Name	Dr. Brijesh Yadav
Date of birth	10-05-1995
Designation	Scientist Sr. Scale (Soil Science)
Qualification	Ph.D.
Email id	brijesh8104@gmail.com; Brijesh.Yadav@icar.org.in

Educational Qualifications

Ph.D (Agricultural Physics), ICAR-Indian Agricultural Research Institute, New Delhi (2021); M.Sc (Agricultura Physics), ICAR-Indian Agricultural Research Institute, New Delhi (2016). B.Sc. (Ag.) Hons., SKRAU, Bikane (2014).

Professional Experience

Position	Institute	Joining date
Scientist	ICAR-NAARM, Hyderabad	05.10.2020
Scientist	ICAR-DMR, Solan	12.01.2021
Scientist	ICAR-NBSS&LUP RC, Udaipur	04.10.2021

Research Areas

Remote Sensing and GIS • Soil Physics • Soil Survey

Awards

IARI Merit Fellowship for Ph.D., 2016 (All India Rank 2) • ICAR-Junior Research Fellowship 2014 (All India Rank 05) • National Fellowship for OBC (2018)

Relevant experience

Sr. No.	Experience field	Description
1.	Remote sensing and GIS	➢ Digital mapping of soil attributes in Central Gujarat region at 30m resolution ➢ Developed landform and terrain mapping units (TMU) maps of Vadodara, Anand and Tapi districts, Gujarat ➢ Digital soil mapping of key soil properties in South Gujarat region ➢ Developed land degradation vulnerability map of Luni River Basin, Rajasthan using geospatial techniques and AHP modeling ➢ Developed groundwater potential zone map of Jaipur district, Rajasthan using AHP and MIF techniques ➢ Analyzed spatio-temporal trend of vegetation and associated climatic variables using remote sensing products over Rajasthan during 2001–2021

2.	Soil Physics	➢ Developed pedo-transfer function for estimation of FC and PWP in Central Gujarat region ➢ Developed pedo-transfer function for estimation of FC and PWP in South Gujarat region ➢ Modelling of soil hydro-thermal regime and soil water balance components using crop simulation models
3.	Soil Survey	• Soil survey of Gandhinagar district, Gujarat • Soil survey of Morbi, Gujarat • Soil survey of Mahisagar district, Gujarat • Soil survey of Junagadh district, Gujarat • Soil survey of Vadodara district, Gujarat • Soil survey of Anand district Gujarat
4.	Crop suitability maps and LUP developed	➢ Developed crop suitability map of major crops in Central Gujarat region ➢ Assessment of crop suitability in South Gujarat region ➢ Developed crop suitability map of major crops for Bikaner division ➢ Developed alternate land use plan for four districts of Bikaner division using geospatial techniques and AHP

In-house Projects

1. High resolution soil mapping using Digital Soil Mapping techniques in Central Region of Gujarat
2. Land Resource Inventory of Vadodara District, Gujarat Using the New SOP for Optimal Agricultural Land Use Planning
3. Assessment of Ecosystem Service Value in Response to Land Use/Land Cover Changes in Different Agro-Ecological Sub-Regions of Rajasthan Using Geospatial Techniques
4. Digital Soil Mapping of South Saurashtra Region of Gujarat using Machine Learning Techniques
5. Digital Soil Mapping of North Gujarat Region
6. Delineation of Potential Crop Zones for Gujarat State-A Step Towards Sustainable Agricultural Land Use Planning
7. High Resolution Soil Mapping using Digital Soil Mapping Techniques in North Saurashtra Region of Gujarat
8. Georeferenced monitoring and change detection of soil series properties for integrated agricultural development in Rajasthan
9. Land Resource Inventory of Anand District, Gujarat Using the New SOP for Optimal Agricultural Land Use Planning
10. Land Resource Inventory of Amreli District, Gujarat Using the New SOP for Optimal Agricultural Land Use Planning
11. Land Resource Inventory of Dang District, Gujarat Using the New SOP for Optimal Agricultural Land Use Planning
12. Land Resource Inventory of Narmada District, Gujarat Using the New SOP for Optimal Agricultural Land Use Planning
13. Land Resource Inventory of Dahod District, Gujarat Using the New SOP for Optimal Agricultural Land Use Planning

Publications (Top 10)

Yadav, Brijesh, Malav, L.C., Jangir, A., Kharia, S.K., Singh, S.V., Yeasin, M.D., Nogiya, M., Meena, R.L., Meena, R.S., Tailor, B.L. and Mina, B.L., 2022. Application of analytical hierarchical process, multi-influencing factor, and geospatial techniques for groundwater potential zonation in a semi-arid region of western India. ***Journal of Contaminant Hydrology***, 253, p.104122.

Yadav, Brijesh, Krishnan, P., Parihar, C. M., & Banerjee, K. (2025). Modelling crop growth and soil hydrothermal regimes under conservation agriculture using APSIM-wheat. **Scientific Reports**, 15(1), 36362.

Yadav, Brijesh, Krishnan, P., Shafeeq, P. M., Parihar, C. M., & Aggarwal, P. 2020. Modelling soil thermal regime in wheat using HYDRUS-2D under diversified maize- wheat-mungbean cropping system. **Catena**, 194, 104765.

Yadav, Brijesh, Krishnan, P., Parihar, C. M., Yadav S. 2020. Effect of conservation agriculture on soil hydro-physical properties under diversified maize-based cropping systems. **Indian Journal of Agricultural Sciences**, 90 (9): 1813–8.

Yadav, Brijesh, Malav, L.C., Jiménez-Ballesta, R., Kumawat, C., Patra, A., Patel, A., Jangir, A., Nogiya,M., Meena, R.L., Moharana, P.C., Kumar, N., Sharma, R.P., Yadav, L.R, Reddy, G.P.O, Mina, B.L. 2022. Modeling and Assessment of Land Degradation Vulnerability in Arid Ecosystem of Rajasthan Using Analytical Hierarchy Process and Geospatial Techniques. **Land**, 12, 106.

Yadav, Brijesh, Malav, L.C.; Singh, S.V.; Kharia, S.K.; Yeasin, Md.; Singh, R.N.; Nogiya, M.; Meena, R.L.; Moharana, P.C.; Kumar, N.; Sharma, R.P.; Reddy, G.P.O; Mina, B.L.; Jha, P.K. Spatiotemporal Responses of Vegetation to Hydroclimatic Factors over Arid and Semi-arid Tropical Climate. Sustainability 2023, 15, 15191.

Malav, L.C., **Yadav, Brijesh**, Tailor, B.L., Pattanayak, S., Singh, S.V., Kumar, N., Reddy, G.P., Mina, B.L., Dwivedi, B.S. and Jha, P.K., 2022. Mapping of Land Degradation Vulnerability in the Semi-Arid Watershed of Rajasthan, India. ***Sustainability,*** *14*(16), p.10198.

Banerjee, K., Krishnan, P., Kumar, A., Barman, A., Roy, D., Sen, S., & **Yadav, Brijesh** (2025). Characterizing and screening of wheat genotypes under salinity stress condition using thermography and multivariate techniques. Scientific Reports, 15(1), 39220.

Malav, L. C., Daripa, A., Chattaraj, S., **Yadav, Brijesh**, Jangir, A., Naitam, R. K., ... & Karak, T. (2025). Trace Elements in Untreated Wastewater in Central India: A Controversial Consideration for Irrigating Vegetables—To Employ or Not to Employ? LC Malav et al. Biological Trace Element Research, 203(12), 6353-6377.

Moharana, P.C., Dharumarajan, S., **Yadav, Brijesh**, Jena, R.K., Pradhan, U.K., Sahoo, S., Meena, R.S., Nogiya, M., Meena, R.L., Singh, R.S. and Singh, S.K., 2023. Prediction of Soil Inorganic Carbon at Multiple Depths Using Quantile Regression Forest and Digital Soil Mapping Technique in the Thar Desert Regions of India. ***Communications in Soil Science and Plant Analysis***, pp.1-18.

Total Publications (Peer-reviewed journals only)

International: 25

National: 04

Google Scholar link: https://scholar.google.com/citations?user=x15OG9IAAAAJ&hl=en