

CurriculumVitae

Rasha Ali Mohammed Ahmed Ali

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Wad Medani-Sudan

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- Nationality: Sudanese
- Place & Date of birth: Gedarif (Sudan), 23/9/1981.
- Marital Status: Married

Academic Qualifications

- PhD, (Science) Plant biotechnology, 2013, University of Khartoum, Thesis title: Fine Mapping of Quantitative Trait Loci (QTLs) Associated with *Striga* Resistance using Molecular Markers and Introgression of resistance genes into Sorghum (*Sorghum bicolor* (L.) Moench) in Sudan

- MSc. of Science, 2008, University of Khartoum.
Thesis Title: (Genetic diversity and cross infestation abilities among different *Striga hermonthica* populations in the Sudan)

- B.Sc of Science (Honor), University of Khartoum.

Short Training & fellowships

- Characterization of wild sorghum for specific traits using Genotyping By sequences (GBS). Visiting scientist at ICRISAT Nairobi Dec. 2012- May 2014.
- Marker assisted selection & Genotyping of BC4F1 population using SSR associated to *Striga* resistance in Sorghum, Research fellowship, BecA Platform at ILRI- Nairobi, Kenya 2011.
- BBSRC-SARID Molecular Marker Training, BecA Platform at ILRI- Nairobi, Kenya. August 2011.
- Fine Mapping of genes associated with *Striga* resistance in sorghum & Genotyping of BC3S3 population with DArT markers and EST derived SSR associated with *Striga* resistance in sorghum. International Crop Research Institute for the Semi-

Arid Tropics (ICRISAT) Patancheru, India 2011.

- Bioinformatics workshop, Sequences analysis using database tool, center of biosciences and biotechnology, University of Gezira, Wad medani- Sudan 2010.
- Molecular Data analysis & QTL mapping. International Crop Research Institute for the Semi- Arid Tropics (ICRISAT) Patancheru, India 2010.
- Application of molecular markers in crop improvement, BecA Platform at ILRI- Nairobi, Kenya 2009.
- Molecular breeding in maize & sorghum, (BECA- ILRI Research platform) Nairobi, Kenya 2008.
- Marker Assisted selection, SSR marker genotyping sorghum. International Crop Research Institute for the Semi- Arid Tropics (ICRISAT) India 2006.
- Tapping biodiversity of the resource poor in ECA region Nairobi, Kenya 2006.
- Histological techniques & electron microscope process. Electron Microscope Unit, Faculty of Science, University of Khartoum, 2005.

Work experience

- Employed by Agricultural Research Corporation –Sudan in 2004
Duties include:
 1. Formulation, execution as well as analysis of laboratories trials, my research focus mainly on *Striga* host-parasite interactions and management.
 2. Training of students and extension officers on *Striga* biology, host-parasite interaction, host resistance mechanisms and management strategies.
 3. Training of student, as well as technicians on DNA extraction, quantification and qualification techniques.
 4. Molecular markers analysis and marker assisted selection with special emphasis on SSRs and AFLPs markers, as well as fine mapping of *Striga* resistant genes in sorghum.
- Teaching Assistant –Dept. of biochemistry & genetics, Faculty of Medicine-University of Gedaref, Sudan 2001-2002.
- Teaching Assistant –Dept. Plant Protection, Faculty of Agricultural

science -University of Gedaref, Sudan 2001-2002.

- Teaching Assistant, Dept. of Botany-Faculty of Science- University of Khartoum 2000-2001.

Computer Skills

Programming and network management, SAS, IRISTAT, GENSTAT, MSTAT, SUPER ANOVA, Map Maker, JoinMap, R- QTL and PlabQTL.

Publications:

Rasha AM .Ali' Abdalla H. Mohamed, Charles Mugoya, Clet Masiga , Dan Kiambi , and C. Tom Hash (2014). Linkage Map Saturation and Fine Mapping of *Striga* Resistant QTLs in Sorghum (*Sorghum bicolor* (L.) Moench, ASARECA 2nd general assembly (9-13 December 2013).

Rasha Ali, Abdalla H. Mohamed, S. Deshpande, Adil. El Hussein, Ngugi. K, C. Mugoya, C. W. Masiga, D. Kiambi and C.T. Hash (2014). Linkage map saturation and fine mapping of *Striga* resistant QTLs in Sorghum (*Sorghum bicolor* (L.) Moench. (Submitted)

Rasha Ali, Mohamed AH, S. Deshpande, S. de Villiers, H. Jagger, Adil El Hussein, C. Mugoya, C. Masiga, Sarah Osama, Abigail Ngugi, N. Theogene and C.T. hash (2014). Introgression of *Striga* resistance genes into Sudanese sorghum preferred varieties, Tabat and Wad Ahmed, Using Marker Assisted Selection, Submitted.

Rasha Ali, Mohamed AH, S. Deshpande, S. de Villiers, H. Jagger, Adil El Hussein, C. Mugoya, C. Masiga and C.T. hash (2014). Climate Change: Introgression of *Striga* resistance genes into preferred sorghum variety AG8 targeting drought prone area of Sudan. Submitted.

Rasha Ali, Mohamed AH, S. Deshpande, C. Mugoya, C. Masiga and C.T. hash (2013). Validation of *Striga* resistance QTLs from the donor N13 under Sudan environments. Submitted.

Abdalla Mohamed, **Rasha Ali**, Adil El Hussein C. Mugoya, C.W. Masiga, S. Deshpande, Kahi Ngugi, Dan Kiambi and, C.T. Hash (2013). First products of DNA marker-assisted selection in sorghum released for cultivation by farmers in sub-Saharan Africa. Submitted.

Niyibigira Theogene, Kahi Ngugi, Santie de Villiers, Dan Kiambi, Eunice

Mutitu, Sarah Osama, Abigail J. Ngugi, Mohamed Abdalla, **Rasha Ali**, Charles Mugoya, Clet Masiga, DaphroseGahakwa (2013). Introgressing *Striga* Resistance from a Mapped Donor Source into a Rwandan Adapted Sorghum Variety. *Journal of Renewable agriculture*. 1(1):6-10.

Ngugi Abigail J., Sarah Osama, Kahiungugi, TheogeneNiyibigira, Abdalla H Mohamed, **Rash Ali**, Eunice Mutitu, Dan Kiambi, Clet Masiga, Charles Mugoya and Santie de villers (2013). Transferring *Striga* resistance QTLs into a farmer preferred sorghum variety. Submitted.

Olupot JR., Abdallah M., **Rasha Ali.**, Ebiyau J., Masiga C. and Mugoya C. (2013). Evaluation of marker assisted selection derived sorghum lines for *Striga* resistance and adaptation to Ugandan conditions. Submitted.

Sarah Osama, Abigail J. Ngugi, Kahiungugi, Dan Kiambi, Abdalla H. Mohamed, Eunice Mutitu, TheogeneNiyibigira, **Rasha Ali**, Clet Masiga, Charles Mugoya, Santie de Villiers (2013). Marker assisted selection of *Striga* resistance in a Kenyan sorghum land-race. Submitted.

Clet WanduiMasiga, Charles Mugoya, **Rasha Ali**, Abdalla Mohamed, Sarah Osama, Abigail Ngugi, Dan Kiambi, Santie de Villiers, Kahiungugi, TheogeneNiyibigira,, AbrahaTesfamichel, Jesse Machuka, Richard Oduor, Steven Runo, Rasha Adam, Jonathan Matheka, LetaBedada, Miccah Seth, Eric Kuria, Jean Ndirigwe, Philip Ndolo, ZakariyaMuthamia, BouweNasona, Michel Ntampirangeza, EngidaTsegaye, NyamongoDesterio, Kwame Ogero, GitongaMburugu, SettumbaMukasa, Dong-Jin Kim, Morag Ferguson, EmmaroldMneney, EroustusNsubuga, TheodomirRishurimuhirwa , Donald Byamugisha, Isaac Wamatsembe and SeyfuKetema(2013).Enhanced utilization of biotechnology research and development innovations in eastern and central Africa for agro-ecological intensification (Submitted).

Rasha AM. Ali, Adil A. El-Hussein and A.G.T. Babiker (2013). Host

specificity and genetic variability within *Striga hermonthica* population in the Sudan, submitted.

Mohamed, A.H. and **Rasha AM. Ali**(2013). Identification of DNA markers (SSR), associated with low haustoria production, mechanical barriers and hypersensitive response as *Striga* resistance mechanisms in sorghum, Submitted.

Rasha AM. Ahmed .Ahmed, Abdalla H. Mohamed, C. Mugoya, C. Masiga, S. Deshpande and C.T.Hash(2011).Fine mapping of *Striga* resistant QTLs in sorghum [*Sorghum bicolor* (L.) Moench]. ASARECA 1st general assembly.

Rasha AM. AhmedAhmed, Abdalla H. Mohamed, D. Kiambi, C. Masiga and C. Mugoya.(2011). Introgression of *Striga* resistance genes into three sorghum cultivars in Sudan.ASARECA 1st general assembly.

Mohamed, A.H.; **Rasha AM.Ahmed** 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, April 2010, Page: 1449-1454.

Mohamed, A.H.; **Rasha AM.Ahmed**and G. Ejeta (2010).An in-vitro method, Paper Roll Assay, for screening sorghum germplasm for specific *Striga* resistant mechanism *Life Sci. Int. J.*, Vol: 4, Issue-2, April 2010, Page: 1471-1479.

Rasha A.M.A. Ali, Adil A. El-Hussein, K.I. Mohamed and A.G.T. Babiker(2009). Specificity and Genetic relatedness among *Striga hermonthica* strains in the Sudan, *Life Sci. Int. J.*, Vol: 3, Issue-3, July 2009, Page: 1152-1158.