


FAISAL IBRAHIM ZEINELDIN, Ph.D.

King Faisal University
Water Studies Center (WSC)
Kingdom of Saudi Arabia
faisalzeineldin@yahoo.ca

	Name	Dr. Faisal Ibrahim Zeineldin
	Nationality	Canadian
	Position	Faculty member
	Qualification	Ph.D., Colorado State University ,USA
	Work	Water Studies Center, King Faisal university
	e-mail	fzeineldin@kfu.edu.sa
		Assis. Professor

EDUCATION BACKGROUND

- 1992-1998 **Ph.D.** May 1998. Department of Agricultural Engineering, Colorado State University, USA
- 1988-1992 **M.S.** December 1992. Department of Agricultural Engineering, Colorado State University, USA
- 1979-1985 **B.Sc.** December 1985. Agricultural Sciences, University of Gezira, Sudan

RESEARCH EXPERIENCE

- 2003-Now *Assistant professor* as senior researcher in Irrigation Engineering, Drainage and water Management Research Program: Primary focus is on solving water challenges and issues at Al-Hassa region and the Kingdom of Saudi Arabia in general. King Faisal University, Water Studies Center, Al-Hofuf, KSA.
- 2001-2003 *Postdoctoral researcher.* Participated in modeling the movement of nitrogen and phosphorus with the runoff water from site specific of watersheds to water sensitive bodies, with Dr. Feng, Yongsheng. Department of Renewable Resources, University of Alberta, Edmonton, AB, Canada.
- 1992-1998 *Doctoral student.* Soil and water chemistry effects on *surge flow irrigation.* Dr. Terence H. Podmore. Department of Agricultural Engineering, Colorado State University, Fort Collins, CO, USA.
- 1988-1992 *Master student.* Estimating effective rainfall for irrigated crops. Dr. Terence H. Podmore. Department of Agricultural Engineering, Colorado State University, Fort Collins, CO. USA.

EMPLOYMENT EXPERIENCE

- 2003- Now Acquired research skills and experience in dealing with water conservation, latest technology of modern irrigation systems, hydroponic and subsurface drip irrigation systems. Get acquainted with the latest electronic technology for

automatic irrigation scheduling such as using of Enviro-Scan, Electronic tensiometers and Timers for efficient water use by crops

- 2001-2002 University of Alberta, Alberta, Canada, where I have acquired research skills and capabilities in water solving problems and in soil and water conservation issues. I did acquire experience in ARC/VIEW applications and GIS based hydrological Models such as TOP-Model and SWAT. I assisted in graduate research projects as well as undergraduate.
- 1993-1998 I worked with the USDA-ARS, Water Management Research Unit, Fort Collins, Colorado in laboratory and field. I participated in running precision farming experiments on research and commercial farms using GPS maps for soil sampling. We used SAS program for statistical data analysis.
- 1987-1988 *Teaching assistant*, Agricultural Engineering Department, University of Gezira, Sudan. I have set and taught laboratory classes and graded exams. I did organize and participate in tenants' summer extension workshops.
- 1986-1987 *Field Inspector*, Gezira Irrigated Crop Project. Monitored and managed operation of canal irrigation water system to meet water requirement for arid regional crops. Advised and enhanced tenants to improve water use efficiencies, adopt new technology of agricultural practices to increase their crop productivity.
- 1985 -1986 *Teaching Assistant*. Agricultural Engineering Department, University of Gezira, Sudan. Coordinated and instructed machinery shop classes and graded undergraduate assignments.

SPECIAL SKILLS

I have excellent computer skills in text, data and graphics (Microsoft office /Word/ Excel/Power Point and Fortran Programming Language). Familiar in using ARC/VIEW, SAS, USGS hydrological models and FAO- Crop WAT model.

MEMBERSHIP IN SCIENTIFIC SOCIETIES

- American Society of Agricultural Engineers (ASAE)
- Society of Crop Protection, University of Gezira

PROFESSIONAL MEETING

- Annual meeting of ASAE, Minneapolis, MI, USA. August 1997
- Annual meeting of ASAE, Orlando, FL, USA. August 1998

PROFESSIONAL MEETING and CONFERENCES:

- *Presented a paper:* Soil and Water Chemistry Effects on Surge Irrigation. *Annual meeting of ASAE, Minneapolis, MI, USA. August 1997*
- *Attended annual meeting of ASAE, Orlando, FL, USA. August 1998*
- *Attended annual meeting of ASAE, Ottawa, ON, Canada. August 2004*
- *Presented a paper:* Polymer effects on available water capacity and percolation of sandy soils, Saudi Arabia. *Annual meeting of CSBE/SCGAB, Edmonton, AB, Canada. July, 2006*
- *Attended the 5th International Conference on Water resources & Arid Environments (ICWRAE 45), King Saud University in Riyadh, 7-9 January 2013*

Khalid Biro, Faisal Zeineldin and Mohammed Refdan Al-Hajhoj. (2018). Land Use Changes in Al-Ahsa Oasis, Saudi Arabia: Towards A Sustainable Management for Natural Resources Using Remote Sensing and Geographic Information System (GIS). *International Workshop on Combating Desertification*, 23-25 April 2018, Riyadh, Saudi Arabia.

PUBLICATIONS, PROCEEDINGS of RESEARCH and MANUSCRIPTS

- Yousef A. and F. Zeineldin. 2007. Improving conveyance and distribution efficiency through conversion of an open channel lateral canal to low pressure pipeline at Al-Hassa irrigation project, Saudi Arabia. *The Arabian Journal for Science and Engineering*, Volume 32, Number 1c. Page 77-86 (ISI)
- Zeineldin, F., Y. Sheng and Li. 2001. Runoff Prediction of Haynes Creek watershed M1 site using SWAT and TOP models. *38th annual Alberta soil science workshop proceedings*, Lethbridge. Alberta
- Zeineldin, F., Y. Aldakheel. 2004. Reduction of Agricultural Water losses by combining Effects of soil layering and Pre-hydrated Polymer. *Second International conference on water resources and arid environment*. Riyadh, KSA.
- Zeineldin, F. I. and Yousif J. Aldakheel. 2010. Evaluation contribution of ground shallow water table to irrigation of date palm trees under irrigation reduction in Saudi Arabia. *International Conference on Chemistry and Chemical Engineering (ICCCE 2010)*. Page 342-345
- Zeineldin, F. I. and K. M. Al-Barrak. 2012. Reused water and hardpan impacts on alfalfa water demand and use efficiency, Saudi Arabia. *World Academy of Science, Engineering and Technology*, issue 69. Page 1009-1014
- Zeineldin, F. I, Khalid Biro and M.R. Al-Hajhoj. 2018. Impacts of Artificial and Natural soil Conditioners on Water Holding Capacity and Hydraulic Conductivity of Sandy soils. *Proceedings of the European Conference on Agricultural Engineering*: 560-567. Wageningen, Netherland. <https://research.wur.nl/en/publications/proceedings-of-the-european-conference-on-agricultural-engineering>
- Khalid Biro, Faisal Zeineldin, Mohammed Refdan Al-Hajhoj. (2019). Satellite-Based Water Status Assessment for Date Palm in Al-Hassa Oasis, Saudi Arabia. *International Journal of Water Resources and Arid Environments*, 8(1): 61-69.
- Khalid Biro, Faisal Zeineldin, Mohammed Refdan Al-Hajhoj and Hassan A. Dinar. (2020). Estimating Irrigation Water Use for Date Palm Using Remote Sensing Over an Oasis in Arid Region. *The Iraqi Journal of Agricultural sciences*. Volume 51, issue (4)
- Khalid Turk, Faisal Zeineldin and Abdullah S. Aljughaiman. (2020). Mapping and assessment of evapotranspiration over an oasis in arid ecosystem using remote

sensing and biophysical modelling. *Conference of the Arabian Journal of Geosciences*. Nov. 25-28, Tunisia.

- Zeineldin F. I. and Yousef Al-Molhem. Influences of Polymer Addition and deficit irrigation on Muskmelon under different drip irrigation methods. Under review. submitted to *Czech Academy of Agricultural Sciences: Soil and Water Research*, registered with no. 94/2020-SWR.

Reaching Community

In 2016- 2017, I have participated in number of training sessions via KFU entities for enhancing capacity of the employees of the Agriculture Ministry and HIDA(SIO now) in water conservation and management:

- 1- *Training titled: Design of modern irrigation systems (14-18/5/2017) in cooperation with the faculty of society service*
- 2- *Training Titled: Agriculture and Modern Irrigation control in green houses (12-16/3/2017). in cooperation with MEWA*
- 3- *Training Titled: Agriculture and Irrigation in Green houses (4-8/12/2016)*
- 4- *Training Titled: Crop Water Requirement (29-2 to 3/3 -2016) in cooperation with HIDA and now Saudi Irrigation Organization (SIO)*
- 5- *Training Titled: Fundamentals of Estimation of Water Requirement of Crops (20-22 /3-2016) in cooperation with HIDA and now Saudi Irrigation Organization (SIO)*

Current Research Activities

- 1- **Conducting an IoT research titled "An organic fertilizing subsurface drip irrigation modified method combined with clay subsurface-layer for Green-house vegetable production"** *Water studies Center and Research and training station facilities, self-funding and .*
- 2- **Conducting on field research project (no. 1860022), titled "Assess Water Percolation and Water Requirement of Al-Ahsa rice"** *funded the Deanship of Scientific Research.*
- 3- **Submitted a scientific paper about water use efficiency of greenhouse hydroponic tomato production and assisted in writing of the final report an strategic project no. 10-WAT1150-06 titled " Conservation of Water using new Technology in the Sustainable Green fodders and Vegetables "** *funded by KACST.*
- 4- **Submitted a chapter of title "Mapping and Assessment of Evapotranspiration over Different Land-use/Land-cover Types in Arid Ecosystem"** *in a book titled "Evapotranspiration - Recent Advances and Applications" in the Intech Open.*
- 1- **As Co-Author, Writing a chapter of a book titled "Water security: status quo and future prospects"** *in a book of chair "Food and Nutrition Security in the Kingdom of Saudi Arabia" supervised by the Faculty of Agriculture and Food Sciences, KFU.*

- 2- *I am participating as co-investigator in a research project titled "Assess Performance of Micro-irrigation methods in Management of Irrigation water in Date palm trees, Saudi Arabia" funded by the Date palm Research Center of Excellence.*
- 3- *A co-supervisor assisted in graduation of a Master student with a dissertation titled "Evaluation use of soil moisture sensor-based automation subsurface (ICOMAT) and spraying irrigation systems on irrigation of Bermuda grass in Al-Ahsa Oasis" department of environmental and agricultural resources, faculty agriculture and food science.*

Administration, Coordination and consultancy activities

I was the coordinator of the council of the Graduate Studies and Scientific Research (GSSR) deputy

*I have been awarded consult mission with **FAO-UN** in capacity building and project development at Al-Ahsa Irrigation project in the Kingdom of Saudi Arabia*

*In 2013, I was appointed by the President of the University as member of arbitration committee of **KFU prize** for the National Academic Accreditation and Assessment*

Since 2015 until now, I am a member of the Research Scientific Standard committee (Standard 10) in preparing KFU institutional self-study report to the National Academic Accreditation and Assessment (NAAA)

REFERENCES:

- Prof. Terence H. Podmore, Professor, Colorado State University, Fort Collins, Colorado. Phone (970) 491-1624
- Prof. Harold Duke, Research Scientist, United State Department of Agriculture, Water Management Research Unit, Fort Collins, Colorado. Phone (970) 491-8230
- Prof. Feng, Yongsheng, Ass. Professor, University of Alberta, Department of Renewable Resources. Phone (780) 492-4942
- Dr. Mohammed Bn Refdan Al-Hajhuoj. Former Director of the Water Studies Center
- Dr. Abdulrahman bn Othman Elghannam. Director of the Water Studies Center