

BIO-DATA

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- 2. Address** : Associate Professor
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- 3. Date of Birth** : 01.11.1973
- 4. Religion & Caste** : Muslim, Islam
- 5. Educational Qualification** :



Degree	Year of Passing	University	Percentage of Marks
B.Tech (Agrl. Engg.)	1996	Kerala Agricultural University	82.0 %
M.Tech (Soil & Water Engg.)	1999	Kerala Agricultural University	91.0 % (First Rank)
Post Graduate Diploma in Agricultural Extension and Management	2012	MANAGE, Hyderabad	First class
Ph.D (Soil & Water Engg.)	2016	Kerala Agricultural University	91.0 %

6. Professional Experience

- Working as Associate Professor (Soil and Water Engineering) in Department of Irrigation and Drainage Engineering, Kelappaji College of Agricultural Engineering and Technology, Tavanur, Malappuram under Kerala Agricultural University from 24.08.2021 onwards. Engaged in teaching, research and extension activities in the field of soil and water conservation and irrigation and drainage engineering.
- Worked as Assistant Professor (Soil and Water Engineering) in Krishi Vigyan Kendra, Malappuram under Kerala Agricultural University from 13.10.2005 to 24.08.2021. Engaged in teaching, research and extension activities in the field of soil and water conservation and farm mechanization.
- Worked as Research Associate in the Precision Farming Development Centre (PFDC) at KCAET, Tavanur under Kerala Agricultural University from 22-12-1999 to 12-10-2005. Assisted many research experiments and training programmes on rain shelter cultivation, plastic mulching for vegetables, micro irrigation for vegetables and crop geometry for banana under this scheme.
- Worked as Apprentice Engineer at Kuttippuram Grama Panchayath from 01-09-1999 to 20-12-1999. Prepared estimates of many civil works like roads, water supply lines, canals, retaining walls etc. and supervised their field implementation within the Panchayath area.

8. Merits and Achievements:

- Received **Best Poster Award** from **Hon'ble President of India, Smt. Prathiba Patil** in “**Global Conference on Women in Agriculture**” held at New Delhi during 13-15 March 2012
- Secured **First Rank** of **1996 Admission of M. Tech (Soil and Water Engineering)**.



9. Current Teaching/Research/Extension responsibilities:

A. Research

1. Worked as Co Principal Investigator of a project on “**Farmer Participatory Action Research Programme (FPARP)**” sanctioned by Ministry of Water Resources, Government of India, in collaboration with RARS, Pattambi. The technologies selected for demonstration under this project are SRI technology, micro irrigation in coconut, arecanut and banana and mulching in horticultural crops.
2. Undertaken a project on “**Water harvesting structure with micro irrigation systems**” sanctioned by ICAR Transfer of Technology projects, Zonal Coordinating unit- zone viii, Bangalore. In this project a rain water harvesting pond with 32 lakhs litres capacity was constructed and provided with 750 micron HDPE sheet lining to avoid the seepage loss. The rain water stored in the pond is used for irrigating vegetables, banana and coconut during summer season through micro irrigation systems.
3. Undertaken the research work on” **Groundwater resources modelling of a watershed using MODFLOW**” as part of Ph.D programme.
4. Undertaken the research work on” **Erodibility and runoff potential of lateite soils under simulated rainfall conditions**” as part of M.Tech programme
5. Served as Technical Adviser of a project on “**Rain shelter cultivation of vegetables for Kudumbasree unnits**” under the Tavanur Grama Panchayat.
6. Assisted many research experiments like rain shelter cultivation, plastic mulching for vegetables, drip irrigation for vegetables and crop geometry for banana under the PFDC scheme.

B. Extension

1. Working as BLAKC Nodal Officer of Tirurangadi Block, Malappuram Distict as part of Subhiksha Keralam Programme w.e.f August, 2018.
2. Worked as Principal Investigator of the extension project on **Promotion of small scale mechanisation of horticultural crops in Malappuram District through empowerment of rural women** sanctioned by State Planning Board, Government of Kerala during 2018-19 & 2020-21– 5 lakhs
3. Worked as Principal Investigator of the FLD on “**Mechanical paddy transplanting with Yanji Shakthi Rice Transplanter**” sanctioned by State Planning Board, Government of Kerala. Under this project, mechanical paddy transplanting with Yanji Shakthi Rice Transplanter was carried out for an area of 25 acres under various panchayats of Malappuram District – 2 lakhs
4. Worked as Principal Investigator of the FLD on “**Mechanical paddy reaping with KAMCO KR 120 M Reaper**” sanctioned by State Planning Board, Government of Kerala. Under this project , mechanical paddy reaping with KAMCO KR 120 M Reaper was carried out for an area of 25 acres under. various panchayats of Malappuram District – 2 lakhs
5. Worked as Principal Investigator of the project on “**Establishment of a full- fledged machinery bank cum custom hiring unit of machinery for paddy**” sanctioned by State Planning Board, Government of Kerala. Working of custom hiring unit is going on. – 18.36 lakhs
6. Worked as Training Co-ordinator of 2 number of 7 days training programmes on “**Sacling up of water productivity in agriculture for livelihood through teaching cum- demonstration, training of trainers and farmers**” sanctioned by ICAR for AICRP(Water Management centre at Chalakkudy).
7. Worked as Training Co-ordinator of one week training programme of “**Friends of Coconut Tree**” funded by Coconut Development Board, Kerala. Six trainings were conducted in batches of 20 youth for 6 days each. The success of the programme is reflected in the fact that the coconut growers in the District are now getting the

service of trained climber- cum – technicians on a phone call. Most of the trained persons are now earning upto Rs. 700 to 1000 per day.

8. Developed a **low cost fruit concentrator** as part of KVK on farm trial and which has got good acceptance from farmers. It requires only 40 minutes for preparing 15 kg jack fruit halva instead of 3 hour tedious work. NABAED has given financial assistance for this machine.
9. Worked as course coordinator of **two numbers of one month skill development training programme on Micro Irrigation Technicians** sanctioned by ICAR. Under this programme 20 trainees were attended in each programme and they could do installation and maintenance of micro irrigation systems, fertigation, plastic mulching and construction of rainselters.
10. Conducted **three Vocational training programmes** for rural women and established a SHG women group named 'Krishi Sahayi' for Paddy Mechanization and they trained 14 groups as master trainers for 14 blocks in Malappuram District as part Haritha Malappuram Programme
11. Conducted number of trainings programmes on Farm Mechanization, Paddy Mechanization, Micro Irrigation, Soil and Water Conservation and Protected cultivation for farmers, rural youth, women and extension functionaries
12. Conducted 22 numbers (160 Trials) of **Front Line Demonstrations** in farmer's field of different parts of Malappuram District
13. Conducted 12 numbers (60 Trials) of **On Farm Trials** in farmer's field of different parts of Malappuram District

C. Teaching

1. Offered the following number of courses for B-Tech , M-Tech & Ph.D Programme
 - B.Tech (Agricultural Engineering) : 16 Nos.
 - M.Tech (Soil and Water Conservation Engineering) : 5 Nos.
 - Ph.D (Soil and Water Conservation Engineering) : 11 Nos.
 - Ph.D (Processing & Food Engineering) : 1No.
2. Guided the following projects for B-Tech (Agril. Engg.), M-Tech (Soil & Water Engg.) and Ph.D(SWCE) Programme
 - Performance Evaluation of Cost Effective Fertigation System (**B-Tech** 2007 Admission)
 - Clogging effects of drip emitter with fresh water and muddy water (**B-Tech** 2008 Admission)
 - Estimation of Evaporation using ANN- A case Study (**B-Tech** 2012 Admission)
 - Simulation of salt water intrusion into the coastal aquifers of *Kadalundi* river basin in Malappuram district using Visual MODFLOW -**B.Sc- M.Sc(Integrated)** Climate Change Addaptation Programme (2011 Admission)
 - Modification and evaluation of automated drip irrigation systems - **M.Tech (SWE)** (2014 Admission)
 - Performance evaluation of different wick materials in wick irrigation system (**B-Tech** 2014 Admission)
 - Development of automated drip fertigation system using GSM based controller - **M.Tech (SWE)** (2017 Admission)
 - Effect of Bakkikayam Regulator on Groundwater using Geophysical Techniques and Visual MODFLOW - **M.Tech (SWE)** (2018 Admission)
 - GIS Integrated Site-Specific Fertigation Recommendation for Instructional Farm, KCAET, Tavanur - **M.Tech (SWE)** (2019 Admission)
 - Performance Evaluation of Rain hose irrigation system (**B-Tech**, 2018 Admission)
 - Field evaluation of Site-Specific Fertigation using GIS Integrated Nutrient Status Map of **M.Tech (SWE)** (2020 Admission)

- “Geophysical Techniques for Aquifer Characteristics studies – A case study of Tavanur Panchayat, Malappuram, Kerala(B-Tech, 2019 Admission)
- Impact of flood on groundwater dynamics in chalakkudy river basin using GIS integrated Visual MODFLOW (Ph.D, 2021 Admission) - Ongoing

10. Training Programs Attended

1. 21 days training on "Environmental Science" at UGC Staff College, Calicut University, Calicut from 1st to 21st December 2005.
2. One week training on “Orientation training for newly recruited Assistant Professors, Kerala Agricultural University Thrissur from 31 January to 4th February, 2006.
3. One week training on “Training on promotion of Entrepreneurship in agriculture” at NIRD, Hyderabad during 3rd to 8th September 2007.
4. 10 days training programme on “ Web Designing and Development” at TNAU, Coimbatore from 21st July to 1st August, 2008.
5. 3 days training programme on “Improved Equipments and Machinery for Crop production and Horticulture” Central Institute of Agricultural Engineering, Bhopal from 19th -21st March, 2009.
6. 21 days training on "Enhancing Water Productivity in Agriculture" at Water Technology Centre, ANGRAU, Hyderabad from 17th February to 9th March, 2010.
7. One week education on “GIS and Remote Sensing Techniques for Water Resources Assessment” at IIT, Madras during 31st January to 5th February 2011.
8. 16 days training programme on Geographic Information System at Centre for Geo Information Technology, Socio Economic Unit Foundation, Thrissur during 12.09.2014 to 27.09.2014.
9. Two days training programme on Soil & land resources mapping for integrated watershed development at KCAET, Tavanur during 25th & 26th Nov.2015.
10. 21 days ICAR sponsored Summer school in ‘Recent innovations in management of organic production system’ organized by division of Agronomy, ICAR- IARI, New Delhi from 05.08.2016 to 25.08.2016.
11. 3 days training programme on orientation of KVK trainers on skill development organized by ASCI and ICAR at UAS Bangalore from 26th to 28th October, 2016.
12. 3 days training programme on Training of Trainers on skill development organized by ASCI and ICAR at GKVK, UAS Bangalore from 24th to 26th September, 2018.
13. 21days NRDMS-DST Summer School on Geospatial Technologies (Level 1) organized by National Institute of Technology, Calicut and Natural Resources Data Management Systems – Department of Science and Technology, Govt. of India, New Delhi from 10.06.2019 to 30.06.2019.
14. One week online training programme on Documentation and Writing Skills for Extension Functionaries, organized by MANAGE and Extension Education Institute, Hyderabad from 05.07.2021 to 09.07.2021
15. One week online training programme on Data Analysis using R software organized by Kerala Agricultural University from 21.06.2022 to 25.06.2022
16. Two weeks online training programme on Data Science in Agriculture organized by ICAR – IASRI, New Delhi from 04.09.2023 to 15.09.2023

11. Conference Attended

1. Attended “International Conference in Plasticulture and Precision Farming” held at New Delhi during Nov. 17-21, 2005.
2. Attended 1st Kerala Women’s Science Congress” held at St. Teresas College, Ernakulam from 10-12 August 2010
3. Attended All India Seminar on “Recent Trends in Agricultural Machanisation for Efficiency Improvement” held at Visvesvaraya Bhavan, The Institution of Engineers, Kerala State Centre, 9-10 August 2011
4. Attended “Global Conferrence on Women in Agriculture” held at New Delhi during 13-15 March 2012
5. Attended 2 days workshop on “Geoinformatics” held at Socio Economic Unit Foundation, Thrissur from 29-30 June 2012.

6. Attended and presented a research paper entitled “Identification of groundwater potential zones using Geophysical Technique with Signal Stacking Resistivity Meter in Kadalundi River Basin, Malappuram, Kerala” in 6th International Ground Water Conference 2015 held at SRM University, Chennai, Tamil Nadu, India during February 11-13, 2016.
7. Attended and presented a research paper entitled “Spatial and Temporal Groundwater Level Fluctuation Studies in Kadalundi River Basin, Malappuram, Kerala” in First National Ground Water Conference 2016 on “Sustainable Development and Management of Groundwater Resources in Arid and Semi-Arid Regions” held at JNTU, Hyderabad, India during October 5-7, 2016.
8. Attended and presented a research paper entitled “Groundwater Resources Modelling of Kadalundi River Basin, Malappuram, Kerala using Visual Modflow” in 7th “International Ground Water Conference 'GROUND WATER VISION 2030' scheduled from 11-13 December 2017 at ICAR National Agricultural Science Centre Complex, New Delhi.
9. Attended two days national workshop on “Plant Protection Techniques” scheduled on 06.03.2019 and 07.03.2019 at National Institute of Plant Health and Management, Hyderabad.
10. Attended and presented a research paper entitled “Studies on Saline Water Intrusion in the Coastal Stretch of Kadalundi River Basin, Malappuram using Visual MODFLOW ” in III Indian National Ground Water Conference on groundwater resources Management for sustainable Development: Spatial emphasis on coastal and urban environment' scheduled from 18-20 February 2020 at CWRDM, Kozhikode, Kerala.
11. Presented a research paper entitled “Assessment of aquifer characteristics using Geoelectrical Resistivity Techniques – A case study from ayacut area of Bakkikayam regulator” in IV Indian National Groundwater Conference (INGWC-2021) on ‘Groundwater Management in Arid and Semi-Arid Regions of Hard Rock Terrains’ jointly organized by Centre for Water Resources, Institute of Science and Technology, Jawaharlal Nehru Technological University Hyderabad, Indian Institute of Technology, Hyderabad and CSIR-National Geophysical Research Institute, Hyderabad

13. Publications:

1. Research Papers (Peer reviewed)- 18 Nos.

- Effect of Bakkikayam regulator on groundwater resources using visual MODFLOW - A case study Indian Journal of Soil Conservation Vol.51(2): 110-116, 2023
- Field Evaluation of Site Specific Drip Fertigation in Tomato, International Journal of Environment and Climate Change, 13(7) : 351-362, 2023
- Spatial Variability Mapping of Soil Chemical Properties Using GIS & GPS, International Journal of Environment and Climate Change, 12(12) : 512-520, 2022
- Assessment of Salt Water Intrusion from Ponnani to Tavanur along the Banks of River Bharathapuzha in Kerala, J. Indian Soc. Coastal Agric. Res. 40(2): 33-47, 2022
- Prediction of the extent of saline water advancement in the coastal stretch of Kadalundi river basin, Malappuram district, Kerala using visual MODFLOW: A case study, The Pharma Innovation Journal, SP-11(3): 365-372, 2022
- Simulation of groundwater flow using visual MODFLOW: A case study for the command area of Chalakudy river diversion scheme, Indian Journal of Soil Conservation Vol.50(1): 29-37, 2022
- Aquifer Characteristics studies using geophysical techniques in ayacut area of Bakkikayam regulator , Malappuram, Kerala, Int. Journal of Agriculture Science, Vol.14 (2): 11126-11130, 2022
- Development of Automated Drip Fertigation System using GSM based Controller, Trends in Biosciences, Vol. 13(2):102-104, 2020
- Precision Farming for Sustainable Agriculture Int. Journal of Agriculture Innovations and Research, Vol.8(6):2319-1473, 2020
- Performance evaluation of different types of wicks used in wick irrigation system, International Journal of Agriculture Sciences Volume 11, Issue 18, 2019, pp. 9102-9105
- Studies on groundwater resources using visual MODFLOW- A case study of Kadalundi river basin, Malappuram, Kerala, Indian Journal of Soil Conservation. Vol.47, No.1, pp 21-29,2019
- Hydrogeological Characteristics and Ground water Scenario of Kadalundi River Basin, Malappuram District, Kerala, International Journal of ‘Trends in Biosciences’ 10(12), 2017, 2193-2200

- Estimation of Pan Evaporation using Artificial Neural Networks – A case study, International Journal of Current Microbiology and Applied Sciences, 6(9): 3052-3065, 2017
- Field Level Investigation of Automated Drip Irrigation System, International Journal of Current Microbiology and Applied Sciences, 6(4): 1888-1898, 2017
- Application of geophysical techniques for groundwater investigation- A case study of Kadalundi river basin, Malappuram, Kerala, Trends in Biosciences,8(16) :4228-4248, 2015
- Performance evaluation of cost effective fertigation systems, Agriculture for Sustainable Development, 3(1- 2) : 47-51, 2015
- Erodibility and runoff potential of three well defined soils in Kerala under simulated rainfall conditions, International Journal of Engineering Research and Development, 8(7), September 2013,pp.42-48
- Erodibility of three well defined soils in Kerala under simulated rainfall conditions, Indian Journal of Soil Conservation , Vol.36(2): 74-77, 2008

2. **Books** - 2 Nos

- **Dr. Abdul Hakkim, V.M.,** Dr. Sajeena, S., Dr. Thulasi, V. and Dr. Renjith, M.T. (2023). Open Precision Farming. State Horticulture Mission – Kerala.
- **Dr. Abdul Hakkim V. M. & Sajeena.S.** (2014). GIS Integrated Site Specific Drip Fertigation. LAP LAMBERT Academic Publishing, Germany

3. **Review Paper** – 1 No.- Identification of Groundwater prospective zones using geoelectrical and electromagnetic surveys, International Journal of Engineering Inventions, 3(6): 17-21, 2014

4. **Conference Paper** – 8 Nos

5. **Popular Articles** – 26 Nos.

6. **Research Reports** - 4 Nos.

7. **Book Chapter** - 2 Nos.

8. **Booklet** - 3 Nos.

9. **Leaflets** - 9 Nos.

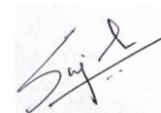
14. Radio Talks and Interviews- 12 Nos.

15. Other Activities:

- Academic Officer (PG), KCAET Tavanur w.e.f 01.11.2023
- Member of PC Group of Soil and Water Conservation Engineering, KAU
- Convener of Institution's Innovative Council (MIC), KCAET, Tavanur
- Member of board of question paper setters of B. Voc Agriculture for the course SDC1AG03 Fundamentals of Agrl. Engg., Calicut University.
- Member of the technical committee constituted for the implementation of the State Horticulture Mission/RKVY 2022-23 Project "Popularisaion of Open Precision Farming in Kerala".Member of Haritha keralam mission Technical Committee (Soil and Water Subcommittee), Malappuram District, Kerala
- Associate Editor and reviewer of International Journal of Agriculture Sciences, Bioinfo Publications and reviewer of Asian Soil Research Journal.

I hereby declare that the Information given above are true to the best of my knowledge and belief.

Tavanur,
08-11-2023



(SAJEENA, S)