

Curriculum Vitae

ENGR. Aaftab Ahmad



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Summary of Qualifications:

➤ **M.Sc (Hydrology and Water Resources Management) (2015-17)**

King Abdul-Aziz University (KAU) Jeddah Saudi Arabia CGPA (4.30/5)

Thesis title: “Effectiveness of silicon for mitigating drought stress in sorghum (*Sorghum bicolor* L.) in arid region of Hada Sham Saudi Arabia”

Research Objectives:

- 1) To obtain the highest yield of Sorghum at minimum water use under arid conditions.
- 2) Crop water consumptive use according to Penmen-Monteith equation and Kc.
- 3) The effect of water stress on Sorghum morphological characters.
- 4) The effect of Silicon application on Sorghum drought tolerance.

Courses covered during M.Sc.

Methods of scientific research, Advance surface water hydrology, Watershed modelling, Management of irrigation, Advance ground water hydrology, Advance irrigation and drainage, Stochastic methods in hydrology.

➤ **B.Sc. (Agricultural Engineering) (2006-10)**

University of Agriculture, Faisalabad (UAF) Pakistan CGPA (3.20/4)

Specialization in

- 1) ***Irrigation & Drainage (I&D)***

Major Courses covered during B.Sc.

Fundamentals of fluid mechanics, Applied fluid mechanics, Soil mechanics & dynamics, Open channel hydraulics, Surface and ground water Hydrology, Soil and water conservation, Irrigation & water quality Engineering, Water management, Drainage engineering, Pumps & tube Wells, GIS application in water resources and waste water treatment.

- **F.Sc (Pre-Engineering) (2004-06) Marks (830/1100)**
Tameer-e-Seerat Model Degree College, Mansoorah, Multan Road Lahore.
- **Matriculation with Science (2002-04) Marks (674/850)**
Ghazali Model High School Phalia, Mandi Baha-ud-Din

Future research interests

I am keen interested to work in Agricultural Hydrology and water resources management particularly in arid regions. To study the crop water requirements and soil-water-plant relationships. Optimization and irrigation scheduling. Expanding my master thesis work in more details.

Research Experiences:

❖ **Universiti Teknologi Petronas Malaysia** **1 year**

Worked as “**Research Assistant**” In the Department of Civil Engineering from January 2012 to December 2012.

Responsibilities:

- Hydrologic Modeling of Rainfall water in Tana Rata at Cameron Highlands Penang Malaysia.
- Watershed delineation and water resources management at Tana Rata using hydrologic analysis of GIS.
- Finding shortest path between water body and cultivated areas using Least cost path Analysis (LCPA) of GIS.
- Preparation of technical reports and proposals for higher authorities.
- Demonstration in laboratories for under graduate students and study of sewerage system of UTP Malaysia.
- GIS and RS application in satellite image processing for site information.
- Finding the flow path of water using Digital Elevation Modelling (DEM) function of GIS.
- Used HEC-HMS and WMS for Hydrologic parameters calculations.
- Used many other small scale software's for irrigation and hydrology.

Professional Experiences:

❖ Saudi Binladen Group (USMS)

July 2013 to Sep. 2015

Worked as “**Irrigation/Landscape Supervisor**” in **United Saudi maintenance and services (USMS) Al-Riyadh Saudi Arabia.**

Responsibilities:#

- Operation and maintenance of ***Rain Bird auto irrigation system*** at ***King Khalid International Airport Al-Riyadh.***
- Nursery raising and maintenance of date palm and flowers at ***King Khalid International Airport Al-Riyadh.***
- Construction, operation and maintenance of auto irrigation system designed by ***Hunter Industries U.S.A*** with central computer and satellite controller ***at King Saud Bin Abdul-Aziz University for Health Sciences(KSAU-HS) National Guard Campus Al-Riyadh Saudi Arabia.***
- Installation of special rain gun sprinkler in football stadium at KSAU-HS.
- Operation of STP pump room for auto irrigation at KSAU-HS site.
- Operation and maintenance of fertilizer injection machine at KSAU-HS.
- Designing, Operation and Maintenance of Drip and Sprinkler irrigation systems.
- Cutting, pruning and maintenance of trees, hedges, ground covers and flowers.
- Supervision and monitoring of landscape maintenance and indoor plants.
- Construction, operation and maintenance of auto irrigation system designed by ***Hunter Industries U.S.A*** at ***ministry of interior (MOI) Al-Hayer Al-Riyadh Saudi Arabia.***
- Construction and maintenance of ***Rain Bird Auto irrigation System*** at ***King Abdullah Foundation Umm-ul- Hammam Al-Riyadh Saudi Arabia.***
- Inspection of environmental health and safety activities.
- Material purchasing for construction works at Landscape and Hard scape sites.
- Soil preparation for landscape construction.
- Preparation of different reports, irrigation schedules, maintenance team schedules and controller schedules etc.
- Proposals for improvement and up-gradation of Irrigation and landscape areas.
- Involved in different inspections ensuring the quality of work is done as per required standards. Quality Control activities at different sites.
- Trouble shooting at different sites

❖ M/S Khurshid Contractors Mandi Baha-ud-Din

2 Years

Worked as “**Field Engineer**” from 2010 to 2012

Responsibilities:

- Field Visits, farmer’s demonstration and trainings.

- Technical Consultancy on Drip and Sprinkler Irrigation systems engineering.
- Designing and Installation of Drip, Sprinkler Irrigation Systems Projects.
- Marketing of advance techniques of irrigation systems.
- Marketing of advance techniques of precision farming system.
- Marketing of advance techniques of Laser land leveling.
- Prepared technical proposals, design reports, Bill of Quantity (BOQs) and engineered estimates.
- Performed Installation and Commissioning of Drip, Sprinkler Projects.
- Marketing of advance techniques in pumps and tube well for underground water suction for irrigation purpose in arid areas.

Publications and projects:

The following research paper was accepted and published in an international conference in Pakistan and got best paper award.

“Development of an Optimum irrigation Scheme using least cost path analysis (LCPA) and Digital Elevation modelling (DEM)”

“Effect of irrigation scheduling and foliar application of silicon in mitigating drought stress of Sorghum under arid climates” submitted.

“Effect of irrigation scheduling on water use efficiency under arid climatic conditions” under review.

Skills:

- Self-motivated, target oriented with sound knowledge of Irrigation projects.
- Performing duties honestly and with devotion& dedication.
- Got letter of appreciations from KSAU-HS by providing good services.
- Got employ of the month and special award on good performance.
- Good Communication Skills in English having 6 Bands in IELTS.

Computer Skills:

- Operating Systems Window XP.
- **Software:** MS Office (Word, Excel, Power Point and Internet Surfing)

Languages Skills:

- English, Urdu, Punjabi, Arabic, Hindi.