



FEED THE FUTURE

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

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*Borlaug Higher Education for
Agricultural Research and Development*

Final Scholar Report: Kenya

By

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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 students updates for Kenya.

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

- John Medendorp, Director
- Mathias Ndizihiwe, 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 Kenya. 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 10 Kenyan scholar and 9 successfully completed their program and went back to their home institutions after completion of their degree program.

Successes

The Kenyan cohorts showed the lowest attrition rate of any of the BHEARD country programs. This low attrition rate provides a better investment and a higher return on funds invested for the Mission. Most of the sponsored scholars studied at nationally ranked programs in the United States, one of them in South Africa, making these scholars unique among the various country cohorts. The scholars were well selected for the program and well prepared.

Challenges

One PhD scholar failed candidacy and was by obligation terminated by BHEARD.

LIST OF ALL SCHOLARS

Below is the list of all Kenyan BHEARD scholars, together with their respective graduation status, institution of study, subject area, degree received, and year of graduation.

NAME (first and last)	SEX	COHORT	STUDENT STATUS	UNIVERSITY	SUBJECT AREA	ACADEMIC LEVEL	GRADUATION YEAR
1. Ithinji, Duncan	M	COHORT 3	COMPLETED	Washington State University	Immunology and Infectious diseases	PhD	FY21
2. Kosgey, Zannah	F	COHORT 3	COMPLETED	University of Minnesota	Plant Pathology	PhD	FY20
3. Macharia, Anthony	M	COHORT 3	COMPLETED	Texas Tech University	Agricultural and Applied Economics	PhD	FY20
4. Otieno, Susan	F	COHORT 3	COMPLETED	Michigan State University	Plant Breeding, Genetics and Biotechnology	PhD	FY20
5. Rono, Patrick	M	COHORT 3	COMPLETED	Texas Tech University	Agricultural and Applied Economics	PhD	FY20
6. Shibia, Mumina	F	COHORT 3	COMPLETED	Texas Tech University	Agricultural and Applied Economics	PhD	FY20
7. Magogo, Juma	M	COHORT 3	COMPLETED	Texas Tech University	Agricultural Education and Communications	PhD	FY20
8. Moturi, Walter	M	COHORT 3	COMPLETED	University of Georgia	Agricultural and Applied Economics	PhD	FY19
9. Ndungu, Cyrus	M	COHORT 3	WITHDRAWN	University of Minnesota	Applied Plant Science, Plant Breeding / Molecular Genetics	PhD	
10. Mbaka, Zachary	M	COHORT 4	COMPLETED	University of Pretoria	Natural Sciences	MSc	FY20

PAPER PUBLICATIONS BY SCHOLARS

The following is a partial list of the publications generated by the Kenyan scholars. This list was tabulated only through the end of the student program, which closed on September 30, 2021.

STUDENT NAME	TITLE	AUTHORS	PUBLISHED IN	PUBLICATION DATE
1. Juma Riziki Magogo	Spatial Patterns of African Indigenous Vegetables Value Chain Actors: The Case of Narok and Kajiado County, Kenya	"Juma R. Magogo David E. Lawver Mathew T. Baker Boren-Alpizar Amy Cynthia McKenney Agnes O. Nkurumwa"	American Journal of Geographic Information System	09/02/20
2. Kosgey, Zannah	Inheritance of Stem Rust (<i>Puccinia graminis</i> Pers. F. Sp. <i>Tritici ericks</i> and E. Hen) Resistance in Bread Wheat (<i>Triticum aestivum</i> L.) Lines to TTKST Race	Zannah Kosgey, James O. Owuochi, Michael A. Okiror, and Peter N. Njau	International Journal of Agronomy and Agricultural Research	10/12/15
3. Kosgey, Zannah	Potential Uses, Perceptions and Policy Issues of Genetically Modified Crops in Africa: A Case Study of Kenya	Kosgey Zannah and Kimani Cyrus	African Journal of Food, Agriculture, Nutrition and Development	01/01/19
4. Kosgey, Zannah Chepkoech	First Report of a 16Srl (Aster Yellows) Group Phytoplasma in Phlox in the United States	Andrew E. Sathoff, Deepak Rajendran, Seth D. Wannemuehler, Katarina Sweeney, Fazal Manan, Zannah C. Kosgey, Lillian H. Garber, and Benham E. Lockhart,	Plant Health Progress	09/06/16
5. Macharia, Anthony	Heterogeneity in Irrigation Technology Impacts: Implication for Adoption	Anthony M. Macharia, Carlos Carpio, and Lilian Kirimi		08/05/18
6. Macharia, Anthony	Effect of Irrigation Technology Adoption on Smallholder Common Bean (<i>Phaseolus vulgaris</i>) Productivity in Kenya	Anthony M. Macharia, Carlos Carpio, and Lilian Kirimi		02/02/18
7. Magogo, Juma Riziki	Adoption of African Indigenous Vegetables into Agro-Pastoral Livelihoods for Income and Food Security: Evidence from Kenya	Patience Mlongo Mshenga, Mwanarusi Saidi, Agnes O. Nkurumwa, Juma Riziki Magogo, Shem Ipomai Oradu	Journal of Agribusiness in Developing and Emerging Economies	08/14/15
8. Moturi, Walter Ondicho	Milk Marketing Channel Choices for Enhanced Competitiveness in The Kenya Dairy Supply Chain: A multinomial Logit Approach	Moturi, Walter ; Obare, Gideon ; Kahi, Alexander	International Association of Agricultural Economists	08/09/15
9. Otieno, Susan	Performance of Five Potato Varieties with Regards to Growth and Production of Mini-Tubers Under an Aeroponic System in Central Highlands of Kenya	Miriam W. Mbiyu, Charles Lung'aho, Susan A. Otieno, Moses W. Nyongesa, Margaret	African Journal of Agricultural Research	11/07/17

		N. Muchui, and Judith N. Ogemma		
10. Otieno, Susan	Taking Aqua Shops from Asia to Africa	Susan Otieno, Graham Haylor, and William Savage	Facilitated Advocacy for Sustainable Development	
11. Rono, Patrick Kibet	An Analysis of Demand for Roots and Tubers in Kenya using the Linear Approximation Almost Ideal Demand System (LA-AIDS)	Rono, Patrick Kibet; Rahman, Shaikh; Benaissa Chidmi	Southern Agricultural Economics Association	02/04/17
12. Rono, Patrick Kibet	Determinants of Food Security among Smallholder Farmers in Kenya	Rono, Patrick K; Rahman, Shaikh Mahfuz; Devadoss, Stephen	Southern Agricultural Economics Association	02/02/18
13. Shibia, Mumina Guyo	Consumer Demand for Meat in Kenya: An Examination of the Linear Approximate Almost Ideal Demand System	Mumina Shibia, Shaikh Mahfuz Rahman, and Benaissa Chidmi	Southern Agricultural Economics Association	02/04/17
14. Shibia, Mumina Guyo	An Empirical Evaluation of the Nature and Extent of Livestock Shocks in Sedentary Pastoral Households in Northern Kenya	Mumina Shibia, Shaikh Mahfuz Rahman, and Stephen Devadoss	Southern Agricultural Economics Association	02/02/18