

## CURRICULUM VITAE

### Dr. Abrar Yousuf

Assistant Professor

Dept. of Soil and Water Engineering

Punjab Agricultural University

Ludhiana, Punjab, India

E-mail: [er.aywani@pau.edu](mailto:er.aywani@pau.edu), [er.aywani@gmail.com](mailto:er.aywani@gmail.com)

Phone: +91 9501404847

**Researchgate:** [https://www.researchgate.net/profile/Abrar-Yousuf?ev=hdr\\_xprf](https://www.researchgate.net/profile/Abrar-Yousuf?ev=hdr_xprf)

**Google Scholar:**

<https://scholar.google.com/citations?user=z8CGjDAAAAAJ&hl=en>



**Expertise: Soil and Water Conservation; Hydrologic Models (WEPP, SWAT, RUSLE, EROSION 3D), Remote Sensing and GIS, Runoff Simulation**

### Experience

- Scientist (Soil and Water Engineering), PAU-Regional Research Station, Ballawal Saunkhri, SBS Nagar Punjab *w.e.f.* **25<sup>th</sup> July 2025 to 3<sup>rd</sup> February 2025**
- Assistant Professor, Dept. of Soil and Water Engineering, Punjab Agricultural University, Ludhiana, Punjab, India *w.e.f.* **4<sup>th</sup> February 2025 to till date.**

| ACADEMIC QUALIFICATIONS |                                     |                                                                                |            |             |
|-------------------------|-------------------------------------|--------------------------------------------------------------------------------|------------|-------------|
| Year                    | Degree                              | Board/University/Institute                                                     | Percentage | Grade       |
| 2021                    | Ph.D. Soil and Water Engineering    | Punjab Agricultural University, Ludhiana                                       | 8.72       | Distinction |
| 2014                    | M. Tech. Soil and Water Engineering | Punjab Agricultural University, Ludhiana                                       | 8.53       | Distinction |
| 2012                    | B. Tech. Agricultural Engineering   | Sher-e-Kashmir University of Agricultural Sciences and Technology-Kashmir, J&K | 8.46       | Distinction |
| 2007                    | 12 <sup>th</sup>                    | J&K Board of School Education                                                  | 80.93      | Distinction |
| 2005                    | 10 <sup>th</sup>                    | J&K Board of School Education                                                  | 83.50      | Distinction |

**Ph.D. Dissertation:** Development of remote sensing and GIS based runoff and sediment yield model for a watershed

**M.Tech. Thesis:** Simulation of runoff and sediment yield from a small watershed in Shivalik foot-hills using WEPP model

### Awards / fellowships / distinctions

- **Dr. KL Sharma Young Scientist Award** by Indian Society of Dryland Agriculture, Hyderabad, India
- **Best Oral Presentation Award for the paper** Integrating Geospatial and Analytical Hierarchy Process Techniques for Identification of Potential Rainwater Harvesting Sites in

Lower Shivaliks of Punjab” authored by Abrar Yousuf, Moonisa Aslam Dervash, MJ Singh, Mohammad Amin Bhat, Navneet Sharma during an International Conference on Advancements in Basic Sciences, Environmental Studies and Traditional Medicine for Translational Drug Discovery and Development (TMT3D-2024) being organized by National Environmental Science Academy at Banaras Hindu University, Varanasi during 21-23 November, 2024

- **Best Oral Presentation Award** for the paper entitled “SWAT model application for simulating the water balance and water yield in the lower Sutlej sun-basin of Indian Punjab” during 3<sup>rd</sup> International web conference on Natural Management for Global Food Security and Sustainable Development Goals (2-3 December 2022)
- **Certificate of Appreciation**
- **Student Incentive Award for Doctoral Research** during the 31<sup>st</sup> National Conference on Innovative resource management approaches for coastal and inland ecosystems to sustain productivity and climate resilience held at Navsari Agricultural University, Navsari, Gujarat, India during 13-15 October 2022 organized by Soil Conservation Society of India, New Delhi.
- **Best Research Paper Award** for the research paper entitled “Impact of land configuration and strip intercropping on runoff, soil loss and crop yields under rainfed conditions in the *Shivalik* foothills of North-West, India. (Sustainability. 13:6282)” during XXVII Biennial workshop of All India Coordinated Research Project on Dryland Agriculture (2-4<sup>th</sup> June 2022)
- **Best Paper Award** during the National seminar on “Agrometeorological interventions for doubling the farmers’ income” held at Kerala Agricultural University, Thrissur during 20-22 January 2020
- **AICRP for Dryland Agriculture Most Responsive Centre Team Award** during XXVI Biennial Workshop of All India Coordinated Research Project for Dryland Agriculture at University of Agricultural Sciences, Bengaluru during 16-19 January 2019.
- **Best Poster Award** at 26<sup>th</sup> National conference on Natural Resource Management through Climate Smart Sustainable Agriculture (NRMCSSA), Barapani, Meghalaya.
- **Best M. Tech. Thesis Award** by Society for Scientific Development in Agriculture and Technology (SSDAT), 2017.
- Merit certificate in B. Tech. Agricultural Engineering
- Merit certificate in M. Tech. Soil & Water Engineering
- Qualified ICAR JRF in 2012
- Qualified ICAR SRF in 2015
- Awarded INSPIRE fellowship during Ph.D.
- Awarded MANF fellowship during Ph.D. (Not availed)
- University Merit Fellowship during Ph.D. (Not availed)
- Received Merit-cum-Means Fellowship during M. Tech. Degree
- Qualified NET conducted by ASRB, New Delhi

#### **Working/Research Experience**

- Scientist (Soil and Water Engineering) in All India Coordinated Research Project for Dryland Agriculture (AICRPDA) (2016-2025).

### **Research projects**

- **Co-PI in the project:** “Development of Sustainable Agricultural Water Management Practices for Kahnawan Block of Gurdaspur, Punjab” funded by NABARD (2024 to till date)
- **PI in the project:** “Identification of Potential Rainwater Harvesting Sites using geo-spatial techniques in *Kandi* region of Punjab” funded by Department of Soil and Water Conservation, Govt. of Punjab (2023-till date)
- **PI in the project:** “Assessment of Reservoir Sedimentation using Hydrological Modeling, Remote Sensing and GIS for the selected Dams located in Kandi Region of Punjab” funded by Department of Soil and Water Conservation, Govt. of Punjab (2021-2024)
- **PI in the project:** "Assessment of current status of Makkowal Type Water Harvesting Structures in Kandi region of Punjab" funded by Department of Soil and Water Conservation, Govt. of Punjab (2021-2024)
- **Co-PI in the project:** “National Innovations in Climate Resilient Agriculture” funded by ICAR-CRIDA Hyderabad. (2016-2025)
- **Associated Scientist in the project:** “All India Coordinated Operational Research Project for Dryland Agriculture” funded by ICAR-CRIDA Hyderabad. (2016-2018)
- **Co-PI in the project:** “Planning of decentralised erosion prevention for selected rain water retention measures in Punjab, India under the aspect of the adjustment to climate change” funded by GIZ, New Delhi and IPRO Consult, Germany. (2017-2019)
- **Co-PI in the project:** “Integrated Approaches to Conserve Natural Resources for Sustainable Development and to Mitigate the Effect of Climate Change in Participatory Mode” funded by DST, New Delhi. (2017-2018)
- **Associated Scientist in the project:** “Revival of village ponds through scientific interventions” funded by DST, New Delhi (2017-2019)

### **Teaching experience**

1. Soil and Water Conservation Engineering (SWE 102)
2. Soil Physics and Conservation (Soils 52)
3. Farm Irrigation and Drainage (SWE 51)
4. Elementary Food Technology (FT-51)
5. Elementary Agro-processing (PFE 51)
6. Member, Advisory Committee of Mr. Robinpreet Singh (Student, M.Sc. Soil Science)
7. Member, Advisory Committee of Ms. Yasmin (Student, M.Sc. Agrometeorology)
8. Member, Advisory Committee of Avaninder Preet Kalsi (Student, M.Sc. Horticulture)
9. Member (Collaborating Scientist), Advisory Committee of Mr. Navneet Sharma, (Student, Ph.D. Soil and Water Engineering)

### **Membership of scientific societies / associations:**

- Life member of Indian Society of Dryland Agriculture
- Life member of Soil Conservation Society of India

- Life Member of Indian Society of Agricultural Engineers
- Life Member of Soil Conservation Society of India
- Life Member of Academy of Natural Resources Conservation and Management
- Member, World Association of Soil and Water Conservation

#### **Administrative skills**

1. **Academic Coordinator**, PAU-College of Agriculture, Ballawal Saunkhri
2. **Coordinator**, Department of Agricultural Engineering and Technology, PAU-College of Agriculture, Ballawal Saunkhri
3. **Assistant Hostel Warden**, PAU-College of Agriculture, Ballawal Saunkhri
4. **In charge Hostel Warden**, Boys Hostel, RRS Ballawal Saunkhri
5. **Assistant Hostel Warden**, Boys Hostel, RRS Ballawal Saunkhri
6. **In charge, Sugarcane Processing Unit**, RRS Ballawal Saunkhri
7. **In charge**, Guest House, RRS Ballawal Saunkhri
8. **In charge**, Station & Vehicle Management Committee, RRS Ballawal Saunkhri
9. **In charge**, Soil and Water Engineering Laboratory, RRS Ballawal Saunkhri
10. **In charge**, Cleanliness committee, RRS, Ballawal Saunkhri
11. **Co-In charge**, Sports Committee, RRS, Ballawal Saunkhri
12. **Member**, Farm Management Committee, RRS, Ballawal Saunkhri
13. **Member, Screening committee** for post of Office Assistant for Diploma in Agriculture
14. **Member, Screening committee** for post of Project Associate in the DST Village Pond project
15. **Convener**, House Allotment Committee, RRS, Ballawal Saunkhri
16. **Convener**, Shamiana and Stall Management Committee, Kisan Mela (March 2019)
17. **Convener**, Shamiana and Stall Management Committee, Kisan Mela (September 2018)
18. **Convener**, Shamiana and Stall Management Committee, Kisan Mela (March 2018)
19. **Convener**, Shamiana and Stall Management Committee, Kisan Mela (September 2017)
20. **Convener**, Shamiana and Stall Management Committee, Kisan Mela (March 2017)
21. **Co-Convener**, Stall Management Committee, Kisan Mela (September 2016)
22. **Co-Convener**, Physical Arrangement Committee (Registration room) for Inaugural Function of Diploma in Agriculture (July 2018)

#### **List of publications**

1. Abrar Yousuf, Pravin Dhiphale, Mehraj U. Din Dar, Mansour Almazroui (2024) Integrating Multi-Criteria Decision-Making (MCDM) Models and Morphometric Analysis for Watershed Prioritization in Lower Shivaliks of Punjab, India. Earth Systems and Environment. <https://doi.org/10.1007/s41748-025-00931-5>

2. Shiv Kumar Lohan, N. K. Chhuneja, Sunil Kumar, Anand Gautam and Abrar Yousuf (2024) Safety in Agriculture for Reducing Health Hazards: Analysing Prevalence and Prevention Strategies. *Journal of Agricultural Engineering (India)* 62:-
3. **Abrar Yousuf**, Navneet Sharma, Mohammad Amin Bhat, Anil Khokhar, Parminder Singh Sandhu, Balwinder Singh Dhillon, Ahmed Abdullah Al Dughairi, Hussein Almohamad and Hazem Ghassan Abdo (2024) Soil erosion assessment and watershed prioritization using GIS based RUSLE in Lower Shivaliks of Northwest India. *Geology, Ecology and Landscapes*
4. Mohammad Amin Bhat, Anil Khokhar, M.J. Singh, **Abrar Yousuf**, Balwinder Singh Dhillon, K.B. Singh and Randeep Singh 2024 Performance of Maize (*Zea mays* L.) in Response to Application of Prilled and Nano Urea under Rainfed Conditions of Northwest India. *Indian Journal of Dryland Agricultural Research & Development* 39(1):24-29.
5. Navneet Sharma, **Abrar Yousuf** and Arun Kaushal (2024) Evaluating the efficacy of best management practices in mitigating sediment yield and nutrient losses in the lower Sutlej River Basin, India. *Water Air and Soil Pollution* 235:703. <https://doi.org/10.1007/s11270-024-07491-w>
6. Navneet Sharma, Arun Kaushal, **Abrar Yousuf**, Samanpreet Kaur and Rakesh Sharda (2024) Towards sustainable river health: integrating hydrological modeling to predict nitrogen and phosphorus load in the lower Sutlej Sub-Basin, Punjab, India. *Water Practice and Technology* 19: 3631–3653
7. Moonisa Aslam Dervash, Bashir Ahmad Ganai and **Abrar Yousuf** (2024) Land use land cover dynamics around a western Himalayan wetland using geospatial techniques. *Current World Environment* 19(2):
8. Jaspreet Singh, Sanjeev K. Sandal, **Abrar Yousuf** and Mohammad Amin Bhat (2024) Effect of drip irrigation and NPK fertigation on growth, yield, quality and economics of tomatoes (*Lycopersicum esculentum*) under protected environment. *Journal of Soil and Water Conservation* 23(2): 168-176.
9. Jaspreet Singh, Sanjeev K. Sandal, **Abrar Yousuf** and Mohammad Amin Bhat (2024) Optimizing Tomato (*Solanum lycopersicum* L.) Cultivation in a Naturally Ventilated Polyhouse: Impacts of Drip Irrigation and Fertigation on Root Growth, Nutrient Uptake, and Productivity. *International Journal of Environment and Climate Change* 14(2): 923-932
10. Navneet Sharma, Arun Kaushal, **Abrar Yousuf**, Samanpreet Kaur, Rakesh Sharda (2024) Prioritization of sub-watersheds and subsequent site identification for soil water and conservation practices using the SWAT-AHP integrated model in the Lower Sutlej Sub-basin, India. *Environmental Science and Pollution Research* 31: 23120–23145
11. **Abrar Yousuf**, Navneet Sharma, Amanpreet Kaur Benipal, MJ Singh, Mohammad Amin Bhat and Pravin Dahiphale (2023) Integrating RUSLE and SDR in GIS framework for assessment of soil erosion and sediment yield in Kandi region of Punjab. *Indian Journal of Soil Conservation* 51(3): 82-94
12. Navneet Sharma, Arun Kaushal, **Abrar Yousuf**, Samanpreet Kaur, Rakesh Sharda, Som Pal Singh, OP Gupta and Anil Sood (2023) Prioritization of erosion susceptible watersheds using morphometric analysis and PCA approach: A case study of lower Sutlej River basin of Indian Punjab. *Watershed Ecology and the Environment*. 5(2): 209-224.
13. Jaspreet Singh, Sanjeev K. Sandal, **Abrar Yousuf** and Parminder Singh Sandhu (2023) Effect of Drip Irrigation and Fertigation on Soil Water Dynamics and the Productivity of Greenhouse Tomato. *Water*. 15: 2086. DOI:0.3390/w15112086

14. Baljeet Kaur, Navneet Kaur and **Abrar Yousuf** (2023) Projections in extreme maximum and minimum temperature events for Jalandhar district of Punjab. *Journal of Agricultural Physics*. 22: 31-37.
15. Navneet Sharma, Arun Kaushal and **Abrar Yousuf** (2023) SWAT model application for simulating water balance and water yield in the lower Sutlej sub-basin. *Journal of Soil and Water Conservation* 22(1): 354-360. DOI: 10.5958/2455-7145.2022.00045.5
16. **Abrar Yousuf**, MJ Singh, Amanpreet Kaur Benipal and Navneet Sharma (2022) Soil erosion and sediment yield assessment using RUSLE and GIS based approach in a forest watershed in Kandi region of Punjab. *Journal of Soil and Water Conservation* 21(4): 354-360. DOI: 10.5958/2455-7145.2022.00045.5
17. MJ Singh, Anil Khokhar, BS Dhillon, **Abrar Yousuf** and MA Bhat (2022). Overview of Dryland Agriculture Research and Achievements in Kandi Region of Punjab. *Indian Journal of Dryland Agricultural Research & Development* 36(2): 77-87. DOI: 10.5958/2231-6701.2022.00020.3
18. Parminder Singh Sandhu, **Abrar Yousuf**, MJ Singh, Vivek Sharma and Anil Khokhar (2021) Rainwater harvesting and supplemental irrigation for improved water productivity of wheat in Kandi region of Punjab. *Indian Journal Dryland Agricultural Research & Development* 36(2): 43-47.
19. Anil Khokhar, Mohammad Amin Bhat, MJ Singh, Amit Kaul, Parminder Singh Sandhu, **Abrar Yousuf**, Balwinder Singh Dhillon and G. Ravindra Chary (2021) Effects of Soil and Foliar Application of Urea on Growth, Yield and Economics of Rainfed Maize (*Zea mays* L.) in Punjab. *Indian Journal Dryland Agricultural Research & Development* 36(2): 27-32.
20. Singh MJ, Anil Khokhar, **Abrar Yousuf**, Parminder Singh Sandhu and Balwinder Singh Dhillon (2021) Evaluation of tillage and planting methods for *in-situ* moisture conservation in rainfed Maize (*Zea mays* L.)-wheat (*Triticum aestivum* L.) cropping system. *Indian Journal Dryland Agricultural Research & Development* 37(1): 1-9.
21. **Abrar Yousuf**, Anil Bhardwaj and Faizaan Yousuf (2022) Development and evaluation of GIS-based runoff and sediment yield watershed scale model. *Arabian Journal of Geosciences*. 15:1570. DOI:10.1007/s12517-022-10863-3
22. Navneet Sharma, Arun Kaushal, **Abrar Yousuf**, Anil Sood, Samanpreet Kaur and Rakesh Sharda (2023) Geospatial technology for assessment of soil erosion and prioritization of watersheds using RUSLE model for lower Sutlej sub-basin of Punjab, India. *Environmental Science and Pollution Research*. 30:515-531 (NAAS 11.19)
23. Anil Khokhar, Mohammad Amin Bhat, MJ Singh, **Abrar Yousuf**, Vivek Sharma, and Parminder Singh Sandhu (2022) Soil properties, nutrient availability vis-à-vis uptake and productivity of rainfed maize-wheat system in response to long-term tillage and n management in northwest India. *Communications in Soil Science and Plant Analysis* 53(22): 2935-2954.
24. Pravin Dahiphale, Manmohanjit Singh and **Abrar Yousuf** (2022) Morphometric Indices based Prioritization of Watersheds in lower Shivaliks of North-West India using Remote Sensing and GIS. *Indian Journal of Soil Conservation*. 50:1-11. (NAAS 5.59)
25. N L Kushwaha, Ahmed Elbeltagi, Sushant Mehan, Anurag Malik and **Abrar Yousuf** (2022) Comparative study on morphometric analysis and RUSLE based approaches for micro-watershed prioritization using remote sensing and GIS. *Arabian Journal of Geosciences*. 15:564 (NAAS 7.82)

26. Manmohanjit Singh, **Abrar Yousuf**, Harpreet Singh, Sukhdeep Singh, Kerstin Hartsch, Michael von Werner, Ashraf Y. Elnaggar, Enas E. Hussein, Hager R. Ali, Abdulrazzak (2022) Simulation accuracy of EROSION-3D Model for estimation of runoff and sediment yield from micro-watersheds. *Water*. 14, 280. doi:10.3390/w14030280 (NAAS: 9.10)
27. **Abrar Yousuf** and Anil Bhardwaj (2021) Development and application of travel time based gridded runoff and sediment yield model. *International Journal of Environmental Science and Technology*. 19: 9801–9816. doi:10.1007/s13762-021-03661-z (NAAS 8.53)
28. Mahesh Chand Singh, Rohit Singh, **Abrar Yousuf** and Vishnu Prasad (2021) Geo-informatics based morphometric analysis of a reservoir catchment in *Shivalik* foothills of North-West India. *Journal of Agricultural Engineering*. 58(3): 1-14. (NAAS 4.79)
29. Anil Khokhar, MJ Singh, Parminder Singh Sandhu, Vivek Sharma and **Abrar Yousuf**, (2021) Real time contingency measures to mitigate mid-season drought situation for rainfed maize in Kandi region of Punjab. *Indian Journal of Dryland Agricultural Research & Development*. 35(2): 24-28. (NAAS 4.88)
30. Anil Khokhar, Vivek Sharma, MJ Singh, **Abrar Yousuf**, Parminder Singh Sandhu, Vijay Kumar and MA Bhat (2021) Effect of potassium and magnesium application on growth, yield and nutrient uptake of rainfed maize in the sub-montaneous region of Punjab, India *Journal of Plant Nutrition* 45(14): 2202-2212. (NAAS 7.71)
31. Ejaz Ahmad Dar, Ajmer Singh Brar, Showket A. Dar, Bandar S. Aljuaid, Ahmed M. El-Shehawi; Rizwan Rashid, Zahoor A. Shah, **Abrar Yousuf**, Mohammad Amin Bhat, Mushtaq Ahmed, Fayaz Ahmad Bahar, Hesham El Enshasy, Marian Brestic, Maria Barboricova, Marek Zivcak, Shahid Farooq and Mohd Sari (2021) Quantitative response of wheat to sowing dates and irrigation regimes using CERES-Wheat model. *Saudi Journal of Biological Sciences* 29:6198-6208. (NAAS 10.22)
32. Anil Khokhar, **Abrar Yousuf**, Manmohanjit Singh, Vivek Sharma, Parminder Singh Sandhu and Gajjala Ravindra Chary (2021) Impact of land configuration and strip intercropping on runoff, soil loss and crop yields under rainfed conditions in the *Shivalik* foothills of North-West, India. *Sustainability*. 13:6282. (NAAS 9.82)
33. Navneet Kaur, **Abrar Yousuf** and MJ Singh (2021) Long term rainfall variability and trend analysis in lower *Shivaliks* of Punjab, India *Mausam* 72: 571-582. doi.org/10.54302/mausam.v72i3.1307 (NAAS 6.5)
34. Mahesh Chand Singh, **Abrar Yousuf** and Vishnu Prasad (2021) Morphometric and principal component analysis–based prioritization of reservoir catchments using geospatial techniques for land and water conservation aspects in North-West India. *Arabian Journal of Geosciences* 14:598 (NAAS 7.82)
35. **Abrar Yousuf**, Anil Bhardwaj and Vishnu Prasad (2021) Simulating impact of conservation interventions on runoff and sediment yield in a degraded watershed using WEPP model. *Ecopersia*. 9:191-205.
36. Vishnu Prasad, **Abrar Yousuf** and Navneet Sharma (2020) Hydrological modeling for watershed management. *Journal of Natural Resource Conservation and Management*. 1: 29-34.
37. Vishnu Prasad, **Abrar Yousuf** and Navneet Sharma (2020) GIS based morphometric analysis of forest watershed using high resolution satellite data. *Journal of Soil and Water Conservation, India* 19(3): 292-299.

38. Jonas Lenz, **Abrar Yousuf**, Marcus Schindewolf, Michael von Werner, Kerstin Hartsch, MJ Singh and Jurgen Schmidt (2018) Parameterization for EROSION 3D model under simulated rainfall conditions in lower Shivaliks of India. *Geosciences*. 8, 396; doi:10.3390/geosciences8110396. 1-18.
39. MJ Singh, **Abrar Yousuf**, SC Sharma, SS Bawa, Anil Khokhar, Vivek Sharma, Vijay Kumar, Satvinder Singh and Sher Singh (2018) Evaluation of vegetative barriers for runoff, soil loss and crop productivity in Kandi region of Punjab. *Journal of Soil and Water Conservation, India* 16(4): 325-332.
40. **Abrar Yousuf** and Anil Bhardwaj (2018) WEPP model, Present simulation capabilities, field performance and future enhancement needs. *Research Journal of Agricultural Sciences* 9(special): 221-230.
41. Dar EA, Brar AS and **Abrar Yousuf** (2018) Growing degree days and heat use efficiency of wheat as influenced by thermal and moisture regimes. *Journal of Agrometeorology*. 20(2): 168-170.
42. Dar EA, **Abrar Yousuf** and AS Brar (2017) Comparison and evaluation of selected evapotranspiration models for Ludhiana district of Punjab. *Journal of Agrometeorology* 19(3): 274-276.
43. **Abrar Yousuf**, A Bhardwaj, AK Tiwari and VK Bhatt (2017) Simulation of runoff and sediment yield from a forest micro-watershed in Shivalik foot-hills using WEPP model. *Indian Journal of Soil Conservation* 45(21): 21-27.
44. NL Kushwaha and **Abrar Yousuf** (2017) Soil Erosion Risk Mapping of Watersheds using RUSLE, Remote Sensing and GIS: A Review. *Research Journal of Agricultural Sciences* 8(2): 269-277.
45. EA Dar, **Abrar Yousuf**, EA Bhat and T Poonia (2017) Growth, yield and quality of baby corn (*Zea mays* L.) and its fodder as influenced by crop geometry and nitrogen application- a review. *The Bioscan*. 12(1): 463-469.
46. **Abrar Yousuf** and MJ Singh (2016) Runoff and soil loss estimation using hydrological models, remote sensing and GIS in Shivalik foothills: a review. *Journal of Soil and Water Conservation* 15(3): 205-210.
47. Mahesh Chand Singh, **Abrar Yousuf** and JP Singh (2016) Greenhouse microclimate modeling under cropped conditions-A review. *Research in Environment and Life Science* 9(12): 1552-1557.
48. **Abrar Yousuf**, A Bhardwaj, AK Tiwari and VK Bhatt (2015) Modelling runoff and sediment yield from a small forest watershed in *Shivalik* foot-hills using WEPP model. *International Journal of Agricultural Science and Research* 5(1): 67-78.

#### **Abstracts in conferences**

1. Abrar Yousuf, Moonisa Aslam Dervash, MJ Singh, Mohammad Amin Bhat, Navneet Sharma, Koyel Sur (2025) Assessment of suitable rainwater harvesting zones in *Kandi* region of Punjab using GIS based Fuzzy Logic and AHP techniques. National seminar on green energy for clean environment and sustainable agriculture being organized by academy of natural resource conservation & management (ANRCM), Lucknow (22nd April 2025).
2. Abrar Yousuf, MJ Singh, Mohammad Amin Bhat and Amanpreet Kaur Benipal (2025) Soil erosion and sediment yield estimation using integrated RUSLE and SDR approach in geospatial

environment. National Seminar on Climate Resilient Agriculture in the Facet of Transition in Agriculture (CRAFT), PAU, Ludhiana (17<sup>th</sup>-18<sup>th</sup> March, 2025).

3. Priya P. Gurav, Mohammad Amin Bhat, M.J. Singha, Abrar Yousuf, Anil Khokhar, Parminder Singh Sandhu, Kanwar Barjinder Singh, Balwinder Singh Dhillon, Randeep Singh, J.V.N.S. Prasad and V.K. Singh (2024) Effect of Long-term integrated nitrogen management on carbon sequestration and yield of a rainfed maize-wheat cropping system in Northern Western India. Global Soils Conference 2024 lobal Soils Conference 2024 Caring Soils Beyond Food Security: Caring Soils Beyond Food Security: Climate Change Mitigation & Ecosystem Services Climate Change Mitigation & Ecosystem Services, NASC complex, New Delhi (19-22 November 2024)
4. Abrar Yousuf, M. J. Singh, Anil Khokhar, Parminder Singh Sandhu, Mohammad Amin Bhat, Balwinder Singh Dhillon, K. B. Singh, Vivek Sharma and Vijay Kumar (2025) Rainwater Harvesting and Supplemental Irrigation for Improved Crop and Water Productivity in Lower Shivaliks of Northwest India. International Conference on Rainfed Agriculture: Building Pathways for Resilience & Sustainable Livelihoods during 29-31, January 2025 at ICAR-CRIDA, Hyderabad
5. Anil Khokhar, Azadwinder Singh, Harpreet Kaur Virk, Balwinder Singh Dhillon, M. J. Singh, Abrar Yousuf and Mohammad Amin Bhat (2025) Effect of row spacing and seed rate on growth and productivity of short duration pigeon pea varieties under rainfed conditions. International Conference on Rainfed Agriculture: Building Pathways for Resilience & Sustainable Livelihoods during 29-31, January 2025 at ICAR-CRIDA, Hyderabad
6. Mohammad Amin Bhat, MJ Singh, Abrar Yousuf, Balwinder Singh Dhillon, K. B. Singh, Anil Khokhar, Parminder Singh Sandhu and Randeep Singh (2025) Impact of Long-Term Integrated Nitrogen Management on System Productivity, Carbon Sequestration and Sustainability Yield Index of Rainfed Maize-Wheat Cropping System. International Conference on Rainfed Agriculture: Building Pathways for Resilience & Sustainable Livelihoods during 29-31, January 2025 at ICAR-CRIDA, Hyderabad
7. Navneet Sharma, **Abrar Yousuf** and Arun Kaushal (2024) Evaluating Best Management Practices for Watershed Sustainability: A Model- Based Approach to Sediment and Nutrient Control for Informed Decision-Making. 32nd National Conference of SCSi, Kanpur (18-20, Oct-2024)
8. **Abrar Yousuf**, Moonisa Aslam Dervash, MJ Singh, Mohammad Amin Bhat, Navneet Sharma (2024) Integrating Geospatial and Analytical Hierarchy Process Techniques for Identification of Potential Rainwater Harvesting Sites in Lower *Shivaliks* of Punjab. International Conference on Advancements in Basic Sciences, Environmental Studies and Traditional Medicine for Translational Drug Discovery and Development (TMT3D-2024) being organized by National Environmental Science Academy at Banaras Hindu University, Varanasi during 21-23 November, 2024 (Best paper)
9. **Abrar Yousuf** and Anil Bhardwaj (2024) Development and evaluation of event-based runoff and sediment yield model. 5th international web conference being organized by Academy of Natural Resources Conservation and Management, Lucknow during 15-16 October 2024
10. **Abrar Yousuf**, MJ Singh, KB Singh, AK Benipal and MA Bhat (2023) Assessment of soil erosion and sediment yield using RUSLE-SDR and GIS in lower Shivalik foothills of India. 5<sup>th</sup> International Conference on Sustainable Natural Resource under Global Climate Change at NASC Complex, New Delhi, India.

11. **Abrar Yousuf**, Navneet Sharma and Mohammad Amin Bhat (2023) Assessment of Ecosystem Resilience in Reference to Hydroclimatic Disruptions in Northwest India. 5<sup>th</sup> International Conference on Sustainable Natural Resource under Global Climate Change at NASC Complex, New Delhi, India.
12. Navneet Sharma, Arun Kaushal and **Abrar Yousuf** (2023) Identification Of Soil Erosion Hot-Spot Areas For Prioritization Of Conservation Measures And Evaluation Of Best Management Practices For Sustainable Watershed Management In The Lower Sutlej Sub-Basin, India. 5<sup>th</sup> International Conference on Sustainable Natural Resource under Global Climate Change at NASC Complex, New Delhi, India.
13. Mohammad Amin Bhat , Harmeet Kaur , MJ Singh , KB Singh , Anil Khokhar, **Abrar Yousuf**, Balwinder Singh Dhillon (2023) Response Of Maize Varieties To Varying Levels Of Fertilizer Nitrogen Under Rainfed Conditions. 5<sup>th</sup> International Conference on Sustainable Natural Resource under Global Climate Change at NASC Complex, New Delhi, India. (**Awarded Best Poster Award**)
14. **Abrar Yousuf**, MJ Singh, Amanpreet Kaur Benipal and Navneet Sharma (2022) Estimation of sedimentation rate in small reservoirs using RUSLE, sediment delivery ratio and GIS. In: 31<sup>st</sup> National Conference on Innovative Resource Management Approaches for Coastal and Inland Ecosystems to Sustain Productivity and Climate Resilience (13-15 October 2022) at Navsari Agricultural University, Navsari, Gujarat, India
15. **Abrar Yousuf**, MJ Singh, Anil Khokhar, Parminder Singh Sandhu, MA Bhat and BS Dhillon (2022) Micro-Irrigation based supplemental irrigation using harvested rainwater for sustainable agriculture under rainfed ecosystems. In: International Conference on Reimagining Rainfed Agro-ecosystems: Challenges & Opportunities during 22-24, December 2022 at ICAR-CRIDA, Hyderabad.
16. MA Bhat, MJ Singh, Anil Khokhar, **Abrar Yousuf**, Parminder Singh Sandhu and Balwinder Singh Dhillon (2022). Influence of integrated nutrient management on soil properties, crop yields and water use efficiency in rainfed maize-wheat rotation. In: International Conference on Reimagining Rainfed Agro-ecosystems: Challenges & Opportunities during 22-24, December 2022 at ICAR-CRIDA, Hyderabad.
17. BS Dhillon, MJ Singh, Anil Khokhar, **Abrar Yousuf**, MA Bhat and Parminder Singh Sandhu (2022) Enhancing system productivity of farmers through rainfed integrated farming systems in Shivalik foot hills of Punjab. In: International Conference on Reimagining Rainfed Agro-ecosystems: Challenges & Opportunities during 22-24, December 2022 at ICAR-CRIDA, Hyderabad.
18. Anil Khokhar, MJ Singh, **Abrar Yousuf**, MA Bhat, Parminder Singh Sandhu and BS Dhillon (2022) Maize and black gram strip-intercropping system for higher productivity and economics under rainfed conditions. In: International Conference on Reimagining Rainfed Agro-ecosystems: Challenges & Opportunities during 22-24, December 2022 at ICAR-CRIDA, Hyderabad.
19. Navneet Sharma, Arun Kaushal and **Abrar Yousuf** (2022) SWAT model application for simulating the water balance and water yield in the lower Sutlej sun-basin of Indian Punjab” during 3rd International web conference on Natural Management for Global Food Security and Sustainable Development Goals (2-3 December 2022)
20. Navneet Sharma, Arun Kaushal and **Abrar Yousuf** (2022) Prioritization of Watersheds in Lower Sutlej River Basin of Indian Punjab Based on Morphometric and Principal Component Analysis.

2nd International Conference on River Corridor Research and Management (30th May – 1st June 2022).

21. **Abrar Yousuf**, Navneet Kaur and M J Singh (2022) Quantifying effects of rainfall characteristics on runoff and sediment yield from a forest micro-watershed in lower Shivaliks of north-west India. AGMET 2022. (24-26<sup>th</sup> March 2022) SKUAST-K.
22. Participated in National Web-Conference on Technological Approaches for Resource Conservation and Management for Environmental Sustainability organized online by Academy of Natural Resource Conservation and Management on August 16-17, 2020.
23. Vishnu Prasad, **Abrar Yousuf** and Navneet Sharma (2020) GIS based morphometric analysis of forest watershed using high resolution satellite data. National Seminar on ‘Natural Resources Conservation and Management’ at ICAR-NBFGRC Campus, Lucknow, Uttar Pradesh. (20 March 2021)
24. MJ Singh, Navneet Kaur and **Abrar Yousuf** (2020) Rainfall trend analysis in selected site of lower Shivalik foothills of Punjab. National Seminar on ‘Agrometeorological interventions for enhancing farmers’ income.’ Kerala Agricultural University, Thrissur, Kerala. (25-27 January 2020)
25. Anil Khokhar, MJ Singh, **Abrar Yousuf** and PS Sandhu (2020) Evaluation of tillage and planting methods for in situ moisture conservation in rainfed maize-wheat cropping system. National seminar on ‘Agrometeorological interventions for doubling the farmers’ income’ held at Kerala Agricultural University, Thrissur, Kerala. (25-27 January 2020) (**Awarded Best Paper Award**)
26. MJ Singh, Harpreet Singh, **Abrar Yousuf**, Kerstin Hartsch and Michael von Werner (2019) Applicability of EROSION 3D model to simulate runoff and soil loss in lower Shivaliks of Punjab, India. International Conference on ‘Soil and water resources management for climate smart agriculture, global food and livelihood security’ NASC complex, New Delhi. (5-9<sup>th</sup> November 2019).
27. **Abrar Yousuf** and Anil Bhardwaj (2019) Application of WEPP model for runoff and sediment yield simulation from ungauged watershed in Shivalik foothills. National Conference on ‘Big Geo-spatial Data: Analytics, Modelling and Applications.’ Punjab Remote Sensing Centre, Ludhiana. Pp. 65 (25-26 September 2019)
28. **Abrar Yousuf**, Shabnam Ara, Shaik Iftikhar Ahmad, Ramashray Prasad and BR Thakur (2019) Morphometric Analysis of a Choharkhad micro-watershed using GIS. National Conference on ‘Big Geo-spatial Data: Analytics, Modelling and Applications.’ Punjab Remote Sensing Centre, Ludhiana. Pp. 73 (25-26 September 2019)
29. Navneet Kaur, **Abrar Yousuf** and MJ Singh (2019) Rainfall variability analysis in lower Shivalik region of Punjab. National Conference on ‘Big Geo-spatial Data: Analytics, Modelling and Applications.’ Punjab Remote Sensing Centre, Ludhiana. Pp. 77 (25-26 September 2019)
30. Kallem Sushanth, Anil Bhardwaj, **Abrar Yousuf** and Brijendra Pateriya (2019) Impact assessment of land use changes on runoff and sediment yield of watershed using RS, GIS and WEPP model. National Conference on ‘Big Geo-spatial Data: Analytics, Modelling and Applications.’ Punjab Remote Sensing Centre, Ludhiana. Pp. 66 (25-26 September 2019)
31. **Abrar Yousuf**, M J Singh, Jonas Lenz, Marcus Schindewolf, Kerstin Hartsch, Michael von Werner and Jurgen Schimdt (2019) Simulated rainfall experiment to study the effect of different land uses on runoff and soil loss in lower *Shivaliks*. Proc 28th National Conference on ‘Farmers’ Friendly Soil and Water Conservation Technologies for Mitigating Climate Change Impact.’

- Hotel Gem Park, Udhagamandalam (Ooty) Tamil Nadu. Pp. 84 (31<sup>st</sup> January to 2<sup>nd</sup> February 2019)
32. Parminder Singh Sandhu, Anil Khokhar, MJ Singh, Vijay Kumar, Vivek Sharma and **Abrar Yousuf** (2019) Characterization and Analysis of Rainfed Integrated Farming System in Lower Shivaliks of Punjab. Proc 28th National Conference on ‘Farmers’ Friendly Soil and Water Conservation Technologies for Mitigating Climate Change Impact.’ Hotel Gem Park, Udhagamandalam (Ooty) Tamil Nadu. Pp. 61 (31<sup>st</sup> January to 2<sup>nd</sup> February 2019)
  33. Jonas Lenz, **Abrar Yousuf**, Marcus Schindewolf, Michael von Werner, Kerstin Hartsch, M J Singh, and Jurgen Schimdt (2018) Artificial rainfall simulation tests for soil erosion modelling in Punjab, India. Geophysical Research Abstracts, Vol. 20, EGU2018-19686, EGU General Assembly 2018
  34. MJ Singh, **Abrar Yousuf** and DS Rana (2017) Scientific Interventions in Rainwater Management in lower *Shivaliks* under changing climate scenario. Proc 26<sup>th</sup> National Conference on ‘Natural Resource Management for Climate Smart Sustainable Agriculture.’ Barapani, Meghalaya. 11-13 September 2017. (**Awarded Best Poster Award**)
  35. **Abrar Yousuf** (2017) Micro-irrigation: Future for Sustainable Agriculture. Proc National Seminar on ‘National Development through Science and Technology.’ University of Kashmir, Srinagar, J&K. (25-26 September 2017)
  36. **Abrar Yousuf**, MJ Singh and Anil Khokhar (2017) Radiocarbon Carbon Dating of Groundwater. 2<sup>nd</sup> Himachal Pradesh Science Congress. Shimla, Himachal Pradesh (7-9 November 2017).
  37. Anil Khokhar, MJ Singh, Vijay Kumar, Vivek Sharma, **Abrar Yousuf** and Parminder Singh Sandhu (2017) Real Time Contingency Planning: An Adaptation Strategy for Crop Management under Changing Climatic Scenario. 2<sup>nd</sup> Himachal Pradesh Science Congress. Shimla, Himachal Pradesh (7-9 November 2017).
  38. Manvendra Bhardwaj, Sunil Kumar, Krishan Kumar and **Abrar Yousuf** (2018) Different techniques to resolve the whitefly attack in cotton. Punjab Science Congress, Ludhiana, Punjab
  39. **Abrar Yousuf**, Anil Bhardwaj, AK Tiwari and VK Bhatt (2015) Modelling runoff and sediment yield from a small watershed in Shivalik foothills using WEPP model. ‘49th Annual Convention of Indian Society of Agricultural Engineers (ISAE) and Symposium on Engineering Solutions for Sustainable Agriculture and Food Processing.’ PAU, Ludhiana. (23-25 February 2015)
  40. Participated in 2<sup>nd</sup> Agricultural Science Congress on “Sustainable Hill for Food and Livelihood Security” held at SKUAST Jammu (28-30 October, 2015)

#### **Books**

1. **Abrar Yousuf** and MJ Singh (2019) Watershed Hydrology, Management and Modeling. CRC Press, Taylor and Francis Group, Boca Raton.
2. Moonisa Aslam Dervash, **Abrar Yousuf**, Munir Ozturk and Rouf Ahmad Bhat (2022) Phytosequestration-Strategies for mitigation of aerial carbon dioxide and aquatic nutrient pollution. Springer Nature Switzerland.
3. Moonisa Aslam Dervash, **Abrar Yousuf**, Mohammad Amin Bhat, Munir Ozturk (2024) Soil Organisms: Deciphering the Life Beneath Our Feet. Springer Nature Switzerland
4. Moonisa Aslam Dervash, **Abrar Yousuf**, Parminder Singh Sandhu, Munir Ozturk (2025) Lantana Camara: Ecological and Bioprospecting Perspectives. Springer Nature Switzerland

### Book chapters

1. Anil Khokhar, MJ Singh, **Abrar Yousuf**, Parminder Singh Sandhu, Vivek Sharma, Vijay Kumar and MA Bhat (2022). Improved Agronomic practices for rainfed crop production in Kandi region of Punjab. In: Improved Agronomic Practices for Rainfed Crops in India (Eds. Chary et al. 2021). Central Research Institute of Dryland Agriculture, Hyderabad, Telangana, India. Pp. 150-163.
2. **Abrar Yousuf**, Anil Bhardwaj, Sukhdeep Singh and Vishnu Prasad (2021) Application of WEPP model for runoff and sediment yield simulation from ungauged watershed in Shivalik foothills. In: Computers in Earth and Environmental Sciences. Eds. HR Pourghasemi. Elsevier. Pp. 327-335.
3. AJ Shahrood and **Abrar Yousuf** (2020) Physical Drivers of Earth's Climate. In: *Climate Change Alleviation for Sustainable Progression: Floristic Prospective and Arboreal Avenues as a Viable Confiscation Tool*. Eds MA Dervash and AA Wani, Science Publishers, Taylor and Francis, Boca Raton, USA. Pp 1-12.
4. Vishnu Prasad, **Abrar Yousuf** and Parminder Singh Sandhu (2020) Impact of climate change on watershed hydrology. In: *Climate Change Alleviation for Sustainable Progression: Floristic Prospective and Arboreal Avenues as a Viable Confiscation Tool*. Eds MA Dervash and AA Wani, Science Publishers, Taylor and Francis, Boca Raton, USA. Pp. 33-54.
5. Mohammad Amin Bhat, **Abrar Yousuf** and Parminder Singh Sandhu (2020) Soil Quality vis-à-vis Climatic Upheaval. In: *Climate Change Alleviation for Sustainable Progression: Floristic Prospective and Arboreal Avenues as a Viable Confiscation Tool*. Eds MA Dervash and AA Wani, Science Publishers, Taylor and Francis, Boca Raton, USA. Pp. 151-181.
6. Sukhjeet Kaur, Navneet Kaur, Abrar Yousuf, Jagdish Singh and Parminder Singh Sandhu (2020) Climate Risk Management vis-à-vis Crop Productivity under Climatic Variability. In: *Climate Change Alleviation for Sustainable Progression: Floristic Prospective and Arboreal Avenues as a Viable Confiscation Tool*. Eds MA Dervash and AA Wani, Science Publishers, Taylor and Francis, Boca Raton, USA. Pp. 182-201.
7. **Abrar Yousuf**, Shabnam Ara, Shaik Iftikhar Ahmad, Ramashray Prasad and BR Thakur. (2020) Remote Sensing and GIS based Morphometric Analysis of a Micro-watershed. In: *Urban Environment: Issues and Challenges*. Eds. Atiqur Rahman, Shahnaz Parveen and Mary Tahir. Pp. 323-339. RK Books, New Delhi India
8. **Abrar Yousuf**, Jonas Lenz and Ejaz Ahmad Dar (2019) Measures to control soil erosion. In: *Watershed Hydrology, Management and Modeling*. Eds Abrar Yousuf and MJ Singh. CRC Press, Taylor and Francis Group, Boca Raton.
9. Junaid N Khan, Rohitashw Kumar and **Abrar Yousuf** (2019) Runoff and Rainwater Harvesting. In: *Watershed Hydrology, Management and Modeling*. Eds Abrar Yousuf and MJ Singh. CRC Press, Taylor and Francis Group, Boca Raton.
10. K. Karthikeyan, **Abrar Yousuf**, Nirmal Kumar, BS Bhole and RK Naitam (2019) Land Evaluation: A General Perspective. In: *Watershed Hydrology, Management and Modeling*. Eds Abrar Yousuf and MJ Singh. CRC Press, Taylor and Francis Group, Boca Raton.
11. Altamash Bashir, Mumtaz Majeed, Hilal A Rather, **Abrar Y Wani** and M Amin Ahangar Global Warming and Climate change: Impact and strategies for its mitigation In *Agro Forestry and Climate Change* (Eds Pawan Kumar Bharti and Narayan Singh) Published by Discovery Publishing House Private Limited.

### Folders/Technical Bulletins

1. MJ Singh, Anil Khokhar, **Abrar Yousuf**, Parminder Singh Sandhu, Vivek Sharma, Mohammad Amin Bhat, Vijay Kumar and G Ravindra Chary (2021). Rainfed Agriculture Technologies for Kandi Region of Punjab. Punjab Agricultural University. pp. 1–50.

2. Balwinder Singh Dhillon, Anil Khokhar, Manmohanjit Singh, **Abrar Yousuf** and Mohammad Amin Bhat (2022) Brani kheti sanyukt pranali: Sardar Gurcharan Singh di Safalta di kahani. All India Coordinated Research Project for Dryland Agriculture, Regional Research Station, Punjab Agricultural University Ballawal Saunkhri, District SBS Nagar, Punjab – 144521. Pp. 4.
3. Balwinder Singh Dhillon, Anil Khokhar, Manmohanjit Singh, **Abrar Yousuf** and Mohammad Amin Bhat (2022) Rainfed Integrated Farming System: A Success Story of Sardar Gurcharan Singh. All India Coordinated Research Project for Dryland Agriculture, Regional Research Station, Punjab Agricultural University Ballawal Saunkhri, District SBS Nagar, Punjab – 144521. Pp. 4.
4. Anil Khokhar, Balwinder Singh Dhillon, Manmohanjit Singh, **Abrar Yousuf** and Mohammad Amin Bhat (2022) Brani halta vich kheere di kaasht: Kandi ilake de chhote kisana layi vardaana. All India Coordinated Research Project for Dryland Agriculture, Regional Research Station, Punjab Agricultural University Ballawal Saunkhri, District SBS Nagar, Punjab – 144521. Pp. 4.
5. Anil Khokhar, Balwinder Singh Dhillon, Manmohanjit Singh, **Abrar Yousuf** and Mohammad Amin Bhat (2022) Rainfed cucumber cultivation: a boon for small and marginal farmers of Kandi region. All India Coordinated Research Project for Dryland Agriculture, Regional Research Station, Punjab Agricultural University Ballawal Saunkhri, District SBS Nagar, Punjab – 144521. Pp. 4.
6. Navneet Kaur, **Abrar Yousuf** and Manmohanjit Singh (2021) Changing rainfall scenario in kandi region of Punjab. Regional Research Station, Ballawal Saunkhri, Balachaur, SBS Nagar, 144521
7. Navneet Kaur, Manmohanjit Singh and **Abrar Yousuf** (2021) Punjab de kandi khetar vich barisha da badal riha vartara. Regional Research Station, Ballawal Saunkhri, Balachaur, SBS Nagar, 144521
8. Vijay Kumar, Vivek Sharma, MJ Singh, Anil Khokhar, SC Sharma, **Abrar Yousuf** and Parminder Singh Sandhu (2019) Climate Resilient Agriculture: Innovations and Experiences in Kandi region of Punjab. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521
9. Anil Khokhar, Manmohanjit Singh, Vivek Sharma, Vijay Kumar, **Abrar Yousuf** and Parminder Singh Sandhu (2019) Real Time Contingency Measures for Crop Management under Rainfed Conditions in Shiwalik Foothills. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521
10. Manmohanjit Singh, Anil Khokhar, Vijay Kumar Vivek Sharma, G. Ravindra Chary, **Abrar Yousuf** and Parminder Singh Sandhu (2019) Research Achievements of AICRPDA Centre Ballawal Saunkhri since inception. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521
11. Parminder Singh Sandhu, Vivek Sharma, MJ Singh, **Abrar Yousuf**, Vijay Kumar, Anil Khokhar (2019) Integrated Farming System: A success example of Smt Masya Devi – Punjabi. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521
12. Anil Khokhar, Manmohanjit Singh, Vivek Sharma, Vijay Kumar, **Abrar Yousuf** and Parminder Singh Sandhu (2019) Kandi ilake diyaan barani haltaan vich Mausam adharit kheti prabandhan. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521
13. Vijay Kumar, Manmohanjit Singh, **Abrar Yousuf**, Vivek Sharma, Anil Khokhar and Parminder Singh Sandhu (2017) In situ and Ex situ rainwater conservation in Kandi region of Punjab for

sustainable agriculture. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521

14. Vivek Sharma, Parminder Singh, Vijay Kumar, Manmohanjit Singh, Anil Khokhar and **Abrar Yousuf** (2017) ORP at a glance. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521
15. Anil Khokhar, Vijay Kumar, Vivek Sharma, Manmohanjit Singh, **Abrar Yousuf** and Parminder Singh Sandhu (2017) Contingency crop planning for *Kandi* region of Punjab. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521
16. Manmohanjit Singh, Parminder Singh Sandhu, Vijay Kumar, **Abrar Yousuf**, Vivek Sharma and Anil Khokhar (2018) Kandi ilake vich meeh de pani di suchji sambhal. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521
17. Anil Khokhar Parminder Singh Sandhu, Manmohanjit Singh, Vijay Kumar, Vivek Sharma and **Abrar Yousuf** (2018) Punjab de kandi illake vich mausam anusar barani phasalan di bijaie. Regional Research Station, Punjab Agricultural University, Ballawal Saunkhri, SBS Nagar, 144521

#### Popular Article

1. Abrar Yousuf, Ajaib Singh and MJ Singh (2024) Soil and Water Conservation technologies for kandi region of Punjab. Progressive farming, July 2024 issue, Pp. 23-24. Changi kheti
2. Ajaib Singh, Abrar Yousuf and MJ Singh (2024) Kandi khetar vich hetu layi zaroori hai Bhoomi ate paani di sambhal. Changi kheti July 2024 issue, Pp. 23-24.
3. Parminder Singh Sandhu, **Abrar Yousuf** and Jaspreet Singh (2023) Makki di fasal vich nadeena di roktham. Kheti Sandesh. 302: 11.
4. **Abrar Yousuf**, MJ Singh, Anil Khokhar and MA Bhat. (2022) Rainwater harvesting through ponds: A sustainable source of income for small and marginal farmers. Soil and Water Conservation Today 18: 5-6.
5. Balwinder Singh Dhillon, Anil Khokhar and **Abrar Yousuf** (2022) Gaehu main kharpatwar nijhantran av sinchai parbandhan. *Kheti (ICAR)*. September, pp 36-37.
6. Balwinder Singh Dhillon, Manmohanjit Singh and **Abrar Yousuf** (2022) Punjab dae kandi khtar vich Kanak di kasat. Changi Kheti. October, 58 (10): 11.
7. Manmohanjit Singh, Balwinder Singh Dhillon and **Abrar Yousuf** (2022) Successful cultivation of wheat under Punjab dae kandi khtar vich Kanak di kasat. Progressive Farming. October, 58 (10): 12.
8. Balwinder Singh Dhillon, Manmohanjit Singh and **Abrar Yousuf** (2022) Punjab dae kandi khetar vich Kanak di safal kasat sambandhi nukatae. Ajit (Newspaper), November 22, 67 (322): 11.
9. Balwinder Singh Dhillon, Manmohanjit Singh and **Abrar Yousuf** (2023) Kandi khetar chun Kanak di safal kasat. Punjabi Jagran (Newspaper), January 09, 7.
10. Balwinder Singh Dhillon, Manmohanjit Singh and **Abrar Yousuf** (2023) Mool anajha (millets) di kasat kiven kariyae? *Bahumantvi Kheti* 6(2): 11-12.
11. MS Shirahatti, RS Patode, **Abrar Yousuf**, Boini Narsimlu, RR Halidoddi, A Sonowal, and R Rejani (2022). Farm pond: Resilient technology for higher productivity in rainfed farming. Indian Farming, 72 (08): 12-15
12. Parminder Singh Sandhu, **Abrar Yousuf** and Jaspreet Singh (2023) Makki di fasal vich nadina di roktham. Kheti Sandesh, Issue 303 (June 2023): Pp 4
13. Anil Khokhar, **Abrar Yousuf** and Dinesh Tomar (2023) Improved practices for the cultivation of crops under rainfed conditions. Fasal Kranti (Accepted)
14. MJ Singh, Anil Khokhar, **Abrar Yousuf** and MA Bhat (2023) Paani di ghaat hon te sauna diyan fasla di safal kasht kive kariye. Krishi Jagran 25 (7): 40-42.

15. Parminder Singh Sandhu, **Abrar Yousof** and Jaspreet Singh (2023) Makki di fasal vich nadina di roktham. Kheti Duniya, 41 (27): Pp
16. MS Shirahatti, RS Patode, **Abrar Yousof**, Boini Narsimlu, RR Halidoddi, A Sonowal, and R Rejani, (2022). Farm pond: Resilient technology for higher productivity in rainfed farming. Indian Farming, 72 (08): 12-15
17. Balwinder Singh Dhillon, Anil Khokhar and **Abrar Yousof** (2022) Gehu me kharpatwar niyantaran avam sinchayi prabandhan. Kheti (ICAR). September.
18. Balwinder Singh Dhillon, Anil Khokhar and **Abrar Yousof** (2022) Kanak vich nadeena di roktham ate sinchai parbandh. Krishi Jagran. February, 24 (2): 26-29
19. MJ Singh and **Abrar Yousof** (2018) Rainfall Simulation for Soil Erosion Studies. Soil and Water Conservation Today 13(3): 3-4.
20. KK Sharma, DS Rana and **Abrar Yousof** (2018) Drip irrigation: A disease management strategy. Agriculture World. 4(8): 46-50.

### **Workshops attended/organized**

1. Participated in Brainstorming on water policy for rainfed agriculture at CRIDA Hyderabad. (4<sup>th</sup> June 2022)
2. Participated in biennial AICRPDA workshop and Annual NICRA workshop at CRIDA Hyderabad. (2-4<sup>th</sup> June 2022)
3. Participated in Working Group Meeting of AICRPDA and VIII Annual Review Workshop of AICRPDA-NICRA during 26-28 May, 2020.
4. Attended in Regional Workshop on Motivating and Attracting Youth in Agriculture (MAYA-2020) at Punjab Agricultural University, Ludhiana from 28-29 February 2020
5. Review meeting DST sponsored project 'Revival of village ponds through scientific interventions' at PAU, Ludhiana (October 2018)
6. Review meeting DST sponsored project 'Revival of village ponds through scientific interventions' at IIT, Roorkee (14-15 June 2019)
7. Participated in XXVI Biennial Workshop of All India Coordinated Research Project for Dryland Agriculture at University of Agricultural Sciences, Bengaluru during 16-19 January 2019.
8. Participated in Silver Jubilee Biennial Workshop of All India Coordinated Research Project for Dryland Agriculture at PDKV, Akola during 17-21 January 2017
9. Organized workshop on Application of Hydrological Models for soil erosion management at Regional Research Station-Punjab Agricultural University, Ballawal Saunkhri on 17 October 2018.

### **Trainings**

1. **21 days** Webinar Series on "Remote Sensing in Crop Monitoring and Assessment" organized by Indian Institute of Remote Sensing, Dehradun *w.e.f.* 19 May to 9 June 2020.
2. **7 days** online training on "Recent Advances of Instrumentation in Agriculture Meteorology" organized by Vasant Rao Naik Marathwada Krishi Vidyapeeth, Parbhani *w.e.f.* 26 May to 2 June 2020.
3. **1 day** webinar on "Accelerate Research Planning using Elsevier's Scopus, ScienceDirect & Mendeley" organized by IUST Kashmir on 4 May 2020

4. **7 days** online training on “Advanced Agrometeorological Techniques for Climate Smart Agriculture” organized by MPKV, Rahuri *w.e.f.* 30 April to 4 May 2020
5. **5 days** training course on “Planetary Geosciences” organized by Indian Institute of Remote Sensing *w.e.f.* 13 April to 17 April 2020
6. **21 days** Summer School on “Capacity Building in Geospatial Technologies” organized by Department of Geography, Himachal Pradesh University, Shimla *w.e.f.* 18 June to 08 July 2019
7. **Nine days** Training course on “Applied Groundwater Flow and Transport Modelling with MODFLOW” organized by Department of Hydrology, Indian Institute of Roorkee, Roorkee *w.e.f.* 26 July 2018 to 03 August 2018
8. **21 days** Summer school on “Advances and modeling in micro irrigation for enhancing water use efficiency” organized by Division of Agricultural Engineering, SKUAST-Kashmir *w.e.f.* 5-25 July 2017
9. **Ten days** Orientation Course on “Effective Teaching, Research and Extension” organized by Department of Extension Education and Communication Management, College of Home Science, PAU, Ludhiana *w.e.f.* 7 to 17 November, 2017.
10. **Three months** training on Basics of “Remote Sensing, Geographical Information System and Global Navigation Satellite System” organized by Indian Institute of Remote Sensing at Punjab Remote Sensing Centre, Ludhiana *w.e.f.* August 10 to November 27 2015
11. **Two months** training in Central Institute of Agricultural Engineering, Bhopal, Madhya Pradesh
12. **Two months** training in Central Institute of Temperate Horticulture, Srinagar, J&K

Place: Ludhiana  
Date: 26.12.2025

(Abrar Yousuf)