

Personal Data

Name: Mahmoud Fadl El Mula Ahmed

Date of Birth: 1/1/1953

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Nationality: Sudanese

Title: Associate Professor

Academic Qualification

B.Sc. (Agriculture): 1975 University of Khartoum, Sudan.

M.Sc. (Agriculture): 1979 University of Khartoum, Sudan.

Ph.D. (Agronomy, Plant-water Relationships):

High Diploma in Water Resources and management

Tutor Certificate

1983 University of Florida, Gainesville, USA

1987 University of Perugia, Italy

2008 World Intellectual Property Organization (WIPO) Academy in collaboration with
University of Khartoum

Employment Record

“ 1975 – 1976 :

Assistant Agricultural Field Inspector, Ministry of Agriculture, Sudan.

“ 1976 – 1979 :

Teaching Assistant, Agronomy Dept., Faculty of Agriculture, University of Khartoum, Sudan.

“ 1979 – 1983 :

A Ph.D. Candidate at Gainesville, Florida, USA.

“ 1983 – 1992 :

Assistant Professor, Agronomy Dept., Faculty of Agriculture, University of Khartoum, Sudan.

“ 1992 – 1995 :

Irrigation/ Agronomist Expert in the World Bank Project at Hodeida, Yemen.

“ 1995 – now :

Associate Professor, Agronomy Dept., Faculty of Agriculture, University of Khartoum, Sudan.

Working Experience

q Teaching and Training :

1. Taught various undergraduate courses in field crops production.
2. Taught advanced courses at the Honours and M.Sc. level in water relation of plants.
3. Taught advanced courses at the Honours and M.Sc. level in crop physiology.
4. Supervised research studies of more than 30 M.Sc. Students in the field of water relations and Agronomy, who successfully obtained their Degree from the University of Khartoum, Sudan.
5. Supervised seven Ph.D. Students, who are now either university professors or researchers in the Agricultural Research Corporatuion (ARC), Sudan
6. Acted as an internal and external examiner for more than 40 M.Sc. and .Ph.D.students .

7. Initiated, prepared and organized training courses for agricultural specialists working in both public and agricultural projects and in the private sector and to farmers on agronomy and water management.

Consultations and Development Work

- Prepared detailed technical feasibility studies for a number of farms in Khartoum area.
- Worked as an international expert in a World Bank Project (Tehama Five) in Yamen from 1992 to 1995; responsible for crop water requirements, extension, in-service training (capacity building) of local staff and farmers assessment and evaluation of different irrigation systems (Wadi, Surface and Trickle irrigation) and cropping patterns, in Tehama Five Project, in Yemen; co-financed by the International Development Authority (IDA) of the World Bank and the Netherlands Government.
- Participated in Wadi El Milk rural development Project, a study conducted by FAO and UNDP in Western Sudan, 1988.
- A member of steering committee of the “Disaster Prevention Symposium” mainly concerned with environment degradation problems, and how to combat disaster; organized by the Regional Office of UNESCO and the University of Khartoum in 1990.
- Participated in a study for the Arab Organization for Agricultural Development (AOAD) named “Optimum Utilization of Water Resources for Arab Agriculture”, in 1995.
- A consultant for preparation and identification of integrated rural development projects for the Federal Ministry of Agriculture and Animal Resources in West, North and South Darfur States in Western Sudan in 1995.
- FAO/UNDP consultant for assessment and evaluation of the pilot phase of area Rehabilitation Scheme (ARS) for Bahr el Jebel and Bahr El Ghazal States in Southern Sudan in 1996.
- UNDP consultant for project formulation and document of SUD/95/001, Juba ARS in 1996.
- UNDP consultant for project formulation and document of SUD/95/002, Wau ARS in 1996.
- UNDP consultant for the Red Sea ARS survey mission in 1997.
- A team member in a consultancy responsible for the preparation of a study on: (The Use of Agroclimatic Data for irrigation Water Management) League of Arab States; Arab Organization for Agricultural Development; Khartoum, Sudan in 1997.

- As an agronomist, participated in the project document preparation for Area Rehabilitation Schemes (ARSs) for Abeyi, Lagawa, (Western Kordofan), Malakal (Upper Nile State), and Sinkat (Red Sea State) in 1998. These projects mainly focus on : Food Security and improved livelihood of vulnerable households; environment friendly programmes; women in development (WID) and community participation (bottom-top) approach for integrated rural development, as well as poverty alleviation, in 1999.
- A national counterpart for training of trainers (TOT) session in the field of farming systems, organized by ADRA, Sudan, and NORAD in Um Jawasir Project, in Northern State, in 1999.
- A team member for Plan Sudan, Kassala, Kalahoot Development Project as a chief agronomist in a feasibility study in Kassala, Eastern Sudan, in 2000.
- Conducted a study on vegetable water requirement for the Arab Organization for Agricultural Development, Khartoum, Sudan, in 2000.
- Chief Agronomist consultant for conducting a pre-feasibility study for growing some field crops in the irrigated areas of the Sudan (mainly sorghum, maize, groundnut and sunflower) for the Arab Authority for Agricultural Investment and Development (AAID), Khartoum, Sudan in 2000.
- Chief irrigation agronomist in a feasibility study for two Lybian Agricultural schemes in northern Sudan during 2000-2001.
- Chief agronomist in the feasibility study for New Amri Scheme (re-settlement of Amri people who were transferred due to Marawi Dam) in 2003.
- Nominated by the national Agricultural Research Corporation (ARC) as a member of the Association for Strengthening Agricultural Research in Eastern and Central Africa (**ASARECA**), as a sector expert in Agronomy(2003).
- Participated in teaching and training of agricultural engineers and Government officials in the field of natural resources and rural development
- Chief agronomist for New Amri and Kehaila projects, in a consultancy mission with Marawi Dam Authority (2004).
- Irrigation agronomist consultant for Merawi Dam Authority to carry out a feasibility study for introducing sprinkler irrigation system as a pilot farm in the Northern State (New Amri & New Hamdab Schemes) and River Nile State(El Makabrab Scheme), 2005.

My experience in flood and groundwater irrigation, dates back to 1992 when I was seconded to Yemen. I was in charge of irrigation agronomy, stationed at Hodeida, Yemen. Due to the scarcity of rains in that area ($\leq 100\text{mm}$ per annum), the system of irrigation was either supplementary or underground water through pumping. A kind of

flush irrigation caused by the different “Wadis” (seasonal streams) flowing from the mountains to the Red Sea, and by pumping towards the sea coast. I experienced this system from 1992 to 1995 as an irrigation agronomist expert with one of the World Bank projects in Tehama Plain (Tehama Five), in Yemen. Crops grown included cotton, sorghum, millet, sesame, tomatoes, eggplants, onions and some forages. Description of the job was partially extension and partially on-farm research, where we used to deduct an area from the farmer and carry out all experimental work related to appropriate irrigation, and demonstrating the agricultural activities through field days. The assignment also included training of subject matter specialists (SMS).

Worked as an International Irrigation Agronomist in Groundwater and Soil Conservation Project (GSCP), Sana’a, Yemen, in a short assignment for six months during 2006, dealing with training of Irrigation Advisory Services (IAS) and capacity building for water users groups (WUGs), and water users associations (WUAs), supervising modern irrigation techniques (Drip, Bubbler, Micro sprinkler, as well as spate irrigation and water harvesting activities) visits were to fifteen Governorates, where the project had eleven field units. Several field days were conducted to strengthen the capacity building of the beneficiaries. The Project was financed by IDA (International Development Authority). One of the main tasks was water, fuel and labor saving through the on-farm modern irrigation systems.

At the end of the above mentioned assignment, I was recruited by Sana’a Basin Water Management Project (SBWMP) in the same year-2006- for a total period of 18 months (to be divided into three spells). Duties included irrigation agronomy tasks, specifically, water savings, WUGs & WUAs capacity building and on-farm training, supervision of demonstration farms.....etc.

Worked as chief agronomist in the feasibility studies of Nadec Company (KSA) in Abu Hamad and North Kordofan areas where 42000 hectares were allocated for each area to grow field crops (alfalfa, sorghum, potatoes and maize in N. Kordofan; and wheat alfalfa, potatoes, sorghum and onions in Abu Hamad during August-October, 2008.

Assigned for three missions as FAO International Irrigation Agronomist consultant in the Kingdom of Saudi Arabia (KSA). The first mission was assigned for Najran and Domat Al Jandal (17th October 2008-14th November, 2008) to select and design demonstration farms. The second mission was from 15th November to 5th December, 2008, in Riyadh area to select and design demonstration farms under treated waste water irrigation. The third mission (16th December, 2008-15th January, 2009) was for Jazan and Tehama Plain to assess different irrigation systems, irrigation scheduling and determination of crop water requirements for tropical and subtropical fruits grown in the area; as well as training of local staff in the field of different irrigation systems.

Was selected as a coordinator for agricultural studies (agronomy, horticulture, crop protection, forestry and animal production in Rose iris Dam feasibility studies (January-February, 2009)

Membership in Academic and Professional Societies

1. Member of the Faculty Board, Faculty of Agriculture, University of Khartoum, 1984 – 1985; 1990 – 1992.
2. Member of the Senate, University of Khartoum, 1990 – 1992.
3. Member of the University Farm Council, University of Khartoum, 1990 – 1992.
4. Member of the Soil Science Society of America.
5. Member of the American Society of Agronomy.
6. Member of the Sudan Agricultural Society Journal.
7. Member of the University of Khartoum Journal of Agricultural Science
8. Member of the Association for Strengthening Agricultural Research in Eastern and Central Africa (**ASARECA**), as a sector expert in Agronomy.

Other Professional Activities

1. Participated in preparation of curricula in Agronomy and crop-water relationships for universities of Kordofan, Darfur and East Sudan.
2. External examiner for Agronomy and crop-water relationships in a number of universities and specialized colleges in Sudan.
3. A secretary of the examination committee in the Faculty of Agriculture, University of Khartoum for six years (1983-1989).
4. Manager of the Demonstration Farm, Faculty of Agriculture, University of Khartoum (1988 – 1990).
5. Worked as Head, Department of Agronomy, Faculty of Agriculture, University of Khartoum (1990 – 1992).
6. Worked as Deputy Dean Faculty of Agriculture, University of Khartoum, Sudan for 4 years, 2000-2004.

7. A research advisor for the Applied Agricultural Research Department of the Arab Authority for Agricultural Investment and Development (AAAID), for two years (2001-2003) Khartoum, Sudan.

Courses and Scientific Visits

- 1978 :** British Council award to attend a training course at Scottish Horticultural Institute, Dundee, Scotland, UK.
- 1987 :** A visiting scientist to ICARDA, Aleppo, Syria.
- 1987 :** A training course at the Water Resources Research and Documentation Centre (WARREDOC) at Colombella, Perugia, Italy.
- 1987 :** Presented a paper in the Symposium of Irrigation Prospects in Africa, Addis Ababa, Ethiopia.
- 1989 :** A visiting scientist to Arab Centre for Arid Zone Studies, Damascus, Syria.
- 1990/1991 :** A research fellowship award as a visiting scientist in the field of water relations and crop water requirements at ICRISAT, India.

Publications

- n **1981 :** M.F. Ahmed and U.S. Gupta. "Early responses of green gram (*Vigna radiata*; L. Wickiaek) to salt mixture". Curr. Agric. 15,11 – 14.
- n **1981 :** M.F. Ahmed and U.S. Gupta. "Combined effects of salts with some growth regulators, Amino acids and redox chemicals on the early growth of green gram (*Vigna radiata*; L. Wilckaek)". Pulse Crops Newsletter; 1,74 – 76.
- n **1987 :** M.F. Ahmed and A.A. Siddig "Irrigation Systems of the Sudan". Proceeding of the Symposium on Prospects of African Water Resources. WARREDOC, Italy.
- n **1990 :** M.F. Ahmed, "Agricultural Hazards and their control in Sudan". In: (Disaster Prevention in the Sudan, Symposium Proceedings). M.E. Abu Sin, ed., University of Khartoum Press.
- n **1993 :** Mahalakshimi, V. ; Ahmed, M.F.; Rao, K.P. and Bidinger, F.R. "A Test of two empirical Evapotranspiration formulae for semi-arid regions". Annuals of Arid Zone, 32 (2), 89-95.
- n **1993 :** M.F. Ahmed and A.M. El Naim. "Effects of irrigation interval on consumptive use, water use efficiency and crop coefficients of sunflower". U. K. J. Agric. Sci. 1(1), 1-15.
- n **1994 :** A.M. Ismail and M.F. Ahmed "Effects of watering regime on growth and yield

of two groundnut cultivars". U. K. J. of Agric. Sci. 2, (2) 17-44.

n **1995** : G. Somi; M. A. El Haiba; M. A. El Abasieri. "Efficient Water Use In Agriculture In Arab Countries." Arab Organization For Agricultural Development. Khartoum, Sudan; pp. 148.

n **1996** : S. A. Awok, T. E. M. Hago and M. F. Ahmed. "The effects of nitrogen and weeding on yield and yield component of irrigated rice (*Oryza sativa* L.)". U. K. J. of Agric. Sci. 4 (2), 57-68.

n **1997** : H. S. Adam; A. B. Saeed and M. F. Ahmed. "The Use of Agroclimatic Data For Irrigation Water Management." Arab Organization for Agricultural Development. Khartoum, Sudan. Pp. 107.

n Ahmed, M. F. Dawi, I. and Ibrahim, O. H. 2006. Use of infrared Thermometer for water stress detection in faba bean. Sudan J. Agric. Res., 6, 43-51

n Ahmed, M. F.; Shouk, A. K. and Ahmed, F. E. 2007. Effects of irrigation water quantities and seasonal variation on oil content and fatty acid composition of sunflower. (*Helianthus annuus* L) J. Sci Food Agric. 87: 1806-1809.

n Ahmed, M. F. Dawi, I. and Ibrahim, O. H. 2006. Use of infrared Thermometer for water stress detection in faba bean. Sudan J. Agric. Res., 6, 43-51

n Ahmed, M. F.; Shouk, A. K. and Ahmed, F. E. 2007. Effects of irrigation water quantities and seasonal variation on oil content and fatty acid composition of sunflower. (*Helianthus annuus* L) J. Sci Food Agric. 87: 1806-1809.