



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

October 30, 2021



*Borlaug Higher Education for
Agricultural Research and Development*

Final Scholar Report: Rwanda

By

The BHEARD Administrative Team
Michigan State University

Office of the Dean
College of Agriculture and Natural Resources
Michigan State University
446 W. Circle Drive, Room 102
East Lansing, Michigan 48824-1039

Email: CGC.BHEARD@campusad.msu.edu

Project Website: <https://www.canr.msu.edu/bheard>



Executive Summary

Michigan State University (MSU) is the implementing entity of the Borlaug Higher Education for Agricultural Research and Development (BHEARD) program. As part of the United States government's Feed the Future initiative, BHEARD is funded by the United States Agency for International Development (USAID), through the International Maize and Wheat Improvement Center (CIMMYT).

Honoring the legacy of Nobel Peace Prize Laureate Norman Borlaug, the program increases the number of agricultural scientists and strengthens scientific institutions in partner countries. BHEARD supports long-term training of agricultural researchers at the master's and doctoral levels, linking scientific and higher education communities in Feed the Future priority countries and the United States.



A BHEARD scholarship supports coursework at U.S. and regional universities in Africa, Brazil, Bangladesh, and India; providing funding for research and post completion research in the student's home country. In addition, the program provides a variety of allowances to cover training costs and laboratory fees. BHEARD also aims to develop, test and evaluate new models of small-scale institutional capacity development. This report documents BHEARD programmatic activities from October 1, 2018 through September 30, 2019. It includes a program overview, financial summaries, and student updates for Rwanda.

Acknowledgement and thank you to all BHEARD staff who have worked for this program and contributed to this report.

- John Medendorp, Director
- Mathias Ndizihwe, Student Progress Coordinator
- Cait Goddard, Institutional Capacity Development Lead
- Jen Riebow, Fiscal Officer

Activity Summary

The Borlaug Higher Education for Agriculture and Development (BHEARD) program, supported by US Agency for International Development (USAID) develops agricultural scientists and increases agricultural research capacity in Feed the Future partner countries including Rwanda. BHEARD has provided scholarships to students seeking masters and doctorate degrees at US and regional academic institutions and has provided funding for agricultural research in their home

countries. The program also developed, tested, and evaluated new models of small-scale institutional capacity development. BHEARD sponsored 41 and 27 successfully completed their program and went back to their home institutions after completion of their degree programs. Of those who completed, 13 are from Cohort 3, 7 from Cohort 4 and 7 scholars completed from Cohort 5. Fourteen scholars withdrew or were withdrawn from the program due to various reasons. This was the highest attrition rate of any country program.

Successes

For those scholars completing the program, the Rwandan cohort of BHEARD students had among the highest publication rates of all country programs. The level of academic productivity bodes well for these scholars and Rwanda will benefit from the investment in their education.

Challenges

Fourteen scholars were unable to complete their program and have been withdrawn from the program due to different reasons:

- Two scholars declined scholarships before starting the programs
- Two scholars violated the conditions of sponsorship
- Nine scholars did not complete within the timeline.

The last of these reasons was especially disconcerting. Agreements were negotiated with the participating universities in Kenya to waive the requirement to develop a thesis proposal prior to admission into the graduate schools at these institutions. The first year of BHEARD studies was allotted for the purpose of allowing students time to prepare proposals and submit them for approval in the first year. Few of the students completed a proposal within the first year, and several of the students spent considerable amounts of time at home in Rwanda rather than attending the university. Although this was a violation of BHEARD conditions scholarship, the BHEARD East African coordinator only discovered these departures after the fact, since students did not inform the coordinator of their departures, as was required. Although the BHEARD program attempted to discern the status of the students after the program closed, few of the students responded to update their status. As a result of this lack of compliance and lack of diligence, the Rwandan country cohort represents one of the lowest completion rates of all the BHEARD countries at (66%).

LIST OF ALL SCHOLARS

The list of all BHEARD students was the following:

NAME (first and last)	SEX	COHORT	STUDENT STATUS	UNIVERSITY	SUBJECT AREA	ACADEMIC LEVEL	GRADUATION YEAR
1. Habimana, Richard	M	COHORT 5	COMPLETED	Egerton University	Animal Science	PhD	FY21
2. Ndayitegeye, Olivier	M	COHORT 5	COMPLETED	Egerton University	Water Resource and Environmental Management	PhD	FY21
3. Ndereyimana, Assinapol	M	COHORT 5	COMPLETED	Egerton University	Horticulture	PhD	FY20
4. Nyabinwa, Pascal	M	COHORT 5	COMPLETED	Egerton University	Animal Science	PhD	FY21

5.	Rwubatse, Bernard	M	COHORT 5	COMPLETED	Univ. of Nairobi	Food Science and Technology	PhD	-
6.	Waweru, Bancy	F	COHORT 5	COMPLETED	Univ. of Nairobi	Crop Protection	PhD	FY21
7.	Djangwani, Juvenal	M	COHORT 5	WITHDRAWN	Univ. of Nairobi	Food Science and Technology	PhD	-
8.	Gashururu, Richard	M	COHORT 5	WITHDRAWN	Univ. of Nairobi	Applied Veterinary Parasitology	PhD	-
9.	Kambabazi, Marie-Rose	F	COHORT 5	WITHDRAWN	Univ. of Nairobi	Food Science and Technology	PhD	-
10.	Murindwa, Erneste	M	COHORT 5	WITHDRAWN	Univ. of Nairobi	Food Science and Technology	PhD	-
11.	Nshimiyimana, Octave	M	COHORT 5	WITHDRAWN	Univ. of Nairobi	Crop Protection	PhD	-
12.	Nzeyimana, Felix	M	COHORT 5	WITHDRAWN	Univ. of Nairobi	Soil Science	PhD	-
13.	Udahemuka, Jean Claude	M	COHORT 5	WITHDRAWN	Univ. of Nairobi	Biotechnology	PhD	-
14.	Umunezero, Olive	F	COHORT 5	WITHDRAWN	Univ. of Nairobi	Animal Production	PhD	-
15.	Karayire, Aulalia	F	COHORT 5	WITHDRAWN	Univ. of Nairobi	Applied Human Nutrition	PhD	-
16.	Mukamurezi, Godelieve	F	COHORT 5	WITHDRAWN	Univ. of Nairobi	Food Science and Technology	PhD	-
17.	Uwihirwe Judith	F	COHORT 5	WITHDRAWN	Uni. of Nairobi	Dryland Resource Management	PhD	-
18.	Ayabagabo, Jean De Dieu	M	COHORT 5	COMPLETED	Egerton University	Animal Science	PhD	-
19.	Kamatenesi, Jovia	F	COHORT 4	COMPLETED	Univ. of Nairobi	Horticulture	MSc	FY19
20.	Manishimwe, Rosine	F	COHORT 4	COMPLETED	Texas Tech University	Animal Science	PhD	FY20
21.	Mbarushimana, Jean De Dieu	M	COHORT 4	COMPLETED	Univ. of Nairobi	Agronomy	MSc	FY19
22.	Mwungura, Marc	M	COHORT 4	COMPLETED	Univ. of Nairobi	Soil Science	MSc	FY21
23.	Niyikiza, Daniel	M	COHORT 4	COMPLETED	University of Tennessee	Plant Science	PhD	FY21
24.	Shingiro, Bosco	M	COHORT 4	COMPLETED	Michigan State Univ.	Food Science	PhD	FY21
25.	Nishimwe, Kizito	M	COHORT 4	COMPLETED	Iowa State Univ.	Food Science and Technology	PhD	FY20
26.	Kabeja, Alice	F	COHORT 3	COMPLETED	Univ. California, Davis	Horticulture and Agronomy	PhD	FY20
27.	Bigirimana, Joseph	M	COHORT 3	COMPLETED	Michigan State University	Entomology	PhD	FY19
28.	Byukusenge, Maurice	M	COHORT 3	COMPLETED	Penn State University	Pathobiology	PhD	FY20
29.	Dutuze, Marie	F	COHORT 3	COMPLETED	Louisiana State University	Pathobiological Sciences	PhD	FY19

30. Mazimpaka, Eugene	M	COHORT 3	COMPLETED	Makerere University	Veterinary Medicine	MSc	FY17
31. Mpatswenumuga bo, Jean Pierre	M	COHORT 3	COMPLETED	University of Nairobi	Applied Microbiology (Bacteriology)	MSc	FY18
32. Mwizerwa, Herve	M	COHORT 3	COMPLETED	University of Nairobi	Food Science and Technology	MSc	FY18
33. Ntampaka, Pie	M	COHORT 3	COMPLETED	University of Nairobi	Veterinary Pathology, Microbiology and Parasitology	MSc	FY18
34. Rukundo, Jean De Dieu	M	COHORT 3	COMPLETED	University of Nairobi	Livestock Production	MSc	FY18
35. Tumukunde, Ella	F	COHORT 3	COMPLETED	University of Nairobi	Agricultural Economics	MSc	FY19
36. Uwituze, Chantal	F	COHORT 3	COMPLETED		Soil Science	MSc	FY18
37. Uwizeyimana, Dieudonne	M	COHORT 3	COMPLETED	University of Nairobi	Land and Water Management	MSc	FY19
38. Kayitesi, Claudine	F	COHORT 3	COMPLETED	University of Nairobi	Agricultural Economics	MSc	FY20
39. Dushimayezu, Bertrand	M	COHORT 3	WITHDRAWN	University of Nairobi	Agricultural and Applied Economics	MSc	-
40. Niragire, Ildephonse	M	COHORT 3	WITHDRAWN	University of Nairobi	Agricultural Resource Management	MSc	-
41. Mutoni, Doreen	F	COHORT 3	WITHDRAWN	University of Missouri	Plant Science	PhD	-

PAPER PUBLICATIONS BY SCHOLARS

In spite of the challenges represented by a certain segment of the cohort, the completing scholars have shown a high level of academic productivity. Below are the peer reviewed articles published by Rwandan scholars through September 30, 2021, the closing date of the student portion of the BHEARD program.

STUDENT NAME	TITLE	AUTHORS	PUBLISHED IN	PUBLICATION DATE
1. Daniel NIYIKIZA	Interactions of gene expression, alternative splicing, and DNA methylation in the developing soybean nodules	Daniel Niyikiza, Sarbottam Piya, Pratyush Routray, Long Miao, Won-Seok Kim, Tessa Burch-Smith, Tom Gill, Carl Sams ¹ , Prakash R. Arelli, Vince Pantalone, Hari B. Krishnan, and Tarek Hwezi	The Plant Journal	06/03/20
2. Herve Mwizerwa	Profiling of Microbial Content and Growth in Fermented Maize Based Products from Western Kenya.	Mwizerwa H, George Ooko Abong G. O, Mbugua S. K, Okoth M. W, Gacheru P, Muiru M, Obura B, Viljoen B.	Current Research in Nutrition and Food Science	12/01/17
3. Herve Mwizerwa	Effect of Resistant Cassava Starch on Quality Parameters and Sensory Attributes of Yoghurt.	Herve Mwizerwa, George Ooko Abong, Michael Wandayi Okoth, Martin Patrick Ongol, Calvin	Current Research in Nutrition and Food Science	12/01/17

		Onyango And Pushparajah Thavarajah		
4. Richard HABIMANA	Genome-Wide Association Study of Growth Performance and Immune Response to Newcastle Disease Virus of Indigenous Chicken in Rwanda	Richard Habimana, Kiplangat Ngeno, Tobias Otieno Okeno, Claire D' andre Hirwa christian Keambou Tiambo and Nasser Kouadio Yao	Frontiers in Genetics	08/16/2020
5. Richard HABIMANA	Growth performance and immune response to Newcastle disease in four gene pools of indigenous chicken in Rwanda	Habimana, R., Ngeno, K., Shyaka, A., Ntawubizi, M., Mahoro, J., Hirwa, C. d'andre, Ingabire, A., Kiptui, L., Gafarasi, I. M. and Otieno, T. O.	Genetic Resources	12/29/2020
6. Richard HABIMANA	Morphobiometrical characteristics of indigenous chicken ecotype populations in Rwanda	R Habimana , K Ngeno , J Mahoro 4, M Ntawubizi , F Shumbusho , M Manzi , C A Hirwa , T O Okeno	Tropical Animal Health and Production	11/31/2020
7. Richard HABIMANA	Genetic diversity and population structure of indigenous chicken in Rwanda using microsatellite markers	Richard Habimana, Tobias Otieno Okeno, Kiplangat Ngeno, Sylvere Mboumba, Pauline Assami, Anique Ahou Gbotto, Christian Tiambo Keambou, Kizito Nishimwe, Janvier Mahoro, Nasser Yao	PloS One	4/2/2020
8. Dutuze Fausta	Comparative characterization of the reassortant Orthobunyavirus Ngari with putative parental viruses, Bunyamwera and Batai: in vitro characterization and ex vivo stability	M. Fausta Dutuze ^{1,2} , E. Handly Mayton ¹ , Joshua D. Macaluso ¹ and Rebecca C. Christofferson	Journal of general virology	12/01/20
9. Ayabagabo , Jean De Dieu	Mycotoxin Prevalence in Stored Animal Feeds and Ingredients in Rwanda	Kizito Nishimwe, Erin Bowers, Jean de Dieu Ayabagabo, Richard Habimana, Samuel Mutiga, Dirk E. Maier		10/07/18
10. Ayabagabo , Jean De Dieu	Assessment of Aflatoxin and Fumonisin Contamination and Associated Risk Factors in Feed and Feed Ingredients in Rwanda	Kizito Nishimwe, Erin Bowers, Jean de Dieu Ayabagabo, Richard Habimana, Samuel Mutiga, and Dirk Maier	toxins	05/04/19
11. Bigirimana, Joseph	Occurrence of Potato Taste Defect in Coffee and its Relations with Management Practices in Rwanda	Bigirimana, J., Adams, C.G., Gatarayiha, C.M., Muhutu, J.C., Gut, L.J.	Agriculture, Ecosystems & Environment	01/01/19
12. Bigirimana, Joseph	Options for managing Antestiopsis thunbergii (Hemiptera: Pentatomidae) and the relationship of bug density to the occurrence of potato taste defect in coffee	Bigirimana, Joseph ; Gerard, Andrew ; Mota-Sanchez, David ; Gut, Larry J	The Florida Entomologist	12/01/18

13. Bigirimana, Joseph	Population Distribution and Density of Antestiopsis Thunbergii (Hemiptera: Pentatomidae) in the Coffee Growing Regions of Rwanda in Relation to Climatic Variables	Joseph Bigirimana, Bellancile Uzayisenga, and Larry J. Gut	Crop Protection	05/04/19
14. Bigirimana, Joseph	Mitigating Antestia Bug Damage and the Potato Taste Defect in Rwandan Coffee	Andrew Gerard & Joseph Bigirimana		06/02/18
15. Byukusenge, Maurice	Complete Genome Sequences of Four Bovine Coronavirus Isolates from Pennsylvania	Maurice Byukusenge, Ruth Helmus Nissly, Sunitha Manjari Kasibhatla, Lingling Li, Rebekah Russell, Hayley Springer, Rhiannon Barry, Robert Van Saun, David Wolfgang, Ernest Hovingh, Urmilla Kulkarni-Kale, and Suresh V. Kuchipudi	American Society for Microbiology	05/31/18
16. Byukusenge, Maurice	Whole-Genome Sequences of 18 Bovine Alpha herpesvirus 1 Field Isolates from Pennsylvania and Minnesota	Chothe, Shubhada K.; Aswathy, Sebastian; Thomas, Asha; Nissly, Ruth; and Byukusenge, Maurice	American Society for Microbiology	04/01/18
17. Byukusenge, Maurice	Comparison between Rose Bengal Plate Test and Competitive Enzyme Linked Immunosorbent Assay to Detect Bovine Brucellosis in Kigali City, Rwanda	Manishimwe, Rosine; Ntaganda, Julius; Habimana, Richard; Nishimwe, Kizito; Byukusenge, Maurice; Dutuze, Fausta; Ayabagabo, Jean de Dieu; Lydia, Umurerwa; Rukundo, Jean Claude	Journal of Dairy, Veterinary & Animal Research	11/16/15
18. Byukusenge, Maurice	Erratum: Complete genome sequences of four bovine coronavirus isolates from Pennsylvania	Maurice Byukusenge, Ruth Helmus Nissly, Sunitha Manjari Kasibhatla, Lingling Li, Rebekah Russell, Hayley Springer, Rhiannon Barry, Robert Van Saun, David Wolfgang, Ernest Hovingh, Urmilla Kulkarni-Kale, Suresh V. Kuchipudi	American Society for Microbiology	07/19/18
19. Byukusenge, Maurice	Whole-genome sequence analysis reveals unique SNP profiles to distinguish vaccine and wild-type strains of bovine herpesvirus-1 (BoHV-1)	Chothe, S.K., Sebastian, A., Thomas, A., Nissly, R.H., Wolfgang, D., Byukusenge, M., Mor, S.K., Goyal, S.M., Albert, I., Tewar, D., Jayarao, B.M., Kuchipudi, S.V.	Virology	09/01/18
20. Byukusenge, Maurice	Complete Genome Sequences of 20 Nontyphoidal Salmonella Isolates from Rwanda	Maurice Byukusenge, Lingling Li, Mediatrice Uwanyirigira, Venkata R. Vepachedu, Subhashinie Kariyawasam, Manassé Nzayirambaho, Suresh V. Kuchipudi, Bhushan M. Jayarao	American Society for Microbiology	03/21/19

21. Dutuze, Marie Fausta	A Review of Bunyamwera, Batai, and Ngari Viruses: Understudied Orthobunyaviruses With Potential One Health Implications	M. Fausta Dutuze, Manassé Nzayirambaho, Christopher N. Mores, and Rebecca C. Christofferson	Frontiers in Veterinary Science	04/12/18
22. Dutuze, Marie Fausta	Tissue tropisms, infection kinetics, histologic lesions, and antibody response of the MR766 strain of Zika virus in a murine model	Anna B. Kawiecki, E. Handly Mayton, M. Fausta Dutuze, Brad A. Goupil, Ingeborg M. Langohr, Fabio Del Piero, and Rebecca C. Christofferson	Virology Journal	04/18/17
23. Dutuze, Marie Fausta	Perception of Animal Welfare by Students of Cheikh Anta Diop University of Dakar	M.F. Dutuze, A.R.I. Garba, R. Manishimwe, P. Kone	Journal of Tropical Livestock Science	01/20/16
24. Habimana, Richard	Mycotoxin Prevalence in Stored Animal Feeds and Ingredients in Rwanda	Kizito Nishimwe, Erin Bowers, Jean de Dieu Ayabagabo, Richard Habimana, Samuel Mutiga, Dirk E. Maier		10/07/18
25. Habimana, Richard	Model African Union: Experiential Pedagogical Approach to Teaching One Health in Veterinary Medicine and Public Health	Florence Wakoko-Studstill, Margaret Loy Khaitsa, Samuel George Okech, John Baligwamunsi Kaneene, Patrick Pithua, Sherry Blackmon, Haiden Rogers, Gertrude Shepelo, Muasya Daniel Wambua, Erick Komba, Richard Samson, Tsegay Tkue Gebrewahde, Richard Habimana, Andrew Kibogo, Viola Kasonev, Augustus Okite, Watson Aijuka, John David Kabasa	The Pan African Medical Journal	08/26/17
26. Habimana, Richard	Characterization of Indigenous Chicken Production Systems in Rwanda	J. Mahoro, T.K. Muasya, F. Mbuza, R. Habimana, A.K. Kahi	Poultry Science	09/14/17
27. Habimana, Richard	Assessment of Aflatoxin and Fumonisin Contamination and Associated Risk Factors in Feed and Feed Ingredients in Rwanda	Kizito Nishimwe, Erin Bowers, Jean De Dieu Ayabagabo, Richard Habimana, Samuel Mutiga, and Dirk Maier	toxins	05/14/19
28. Kamatenesi, Jovia	Complete Sequence and Diversity of a Maize-Associated Poliovirus in East Africa	Deogracious P. Massawe, Lucy R. Stewart, Jovia Kamatenesi, Theodore Asiimwe, and Margaret G. Redinbaugh	Virus Genes	04/23/18
29. Manishimwe, Rosine	Assessment of Antibiotic Use in Farm Animals in Rwanda	Rosine Manishimwe, Kizito Nishimwe and Lonzy Ojok	Tropical Animal Health and Production	05/19/17
30. Manishimwe, Rosine	Characterization of Antibiotic Resistant Escherichia coli in Different Poultry Farming Systems in the	R. Manishimwe, M. Buhire, A. Uyisunze, J. B. Turikumwenayo, M. Tukei	Veterinary Science & Technology	09/20/17

	Eastern Province and Kigali City of Rwanda			
31. Manishimwe, Rosine	Characterization of Broiler Poultry Production System in Rwanda	Francis Mbuza, Rosine Manishimwe, Janvier Mahoro, Thomas Simbankabo, and Kizito Nishimwe	Tropical Animal Health and Production	10/11/16
32. Manishimwe, Rosine	Higher Education Resource Services, East Africa: A Women Leadership and Management Development Model	Margaret Loy Khaitisa, Naomi Watasa Lumutenga, Ruth Muwazi, Florence Wakoko-Studstill, Irene Naigaga, May Sengendo, Consolata Kabonesa, Wanjiku Kabira, Joy Mueni Maina Kiiru, Katherine Kanabahita, Frances Nyachwo, Mary Okwakol, Catherine Wandera, Kifle Tsegabirhant, Tesfu Hailu Frehiwot, Katunzi-Mollel Kokuberwa, Judith Samwel Kahamba, Angele Musabyimana, Rosine Manishimwe, Marie Bigendako, Renovate Irambona	The Pan African Medical Journal	08/25/17
33. Mazimpaka, Eugene	Current status of cattle production system in Nyagatare District-Rwanda	Mazimpaka, E., Mbuza, F., Michael, T., Gatari, E.N., Bukenya, E.M., James, O.-A.	Tropical Animal Health and Production	08/19/17
34. Mazimpaka, Eugene	Poultry production and constraints in Eastern Province of Rwanda: case study of Rukomo sector, Nyagatare district	Mazimpaka, E., Tukei, M., Shyaka, A., Gatari, E.N.	Tropical Animal Health and Production	04/01/18
35. Mbarushimana Jean de Dieu	Effect of inorganic fertilizers and planting density on growth and yield of selected maize varieties in eastern Rwanda	Jean de Dieu Mbarushimana, Josiah Mwivandi Kinama, George Ndiema Chemining'wa	International Journal of Agronomy and Agricultural Research (IJAAR)	11/06/18
36. Mpatswenumugabo, Jean Pierre	Field Validation of Clinical and Laboratory Diagnosis of Wildebeest Associated Malignant Catarrhal Fever in Cattle	Sheillah Ayiela Orono, George Chege Gitao, Jean Pierre Mpatswenumugabo, Maurine Chepkwony, Christine Mutisya, Edward Okoth, Barend Mark de Clare Bronsvort, George Cameron Russell, Vishvanath Nene and Elizabeth Anne Jessie Cook	BMC Veterinary Research	02/28/19
37. Mpatswenumugabo, Jean Pierre	Prevalence of Subclinical Mastitis and Distribution of Pathogens in Dairy Farms of Rubavu and Nyabihu Districts, Rwanda	J. P. Mpatswenumugabo, L. C. Bebora, G. C. Gitao, V. A. Mobegi, B. Iraguha, O. Kamana, and B. Shumbusho	Journal of Veterinary Medicine	07/17/17

38. Mwizerwa, Herve	Profiling of microbial content and growth in fermented maize based products from Western Kenya	Mwizerwa, H., Abong, G.O., Mbugua, S.K., Okoth, M.W., Gacheru, P., Muiru, M., Obura, B., Viljoen, B.	Current Research in Nutrition and Food Science	08/01/18
39. Mwizerwa, Herve	Effect of resistant cassava starch on quality parameters and sensory attributes of yoghurt	Mwizerwa, H., Abong, G.O., Okoth, M.W., Ongol, M.P., Onyango, C., Thavarajah, P.	Current Research in Nutrition and Food Science	12/01/17
40. Ndayitegeye, Olivier	Evaluation of CROPWAT 8.0 model in predicting the yield of east Africa highland banana under different sets of irrigation scheduling	Olivier Ndayitegeye, Japheth Ogalo Onyando, Romulus Okoth Okwany and Johnson Kisera Kwach	http://www.f2f foundation.org /faa/2020/08/16/evaluation-of-cropwat-8-0-model-in-predicting-the-yield-of-east-africa-highland-banana-under-different-sets-of-irrigation-scheduling/	08/16/20
41. Ndayitegeye, Olivier	Vegetative growth of banana as influenced by deficit irrigation and irrigation interval	Olivier Ndayitegeye, Japheth Ogalo Onyando, Romulus Okoth Okwany, Johnson Kisera Kwach	http://www.f2f foundation.org /faa/2019/12/07/vegetative-growth-of-banana-as-influenced-by-deficit-irrigation-and-irrigation-interval/	12/07/19
42. Ndereyimana, Assinapol	Growth, yield and fruit quality of tomato under different integrated management options against <i>Tuta absoluta</i> Meyrick	Assinapol Ndereyimana, Samuel Nyalala, Patrick Murerwa, Svetlana Gaidashova	Advances in Horticultural Science	04/21/20
43. Ndereyimana, Assinapol	Field efficacy of entomopathogens and plant extracts on <i>Tuta absoluta</i> Meyrick (Lepidoptera: Gelechiidae) infesting tomato in Rwanda	Assinapol Ndereyimana, Samuel Nyalala, Patrick Murerwa, Svetlana Gaidashova	Crop Protection	04/21/20
44. Ndereyimana, Assinapol	Bioactivity of plant extracts against tomato leaf miner, <i>Tuta absoluta</i> (Meyrick) (Lepidoptera: Gelechiidae)	Assinapol Ndereyimana, Samuel Nyalala, Patrick Murerwa, Svetlanan Gaidashova	Journal of Applied Horticulture	12/01/19
45. Ndereyimana, Assinapol	Pathogenicity of some commercial formulations of entomopathogenic fungi on the tomato leaf miner, <i>Tuta</i>	Assinapol Ndereyimana, Samuel Nyalala, Patrick Murerwa, Svetlana Gaidashova	Egyptian Journal of	11/18/19

	absoluta (Meyrick) (Lepidoptera: Gelechiidae)		Biological Pest Control	
46. Ndereyimana, Assinapol	Potential of entomopathogenic nematode isolates from Rwanda to control the tomato leaf miner, Tuta absoluta (Meyrick) (Lepidoptera: Gelechiidae)	Assinapol Ndereyimana, Samuel Nyalala, Patrick Murerwa, Svetlana Gaidashova	Egyptian Journal of Biological pest Control	08/27/19
47. Ndereyimana, Assinapol	Eco-Efficiency of Tomato from Rwamagana District in Rwanda: From Field Constraints to Statistical Significance	Claudine Basset-Mens, Béatrice Rhino, Assinapol Ndereyimana, Ulrich Kleih, Yannick Biardae	Journal of Cleaner Production	05/03/19
48. Nishimwe, Kizito	Mycotoxin Prevalence in Stored Animal Feeds and Ingredients in Rwanda	Kizito Nishimwe, Erin Bowers, Jean de Dieu Ayabagabo, Richard Habimana, Samuel Mutiga, Dirk E. Maier		10/07/18
49. Nishimwe, Kizito	Assessment of Antibiotic Use in Farm Animals in Rwanda	Rosine Manishimwe, Kizito Nishimwe and Lonzy Ojok	Tropical Animal Health and Production	05/19/17
50. Nishimwe, Kizito	Characterization of Broiler Poultry Production System in Rwanda	Francis Mbuza, Rosine Manishimwe, Janvier Mahoro, Thomas Simbankabo, and Kizito Nishimwe	Tropical Animal Health and Production	10/11/16
51. Nishimwe, Kizito	An Initial Characterization of Aflatoxin B1 Contamination of Maize Sold in the Principal Retail Markets of Kigali, Rwanda	Kizito Nishimwe, Immaculate Wanjuki, Charles Karangwa, Ross Darnell, Jagger Harvey	Food Control	09/05/16
52. Nishimwe, Kizito	Assessment of Aflatoxin and Fumonisin Contamination and Associated Risk Factors in Feed and Feed Ingredients in Rwanda	Kizito Nishimwe, Erin Bowers, Jean De Dieu Ayabagabo, Richard Habimana, Samuel Mutiga, and Dirk Maier	toxins	05/14/19
53. Ntampaka, Pie	Knowledge, attitudes and practices regarding rabies and its control among dog owners in Kigali city, Rwanda	Ntampaka, Pie; Nyaga, Philip Njeru; Gathumbi, James Kinuthia; Tukei, Michael; Niragire, François.	Cold Spring Harbor Laboratory Press	12/18/18
54. Shingiro, Jean-Bosco	Fermentation and germination improve nutritional value of cereals and legumes through activation of endogenous enzymes	Smith G. Nkata, Emmanuel Ayua, Elijah H. Kamau, and Jean-Bosco Shingiro	Food Science & Nutrition	09/21/18
55. Uwituze, Chantal	Effect of Mulch Types and Mineral Fertilizer Rates on Cabbage (Brassica Oleracea var. Capitata) Growth and Yield in the Highlands of Rwanda	"Chantal Uwituze, Hamudu Rukangantambara1 and Joyce J. Lelei2	International Journal of Plant & Soil Science	07/26/17
56. Uwizeyimana, Dieudonne	Effect of water conservation measures on soil moisture and maize yield under drought prone agro-ecological zones in Rwanda	Uwizeyimana, Dieudonne; Kironchi, Geoffrey; Karuku, George; Mureithi, Stephen M.	International Soil and Water Conservation Research	09/01/18

57. Uwizeyimana, Dieudonne	Modelling surface runoff using the soil conservation service-curve number method in a drought prone agro-ecological zone in Rwanda	Uwizeyimana, D., Mureithi, S.M., Mvuyekure, S.M., Karuku, G., Kironchi, G.	International Soil and Water Conservation Research	12/19/18
58. Waweru, Bancy	Molecular Detection of Ugandan Passiflora Virus Infecting Passionfruit (<i>Passiflora edulis sims</i>) in Rwanda	W. Waweru Bancy, C. Kilalo Dora, Kyalo Martina, and J. Musembi Mutuku	Annual Research & Review in Biology	01/16/19
59. Waweru, Bancy	Management of White Grubs (Coleoptera:Scarabeidae) with Entomopathogenic Nematodes in Rwanda	Joelle Kajuga, Athanase Hategekimana, Xun Yan, Bancy Waithira Waweru, Hongmei Li, Kebin Li, Jiao Yin, Li Cao, Daniel Karanja, Christine Umulisa, and Stefen Toepfer	Egyptian Journal of Biological Pest Control	01/30/18
60. Waweru, Bancy	Research progress report from July to September 2018	Bancy Waithira Waweru		
61. Waweru, Bancy	Diversity and economic importance of viral diseases of pepper (<i>Capsicum spp.</i>) in Eastern Africa	"B.W. Waweru, D.C. Kilalo , D.W. Miano, J.W. Kimenju and P. Rukundo"	Journal of Applied Horticulture	
62. Pascal Nyabinwa	Effects of endometritis on reproductive performance of zero-grazed dairy cows on smallholder farms in Rwanda	Pascal Nyabinwa, Olivier Basole Kashongwe, Claire d'Andre Hirwa, Bockline Omedo Bebe	Animal Reproduction Science	08/27/20
63. Rosine Manishimwe	Antibiotic resistance among <i>Escherichia coli</i> and <i>Salmonella</i> isolated from dairy cattle feces in Texas	Rosine Manishimwe ,Paola M. Moncada,Marie Bugarel, H. Morgan Scott,Guy H. Loneragan	PLOS ONE	05/21/21
64. Bancy Waithira Waweru	Farmers' knowledge and perceptions of virus diseases affecting hot pepper (<i>Capsicum sp.</i>) and their management in Rwanda.	Waweru B.W., Kilalo D.C., Kimenju J.W., Rukundo P. and Miano D.W.	Fundamental and Applied Agriculture	08/16/20
65. Bancy Waithira Waweru	Evaluation of hot pepper (<i>Capsicum spp.</i>) genotypes for resistance to viruses and aphids in Rwanda.	Waweru B.W., Kilalo D.C., Kimenju J.W., Rukundo P. and Miano D.W.	Advances in Horticultural Science	10/23/20
66. Bancy Waithira Waweru	Effect of border crops and intercropping on aphid infestation and the associated viral diseases in hot pepper (<i>Capsicum sp.</i>).	Waweru, B.W, Rukundo, P., Kilalo, D.C, Miano, D.W and Kimenju, J.W	Crop Protection Journal	07/01/21
67. Bancy Waithira Waweru	Detection and distribution of viruses infecting hot pepper (<i>Capsicum spp.</i>) in Rwanda.	Waweru, B.W., Miano, D.W., Kilalo, D.C., Rukundo P and Kimenju, J.W	Journal of Plant Pathology	03/15/21
68. Rosine Manishimwe	Antibiotic-Resistant <i>Escherichia coli</i> and <i>Salmonella</i> from the Feces of Food Animals in the East Province of Rwanda	Rosine Manishimwe, Paola M. Moncada, Vestine Musanayire, Anselme Shyaka, H. Morgan Scott, Guy H. Loneragan	Animals	04/03/21