Curriculum Vitae

Dr. Ali Widaa Mohammed Elamin

Associate Professor

Irrigation and Drainage Engineering

Irrigation Water Quality

- **Teaching**: All the irrigation courses (principle of irrigation, irrigation systems Design and Evaluation, Hydrology, Hydraulic, soil and water conservation Engineering), basic science (Calculus, Differential Equations and Mechanics and Vectors)

- **Research Area**: irrigation water quality, irrigation water management, water resources, water productivity, dry farming, and recycling of sewage water in irrigation .

- **consultancy** : consultant in design and evaluation of irrigation systems, rain water harvesting, dry farming, water quality, irrigation syllabus

University of Khartoum – Faculty of Agriculture

Department of Agricultural Engineering

19/02/2023

1. **PERSONAL DATA**:

NAME: ALI WIDAA MOHAMMED ELAMIN

DATE OF BIRTH: 1 JANUARY, 1972

NATIONALITY: SUDANESE

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Marital Status Married with 4 Children

2. **RANK** Associate Professor in Agricultural Engineering

3. **Education**

1. B.Sc. (Agric.) University of Khartoum Sudan, 1996.
2. M.Sc., University of Khartoum Sudan, 1999.
3. Ph.D. in Irrigation and Drainage Engineering, Khartoum, Sudan, 2007.

4. Diploma in courses and methods of teaching- University of Khartoum- Staff development and advanced training Centre.
5. Dialogue on Innovative Higher Education Strategies (DIES) Training course: "proposal writing for international research projects" first part 20th -25th Nov. 2011 organized by DAAD, Nairobi, Kenya
6. Dialogue on Innovative Higher Education Strategies (DIES) Training course: "proposal writing for international research projects" second part 9th -14th April. 2012 organized by DAAD, Nevasha, Kenya.
7. Computer courses (SAS, SPSS, Excel, Power point, Word and internet)
8. International course in Agrıcultural Mechanızatıon and Informatıon Technologıes. International Agricultural Research and Training Center (IARTC) in Izmir/Turkey between 13 – 17 May 2013.
9. "2nd International course In Agrıcultural Irrıgatıon and Informatıon Technologıes. International Agricultural Research and Training Center (IARTC). Izmir/Turkey 15 – 19 September 2014.
10. 4th" International course In Watershed Hydrology and Soıl Conservatıon. International

Agricultural Research and Training Center (IARTC). Izmir/Turkey 2 – 6 November 2015.

11. DIES ProGRANT Proposal Writing for Research Grants, Practical-oriented Training for New Researchers, in Egypt January 24th– 28th 2016 — E-Learning — August 28th- September 1st 2016
12. Workshop on indicators of Agricultural Expenditures and Agricultural Technologies for Africa: the case of Sudan- April 2018.

4. EXPERIENCE

1997-99 Teaching Assistant, University of Khartoum, Sudan. The work covered the setting, supervising and conducting of Undergraduate Lab., supervision of undergraduate tutorial.

1997-99 Graduate Students at University of Khartoum, Sudan for M.Sc. Degree

1999-2003 lecturer, University of Khartoum, Sudan, The work was participating in basic science lectures for undergraduate students in Faculties of Agriculture, Veterinary, Animal Production and Forest.

2003-2007 Ph.D. Student at University of Khartoum, Sudan and Technical University of Berlin, Germany.

2007-to date: Faculty Member at University of Khartoum, Sudan.

2003- 2008: Secretary Council of the Department of Agricultural Engineering, University of Khartoum.

2008 to 2012: Coordinator Postgraduate Studies at Department of Agric. Engineering, University of Khartoum.

Dec.2010 to May 2011: Acting head of the Dept. of Agric. Engineering.

June/2013 to Nov/2013: Head of the Agricultural Training and Community Service Unit, Faculty of Agriculture- University of Khartoum.

Nov/2013 – Aug. 2014: Assistant professor University of Sirte – Libya.

Nov/2013 – Aug. 2014: Chairman of the Strategic Plan Committee - Faculty of Agriculture, University of Sirte.

March/2015 – to **February/2018** : Head of the Dept. of Agric. Engineering, Faculty of Agriculture, University of Khartoum.

December/2015 to date Associate Professor- Faculty of Agriculture- University of Khartoum.

February 2018 to date principal of the Dar Al-aloum College for Science and Technology.

Editorial Manager 2020 to date: Journal of Dar Al-aloum College for Science and Technology for Arts and Sciences.

5. OTHER EXPERIENCE

1. **Referee**
    - Sudan Journal of Desertification Research – University of Khartoum
    - University of Khartoum journal of Agricultural Science
    - Journal of Sudan Academic for Science
    - Journal of Agricultural Science -University of Zalingei
    - Direct Research Journal of Biology and Biotechnology (DRJBB). **https://directresearchpublisher.org**

- Agricultural Engineering and Food Security Journal, universal wiser publisher.
- Journal of Dar-Eloloum College for Arts and Sciences (JDECAS)
- Ministry of Higher Education-Sudan
- Staff Promotion Committee- Al-Salam University

2. Examiner

- University of Khartoum
- University of Sudan for Science and Technology
- Neelain University
- Sudan Academic for Science
- Bakhet Elrida University

3. Participated as trainer:

- Training courses (lectures and field work), in modern irrigation systems for Agricultural Engineers- Ministry of Agriculture- Khartoum State.
- Training courses in water harvesting Techniques for Agricultural Engineers and farmers - Ministry of Agriculture- White Nile State.
- Training courses (lectures and field work), in modern irrigation systems for Agricultural Engineers- Sudanese Agricultural Engineers Union.
- Training courses (lectures and field work), in modern irrigation systems for participants form different Sudanese Universities- Ministry of Higher Education- Sudan

6. Research Projects

Project	Funding Agency	Status
Evaluation of reusing of treated wastewater in irrigation	Ministry of Agriculture, Khartoum state	Finished
Irrigation water productivity for sorghum under different water regimes and conservation tillage in Gezira scheme	Ministry of Higher Education and scientific Research	Finished

7. PUBLICATIONS

Refereed Journals:

1. Elshamy, O.M.; H.A. Al Hashem and A.W**. Elamin** "the effect of tillage implements on tractor performance under different operational conditions" , Egyptian journal of applied sciences. 2003, 18(5B): 800-818.
2. **Widaa** A. and A.B. Saeed "Impact of using treated wastewater for irrigation on soil chemical properties, plant growth and forage yield" , University of Khartoum journal of Agricultural science. 2008, 16 (1): 75-87.
3. **Widaa** A. M. ; A.B. Saeed and A. Bouch "Water Use Efficiencies of Gezira, Rahad, and New Halfa Irrigated Schemes under Sudan Dry Land Condition" , Sudan J. Des. Res. 3(1): 62-72, 2011.
4. Ibrahim, Y. M.; Saeed, A. B. and **Widaa, A. M.** "Performance of Basin and Bubbler Irrigation Systems under River Nile State

Conditions", University of Khartoum journal of Agricultral Science. 2011, 19 (3): 364-373.

5. Ibrahim, Y. M.; Saeed, A. B. and **Widaa, A. M.** "Effect of Irrigation Water Management on Growth of Date Palm offshoots (*Phoenix dactylifera*) under the River Nile State Conditions" University of Khartoum journal of Agricultural Science. 2012, 20 (3): 275-285.

6. Makhlof, H. A.; **Widaa** A. M, and Gowing, J. (2015). Effect of Farmer Experience on Selection of Irrigation Methods at Sirte, Libya. University of Khartoum journal of Agricultural Science 3 (1): 99-115.

7. Widaa, A. M; Saeed, A. B.; Abdalla, N. A. and Abdelrazig N. (2015). Impact Of Groundwater Quality On Soil Properties And Crop Production Under Khartoum State Condition. International Journal of Technology Enhancements and Emerging Engineering Research, Vol 3, (11): 1 -3.

8. **Widaa**, A. M.; Ibrahim, Y. M.; Saeed, A. B. and Abdalla, N. A. (2015). Determination Actual Evapotranspiration and Crop Coefficients of Young Date Palm Trees (Phoenix dactylifera) in the Nile Valley State. University of Khartoum journal of Agricultural Science 3 (2): 120-126.

9. Abdallaa, N. A.; Wu L. T. and **Widaa** A. M. (2016) Rain infiltration into loess soil under different rain intensities and slope angles. International Journal of Scientific Engineering and Applied Science (IJSEAS), 2(8):179-183.

10. Bush, A.; Saeed, A.B.; Mohamed, E.A., Mohamed, Z.Y.; **Widaa** A. M and Mahmoud, T. (2016) "Water productivity of Tomato (*Lycopersicon esculentum*) under Sudan Dry Land Conditions", Palgo Journal of Agriculture. 3(6): 207-211.

11. Bush, A.; **Widaa** A. M; Saeed, A.B. Abd Eldayim A.M. and Elsheikh T. M. (2016). Effect of Irrigation Systems and Watering Amount on Tomato (*Lycopersicon esculentum*) Production under Semi-arid Conditions. International Journal of Scientific Engineering and Applied Science (IJSEAS) –3 (2): 92-96.

12. Widaa A. M; Abd Eldayim A.M.; Abdalla, N. A. and Hussain, M.E. (2017). Hydraulic performance of drip irrigation system under different emitter types and operating pressures using treated wastewater at Khartoum State. International Journal of Development and Sustainability, 6 (9): 1086-1095.

13. Bush, A.; Widaa A. M. and Hamid, A.M.N. (2017). Effect of management practices on water use efficiency of Gezira irrigated scheme – Sudan. *International Research Journal of Agricultural Science and Soil Science.* 7(3): 040-045.

14. Makhlouf, H. A.; Widaa A. M.; Abdelhafid, S. E.; Saad, S. A.; and Abdalla, N. A (2017). Agricultural Activity and Adoption of Modern Irrigation Techniques in Sirte –Libya. Zalingie university Journal of Art and Science, 6(2): 140-153.

15. Haitham R. Elramlawi, Hassan I. Mohammed, **Ali W. Elamin,** Omer A. Abdallah, and Abdel Aziz A. M. Taha (2019). Adaptation of Sorghum (Sorghum bicolor L. Moench) Crop Yield to Climate Change in Eastern Dryland of Sudan. *Springer Nature Switzerland AG*,W. Leal Filho (ed.), Handbook of Climate Change

Resilience, https://doi.org/10.1007/978-3-319-71025-9_157-1. Pp 1-25.

16. Khalid H. Solieman; **Ali Widaa M. Elamin;** Mohamed H. Dahab; Haitham R. Elramlawi; Adam B. Adam and Amir M. Abd Aldaim (2019). Impact of Irrigation Intervals and Tillage Systems on Soil Moisture Distribution and Maize (Zea mays l.) Growth in Eastern Sudan. Indian Journal of applied Research 9(11): 1-4.
17. Ali Widaa M. Elamin; Amir Bakheit Saeed; Abbas E. Rahma and Tarig Elgamry (2019). Hydraulic Performance of Drip Emitters under different conditions and water qualities. Sudan J. for Desertification Research, 11(1):47-57.
18. Ali Widaa M. Elamin; Amir Bakheit Saeed; Abbas E. Rahma; Amir Mustafa Abd Eldaiam and Gazafi Mohamedai, (2019) Productivity of Maize (Zea mays) and Sorghum (Sorghum bicolor L.) Under Using Treated Wastewater for Irrigation. Sudan J. for Desertification Research, 11(1): 58-70.
19. Ali Widaa M. Elamin and Hussam Eldeen I. omer (2020). Yield and Quality of Date Palm (*Phoenix dactylifera* L.) Product under Deficit Irrigation Regimes in Dry Conditions. ASRIC Scientific Journal of Water, Energy and Environmental Sciences, 1(1): 1-8.
20. Ali Widaa M. Elamin and Hassan A. A. Ahmed (2020). Effect of Inter Spaces and Emitter Types on the Hydraulic Performance of Drip Irrigation System. ASRIC Scientific Journal of Water, Energy and Environmental Sciences, 1(1):9-19.
21. Adam Bush Adam; Ali Widaa Mohamed and Samia Ahmed (2020) Water Requirement of Mango Trees (*Mangifera indica*)

under Sudan Dry Land Conditions. Journal of Alsalam University, No.10: 61-74.

22. Hassin Abdelsalam Hassin Makhlof, Ali Widaa Mohammed Elamin, Moftah Ali Mohamed, Adam Bush, Amir Mustafa Abdeldyim, (2021). Demarcation of Groundwater Quality for Irrigation purposes in Sirte, Libya. Journal of Water Resources and Irrigation Management (WRIM), 10, (1-3): 15-24.
23. Hassan E. Alsayim, Amir Mustafa Abd. El-Edaiem,Ali Widaa Mohammed Elamin*, Adam Buch Adam and Mohammed Abd-Elhafeez Abass, (2022). Field Evaluation of Center Pivot Irrigation System's Performance under River Nile State Conditions, Sudan. Journal of Water Resources and Irrigation Management (WRIM), 11, (1-3): 1-7.
24. Ali Widaa M. Elamin; Amir Bakheit Saeed (2021). Safe Disposal of Wastewater in Irrigation and Its Effect on Soil Properties under Khartoum Conditions. *ASRIC Journal on Engineering Sciences*, 1: 26-31.
25. Lotfie A. Yousif, Mohammed H. Mohammed, Ashok Kumar Are and Ali Widaa Mohammed Elamin(2022). Energy analysis for sorghum (*Sorghum bicolor (L.) Moench*) production in large-scale rainfed schemes eastern, Sudan. *Journal of Dar-Eloloum College for Arts and Sciences (JDECAS)*, l (1): 12-21.
26. Salim M. Suliman, Ali Widaa M. Elamin, Adam B. Adam, Amir M. Abd Alddaim and Hassin A. Makhlof(2021). Crop water productivity in the main irrigated schemes of Sudan. *Journal of Dar-Eloloum College for Arts and Sciences (JDECAS)*, l (1): 1-11.

Papers under publication (applied for refereed journals and conferences)

1. Evaluation of New Halfa Sugarcane Scheme's Irrigation Network Using Comparative Performance Indicators under Sudan Conditions.
2. Improvement of water productivity of Wheat (*Triticum aestivum* L.) in Khartoum State's Irrigated Schemes Using Remote Sensing Data.
3. Utilization of Treated Wastewater for Production of Sorghum (Sorghum bicolor L) Under Khartoum State conditions
4. Hydraulic Performance of Drip Emitters under different conditions and water qualities.

Conferences with Refereed Full Paper Proceedings

1. **Widaa** A.; A.B. Saeed and H. Deistel "Appropriate management of water resources in Sudan and its impact on the political and social stability", the nexus of natural resources and violent conflicts in sub-Saharan Africa, Arusha, Tanzania, 2005.
2. Elamin A. M.**; Widaa** A. M. and Saeed A.B. "Water Resources Utilization in Sudan". China, 2012.
3. **Widaa**, A. M.; Saeed, A. B.; and Elgamry T. (2015). Impact of Using Treated Wastewater on Soil Properties, Growth and Yield of Maize (Zea mays) and Sorghum (Sorghum bicolor). National Center for Research 10th Scientific Conference Research & Innovation towards Knowledge Based Economy. presented – 1-3 Dec. 2015.
4. Saeed, A. B. ; **Widaa,** A. M.; and Elgamry T.; (2015). Assessment of Hydraulic Performance of Emitters Clogging under indoor and outdoor condition. National Center for Research 10th Scientific Conference

Research & Innovation towards Knowledge Based Economy. presented - 1-3 Dec. 2015.

5. Elgamry T.; **Widaa**, A. M.; and Saeed, A. B. (2015). On the Relation between Climate Change Adaptation and Water Resources in the Sudan. National Center for Research 10th Scientific Conference Research & Innovation towards Knowledge Based Economy. Presented- 1-3 Dec. 2015.
6. Haitham Rajab Elramlawi and **Ali Widaa** Mohammed Elamin, (2016). Water-use efficiency of Sorghum (*sorghum bicolor L. Moench*),under Water Harvesting and Conservation Tillage in Gadarif's Dryland. 2nd International forum on Water harvesting and its Social, Economic and Environmental Impacts. organized by Remote Sensing and Seismology Authority-Sudan and Reginal Center for Remote Sensing of North Africa States, at Khartoum-Sudan during 26-27 September 2016.
7. Ali Widaa M. Elamin and Hussam Eldeen I. omer (2019). Yield and Quality of Date Palm (Phoenix dactylifera L.) Product under Deficit Irrigation Regimes in Dry Conditions. 2ed ASRIC Congress- Advanced water technologies, 20-23 November 2019 Abuja Nigeria.
8. Ali Widaa M. Elamin and Hassan A. A. Ahmed (2019). Effect of Inter Spaces and Emitter Types on the Hydraulic Performance of Drip Irrigation System. 2ed ASRIC Congress- Advanced water technologies, 20-23 November 2019 Abuja Nigeria.
9. Ali Widaa M. Elamin; Amir Bakheit Saeed (2021). Safe Disposal of Wastewater in Irrigation, accepted to be presented in 1st ASRIC Conference in Engineering Science, 6-8/9/2021, Cairo Egypt.

Forum (as Audience)

1. DRI-ALRC-RIHN Joint International Symposium on Research and Development in Dry Lands, Khartoum 11-12 June 2012. Organized by Desertification Research Institute (DRI), National Center for Research; Arid Land Research Center, University of Totori, Japan, and Research Institute for Humanity and Nature, Japan.
2. Sustainability of Agricultural Water for improving Food and Food Security in East and Central of Africa. Organized by Agricultural Research Corporation, Institute of Water Harvesting. Khartoum, Nov/ 2014.
3. Sudanese Geo-Informatics Society (SGS). First Scientific Forum, University of Future, Khartoum at 31 January 2015.
4. The General Conferences of the Association of African Universities. The theme of the Conference is: The Future of African Higher Education. On the 5-8 July 2021, virtual meeting via zoom.

8. Supervision (Master and Ph.D. theses)

a) Master of Agricultural Engineering, Faculty of Agriculture, University of Khartoum

1. Evaluation of water use efficiency in Sudan irrigated schemes (Gezira, Rahad and New Halfa).
2. Evaluation of Groundwater quality and its impact on soil properties and crop productivities under Khartoum state conditions.
3. Evaluation the performance of micro sprinkler irrigation system for lawns under Khartoum state conditions.

4. Using treated wastewater to irrigate sorghum and maize for human consumption under Khartoum state condition.
5. Evaluation of Hydraulic Performance of Drip Irrigation System
6. Reusing of Treated Wastewater in Irrigation for Squash Production
7. Evaluation Study about quantity, quality and utilization of Treated Wastewater in Khartoum state.
8. Effect of Emitter types, operating pressures and Treated Wastewater on Hydraulic performance of drip irrigation system under controlled condition.
9. Comparative Study on Hydraulic Performance of Center Pivot Irrigation System under Northern, Khartoum and River Nile state Conditions
10. Evaluation Study About Hydraulic Performance of Drip Irrigation System Under Khartoum State Conditions.
11. Yield and Quality of Date Palm Product under Deficit Irrigation Regimes in Dry Conditions.
12. Assessment of crop water productivity in the main irrigation schemes (Gezira, New-Halfa and Rahad) in compared with Alrajhi project

b) Master of integrated water management, Sudan Academic for Sciences.

1. Evaluation of the common water harvesting techniques used in Sudan.
2. Impact of emitter types and spaces on emitters clogging of drip irrigation system.
3. Irrigation pumping performance test: case study Elsiliet scheme, Khartoum state, Sudan.

c) **Ph.D in Agriculture (Agricultural Engineering), Faculty of Agriculture, University of Khartoum.**

1. Utilization of Treated Wastewater for Production of Sorghum (Sorghum bicolor L) Under Khartoum State conditions.
2. Technical Performance and Effective Cost of Surface Drip Irrigation System Under Various water management in Sudan.
3. Improvement of water productivity of Wheat (*Triticum aestivum L.*) in Khartoum State's Irrigated Schemes Using Remote Sensing Data.

9. Ongoing research

1. Performance of drip irrigation under different management in Khartoum state.
2. Evaluation reusing treated wastewater to irrigate crops for human consumption.
3. Evaluation of the irrigation water productivity under different regimes and its effect on poverty reduction in Gezira scheme, Sudan

10. Membership

1. Staff of Faculty of Agriculture - University of Khartoum
2. Sudanese Metrological society (SMS).
3. Desertification society
4. German Academic Exchange Service (DAAD) alumni
5. African Union Network of Sciences (AUNS)
6. Afro Gate Research

11. Reference

1. **Professor Mohammed Hassan Dahab**

Dept. of Agric. Engineering- Faculty of Agriculture- University of Khartoum.

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