Division of Land and Water Management

Personal Details

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Research Interest

Land and Water Management

Research Highlights

Micro irrigation, Sensor based irrigation scheduling, Use of geospatial tools in groundwater, Ground water modeling, On-farm water management, Canal water management, Multiple uses of water, Conjunctive use of canal water and groundwater, soil moisture dynamics, Rainwater harvesting Modeling, Crop and hydrological modeling, application of geospatial tools in watershed management, Flood hazard mapping.

Memberships / Fellowships

Technology Developed

Publication Details

A. Research papers published

- Kumar, J., Patel, N., Rajput, T. B. S., Kumari, A., & Rajput, J. (2020). Performance evaluation and calibration of soil moisture sensors for scheduling of irrigation in brinjal crop (Solanum melongena L. var. Pusa Shyamla). Journal of Soil and Water Conservation, 19(2), 182-191.
- Ashutosh, U., Arti, K., & Ahmed, A. (2020). Determination of maximum storage and drainage coefficient from consecutive days maximum rainfall at different locations in India. Journal of AgriSearch, 7(1), 27-31.
- Kumari, A., Patel, N., & Ahmed, A. (2019). Standardization of Frequency Domain Reflectometry and Watermark Sensors for Soil Moisture Measurement at Field Level. Journal of AgriSearch, 6(4), 175-180.
- Kumari, A., Patel, N., & Mishra, A. K. (2018). Response of drip irrigated Broccoli (Brassica oleracea var. italica) in different irrigation levels and frequencies at field level. Journal of Applied and Natural Science, 10(1), 12-16.
- Rajput, J., choudhary, R., Kothari, M. and Kumari, A.2018. Development of Optimum Irrigation Schedule and Rotational Water Allocation Plan for

Bhimsagar Canal Command System. International Journal of Agriculture Sciences, ISSN, 0975-3710.

- Kumari, A., Patel, N., & Mishra, A. K. (2017). Field evaluation and calibration of Tensiometer and Gypsum block sensors in drip irrigated Broccoli (Brassica oleracea var. italica). Journal of Soil and Water Conservation, 16(3), 267-273.

B. Important Book chapters

- Kumari, A., Suna, T., Kumar, M., Murthy, G. R. K., Krishnan, P., & Rao, C. S. (2019). Research and Technology Status: Emerging Opportunities in Land and Water Management. Director NAARM, Rajendranagar.
- Abhilash, A. R., Kumari, A., & Kumar, J. "Water Resource and Use Efficiency Under Changing Climate." In Resources Use Efficiency in Agriculture, pp. 519-576. Springer, Singapore, 2020.
- Rani, A., Kumari, A., Singh, R. N., & Kumari, K. (2021). Climate-Smart Agriculture: An Integrated Approach for Attaining Agricultural Sustainability. In Climate Change and Resilient Food Systems (pp. 141-189). Springer, Singapore.
- Kumari, A.; Koley, T.K. and Sundaram, P.K. (2019). Technological options for horticultural crops in cold desert areas. Recent Advances in Horticulture and Post-harvest technologies for livelihood security: Model Training course: 2019; sponsored by Directorate of Extension Education, Ministry of Agriculture and Farmers Welfare, p.p. 146-151.
- Koley, T.K.; Kumari, A.; Dhakar, M.K., Kumar, R., Kumar, R. and Kumari, Subha (2019).Microgreens Production: A New Enterprises for Start-Up. Recent Advances in Horticulture and Post-harvest technologies for livelihood security: Model Training course: 2019; sponsored by Directorate of Extension Education, Ministry of Agriculture and Farmers Welfare, p.p. 32-34.

C. E-Publications/Popular Articles:

- Sahoo, S.; Dotania, M. L.; Paul, R.; Ahmed, A. and Kumari, A. (2019).Plasticulture: A source of micro plastic in ecosystem. https://www.krishisewa.com/articles/protected-agriculture/1037-plasticulture-a-source-of-microplastic-in-ecosystem.html
- Ahmed,A.; Kumari, A.; Manibhushan; Mondal, S. and PawanJeet (2019).Use of IoT based irrigation scheduling for smart farming. https://www.krishisewa.com/articles/miscellaneous/1018-use-of-iot-based-irrigation-scheduling-for-smart-farming.html
- Jeet, P.; Ahmed, A. and Kumari, A. (2020). On- Farm water management practices: Needs and Future prospects in Bihar. *Food and Scientific Reports,* 1:20-22.
- Kumari, A.; Kumari, Subha; Koley, T.K.; Ahmed,A.;Manibhushan (2020). Recent Advances in Irrigation Scheduling to enhance Agricultural Water Productivity. *Food and Scientific Reports,* 1:8-10.
- कुमारी आरती, उपाध्याय आशुतोष एवं अहमद अकरम.2020.शीत मरुस्थलीय क्षेत्रों में फसल उत्पादन क्षमता बढ़ाने के तकनीकी वकल्प.कृ ष मञ्जूषा.2(2):21-23.
- कुमारी आरती,जीत पवन एवं अहमद अकरम .2020. फसल की योजना और प्रबंधन के लए जल बजट और लेखा परीक्षा की भू मका. कृ ष मञ्जूषा 3(1):60-62.

- कुमारी आरती एवं जाटोठ वरन्ना.2020. ऊर्ध्वाधर कृ ष प्रणाली: शहरी क्षेत्रों में सतत कृ ष उत्पादन का जरिया .e खेती .
- अहमद अकरम; कुमारी आरती और देबनाथ , मृदुस्मिता .2019. इंटरनेट ऑफ़ थंग्स आधारित स्मार्ट सचाई प्रबंधन प्रणाली.कृ ष मञ्जूषा, पेज न. 41-44. https://jsure.org.in/wp-content/uploads/2019/10/12.