

## **Personal Data**

### **Abdel Moniem Elamin Mohamed**

**Birth Date:** 1<sup>st</sup> of January, 1950

**Present Occupation:** Associate Professor

Faculty of Agric., University of Khartoum

**Marital Status:** Married with children

**Specialization:** Irrigation.

**Address:** Department of Agricultural Engineering,

Faculty of Agriculture, University of Khartoum, Sudan.

## **Education**

- B.Sc. (Honours) First Class, Agric. (Agric. Mechanization), Faculty of Agric., University of Khartoum, 1976.
- M.Sc. Irrigation and Drainage, Dept. of Water Science and Engineering, University of California, Davis, (USA), 1979.
- Ph.D. Agric. Engineering, Thesis Title "Factors influencing seedbed irrigation" - Silsoe College, Cranfield University, United Kingdom, 1988.
- Irrigation Engineering Course at Colorado State University, Fort Collins, Sponsored by USAID, June-August 1978.

## **Occupations**

- Agric. Engineer, Rahad Agric. Corporation, Sudan, 1976-1977.
- Teaching Assistant, Dept. of Agric. Engineering, Faculty of Agriculture, University of Khartoum, 1977-1988.
- Lecturer, Dept. of Agric. Engineering, Faculty of Agriculture, University of Khartoum, 1988-1990.
- Faculty Board Member 1988-1990; 1997 to present.
- Assistant Professor, University of Khartoum, 1990.

- Head Department and Member of the Senate of the University of Khartoum, 1992-1994, 2001 up to now.
- Associate Professor, University of Khartoum, 1997.
- Deputy Dean for Academic Affairs (Faculty of Agriculture) 2001 -2004.
- Member of the Examinations and Prizes Committee of the University of Khartoum, 2001-2005.
- Member of the Admission and Registration Committee of the University of Khartoum, 2001-2005.
- Member of the Committee to revise the Examination regulations, University of Khartoum, 2007.
- Secretary of Faculty Research Board, (Faculty of Agriculture) 2001-2004.
- Head Department of Agricultural Engineering, 2005up to now.

## **Teaching Experience**

- Practical classes in Agric. Engineering (B.Sc.), Faculty of Agriculture, University of Khartoum, June 1977 - December 1977.
- Lecturing in irrigation, fifth year students, Faculty of Agriculture, Agric. Mechanization option (1980-1982).
- Soil Mechanics and Tillage Course for final students (B.Sc.) in Agric. Mechanization, Faculty of Agric., University of Khartoum, 1992-1996.
- Irrigation Engineering Course - Final Students of Agric. Engineering (B.Sc.), Faculty of Engineering & Arch., University of Khartoum, 1989-1993.
- Soil and Water Conservation Engineering Course for final students of Agric. Engineering (B.Sc.), Faculty of Agriculture & Arch., University of Khartoum, 1991-1994.
- Soil and Water Conservation Course (Advanced) for M.Sc. Students, Institute of Environmental Studies, University of Khartoum, 1991-1992.
- Irrigation Course for final students (B.Sc.) in Agric. Engineering, Faculty of Agriculture, University of Khartoum, 1996 to present.
- Irrigation Principles and Practices, for B.Sc. Students in Agric. Faculty of Agric., University of Khartoum, 1989 to present.
- Irrigation System Design and Evaluation. Final year Students of Agricultural Engineering, Faculty of Agriculture, University of Khartoum, 1997 to present.

- Principles of Hydraulics. Students specializing in Agric. Engineering, Faculty of Agriculture, University of Khartoum, since 1997 to present.
- Modern Irrigation Systems Design. Course Sponsored by the Arab Organization for Agricultural Development, Khartoum, Sept., 1996.
- Participating in teaching short courses and Diploma and Postgraduate courses in the disciplines of irrigation principles and practices, irrigation systems design and evaluation and irrigation water management.
- Practical Course in Irrigation Principles at Kenana Company Sugar Farms. Sept., 1996.

#### **Visiting lecturer at the following universities:**

- Juba University, Sudan, College of Natural Resources & environmental Studies, Crop Science, Courses of: Irrigation Principles and practices, Soil and Water conservation, 1991-1993.
- Kordofan University, Sudan, College of Natural Resources, courses of Hydrology and Water Resources, 1993, Irrigation Principles and Practices, 1993, 1996.
- Zalingi University, Sudan, Faculty of Agric., courses of Hydrology and Water Resources, irrigation principles and practices, Crop Water Requirements 1995, 1996, 1997.
- Upper Nile University, Sudan, College of Natural Resources and Environmental Studies, School of Agric. and Forestry, Courses:

Principles of hydrology, Water Quality for Irrigation 1996, 1997.

- University of Dongola, Sudan, Courses of Hydrology, Irrigation Principles and Practices, Irrigation System Design, Principles of Hydraulics, Irrigation Pumps 1998, 1999, 2000.
- University of Gadarif, Sudan, course of Irrigation System Design and Evaluation, Irrigation Principles and Practices 2000, 2001, 2002.

#### **Research Experience**

I have supervised post-graduate students in the following topics:

- 1- Long furrow irrigation: A case study in Rahad Agric. Corporation.
- 2- Comparative study between furrow, furrow basin and Border methods of irrigation.
- 3- Effect of natural amendments on soil crust and compaction.
- 4- Determination of irrigation water requirement for potato crop in semi-arid environment of Shambat, Sudan.

- 5- Irrigation Water Management in Gezira Scheme, Sudan.
- 6- Tillage systems for soil and water conservation in Khartoum State.
- 7- The effect of tillage systems and irrigation interval on maize yield in Gezira Scheme, Sudan.
- 8- The effect of sprinkler and furrow basin irrigation systems on fodder production in Shambat, Sudan.
- 9- Development of a manually-powered, positive displacement water lifting device.
- 10- Performance of small irrigation pumps in Khartoum.
- 11- Reclamation of salt affected soils in Dongola area, Northern Sudan by irrigation water.
- 12- Aspects of Guar Mechanical harvesting.
- 13- Influence of volume rate and forward speed on the activity of Amtryne Atrazine herbicide mixture applied to soil for control of weed in sugar cane scheme.
- 14- Sugar cane harvesting methods: A Comparative Study in Kenana Sugar Scheme.
- 15- Evaluation of the irrigation system of the University of Khartoum top farm.
- 16- Design of sprinkler irrigation system of the farm of the Department of Agricultural Engineering and Architecture.
- 17- Design of a Surface irrigation System for the Farm of the Department of Agricultural Engineering.
- 18- The impact of the mechanized farming on settlement of farmers in south Kordofan.
- 19- Water harvesting techniques in Jebel Mara area.
- 20- Evaluation of centre pivot irrigation system at Omdoum.
- 21- Computer Model for the design of drip irrigation system.
- 22- Drip irrigation system design and execution for a shelter-belt west of Omdurman.
- 23- Using Simulation Models for the Design of Center Pivot, Solid Set Sprinkler and Drip Irrigation Systems.
- 24- Management of Irrigation Systems.
- 25- Simulation Modelling of Crop-Water Production Functions.

## **Consultancy**

- Makabrab irrigation project canalization and control structures (1990).
- Irrigation system design (Khartoum and other States).
- Canalization of University of Kordofan Farm (1992).
- Use of ground water for irrigation (Khartoum and Kasala States, 1990).
- Conservation Tillage Systems (Khartoum State).
- Tillage systems for soil and water conservation (Khartoum State).
- Greater Rahad and Kenana Project (1995).
- Design of centre pivot system in the Nile State (Shiekh Abdel Basit Project, 1992).
- Design of the Irrigation System of the Farm of the Staff of the Faculty of Agriculture, University of Khartoum (1997).
- Machinery Selection, Agricultural Bank of Sudan.
- Pump testing, Sudanese Corporation for specifications.
- Selection of the appropriate irrigation system – State Ministry of
- Agriculture, Irrigation and Animal Resources, Khartoum State (2006).
- Selection of Pressurized irrigation systems machinery for Sudan – Ministry of Agriculture and Forestry - Khartoum (2006).
- FAO Consultant for Irrigation Water Management for Project TC/SUD/3010. (2007 up to now).

## **Membership**

- Sudanese Society of Agricultural Engineers.
- Society of Agricultural engineers - United Kingdom.
- National Society of Hydrology (UNESCO-Sudan).

## Publications

- 1- **Mohamed, M.E.A.; Mohamed, A.E. and M.A. Ahmed (1996).** Mechanical harvesting of guar. **I. Effect of seed rate, Univ. of Khartoum Journal of Agric. Sci. 4(1): 1-13.**
- 2- Mohamed, M.E.A.; **Mohamed, A.E.** and M.A. Ahmed (1996). Mechanical harvesting of guar. II. Harvesting methods and associated Losses, Univ. of Khartoum Journal of Agric. Sci. 4(1): 14-26.
- 3- **Mohamed, A.E.** and A.A. Siddig (1997). Methods to increase efficiency of on farm irrigation systems. Country paper. Arab Organization for Agricultural Development, Khartoum.
- 4- **Mohamed, A.E.;** A.B. Saeed and M.A. Omer (1998). Improvement of on farm irrigation and the development of supplemental irrigation. Agricultural mechanization conference, Khartoum.
- 5- Abdalla, M.A. and **Mohamed, A.E.** (1998). Effect of conservation tillage on infiltration. Univ. of Khartoum Journal of Agric. Sci. 6(2): 74-86.
- 6- Saad, I.M.; Mustafa M.A. and **Mohamed, A.E.** (2000). Impact of irrigation method and plough depth on wheat productivity in Saline - sodic soil in Dongola, Sudan. Univ. of Khartoum Journal of Agric. Sci. Vol. 8(2), 2000.
- 7- Hamad, E.E.; Abdalla M. A. and **Mohamed, A.E.** (2001). Effect of watering regimes on growth, yield, and quality of potato (*Solanum tuberosum*) under the semi-arid environment of Shambat - Sudan. Univ. of Khartoum Journal of Agric. Sci. Vol. 9(1), 2001.
- 8- Hamad, E.E.; Ali, A.M. and **Mohamed, A.E.** (2001). A Comparative Study of the Actually Applied and Predicted Water Requirement for the Potato Crop (*Solanum tuberosum*) at Shambat - Sudan. Accepted for publication in Univ. of Khartoum Journal of Agric. Sci. Vol. 9(1), 2001.
- 9- Mohamed, A.A.; Saeed, A.B. and **Mohamed, A.E.** (2003). The Use of Water Harvesting Techniques in Agriculture. Water Conservation Techniques Conference (Khartoum 2003). UNESCO Chair for Water (in Arabic).
- 10- **Mohamed, A.E.** and Makki, E.K. (2005). Wheat Response to Irrigation Scheduling. Univ. of Khartoum Journal of Agric. Sci., 13(1): 53-67.
- 11- Makki, E.K. and **Mohamed, A.E.** (2005). Forage Sorghum Production under Sprinkler and Flood Irrigation Systems. Univ. of Khartoum Journal of Agric. Sci., 13(2): 262-275.
- 12- Makki, E.K. and **Mohamed, A.E.** (2005). Wheat Response to Tillage and Irrigation Scheduling. Univ. of Khartoum Journal of Agric. Sci.,
- 13- Makki, E.K. and **Mohamed, A.E.** (2008). Implements Performance and Effect on Some Soil Physical Properties. Journal of Agricultural Mechanization in Asia, Africa and Latin America, Vol. 39:2.

14- Abdalla, M.A.; **Mohamed, A.E.** and Makki, E.K. (2008). The Response of Two Grain Sorghum Cultivars to Conservation and Conventional Tillage Systems in Central Sudan. Accepted for Publication in Asia, Africa and Latin America Journal Vol. 39:1.

15- Mohamed, H.I.; El Ramlawi, H.R.; **Mohamed, A.E.** and Abass, O.M. (2006). Use of Inflow Cut Back Concept for Improving Furrow Irrigation. Journal of Science and Technology, 7(1): 50-64.

16- El Fatih, E.M. and **Mohamed, A.E.** (2008). Drip Irrigation System for Production of Strawberry (*Fragaria xananassa* Duch.) under Shambat Conditions, Sudan. U. of K. J. Agric. Sci. 16(2).

17- El Fathih, M. and **Mohamed, A.E.** (2008). The Counter-poise (Shadouf) Performance in Zalengi Area, West Darfur State, Sudan. Accepted for Publication in Univ. of Khartoum Journal of Agric. Sci.

18- Ahmed, T.A. and **Mohamed, A.E.** (2008). Response of Groundnut (*Arachis hypogaea* L.) to Different Tillage Systems and Irrigation Scheduling under New Halfa Conditions. U. of K. J. Agric. Sci. 16(2).

19- Mohamed, A.A.; Saeed, A.B and **Mohamed, A.E.** (2008). The Effect of Water Harvesting Technique on Soil Bulk Density. Accepted for Publication in Journal of Since and Technology.

20- Elramlawi, H.R.; Mohammed, H.I. and **Mohamed A.E.** (2007). Comparison of Infiltration Measuring Techniques for Furrow Irrigation in Cracking Clay Soil. Journal of Science and Technology Vol. 8:1.

21- Nour, H.A.M; **Mohamed, A.E.** and Elshami, O.M.E. (2007). Effect of Rainwater Harvesting Techniques on Soil Moisture Conservation at the Upper Terraces of the White Nile State (Sudan). The Third Conference of Sustainable Agricultural Development, Fayoum University, Faculty of Agriculture, 12-14 November 2007, Egypt.

22- Saeed, A.B. and **Mohamed, A.E.** (2008). Sustainable Use of Water Resources in the Drylands of Sudan. Proceedings of the National Symposium of Sustainable Use of the Drylands in Sudan 17-18 June 2008, Khartoum, Sudan.