horticultural crops, (As-Co-PI) funded by MIDH, Department of Horticulture, Govt. of Himachal Pradesh (₹50 lakh; 2023-2024)
- Studies on the effect of natural farming practices through automation on crop productivity under horticulture based cropping systems and biological properties of soil and water due to application of mulch material and stored irrigation water in horticultural crops, (As- Co-PI) funded by Dr YSP University of Horticulture, Nauni, Solan through Govt. of HP (₹20 lakh; May 2023 – May 2024).

### Important research publications

- Sharma A; Bhardwaj S K; Aggarwal R K; Sharma R and Agrawal G. 2023. Greenhouse gas emission potential of sewage treatment plants in Himachal Pradesh. *Scientific Reports*: **13**:9675. <https://doi.org/10.1038/s41598-023-36825-7>.
- Kumar P, Thakur J and Agrawal, G. 2022. Evaluation of regulated deficit drip irrigation strategies in apricot. *Journal of Plant Nutrition*, 45(20):3109-3117. <https://doi.org/10.1080/01904167.2022.2027968>.
- Vaidya P, Bhardwaj SK, Chandel S, Agrawal G and Thakur M. 2016. Impact of land uses on soil quality in mid hill region of North Western Himalayas. *The Ecoscan* **10** (3&4):553-59
- Kumar R, Thaman S, Agrawal G and Sharma P. 2011. Rain Water Harvesting and Groundwater Recharging in North Western Himalayan Region for Sustainable Agricultural Productivity. *Universal Journal of Environmental Research and Technology* **1**(4):539-544
- Jhajharia D, Agrawal G and Seveda M S. 2009. Influence of Meteorological Parameters on Pan Evaporation at Agartala. *Journal of Agricultural Engineering* **46**(1):23-26

- Jhajharia D, Deb Barma S and Agrawal G. 2004. Comparison of Pan Evaporation-Based Reference Evapotranspiration Model with Penman Monteith FAO-56 Model. *Journal of Agricultural Engineering* **41**(3):46-52
- Jhajharia D, DebBarma S and Agrawal G. 2004. Comparison of Simpler Radiation-Based ET Model with Penman Monteith Model for Humid Region. *Journal of Agricultural Engineering* **41**(4):32-36
- Rajput TBS, Patel N and Agrawal G. 2004. Laser leveling- A tool to increase irrigation efficiency at field level. *Journal of Agricultural Engineering* **41**(1):20-25
- Agrawal G and Kumar D. 2002. "Unit hydrograph by Collions method. *Indian Journal of Soil Conservation* **30**(2): 132-136
- Agrawal G and Kumar D. 1999. Unit hydrograph estimation by Z-Transform method. *Journal of Agricultural Engineering* **36** (4): 31-36

## Book

- Gupta B, Agrawal G and Chauhan A. 2022. Forest Fire Characteristics and Management. Studera Press, Delhi. pp 1-320. ISBN No. 978-81-947252-2-0 (Hardcover) and ISBN No. 978-81-953978-3-9 (E-book)

## Awards & Recognitions

- National Merit Scholarship by Board of Secondary Education, Rajasthan.
- Junior Research Fellowship (JRF) by Indian Council of Agriculture Research (ICAR), New Delhi.
- National Eligibility Test (NET) by ASRB, ICAR, New Delhi.
- Served as *Water Resources cum Agriculture Engineer* under the World Bank funded "Rapid Assessment of Wadis to be selected for the Irrigation Improvement Project (IIP-Phase II)", Ministry of Agriculture & Irrigation (MAI), Republic of Yemen (ROY) during Dec 2005- March 2006.
- Served as *Water Resources cum Agriculture Engineer* under the World Bank funded Project "Preparation of Water Resources Assessment Plan for Dhamar Plain", Groundwater & Soil Conservation Project (GSCP), MAI, ROY during 2007-2009.
- Served as *Water Resources cum Agriculture Engineer* under the World Bank funded Project "Feasibility Study & Design of an Improved Solid Waste Management System of Taiz Metropolitan Area", Taiz Municipal Development & Flood Protection Project (TMDFP), Ministry of Public Works and Highways (MPWH), ROY during 2009-2010.
- Served as *Water Resources cum Agriculture Engineer* under the World Bank funded Project "Establishing a Multi-Purpose Geographic Information System (GIS) for Taiz and Preparing Detailed Area Plan for Priority Upgrading and growth areas", TMDFP, MPWH, ROY during 2009- 2010.