

PROF. MUHAMMAD JAMAL KHAN

Department of Water Management

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Education

Ph.D. Agricultural Engineering, Purdue University, Indiana, U.S.A., 1989.

M.S. Agricultural Engineering, Purdue University, Indiana, U.S.A., 1986.

B.Sc. Agricultural Engineering, NWFP University of Engineering & Technology Peshawar, 1981.

B.Sc University of Peshawar, 1978

Area of Interest: Water Resources Management, Irrigation and Drainage

Employment

2009 Working as Chairman Department of Water Management and Director Planning and Development , Agricultural University Peshawar for the UP.

Working as Director Water Resources Management Project, developed a new curriculum for the Department of Water Management at B.Sc, M.Sc and Ph.D. level approved by the Higher Education commission of Pakistan.

Supervision and monitoring construction of university development projects (Boys, girls hostels, sport complex and biotechnology building.

Working as advisor for construction of small earthen embankment dams under the supervision of Inter- cooperation a Swiss International Agency for Development.

- 2008 Worked as post doctoral research fellow at Colorado State University, USA from March, 2008 on use of GIS and RS for water resources management
- 2005-2007 Worked as convener, poverty alleviation project of Swiss Development Corporation in D. I. Khan, Pakistan. Worked as Director Planning and Development developed 20 years vision for Agricultural University, Prepared and got approved mega PC1 for strengthening of NWFP Agricultural University Peshawar worth of 410.537 millions from CDWP , sport PC-1, foreign faculty housing facility and strengthening of water resources management PC1s of about 40 millions each.
- 1997-2005 Chairman/ Professor, Taught advanced Water Management, Irrigation System Design and Management, Sprinkle and Trickle Irrigation System at University level. Sediment transport and erosion mechanics and supervised 30 M.Sc and 5 Ph.D. theses in the Department.
- Supervised different meteorological equipment repair, and maintenance, data collection and dissemination. Worked on installation of weather station equipment at various research stations of NWFP Agricultural University Peshawar, Pakistan. Installed sprinkle irrigation system at Agricultural Research Station Karak and Cereal Crops Research Institute, Pirsabak, Nowshera, during, 1992.

- 1993-1997 Associate Professor, Department of Water Management, Agricultural University. Taught B.Sc and M.Sc Worked as Co-PI in an Irrigation system management project funded by USAID.
- 1986-1993 Assistant Professor, Department of Water Management, Agricultural University. Taught courses Flow measuring structures, Drainage of Agricultural
Agro-hydrology
- 1982-1993 Lecturer, taught courses to B.Sc and M.sc students and conducted applied research in Agricultural University. Proceeded for higher study to U.S.A in 1984.
- 1981-1982 Assistant Engineer, Department of Agriculture, Government of NWFP. After graduation from NWFP University of Engineering and Technology, worked as an Assistant Engineer, in NWFP On- Farm Water Management Project from 1- 1-1982 to 31-8-1982. The task performed was design of watercourses, improvement of water control structures and land leveling.

Post Graduate Students supervised

Supervised and successfully completed thirty (30) M.Sc (Hons) theses and two Ph.D. dissertations as Co-Supervisors. Providing guidance and Supervisions to four M.Sc and four Ph.D. Students. Also supervising different meteorological equipment (at twelve research stations) repair, and maintenance, data collection and dissemination.

Honors and Awards

Obtained a merit Scholarship award for higher study (Ph.D.) abroad from University of Engineering and Technology, Peshawar during the academic session 1980-81. Got first position in B.Sc Agricultural Engineering examinations held in November 1981.

Got post doctoral fellowship from Higher Education Commission of Pakistan for the year 2008 and presently working research assignment on at Colorado State University, USA

Courses Taught:

Operation and management of small dams; High efficiency irrigation system, Sediment transport, Irrigation System Design, Open Channel Flow, Farm Irrigation System design and Agricultural Drainage in the Department of Water Management and Agricultural Engineering.

Supervising and providing guidance to master and Ph.D. students.

Professional Activities

Member Board of Governor Center of Excellence in Water Resources Engineering, UET Lahore

Member of National drainage program

Member Pakistan Engineering Council

Member Editorial Board Journal of Water Resources

Project Director, Lab. Up gradation project

Convener, Vehicle Repair and Maintenance Committee

Member Physical Verification Committee

Member Fund Raising Committee

Member Students Welfare Committee

Member Board of Study, Department of Agricultural Engineering.

Member Board of Stud, Department of Plant Breeding Genetics

Member Board of Study, Department of Environmental Science, Agricultural University Peshawar.

Convener Board of Study of the Departments of Water Management and Agri. Mechanization.

Convener Convocation Seating Arrangement Committee

Member Construction Inquiry Committee

University Library Regulation Committee

University Unfair Means Committee

Convener Workshop Organizing Committee

University Construction Committee.

Subject Expert Selection Board University of Engineering and Technology Peshawar

Subject Expert Selection Board AJK University

Subject Expert Selection Board Sindh Agricultural University

Subject Expert Selection Board University of Engineering and Technology Lahore

Research Grants and Contracts

Project Director/Principal Investigator

- Conducting a study on development of low cost sand filter for provision of safe drinking water in Rok-Kohi area of D.I.Khan from 2005 to date. Developed and tested pond and household level sand filter for provision of safe drinking water in Daman area of D. I. Khan
- Conducted a study on “Sedimentation in Small Earthen Embankment Dams at Shakardara, District Kohat” during 2004-05, funded by the UNDP through Lachi Poverty Reduction Project (LPRP). Determined the incoming sediment load and estimated the siltation life of earthen embankment dams.
- Worked as Coordinator Project for Livelihood Improvement (PLI), funded by the SDC since January 2005 to-date. Helping the management of PLI in

implementation and execution of the water management components of the project. Developed six number water storage ponds for provision of drinking water in Daman area of D. I. Khan.

- Worked as Water Management Specialist/Irrigation Engineer on Chashma Right Bank Irrigation Project, under Project Impact Monitoring and Evaluation Study from 2001-2002 and successfully completed the project. The study was conducted by Sheladia, Associates, Inc. USA and Ifra-D-Consultants (IDC). Determined the present irrigation system efficiency based on the conveyance, and on farm application losses. Compared the water supply and demand under different cropping pattern and made recommendation for better operation of the CRBC.
- Conducted field studies, on alleviation of small scale waterlogging at Peshawar and Bannu. The project was funded by NDP, WAPDA and duration of the project is three years (2001-2004) with cost of Rs 4.5 millions.
- Conducted studies on optimal tillage practices funded by ALP-PARC at Karak and D.I.Khan (2001-2005). The cost of the project was Rs. 2.5 million. The effects of different tillage implements on wheat and chickpeas were studied.
- Completed a study on development of rainfall-runoff relationship at Nizampur watershed funded by PCRWR during 1998-2000.
- Conducted a hydrology study at Hilkot watershed funded by ICIMOD-Nepal, during 1998.
- Conducted a study on an efficient use of irrigation water (Sprinkle and Trickle irrigation System) under "Irrigation System Management Research under USAID funded project through National Agricultural Research Council of Pakistan for the last two years during 1993-1995
- Completed a research on Interaction of Irrigation and Drainage at Mardan SCARP area 1993-1995, funded by CIDA.
- Conducted study on water distribution and conveyances losses at Kabul River Canal System and Lower Swat Canal System during 1993-1997 funded by the Government of The Netherlands.

- Worked on Integrated Watershed Management project under PEP project during 1992-93 at Nowshera, planted trees in eyebrow terraces constructed ponds and bench terraces also installed gun sprinkler system at the site

- Participated in the outreach programme to communicate modern irrigation technology to the farmers, sponsored by the US funded TIPAN project

Recent Academic Journal Publication

1. Khan, M. J. G. Pacha and R. Oad (2008), Evaluation of traditional Karez irrigation system in Afghanistan, International Journal of Irrigation and Drainage.

 2. Khan¹, M.J., A. Razaq and Luis Garcia 2008. Effect of different pre-sowing depths water application on yield of wheat in D.I. Khan, Pakistan. Accepted for publication in Journal of Agricultural Water Management.

 3. of Irrigation System Performance Evaluation of Chashma Right Bank Canal of Pakistan. International Journal of Irrigation and Drainage (submitted for publication of ICID)

 4. Khan, M.J., Gul Daraz Khan Obaidullah, M.Zubair and Naveedullah. 2007. Sediment load assessment of small embankment dams in southern regions of NWFP Vol 24, No. 2 Sarhad Journal of Agriculture.

 5. Ghumman, A.R., Muhammad Zubair Khan and Muhammad Jamal Khan, 2006. Use of numerical modeling for management of canal irrigation water. Published in ICID Journal of Irrigation and Drainage, Vol. 55(4), pp-445-458.

 6. Khattak, M.K., M.J. Khan, M.J. Khattak, M. Asrar and M. Ibrahim, 2006. Economic Evaluation of deep tillage and shallow tillage practices during wheat crop production. Sarhad. J. Agric. Vol. 22, No 1 pp 155-162.
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7. Khan, M.J. M.K. Khattak and S. Wahab, 2006. Influence of Various Tillage Practices on Selected Physical Properties of Sandy Loam Soil Under Rainfed Area. Sarhad. J. Agric. Vol. 22, No 1, pp 71-80.
8. Khattak, M.K., M.J. Khan, M. Asrar, S. Wahab and M. Ramazan , 2005. Enhancement of wheat yield and yield components by controlling wheat with deep tillage practices under irrigated clay loam soil condition. Pak. J. Weed Sci. Res. 11(3-4), pp 131-136.
9. Khattak, M.K and M.J. Khan, 2005. Effect of different tillage practices on weeds and yield of chickpea under sandy loam soil condition. Pak. J. Weed Sci. Res. 11(3-4), pp 157-164
10. Khan, M. Z, M. K. Khattak, M. J. Khan and M. Asrar, 2005. Comparison of water supply and demand for the Rabi season at tertiary level in the command of the Jui Shaikh canal irrigation system. Sarhad J. Agric. Vol. 21 , No 3, pp 417 – 423.
11. Tariq, J.A. , M. J. Khan and A. K. Afridi, 2005. Farmers irrigation water management practices of maize crop. J. Engineering and Applied Sciences Vol 24 No 2. pp 55-61.
12. Tariq, J. A. M. J. Khan and M. J. Kakar, 2004. Irrigation system performance monitoring as diagnostic tool to operation: Case study of Shahibala minor of Warsak Gravity Canal. Pakistan J. of Water Resources, vol. 8(1), pp 13-21.