

Edema Richard

Office Address: Department of Crop Science, Faculty of Agriculture, Makerere University

P.O. Box 7062 - Kampala, UGANDA

Office Tel: 256-041-533580 - Mobile Tel: 256-79-3-529838

E-mail: redema12@yahoo.com; redema@agric.mak.ac.ug

PERSONAL DATA

Date of Birth: July 27, 1967

Ugandan.

Married.

PROFESSIONAL GOALS & SPECIALIZATIONS

Professional Goals & Specializations

- Agricultural development initiatives that use biotechnology for increased productivity, enhanced commercialization, protect biodiversity and environmental sustainability.
- Agricultural research programs that directly benefit resource-poor farmers.
- Managing and provision of leadership in research for development

Demonstrated Technical and Managerial Expertise

- Proven writing, presentation, and facilitation skills
- Proven ability in resource mobilization
- Proficient in several computer programs and experience with modern communication tools

Edema Richard

EDUCATION

Ph.D. Plant Pathology (Molecular Plant Virology)

The Ohio State University, USA, 2001

Thesis: Genetics of Virulence of the *Maize Streak Mastrevirus*

M.Sc. in Agriculture, Crop Science (Cowpea Pathology)

Makerere University, Kampala Uganda, 1996

M.Sc thesis research: Disease distribution map for cowpea (*Vigna unguiculata* L.) using surveying techniques; testing of efficacy of different

chemical for disease control; resistance screening.

B.Sc. Honours in Agriculture (Major in Crop Science).
Makerere University, Kampala, Uganda, 1994

Edema Richard

EXPERIENCE

MAKERERE UNIVERSITY 2002- PRESENT

- February 2002** - Appointed Lecturer in the Department of Crop Science
August 2007 - Promoted to Senior Lecturer
August 2017 - Director, Makerere University Regional Centre of Excellence for Crop Improvement

Teaching

2002 to present. Teaching undergraduate courses (**Introductory Plant Microbiology, Plant Virology and Bacteriology, Field Crops Diseases**) and graduate courses (**Advanced Plant Virology, Advanced Disease Management, Plant Disease Epidemiology and Molecular Biology**).

Graduate student Supervision

Supervision of graduate students (**46 M.Sc and 6 PhDs**). 37 M.Sc have graduated; 4 PhD graduated.

M.Sc. Graduate Students who have completed under my supervision

1. Biruma Moses 2004. Occurrence of fungal seed borne pathogens of rice and effect of post-harvest handling methods on seed quality in Uganda (**Second supervisor**).
2. Adriko John 2005. Evaluation of Improved and Local Cassava varieties in Uganda for Resistance/Tolerance to Cassava Mosaic Virus Disease (CMD). (**Major supervisor**)
3. Kanobe Charles 2005. Evaluation of Seed Sorting Methods for Control Seed-borne Diseases of Cowpea. (**Major supervisor**)
4. Kawube Geoffrey 2005. Efficacy of salt solution density and hand sorting in control of rice seed-borne fungal diseases in Uganda. (**Second supervisor**).
5. Richard Manna 2006. Enhancing Introgression of the Opaque-2 trait into Elite Maize Lines Using Simple Sequence Repeats (SSR). (**Major supervisor**)
6. David Kalule Okello 2006. Agronomic Performance and Breeding Potential of Selected Maize Inbred Lines for the Improvement of the Protein Quality of Adapted Ugandan Germplasm. (**Major supervisor**)

7. Kamenye Ndagire Sandra. 2007. Baseline Characterisation of Indigenous pHID+ Fluorescent Pseudomonas Species in the control of Bean Root Rot and Coffee wilt disease in Uganda. **(Major supervisor)**
8. Anthony Pariyo. 2007. Breeding Values of selected Cassava Genotypes and Utility of DNA Markers Linked to CMD2 LOCI. **(Major supervisor)**
9. Amoding Gladys Lydiah. 2008. The Utility of Microsatellites (SSR) markers for the transfer of Stay-green QTLs into 2 popular local sorghum varieties in Uganda. **(Major supervisor)**
10. Sserumaga Julius Pyton. 2008. Genetics Characterisation of *Colletotrichum Sublineolum* the causative agent of sorghum Anthracnose.
11. Amayo Robert. 2008. Occurrence and Transmission of Seed-borne Cowpea Viruses in Uganda. **(Second supervisor).**
12. Maphosa Mcebisi. 2008. Developing Molecular Markers for Background Selection for Quality Protein Maize Breeding. **(Second supervisor).**
13. Akwero Agnes. 2009. Characterisation of Sorghum germplasm and anthracnose epidemics in Uganda. **(Second supervisor).**
14. Mbeyagala Kapande Emmanuel. 2010. Genetic diversity among sorghum (*Sorghum bicolor* (L.) Moench) landraces in Uganda. **(Major supervisor)**
15. Lado Maurice Mogga. 2011. Inheritance of Resistance to Rice Yellow Mottle Virus Disease in Rice in Uganda. **(Major supervisor)**
16. Onaga Geoffrey. 2011. Characterization of Lowland Rice varieties for tolerance to Iron Toxicity in Uganda **(Major supervisor).**
17. Prossy Namugga. 2011. Response of Longe Four Lines to Recurrent Selection for Low-Nitrogen Tolerance in Uganda. **(Major supervisor)**
18. Alponse Nyombairye. 2011. Combining Ability and Genotype by Environment of Selected Maize Inbred Lines for Performance under Low Nitrogen and Drought Stress. **(Major supervisor)**
19. Babirye Annet 2012. Characterization of Cassava Mosaic Disease Resistant Breeding Populations in Uganda **(Major supervisor)**
20. Fulgence Niyongabo. 2012. Inheritance of Rice Blast Resistance Genes and Their Action on *Magnaporthe Grisea*. **(Major supervisor)**
21. Habarurema Innocent. 2012. Inheritance of resistance to Rice Bacterial Blight. **(Major supervisor).**
22. Munganyika Esperance. Genetic Studies in Rice Yellow Mottle Disease in Selected Rice Genotypes in Uganda. **(Major Supervisor).**
23. Tindamanyire Jimmy.M . 2013. Development of Alternative System for Transforming Banana using *Agrobacterium Rhizogenes*. **(Major Supervisor)**
24. Nolipher Khaki. Characterisation of Drought Tolerance and evaluation of Superior Agronomic Traits in Pigeon Pea Landraces in Uganda. **(Major Supervisor)**

25. Castiano Biniassa U. Levene. Selecting Improved Maize Inbred Lines based on Multi-Environment Evaluation of Early Generation Test Crosses. **(Major Supervisor)**
26. Nizeyimana Fidele. Identification of Bi-parental Populations of Maize with the Best Potential for Producing Superior Inbred Lines. **(Major Supervisor)**
27. Lussewa Rashid Khilloh. Inheritance of bacterial leaf blight resistance in crosses involving interspecific and intraspecific rice genotypes. **(Major Supervisor)**
28. Kijana Ruhebuza. Characterization of *Pseudocercospora Griseola* from common bean in Eastern Democratic Republic of Congo. **(Major Supervisor)**
29. Okot Francis. Phenotypic Diversity of Ugandan Pigeon pea Landraces and Their Reaction to *Fusarium* Wilt in Ugandan Environment. **(Major Supervisor)**
30. Lijalem Gebrewahid Embaye. Stability of Barley Genotypes for Earliness, Resistance to Leaf Scald Disease and Yield in Ethiopia. **(Major Supervisor)**
31. Arinaitwe Ivan Kabiita. Characterizing an F2 banana diploid population for identifying and validating molecular markers for weevil resistance. **(Major Supervisor)**
32. Chemutai Job Alunga. Inheritance of combined resistance to ear rot caused by *fusarium graminearum*, *stenocarpella maydis* and *Aspergillus flavus*. **(Major Supervisor)**
33. Kankundiye Lydie. Inheritance of resistance to maize stem borer (*Busceola Fusca*) in selected weevil (*Sitophilus Zeamais*) resistance lines in Uganda. **(Major Supervisor)**
34. Mutua Peter Mwololo. Inheritance of resistance to sporisorium sorghi (ehrenberg link) among selected sorghum genotypes. **(Major Supervisor)**
35. Kasifa Katono. Development of Cassava Brown Streak Disease Among Selected Cassava Genotypes as Influenced by Amount of Starting Inocula and Level of Host Tolerance. **(Major Supervisor)**
36. Bruno Awio. Multi environmental evaluation and participatory selection of bean varieties for Climatic Change adaptation in Uganda: Case study of Hoima and Rakai district. **(Major Supervisor)**
37. Bigirwa Ayesiga. Assessment of genetic purity of maize hybrids along the maize seed distribution chain. **(Major Supervisor)**
38. Moses Bayo. Evaluation of elite pigeon-pea varieties from ICRISAT and assessment of its seed chain in Northern Uganda **(Major Supervisor)**
39. Paula Adoch. Factors affecting degeneration of cassava seedling exposed to various CBSD disease pressures **(Major Supervisor)**
40. Akello Susan. Inheritance of Aroma quality among Ugandan adapted Rice varieties crossed with Introduced Aromatic Lines. **(Major Supervisor)**

41. Zelalem Zewdu Ayalew Inheritance of Resistance to Rice Blast (Magnaporthe Grisea) in Crosses between Korean and Locally Adapted Rice Varieties in Uganda. **(Major Supervisor)**
42. Morish Adima Inheritance of Resistance to maize lethal Necrosis as evaluated by field infection and vascular puncture Technique in Uganda. **(Major Supervisor)**
43. Josiane Nyiramugisha. Inheritance of cold tolerance in selected rice genotypes in Uganda. **(Major Supervisor)**.
44. Severin Ntivurugurza. Evaluation of different cassava genotypes and selection for adaptation in highland areas of Uganda. **(Major Supervisor)**.
45. Emmanuel Frank Mrema Value of within and between cluster crosses for cassava brown streak disease resistance and validation of Haplotype SNPs Markers in Cassava. **(Major Supervisor)**.
46. Nabaterega Mabel. Determination of the Genetic Basis of Phenotypic Traits Associated With Drought Tolerance In Common Bean Using the Seq1027 X Brb191 Population and Identification of Molecular Markers Linked to these Traits in Uganda. **(Major Supervisor)**.

PhD Graduate Students who have completed under my supervision

1. Abalo Grace. 2007. A Comparative Analysis of Conventional and Molecular Marker Assisted Selection for Resistance against Maize Streak Virus. **(Second supervisor)**.
2. Ochwo-Ssemakula K.N. Mildred. 2008 Occurrence, Distribution, Identification and Characterization of Viruses infecting Passiflora Species in Uganda. **(Major Supervisor)**.
3. Owor Betty. 2008. Developing Transgenic Resistance to Maize Streak Virus Using Small Interfering RNA (Sirnas) and Maize Streak Virus Diversity in Uganda. **(Second supervisor)**.
4. Edmore Gasura. Developing selection criteria for improving grain yield of early maturing maize. **(Major-Supervisor)**

Current M.Sc. Graduate Students under my supervision

1. Sharon Auma. Genetic Analysis of Resistance to Fusarium Root Rot (Fusarium redolens) of Cowpea in Uganda. **(Major Supervisor)**
2. Kidist Tolosa Phenotypic Characterization and G*E Interaction of Selected Rice Genotypes for Cold Tolerance in Uganda **(Major Supervisor)**.

3. **Nigat Tilahun.** Inheritance of Sclerotium Root Rot (*Sclerotium Rolfsii* Sacc.) Resistance in Common Bean (*Phaseolus Vulgaris* L.) in Uganda. (**Major Supervisor**).
4. Solome Nakiyaga. Genetic Analysis of Resistance to Rice Blast (*Magnaporthe Oryzae*) in Ugandan Rice Cultivars. (**Major Supervisor**).

Current PhD Graduate Students under my supervision

1. Kumakech Alfred. Induced Resistance In Banana Against *Mycosphaerella Fijiensis* Infection Based On Botanical Extracts (**Major Supervisor**)
2. Peninah Njenga. Biofortification for improved β -carotene content in local cassava germplasm. (**Major Supervisor**).
3. Josephine Ayiga Aluba Odrumuru. Inheritance of Resistance to *Exserohilum Turcicum*, Agronomic and Grain Yield Traits in Quality Protein Maize in Uganda

Research Management

Diverse projects with both local and international collaborators since 2002 and handling multiple roles simultaneously.

Rockefeller Foundation Grants 2002 to 2006

- **Principal investigator** of 2 research projects funded by the Rockefeller Foundation. **Project 1** focused on the management of cassava mosaic disease that is the number viral disease of cassava in Uganda. **Project 2** aimed to reduce the time to develop suitable germplasm with resistance to the Maize streak virus and the quality protein maize (QPM) for Uganda
- Provide research leadership including technical and scientific backstopping and team coordination on projects. Including student supervision
- Manage operational and project budgets, ensure adherence to the University's policies and procedures.

BIOEARN, 2003-2004

- **Co-Principal investigator:** Environmental risk assessment for possible future deployment transgenic plants. This project aims to development of the Botanicals files.

BIOEARN, 2006-2008

- **Co-Principle Investigator:** Developing Biotechnologies to ameliorate biotic and abiotic stresses in sorghum.

DANIDA-ENRECA, 2005- 2008

- **Co-Principle Investigator:** Capacity building for Biosafety and Ecological Impact Assessment of Transgenic Plants in East Africa

ASARECA, 2005-2008

- **Collaborator:** Marker-Assisted Breeding of the Stay-Green trait of sorghum to enhance Terminal Drought Tolerance in Eastern Africa

REGIONAL MSc PROGRAM IN PLANT BREEDING AND SEED SYSTEMS, 2008 - Todate

- **Coordinator Regional MSc program in Plant Breeding** at Makerere University
- **Co-ordinator:** SCARDA/ASARECA/RUFORUM advanced training for M.Sc. in Plant Breeding, Agric Extension and Agric Soil Science for nine students from Burundi, Sudan and Rwandan
- **Principle Investigator:** AGRA grant 2008 PASS 023. To ensure production of improved crop varieties adapted to poor farmer conditions through advanced training for M.Sc. in Plant Breeding for ten Ugandan and Rwandan nationals and to strengthen the Plant Breeding research program through the establishment of required facilities at Makerere University.
- **Principle Investigator (RUFORUM grant RU2009GRG060)** Development, promotion and dissemination of improved *Fusarium* wilt resistant pigeon pea lines in drought prone areas in Uganda.
- **Co-Principle Investigator (RUFORUM grant RU2010GRG24).** Development of improved scald tolerant barley varieties with superior end-use (malt) and nutritional quality for dry land areas of the northern Ethiopia.

- **Principle Investigator (AGRA 2010 PASS 025)** to ensure production of improved crop varieties adapted to poor farmer conditions through advanced training for M.Sc. in Plant Breeding for ten Ugandan and Rwandan nationals and to strengthen the Plant Breeding research program through the establishment of required facilities at Makerere University.
- **Principle Investigator (AGRA/USAID/WARREN BUFFET)** - to improve food security and livelihoods for South Sudanese smallholder farmers through building the capacity of South Sudan crop scientists in Plant Breeding at M.Sc. level.
- **Coordinator MSc Training (NEXTGENERATION CASSAVA PROJECT)**. To ensure production of improved cassava varieties adapted to poor farmer conditions through advanced training for M.Sc. in Plant Breeding for nine students from Kenya, Rwandan, Tanzania, South Sudan and Uganda and to strengthen the M.Sc. program in Plant Breeding and Seed Systems in Makerere University.
- **Principle Investigator (AGRA grant 2014 PASS 014)** to ensure enhance Masters of Science Degree in Plant Breeding and Seed Systems Program at Makerere University for better responsiveness to farmers' needs and market demands in Eastern African Region
- **Director and Principle Investigator.** the World Bank African Centre of Excellence (ACE II) Project - to establish the **Makerere University Regional Center of Excellence in Crop Improvement (MaRCCI)**

Edema Richard

AWARDS, DISTINCTIONS AND ACHIEVEMENTS

AWARDS

Student fellowships

1994-1996. United States Agency of International Development (USAID) Fellowship to study for a Masters degree in Agriculture (Crop Science) at Makerere University Kampala (Awarded to best student in the department of Crop Science at Makerere University).

1994-1996. Rockefeller Foundation Fellowship to carry out research for the Masters research at Makerere University

1996-2001. Rockefeller Foundation to study for a Ph.D in Plant molecular virology at Ohio State University

Research Grants

USD 73,370 awarded **2002** by the Rockefeller Foundation for research to “Evaluate local and improved cassava varieties for resistance to the cassava mosaic virus”. **(Principal Investigator; Completed)**.

USD 177,865 awarded **2003** by the Rockefeller Foundation for research to “Enhance breeding for resistance to the maize streak virus and the quality protein trait (QPM) using Simple Sequence Repeats”. **(Principal Investigator; Completed)**.

USD 25,000 awarded **2005** ASARECA for “Marker-Assisted Breeding of the Stay-Green trait of sorghum to enhance Terminal Drought Tolerance in Eastern Africa” **(Collaborator; Completed)**.

DKK 1,159,447 awarded **2005** by Danida-ENERECA for “Capacity building for biosafety and ecological impact assessment of transgenic plants in East Africa”. **(Collaborator; Phase 1 completed)**

SEK 799,145 awarded **2006** Marker-assisted breeding of the stay-green trait of sorghum to enhance terminal drought tolerance for the benefit of small-scale farmers in Eastern Africa **(Collaborator; Completed)**

DKK 1,207,642 awarded **2008** by Danida-ENERECA for “Capacity building for biosafety and ecological impact assessment of transgenic plants in East Africa”. **(Collaborator; Completed)**

USD 400,000 awarded **2008** by AGRA to ensure production of improved crop varieties adapted to poor farmer conditions through advanced training for M.Sc. in Plant Breeding for ten Ugandan and Rwandan nationals and to strengthen the Plant Breeding research program through the establishment of required facilities at Makerere University **(Principal Investigator; Completed)**.

USD 331,000 awarded **2008** by SCARDA/ASARECA/RUFORUM for advanced training for M.Sc. in Plant Breeding, Agric Extension and Agric Soil Science for nine students from Burundi, Sudan and Rwandan **(Principal Investigator; Completed)**.

USD 59,661 awarded 2009 by RUFORUM. Development, promotion and dissemination of improved *Fusarium* wilt resistant pigeon pea lines in drought prone areas in Uganda **(Principal Investigator; Completed)**.

USD 60,000 awarded 2010 by RUFORUM. Development of improved scald tolerant barley varieties with superior end-use (malt) and nutritional quality for dry land areas of the northern Ethiopia **(Collaborator; completed)**

USD 643,300 awarded **2010** by AGRA to ensure production of improved crop varieties adapted to poor farmer conditions through advanced training

for M.Sc. in Plant Breeding for twenty Ugandan and Rwandan nationals and to strengthen the Plant Breeding research program through the establishment of required facilities at Makerere University (**Principal Investigator; Completed**).

USD 199,053 awarded **2012** by AGRA-USAID-WARREN BUFFET FOUNDATION to improve food security and livelihoods for South Sudanese smallholder farmers through building the capacity of South Sudan crop scientists in Plant Breeding at M.Sc. level. (**Principal Investigator; Completed**).

USD 800,000 awarded **2013** by BMGF through Cornell University and the National Crops Research Resources Institute, Namulonge Cassava Program to ensure production of improved cassava varieties adapted to poor farmer conditions through advanced training for M.Sc. in Plant Breeding for nine students from Kenya, Rwandan, Tanzania, South Sudan and Uganda and to strengthen the M.Sc. program in Plant Breeding and Seed Systems in Makerere University (**Principal Investigator; on-going**).

USD 2,686,876 awarded **2014** by AGRA to ensure enhance Masters of Science Degree in Plant Breeding and Seed Systems Program at Makerere University for better responsiveness to farmers' needs and market demands in Eastern African Region (**Principal Investigator; on-going**).

USD 6,000,000 awarded 2016 by the World Bank to establish the Makerere University Regional Center of Excellence in Crop Improvement- ACE II (MaRCCI) **Principal Investigator; on-going**).

USD 565,026 award 2018 by the Bill and Melinda Gates Foundation through Cornell University to ensure production of improved cassava varieties adapted to poor farmer conditions through advanced training for M.Sc. & PhD in Plant Breeding for five students from Nigeria, Tanzania and Uganda (**NEW Principal Investigator; on-going**).

Recognition

- 2002** Certificate of merit for dedicated and outstanding Service to the Faculty of Agriculture
- 2003** Certificate of Appreciation in recognition as advisor Organizing Committee of 6th Graduate workshop
- 2010** Certificate of recognition for exemplary coordination of the Regional M.Sc. programme in Plant Breeding and Seed Systems by the Faculty of Agriculture
- 2010** Certificate of recognition for dedication and commitment to excellent mentoring presented by AWARD (2008 -2010)

2011 Certificate of recognition for dedication and commitment to excellent mentoring presented by AWARD (2010-2011)

2019. Distinguished International Alumni CFAES, The Ohio State University

Skill enhancement

2010 Certificate of participation in Result based Monitoring and Evaluation Training by AGRA

2010 Certification of participation in the Champions for Change Leadership Training Course, March 2011, Nairobi Kenya. USAID, CAADP, FEED the FUTURE and AFRCA LEAD

2014 Certificate of completion of requirements of an Introduction to Plant Quantitative Genetics Module, January 6-8th 2014. Tucson Plant Breeding Institute, University of Arizona

2014 Certificate of attending the 'Hands-on training on using Breeding Management System version 2' presented by the integrated Breeding Platform (IBP) of the CGIAR Generation Challenge Programme (GCP), February 5-7th, Nairobi Kenya. Funded by AGRA

Edema Richard

Participation in Faculty and Departmental Activities

Committee Member for Undergraduate, Post-graduate and Financial Departmental Committees.

Team leader organizing the participation of Faculty Committee during the 3rd General Assembly of the Forum for Agricultural Research in Africa (FARA) held in Entebbe, Uganda

Co-Leader organizing the 6th Graduate students' workshop (2004)

Service

Local community

Patron Makerere University Arua Students Union (MASU)

Patron Koboko Joint University students Associations (KOJUSA)

Member Adhoc Committee for Sts Peter and Paul Seminary Old Boys Association

Vice Chair (S.5; class of 2011) Parents Committee for Uganda Martyrs Senior Secondary Namugongo

National

Member of the technical sub-committee of the Zonal Agricultural Research and development Institute at Abi (North-Western Zone).

International

Member of the team charged with development a 3rd phase of Eastern African Regional Program and Research Network for Biotechnology, Biosafety and Biotechnology policy Development (BIOEARN) (Program accepted for funding by Sida; USD 11,000,000)

Coordinator of the African Molecular Marker Applications Network (AMMANet)
Mentor of in the African Women in Agricultural Research and Development Program (AWARD)

Reviewer/Examiner

Frequently acted as external examiner for PhD theses from University of Kwa-Zulu Natal and University of Free-State

I have reviewed Grant proposal for The Regional Universities Forum for Capacity Building in Africa (RUFORUM)

I have reviewed manuscripts for the African Crop Science Journal and other reputable journal;

Review Proposals of the African Centres of Excellence Phase II for West Africa on invitation by the World Bank and Association of African Universities

Edema Richard

AFFILIATIONS

America Pathological Society
International Society of Plant Pathology
African Crop Science Society (ACSS)
African Molecular Marker Applications Network (AMMANet)
Association of Uganda Professional Agriculturalists (ASUPA)
Makerere University Academic Staff Association (MUASA)
Uganda National Academy of Science (UNAS)

PUBLICATIONS

Refereed Journals (55 articles)

1. **Edema, R.** and Adipala, E. 1994. Cowpea disease. Part 1: Control of false and brown rust in Uganda using Benomyl and Mancozeb. **E. Afri. Agric. For. J.** 60 (1):11-17.
2. **Edema, R.** and Adipala, E. 1994. Cowpea disease. Part 2: Optimal dosage and timing of mancozeb sprays for control of brown rust in Uganda. **E. Afri. Agric. For. J.** 60 (1):19-25.
3. **Edema, R.** and Adipala, E. 1995. Relationship between brown and false rusts and cowpea yeilds. **J. Crop Protec.** 14 (5):395-398.
4. **Edema, R.** and Adipala, E. 1996. Effect of crop management practices on yield of seven cowpea varieties in Uganda. **Intl. J. of Pest Mgnt** 42 (4):317-320.
5. **Edema, R.** and Adipala, E. 1997. Influence of season and cropping system on occurrence of cowpea diseases in Uganda. **Plt. Dis.** 81:465-468.

6. Adipala, E., Omongo, C.A., Sabiti, A., Obuo, J.E., **Edema, R.**, Bua, B., Atyang, A., Nsubuga, E.N. and Ogenga-Latigo, M.W. 1999. Pests and diseases on cowpea in Uganda: Experiences from a diagnostic survey. *African Crop Science Journal* 7(4): 465-478.
7. **Edema, R.**, Adipala, E., and Florini, D.A. 2000. Evaluation of 62 cowpea lines for resistance to false rust (*Synhytrium dolichi* (Cooke) Gaum) and scab (*Sphaceloma* sp.) **MUARIK Bulletin** 3, 25-31.
8. Redinbaugh, M.G., Louie, R., Ngwira, P., **Edema, R.**, Gordon, D.T., and Bisaro, D.M. 2001 Transmission of viral RNA and DNA to maize kernels by vascular puncture inoculation. *J. Virolo. Meth.* 98:135-143.
9. Biruma, M., Okori, P., Mudingotto, J., **Edema, R.**, Tusiime, G., Mathur, S.B. and Adipala, E. 2003. Seed-borne fungi associated with farmer saved rice seeds in Uganda and their effect on germination. **MUARIK Bulletin** 6:53-58.
10. Biruma, M., Tusiime, G., Okori, P., **Edema, R.**, Mathur, S.B. and Adipala, E. 2004. Effect of threshing, drying and storage methods on purity and germination of farmer managed rice in Uganda. **MUARIK Bulletin** 7:46-51.
11. Kanobe, C., Kawube, G., Biruma, M., Mudingotto, P.J., **Edema, R.**, Okori, P., Tusiime, G., Mathur, S.B. and Adipala, E. 2004. Seed-borne fungi associated with cowpea and rice and their possible control by seed sorting. **MUARIK Bulletin** 7:52-58
12. McSpadden-Gardener, B.B., Gutierrez, L.J., Joshi, R., **Edema, R.**, and Lutton, E. 2005. Distribution and Biocontrol Potential of *phD*⁺ Pseudomonads in Corn and Soybean Fields. *Phytopathology*. 95:715-724.
13. R. Manna, D.K. Okello, J. Imanywoha, K. Pixley and **R. Edema** 2005. Enhancing introgression of the opaque 2 trait into elite maize lines using simple sequence repeats (SSR). *African Crop Science Journal*. 13(4):215-226.
14. D.K. Okello, R. Manna, J. Imanywoha, K. Pixley, **R. Edema**. 2006. Agronomic performance and breeding potential of selected inbred lines for improvement of protein quality of adapted Ugandan maize germplasm. *African Crop Science Journal*. 14(1):37-47.
15. V. Gichuru, V. Aritua, G.W. Lubega, **R. Edema**, E. Adipala, P.R. Rubaihayo. 2006. A preliminary Analysis of diversity among East African Sweetpotato landraces using morphological and simple sequence repeats (SSR) markers. *Acta Hort. (ISHS)* 703:159-164
16. Betty E. Owor, Dionne N. Shepherd, Nigel J. Taylor, **Richard Edema**, Ad´erito L. Monjane, Jennifer A. Thomson, Darren P. Martin, Arvind Varsani. 2007. Successful application of FTA® Classic Card technology and use of bacteriophage ϕ 29 DNA polymerase for large-scale field sampling and cloning of complete maize streak virus genomes. *J. Virolo. Meth.* 140:100-105.
17. Betty E. Owor, Darren P. Martin, Dionne N. Shepherd, **Richard Edema**, Ade´rito L. Monjane, Edward P. Rybicki, Jennifer A. Thomson and Arvind Varsani. 2007. Genetic analysis of maize streak virus isolates from Uganda reveals widespread distribution of a recombinant variant. *J. Gen Virolo.* 88 (11): 3154-3165.

18. G. Abalo, P. Tongoona, J. Derera and **R. Edema**. 2009. A Comparative Analysis of Conventional and Marker Assisted Selection Methods in Breeding Maize Streak Virus Resistance in Maize. **Crop Science**. 49: 509-520.
19. M. Maphosa, G. Oballim, A. Nalukenge, **R. Edema** and P. Okori. 2011. Feasibility Of Zein Proteins, Simple Sequence Repeats and Phenotypic Traits for Background Selection in Quality Protein Maize Breeding. **African Crop Science Journal**, Vol. 19 (2): 65 – 78.
20. J. Adriko, W. S. Sserubombwe, E. Adipala, A. Bua and J. M. Thresh and **R. Edema**. 2011. Response of improved cassava varieties in Uganda to cassava mosaic disease (CMD) and their inherent resistance mechanisms. **African Journal of Agricultural Research**. 6(3): 521-531.
21. G. Onaga, **R. Edema** and G. Asea. 2012. Tolerance of rice germplasm to iron toxicity stress, the relationship between tolerance, Fe²⁺, P and K content in the leaves and roots. **Archives of Agronomy and Soil Science**, 1–17.
22. Mildred Ochwo-Ssemakula, Theresa Sengooba, J J Hakiza, Ekwamu Adipala, **Richard Edema**, Margaret G. Redinbaugh, Valentine Aritua, and Stephan Winter. 2011. The Characterization and Distribution of a Potyvirus associated with Passion Fruit Woodiness Disease in Uganda. **Plant Disease**. 96(5) 659-665.
23. J. Adriko, W. S. Sserubombwe, E. Adipala, A. Bua and J. M. Thresh and **R. Edema**. 2012. Response of Local Cassava Varieties in Uganda to Cassava Mosaic Virus Disease. **American Journal of Experimental Agriculture** 2(1): 111-132.
24. J. Obala, C. Mukankusi , P.R. Rubaihayo, P. Gibson and **R. Edema**. 2012. Improvement of resistance to Fusarium root rot through gene pyramiding in common bean. **African Crop Science Journal**: 20 (1):1 - 13
25. M.L. Mogga, J. Lamo, G. Asea, P. Gibson and **R. Edema**. 2012. Reaction of rice cultivars to a virulent RYMV strain (RYMV-Iganga strain) in Uganda. **African Crop Science Journal**: 20 (1):51 - 57
26. I. Habarurema, G. Asea, J. Lamo, P. Gibson, **R. Edema**, Y. Séré and R.O. Onasanya. 2012. Genetic analysis of resistance to rice bacterial blight in Uganda. **African Crop Science Journal**: 20 (1):105 - 112.
27. E.K. Mbeyagala , D.D. Kiambi , P. Okori and **R. Edema**. 2012. Molecular Diversity among Sorghum (*Sorghum bicolor* (L.) Moench) Landraces in Uganda. **International Journal of Botany**. 8(3): 85-95.
28. Alexander Bombom, Patrick Okori, Paul Gibson, **Richard Edema**, Godfrey Asea, Patrick Rubaihayo. 2012 Reaction of Waxy and Opaque-2 Inbreds and their Derived Progenies to Multiple Foliar Diseases of Maize in Uganda. **Journal of Agricultural Science** 4 (10): 199-.
29. Amayo, R., Arinaitwe, A. B., Mukasa, S. B.*, Tusiime, G., Kyamanywa, S., Rubaihayo, P. R. and **Edema, R.** 2012. Prevalence of viruses infecting cowpea in Uganda and their molecular detection. **African Journal of Biotechnology** Vol. 11(77): 14132-14139.
30. Vallence Nsabiya, Mildred Ochwo-Ssemakula¹, Peter Sseruwagi, **Richard Edema** and Chris Ojiewo. 2012. Occurrence of Causative Microorganisms

Associated with Hot Pepper Field Diseases in Central Uganda. **Plant Stress (Accepted for publication)**.

31. J.P. Sserumaga, M. Biruma, A. Akwero, P. Okori and **R. Edema**. 2013. Genetic characterisation of Ugandan strains of *Colletotrichum sublineolum* using ISSR makers. **Uganda Journal of Agricultural Sciences**, 14 (1): 111 – 123.
32. J.P. Sserumaga, M. Biruma, A. Akwero, P. Okori and **R. Edema**. 2013. Prevalence of sorghum anthracnose in different agroecologies of Uganda. **Uganda Journal of Agricultural Sciences**, 14 (1): 125 – 135.
33. Edmore Gasura, Peter S. Setimela, **Richard Edema**, Paul T. Gibson, Amsal Tarekegne and Patrick Okori. 2013. Exploiting grain-filling rate and effective grain-filling duration to improve yield of early-maturing maize. **American Crop Science** 53(6): 2295-2303
34. Gasura, E., Setimela, P.S., **Edema, R.**, Gibson, P.T., and Okori, P. 2013. Simple sequence repeats markers for grain-filling traits and yield components in tropical maize. **Journal of Agricultural Sciences** 1(2): 25-29.
35. Geoffrey Onaga, James Egdane, **Richard Edema**, Ismail Abdelbag. 2013. Morphological and Genetic Diversity Analysis of Rice Accessions (*Oryza sativa*L.) Differing in Iron Toxicity Tolerance. **J. Crop Sci. Biotech.** 2013 (March) 16 (1): 53~62.
36. Innocent Habarurema, **Richard Edema**, Paul Gibson, Jimmy Lamo, Godfrey Asea, Yacouba Séré and Elie R. Gasore. 2013. Population diversity of rice bacterial leaf blight isolates in Uganda. **Asian Journal of Plant Science and Research**, 3(1):1-9
37. S.I. Kayondo, P.R. Rubaihayo, B.R. Ntare, P.T. Gibson, **R. Edema**, A. Ozimati and D.K. Okello. 2014. Genetics of Resistance to Groundnut Rosette Virus Disease. **African Crop Science Journal**, Vol. 22, No. 1, pp. 21 - 29
38. Ozimati, A.A, Rubaihayo P.R, Gibson, P., **Edema, R.**, Kayondo I.S., Ntare B.R., Okello D.K. 2014. Inheritance of resistance to kernel infection by *Aspergillus flavus* and aflatoxin accumulation in groundnut. **African Journal of Crop Science** Vol. 2 (1): 51-59.
39. D. Shumbusha, G. Tusiime, **R. Edema**, P. Gibson, E. Adipala and R.O.M. Mwangi. 2014. Inheritance of Root Dry Matter Content in Sweetpotato. **African Crop Science Journal**, Vol. 22, No. 1, pp. 69 - 78.
40. Edmore Gasura, Peter S. Setimela, Amsal Tarekegne, David Icishahayo, **Richard Edema**, Paul T. Gibson, and Patrick Okori. 2014. Variability of Grain-Filling Traits in Early Maturing CIMMYT Tropical Maize Inbred Lines. **Crop Sci.** 54:530–536 (2014).
41. Njenga Peninah, **Edema Richard** and Kamau Joseph. Combining Ability for beta carotene and important qualitative traits in cassava fl populations. **Journal of Plant Breeding and Crop Science.** 6(2): 20-24
42. Damulira Gabriel, Clare Mukankusi, Mildred Ochwo-Ssemakula, **Richard Edema**, Peter Sseuwagi and Paul Gepts. 2014. Identification of new sources of resistance to angular leafspot among Ugandan common bean landraces. **Canadian Journal of Plant Breeding.** 2(2): 55-65.

43. Amongi, W., Nkalubo, S.T., Ochwo-Ssemakula, M., Gibson, P.T. and **Edema, R.** 2014. Development of intermittent drought stress tolerant common bean genotypes in Uganda. **African Crop Science Journal**. **22(4):303 – 315.**
44. Winnyfred Amongi, Stanley Tamusanga Nkalubo, Mildred Ochwo-Ssemakula, Paul Gibson and **Richard Edema.** 2015. Genetics of drought tolerance in common bean genotypes adapted to Ugandan conditions. **Journal of Plant Breeding and Crop Science**. **7(1):18-27**
45. K. Katono, T. Alicai, Y. Baguma, **R. Edema,** A. Bua and C. A. Omongo. 2015. Influence of Host Plant Resistance and Disease Pressure on Spread of Cassava Brown Streak Disease in Uganda. **American Journal of Experimental Agriculture**. **7(5):284-293.**
46. Esperance Munganyinka, **Richard Edema,** Jimmy Lamo, Paul Gibson, Placide Rukundo. 2015. Combining ability for resistance to rice yellow mottle virus disease in interspecific and intraspecific rice Genotypes. **African Journal of Crop Science** **3 (1):102-107.**
47. E. Munganyinka, **R. Edema,** J. Lamo, P. Gibson, D. Gahakwa. 2015. Maternal genetic effect of resistance to rice yellow mottle virus disease in rice. **International Journal of Agronomy and Agricultural Research**. **6(4):213-221.**
48. Ivan K. Arinaitwe*, Alex Barekye, Jerome Kubiriba, Kassim Sadik, Eldad Karamura, **Richard Edema.** 2015. Genetic Analysis of Weevil (*Cosmopolites Sordidus*) Resistance in an F2 Diploid Banana Population. **J. Plant Breed. Genet.** **03 (03):77-91**
49. Esperance Munganyinka, Richard Edema, Jimmy Lamo and Paul Gibson. 2016. The reaction of intraspecific and interspecific rice cultivars for resistance to rice yellow mottle virus disease. **European Journal of Experimental Biology**, 2016, **6(3):13-18.**
50. Babirye, A., Ntawuruhunga, P. and **Edema, R.** 2016. Cassava Mosaic Disease Resistant Clones' growth and yield are prone to early drought stress. (Corresponding author). **African Journal of Agricultural Science**. **11(25): 2240-2244.**
51. Kesiime, V.E*., Tusiime, G., Kashaija, I.N., **Edema, R.,** Paul, G., Namugga, P.& Kakuhenzire, R. Characterization and evaluation of new potato (*Solanum tuberosum* L) Cultivars in Uganda. 2016. **Am. J. Potato Res.** doi:10.1007/s12230-016-9533-5
52. Walter P. Suza*, Paul Gibson, **Richard Edema,** Richard Akromah, Julia Sibiya, Rufaro Madakadze and Kendall R. Lamkey 2016. Plant breeding capacity building in Africa. **Nature Climate Change** **6(11):976 · October 2016 DOI: 10.1038/nclimate3139.**
53. Zelalem Zewdu, Paul Gibson, Jimmy Lamo and Richard Edema. 2016. Reaction of introduced Korean rice genotypes for resistance to rice blast in Uganda. **Journal of Plant Breeding and Crop Science**. Vol. **9(7), pp. 98-105, July 2017 DOI: 10.5897/JPBCS2017.0641.**
54. Irene Mugh, Mildred Ochwo Ssemakula, Clare Mukankusi Paul Gibson and Richard Edema. 2017. Mode of inheritance for cooking time, Iron and Zinc

- content in common bean (*Phaseolus vulgaris* L.) genotypes. **Journal of Plant Breeding and Crop Science (Accepted)**
55. Roy Namasaka, Tusiime Geoffrey, Orawu Martin, Paul Gibson, Josiane Niyamugisha and Richard EdemaA 2017. Response of Cowpea Genotypes to *Fusarium redolens* in Uganda. **American Journal of Plant Sciences (Accepted for publication)**
 56. Symphorien Agbahoungba, Jeninah Karungi, Kassim Sadik, Paul Gibson, Richard Edema, Achille E. Assogbadjo and Patrick R. Rubaihayo. 2018. Microsatellites markers associated with resistance to flower bud thrips in a cowpea F2 population derived from genotypes TVU-123 and WC36. *African Journal of Biotechnology*. Vol. 17(25)767-778. DOI: 10.5897/AJB2018.16480
 57. Awio Bruno, Enid Katungi, Nkalubo T. Stanley, Mukankusi Clare, Malinga G. Maxwell, Gibson Paul, Rubaihayo Patrick, Edema Richard. 2018. Participatory farmers' selection of common bean varieties (*Phaseolus vulgaris* L.) under different production constraints. *Plant Breeding*. 2018;1–7. DOI: 10.1111/pbr.12594
 58. Anna Bildadi Mlaki, Paul Gibson, Richard Edema, Jean Claude Habineza, Gerald Mwanje, Jimmy Lamo and Ephraim Nuwamanya. 2019. Identification of rice genotypes tolerant to submergence at seedling stage in Uganda. *Journal of Plant Breeding and Crop Science*. Vol. 11(7), 173- 184. DOI: 10.5897/JPBCS2019.0827.
 59. M. Nabateregga, C. Mukankusi, B. Raatz, R. Edema, S. Nkalubo and B.M.E. Alladassi. 2019. Quantitative trait loci (QTL) mapping for intermittent drought tolerance in BRB191×SEQ1027 Andean Intra-gene cross recombinant inbred line population of common bean (*Phaseolus vulgaris* L.). *African Journal of Biotechnology*. 18(21) 452-461. DOI: 10.5897/AJB2019.16768
 60. M. Namara, J. Karungi, R. Edema, P. Gibson and P. Tukamuhabwa. 2019. Potential for Yield Loss Reduction and Profitability Assessment of Pesticide Control of Groundnut Leaf Miner Among Soybean Genotypes. *African Crop Science Journal*, Vol. 27, No. 2, pp. 183 – 192
 61. Anastasie Musabyemungu, Peter Wasswa, Agnes Alajo, Doreen M. Chelagat, Milton A. Otema, Paul Musana, Placide Rukundo, Paul Gibson, Richard Edema, Kenneth V. Pecota, G. Craig Yencho and Benard Yada. 2019. Adaptability of a U.S. purple-fleshed sweetpotato breeding population in Uganda. *Australian Journal of Crop Science*. 13(01):17-25. doi: 10.21475/ajcs.19.13.01.p102

Manuscripts in Preparation

1. **Edema, R.** Gordon, D.T., Ngwira, P., and Bisaro, D.M. Location of the Virulence Determinants of the Maize Streak Virus. **(First author)**
2. Kamenya, S.N., Hakiza, G.J., Tusiime, G., McSpadden Gardener, B.B. and **Edema, R.** Detection, isolation and baseline characterization of indigenous PhlD+ fluorescent *Pseudomonas* species in the control of bean root rot and coffee wilt disease in Uganda. **(Principal & corresponding author).**
3. P. Namugga, **R. Edema**, G. Asea and P.Gibson. Selection S1 and S2 of Longe 4 Maize Lines for Tolerance to Low Soil Nitrogen in Uganda. **(Corresponding author).**
4. A. Pariyo, R.O. Mwangi, **R. Edema**, R.S. Kawuki, Y. Baguma, G.N. Ssemakula and M. Fregene. Breeding values of potential cassava parental lines in Uganda. **Co-author**
5. Akwero, **R. Edema** and P. Okori. Temporal and Spatial Development of Sorghum Anthracnose in two Agro-ecologies in Uganda **Co-author.**
6. Fidele Nizeyimana, Richard Edema and Godfrey Asea' Kwemoi Daniel, Paul Gibson. Calculation of Usefulness Criterion using Selection Indices to selecting the best maize breeding populations for multiple traits.
7. Fidele Nizeyimana, Richard Edema, Godfrey Asea, Paul Gibson, Kwemoi Daniel Claver Ngaboyisonga. Characterizing the segregation pattern of various traits in inbreds and testcrosses and their relationship in early generation of maize populations
8. B. U. L. Castiano, G. Asea, R. Edema. Selection strategy for developing inbred lines with drought and disease resistance in Uganda

Proceedings Papers

1. Kamenye, S.N., McSpadden-Gardener, B.B., Tusiime, G. and **Edema, R.** 2005. The Potential of Ugandan Isolates of fluorescent *Pseudomonads* for control of Fusarium wilt of Coffee and Pythium Bean Root Rot. In: **African Crop Science Conference Proceedings. Vol.7 part 3: 1257-1265** (Eds.) Tenywa, J.S., Adipala, E., Nampala, P., Tusiime, G., Okori, P., and Kyamuhangire, W. 7th ACSS Meeting held in Imperial Resort Beach Hotel, Entebbe, Uganda, December 5-9th).
2. Ochwo-Ssemakula, M., Aritua, V., **Edema, R.**, Hakizza, J.J., Sengooba, T. and Adipala, E. 2005. Virus-like infection on passionflora species in Uganda: Incidence and Severity. In: **African Crop Science Conference Proceedings. Vol.7 part 1: 277-**

280. (Eds.) Tenywa, J.S., Adipala, E., Nampala, P., Tusiime, G., Okori, P., and Kyamuhangire, W. 7th ACSS Meeting held in Imperial Resort Beach Hotel, Entebbe, Uganda, December 5-9th).
3. Okello, D.K., Imanywoha, J., Pixley, K. and **R. Edema**. 2005. Relationship between kernel texture and tryptophan level in quality protein maize line (QPM) Longe-5. In: **African Crop Science Conference Proceedings. Vol.7 part 1: 261-263.** (Eds.) Tenywa, J.S., Adipala, E., Nampala, P., Tusiime, G., Okori, P., and Kyamuhangire, W. 7th ACSS Meeting held in Imperial Resort Beach Hotel, Entebbe, Uganda, December 5-9th).
 4. Kawube, G., Kanobe, C., **Edema, R.**, Tusiime, P., Mudingotto, P.J. and Adipala, E. 2005. Efficacy of manual seed sorting methods in reduction of transmission of rice and cowpea seed-borne diseases. In: **African Crop Science Conference Proceedings. Vol.7 part 3: 1363-1367** (Eds.) Tenywa, J.S., Adipala, E., Nampala, P., Tusiime, G., Okori, P., and Kyamuhangire, W. 7th ACSS Meeting held in Imperial Resort Beach Hotel, Entebbe, Uganda, December 5-9th).
 5. A. Nyombayire, **R. Edema**, G. Asea & P. Gibson. 2011. Combining ability of maize inbred lines for performance under low nitrogen and drought stresses. In: **African Crop Science Conference Proceedings. Vol.10 part 1: 579-586** (Eds.) Tenywa, J.S. 10th ACSS Meeting held 10 - 13 October 2011 Maputo, Mozambique.

Conference Papers

1. **Edema, R.**, Gordon, D.T. and Bisaro, D. 1999. Characterizing the genetic determinants of virulence of genomic clones of the maize streak mastrevirus. Poster presentation at the Ohio Plant Biotechnology consortium (OPBC) held September 24th-26th at the Mohican state lodge, Ohio USA..
2. **Edema, R.** Ngwira, P., Redinbaugh, M., Bisaro, D., Gordon, D.T. 2000. Mapping the genetic determinants of virulence of two Maize Streak Mastrevirus (MSV) isolates from Kenya. Poster presentation at the Ohio State University Plant Molecular Biology and Biotechnology Symposium held November 11th, Columbus Ohio.
6. **Edema, R.**, and Gordon, D.T. 2001 The Genetics of Virulence of Maize Streak Mastrevirus (MSV), American Phytopathological Society (APS) annual conference, Salt Lake City, August 25th-29th, 2001.
7. Adriko J., **Edema R.**, Adipala E., Sserubombwe W., Bua A and Thresh J. M. 2003. Evaluation of local cassava varieties for resistance to cassava mosaic virus disease (CMD) in Uganda. 6th African Crop Science Society Conference, Nairobi, Kenya, October 13th to 17th, 2003 (Oral).
8. Otto, F., **Edema, R.**, Adipala, E., Sserubombwe, W., Bua, A., Adriko, A. and Thresh, J.M. 2003. The Use of Varietal Mixtures for control of the Cassava Mosaic Disease. 6th African Crop Science Society Conference, Nairobi, Kenya, October 13th to 17th, 2003 (Oral).
9. Adriko, J., **Edema, R.**, Sserubombwe, W., Adipala, E., Bua, A., Otto, F., and

- Thresh, J.M. 2003. Evaluation of improved cassava varieties in Uganda for resistance to the cassava mosaic geminiviruses (CMGs). 6th African Crop Science Society Conference, Nairobi, Kenya, October 13th to 17th, 2003 (Poster).
10. Otto, F., **Edema, R.**, Adipala, E., Sserubombwe, W., Bua, A., Adriko, A. and Thresh, J.M. 2003. Damage thresholds of cassava mosaic disease in mixed stands of infected and healthy cassava plants. 6th African Crop Science Society Conference, Nairobi, Kenya, October 13th to 17th, 2003 (Poster).
 11. Kanobe, C., **Edema, R.**, Adipala, E., Okori, P. and Mathur, S.B.I. 2003. Evaluation of seed sorting methods for improvement of seed health of cowpea seed in Uganda. 6th African Crop Science Society Conference, Nairobi, Kenya, October 13th to 17th, 2003 (Poster).
 12. Kawube, G., Kanobe, C., **Edema, R.**, Adipala, E., Mudingotto, P. J., Okori, P. and Mathur, S. B. 2003. Evaluating effectivity of common fungicides and the salt floatation method for control of some seed-borne diseases of rice and cowpea. 6th African Crop Science Society Conference, Nairobi, Kenya, October 13th to 17th, 2003 (Poster).
 13. Manna, R., Okello, D.K., Imanywoha, J., Pixley, K., and **Edema, R.** 2005. Enhancing Introgression of the Opaque-2 trait into Elite Maize lines using Simple Sequence Repeats (SSR). 2nd General Meeting on Biotechnology, Breeding and Seed Systems, Nairobi, Kenya, January 24-27th, 2005 (Poster).
 14. Okello, D.K., Manna, R., Imanywoha, J., Pixley, K., and **Edema, R.** 2005. Evaluation Of Potential Quality Protein Maize (QPM) Inbred Lines for Improvement of the Protein Quality of Adaptable Maize Lines In Uganda (Poster). 2nd General Meeting on Biotechnology, Breeding and Seed Systems, Nairobi, Kenya, January 24-27th, 2005 (Poster).
 15. Abalo, G., Tongoona, Imanywoha, J., Pixley, K., and **Edema, R.** 2005. Marker-assisted selection for maize streak virus resistance in elite maize lines. 2nd General Meeting on Biotechnology, Breeding and Seed Systems, Nairobi, Kenya, January 24-27th, 2005 (Oral).
 16. Lamwaka, O., Arinaitwe, G., **Edema, R.**, Kiggundu, A., Dale, J and Tushemereirw, W.K. 2008. Transformation Banana with APETALA1 gene for initiation of early flowering. Poster presentation. Banana and plantain in Africa: Harnessing international partnerships to increase research impact. Leisure Lodge Resort Mombasa, Kenya, 5-9 October 2008.
 17. J Ayiga-Aluba, **R. Edema**, G. Tusiime, G.Asea and P. Gibson. 2013. Recurrent selection for Resistance to Exserohilum turcicum in Longe 5 in Uganda. 6th African Crop Science Society Conference, Entebbe, Uganda, 11th African Crop Science Society Conference 14th-17th October. **(Poster)**.
 18. R Madakadze, M Laing, E Danquah, R Akromah, **R Edema** and J Bokosi. 2016. Leveraging National Agriculture Research services and CGIAR Centers in building capacity of crop improvement specialists in Africa- The Case for the Alliance of a Green Revolution in Africa and its partners. 7th Africa Agriculture Science Week (AASW) and FARA General Assembly, 13-16 June 2016, Kigali, Rwanda **(Oral)**

1. **Edema, R.** and Bekunda, M.A. 2006. Promoting sustainable peace in Northern Uganda through Agricultural Development. *In Peace in Uganda: The Role of the Civil Society*, Edited by Syed A.H. Abidi Pgs 65-70.