VITA

Abdalla H. Mohamed (PhD)

Sorghum Breeding and Genetics Program

ARC, P.O. Box 126 Wad-Medan

Email: abdalla\_moh2002@yahoo.com

Cell Phone 249-9129-39407

**NAME:** Abdalla Hassan. Mohamed

**Date of Birth:** 1/1/1965

**EDUCATION:**

**Ph.D., 2002:** Purdue University, West Lafayette, IN, USA

**M.Sc. 1996:** Purdue University , West Lafayette, IN,USA

##### **B.Sc. 1987:** Faculty of Agricultural Sciences, Gezira

##### University, Wad-Madani, Sudan

**Work Experience:**

**2013 - todate** Senior Scientist**-**ICRISAT, Cereal breeding **program**

2010-2012. Professor, Sorghum Breeding and Genetics Program ARC Wad-medani, Sudan

**2006 – 2010.**  Associate Professor, Sorghum Breeding and Genetics Program ARC Wad-medani, Sudan

**2002 –2006** Assistant Professor, Sorghum Breeding and Genetics Program ARC, Wad-Medani, Sudan

**1996 –2002** Research Scientist, ARC

**1988 - 1993** Assistant Research Scientist Botany and Plant Pathology Section, ARC

**1987 - 1988** Assistant Research Scientist IDRC funded *Striga* Research Project, ARC

**Awards:**

AgriChem Prize for the best student in Crop Protection Department University Of Gezira, 1987.

Dr. Scarth Award for students who use basic research priciples to solve World food problems, Purdue university. 1995.

Memebrship for The Honory Society for Scientists in Agriculture and Vetrinary Medicine with Outstanding Potentials, membership initiated 1998.

ICRISAT *Striga* Biotechnoloy Fellowship 1997

ICRISAT *Striga* Biotechnoloy Fellowship 1998

ICRISAT *Striga* Biotechnoloy Fellowship 1999

## **Short Training :**

### Wheat Improvement training course CIMMYT , Mexico

### 1990 (Diploma)

Management Principles for PhD student in Sciences and Engeneering (6- unit Diploma), Purdue University,

West Lafayette IN, USA,2001.

Molecular Breeding training workshop, 2004 ILRI, Nairobi, Kenya

Bioinformatic and Assiciation mapping. training workshop, 2006 ILRI, Nairobi, Kenya

**Achievements:**

* The release of a very early maturing, potentially high yielding sorghum genotype, **AG-8,** that suits the fragile drought prone area of Sudan,. 2009.
* The release of early maturing and high yielding sorghum genotype, **AG-17**, for irrigated and rain-fed areas of Sudan, 2011.
* Introgression of Striga resistance genes into three sorghum elite backgrounds, using marker assist ed breeding. In progress evaluation of **four**  striga resistant superior lines to be release in striga endemic areas of Sudan 2012, (Submitted).
* 22 superior drought tolerant, Striga resistant sorghum lines were developed using marker assisted breeding (MAB). These lines are now being evaluated in Striga prone areas of ECA, in six countries, Eritrea, Kenya, Rwanda, Sudan, Uganda and Tanzania.
* The release of  **two** technolgies for screening sorghum germplasm for specific Striga resistant mechanisms (Crop Husbandry Committee December 2003):

1. An In-vitro method, Paper Roll Assay (PRA), for screening sorghum germplasm for specific Striga resistant mechanisms
2. An In-vitro method, the Extended Agar Gel Assay (EAGA), for screening sorghum germplasm for specific Striga resistant mechanisms

**Publications:**

Santosh P. Deshpande**, Abdalla Mohamed,** and Charles Thomas Hash, Jr. 2014. Molecular Breeding for Striga Resistance in Sorghum Chapter 6. Page77. In: Translational Genomics for Crop Breeding: Volume 1 - Biotic Stress; ISBN: 978-1-118-76024.

***(Book Chapter)***

G. Ejeta; Patrick, J. Rich and **Mohamed,** A.H. 2007.

Dissecting a Complex Trait to Simpler Components for Effective Breeding of Sorghum with a High Level of Striga Resistance*: In Gebisa Ejeta& Jonathan Gressel eds*. Integrating New Technologies for *Striga* Control "Towards Ending the Witch-hunt" World Scientific publishing Co. pte. Ltd. 2007.

***(Book Chapter)***

Abdalla Mohamed, Rasha Ali, Osama Elhassan, Elnayer Suliman, Charles Mugoya, Clet W. Masiga, Adil Elhusien and Charles T. Hash First products of DNA marker-assisted selection in sorghum released for cultivation by farmers in sub-Saharan Africa. JPSMB. <http://www.hoajonline.com/journals/pdf/2050-2389-2-4.pdf>

Yasir A. Gamar  **and Mohamed, A.H.** 2013. Introgression of Striga resistant genes, into a Sudanese sorghum cultivar, Tabat, using marker assisted breeding (MAS). GJAS 3 (**7**):550-556.

**Mohamed, A. H**. and Gamar Y. A. 2011. Climate change: Selection of sorghum genotype with wide adaptation , AG-17, for rainfed areas of Sudan. *Int. J A R*. V.1(3)143-155

**Mohamed A. H.,** GamarY. A., Elhassan O. M., Elgada, M. H., andAssar A. H.A. 2011. Performance of selected sorghum genotypes under rain-fed areas of Sudan. *Life Sci. Int. J., Vol: 5, Issue-2, Pp: 2119-2127*.

**Mohamed, A. H.,** T. L. Housley, G. Ejeta 2010. Inheritance of hyper sensitive response to Striga parasitism in sorghum [Sorghum bicolor (L.) Moench], AJR, Vol:5, Issue1Pp.2720-2729.

**Mohamed, A.H.**; .T. L. Housley and G. Ejeta 2010.An In-vitro method, the Extended Agar Gel assay, for screening sorghum germplasm for specific Striga resistant mechanisms***,*** *AJR.*, Vol: 4, Issue 2P.1471-1479.

**Mohamed, A.H.**; Ahmed, R. AM and G. Ejeta 2010. Inheritance of Production of the Haustoria Initiation Factor as Mechanism of Striga Resistance in Sorghum, *Life Sci. Int. J*., Vol: 4, Issue-2, P: 1449-1454.

**Mohamed, A.H.**; Ahmed, R. AM and G. Ejeta 2010.An In-vitro method, Paper Roll Assay, for screening sorghum germplasm for specific Striga resistant mechanisms***,*** *Life Sci. Int. J.*, Vol: 4, Issue 2Pp.1471-1479.

**Mohamed, A.,** A. Ellicott, T. L. Housley, G. Ejeta. 2003. Hypersensitive Response to *Striga* Infection in Sorghum. *Crop Sci.* 43:1320-1324.

**Mohamed**, A. H., G. Ejeta, and T. L. Housley. 2001. *Striga asiatica* seed conditioning and 1-aminocyclopropane-1-carboxylate oxidase activity. Weed Res.41:165-176.

**Mohamed,** A. H., G. Ejeta, L. G. Butler and T. L. Housley. 1998. Moisture content and dormancy in *Striga asiatica* seeds. *Weed Res*. 38:257-265.

**Mohamed, A.H.**; .T. L. Housley and G. Ejeta 2011. Identification of SSR makers associated with specific Striga resistant mechanisms in sorghum.(submitted).

**Proceedings:**

**Abdalla H. Mohamed ,**Rasha AM .Ahmed, C. Mugoya, C. Masiga and D. Kiambi. Success Story: Introgression of *Striga* Resistance Genes in Sorghum Using MAS. 1st  ASARECA GENERAL ASSEMBLY,14th -16th December 2011, Entebbe, Uganda

Rasha AM .Ahmed, **Abdalla H. Mohamed**, C. Mugoya, C. Masiga, S. Deshpandeand C.T.Hash Fine Mapping of *Striga* Resistant QTLs in sorghum *[Sorghum bicolor (L.) Moench].* 1st  ASARECA GENERAL ASSEMBLY,14th -16th December 2011, Entebbe, Uganda

KiambiD. , **Abdalla H. Mohamed,** Ngugi K., Abraha, T. C. Mugoya, C. Masiga**.**  Evaluation of Striga resistantand drought tolerant farmer prefferrd sorghum varieties in ECA. 1st  ASARECA GENERAL ASSEMBLY,14th -16th December 2011, Entebbe, Uganda

**Abdalla Mohamed**. Introgressin of Striga resistance genes into farmer preferred sorghum varietietes. **In proceeding of '** Conference on enhancing sorghum productivity in ECA integration of availabe scientific tools and deployment of existing technologies. 26th -29th October 2010, Khartoum Sudan.

Mohamed A. and Rasha Ali Ahmed. Using biotechnological tools, 50 Striga resistant sorghum lines have been developed . **In proceeding of '** Conference on enhancing sorghum productivity in ECA integration of availabe scientific tools and deployment of existing technologies. 26th -29th October 2010, Khartoum Sudan.

Ejeta, G., A. Babiker, K. Belete , P. Pramel, A. Ellicott, C. Grenier. T. L. Housley, I Kapran, A. **Mohamed,** P. J. Rich, C. Shaner and A. Toure. 2001. In vitro techniques for studying mechanisms of *Striga* resistance in sorghum. In: A. Fer, P. Thalouarn, D. M. Joel, L. J. Musslemann, , C. Parker, and Verkleij (eds.). 7th Int Parasitic weeds Symp. Nantes, France June 2001. p.166.

**Mohamed**, A., T. L. Housley, P. J. Rich, G Ejeta,. 2001. Breeding for durable resistance to *Striga* in sorghum. In: A. Fer, P. Thalouarn, D. M. Joel, L. J. Musslemann, , C. Parker, and Verkleij (eds.). 7th Int Parasitic weeds Symp. Nantes, France June 2001. p.96.

**Mohamed**, A., G. Ejeta, and T. L. Housley. 2001. Control of Striga seed germination. In: A. Fer, P. Thalouarn, D. M. Joel, L. J. Musslemann, , C. Parker, and Verkleij (eds.). 7th Int Parasitic weeds Symp. Nantes, France June 2001. p.125.

**Mohamed**, A., A. Ellicott, C. Grenier, P. J. Rich, C. Shaner, and G. Ejeta. Hypersensitive resistance to *Striga* in sorghum. In: A. Fer, P. Thalouarn, D. M. Joel, L. J. Musslemann, , C. Parker, and Verkleij (eds.). 7th Int Parasitic weeds Symp. Nantes, France June 2001. p.204.

Grenier C., P. J. Rich, A**. Mohamed**, C. Shaner, and G. Ejeta. Independent inheritance of lgs and IR genes in sorghum. In: A. Fer, P. Thalouarn, D. M. Joel, L. J. Musslemann, , C. Parker, and Verkleij (eds.). 7th Int Parasitic weeds Symp. Nantes, France June 2001. p.220.

Rich, P. J., A. **Mohamed** A. Ellicott, C. Grenier. C. Shaner and G. Ejeta. Sources of potential Striga resistance mechanisms among wild relatives of sorghum. In: A. Fer, P. Thalouarn, D. M. Joel, L. J. Musslemann, , C. Parker, and Verkleij (eds.). 7th Int Parasitic weeds Symp. Nantes, France June 2001. p.239.

Ejeta, G., **Mohamed**, A., P. J. Rich, A. T. L. Housley, and D. E. Hess. 2000. Breeding for specific mechanisms of resistance to *Striga* in sorghum. Asa abstracts p.225.

Ejeta, G., **Mohamed**, A., P. J. Rich, A. Melake-Berhan, T. L. Housley, and D. E. Hess. 1999. Selection for specific mechanisms of resistance to *Striga* in sorghum. In: B. I. G. Haussmann, D. E. Hess, M. L. Koyama, L. Grivet, H. F. W. Rattunde and H. H. Geiger (eds). Breeding for *Striga* Resistance in Cereals. Proc. Of a Workshop held at IITA, Ibadan, Nigeria, from 18-20 August 1999. p29.

**Mohamed** A., T. L. Housley and G. Ejeta. 1999. In vitro technique for studying post infection *Striga* resistance mechanisms in sorghum. The Paper Roll Assay (PRA). ASA abstracts p.94

Ongoing Research Projects Supported by International and Regional Organizations and Platforms:

1. ASARECA

* Project title: Evaluation of Striga resistant and drought tolerant farmer preferred sorghum varieties in ECA 2012-2014.
* Project title: "Sustainable intensification of sorghum-legume based systems for food security and feed to improve livelihoods and adaptation to climate change in semi-arid areas in East and Central Africa”. 2011-213.
* Project Title: Fighting: “Fighting Striga: Resistance Genes Deployed to boost Sorghum Productivity” 2009 - 2011

2. GCP/UGA/ICRISAT

* Project title: "Discovery and development of alleles contributing to sorghum drought " 2010-2012.