

## **Borlaug LEAP- Past Fellows Directory (Winter 2012)**

### **Abeyou Wale Worqlul**

**Country:**  
Ethiopia

**University:**  
Cornell University

**Department & Degree:**  
Biological and Environmental Engineering, PhD Candidate

**US Mentor institution:**  
Cornell University

**CGIAR Mentor Institution:**  
International Water Management Institute (IWMI)

**Research:**  
Enhancing Rainfall Productivity in Ethiopia for Increased Food Safety

**Email:**  
[aww64@cornell.edu](mailto:aww64@cornell.edu)



Abeyou Worqlul became a Borlaug LEAP Fellow in the Winter of 2012. His research on improving the efficiency of rainfall was aimed at increasing food safety in Ethiopia. One of the goals of this proposal was to plan best management practices more effectively by promoting infiltration and decreasing runoff and the associated soil loss on those water-short parcels upslope, as well as either increasing runoff without causing more erosion or improving drainage on those lands downslope that are periodically saturated during the rainy season.

Mr. Worqlul believes that Ethiopia's best hope for increasing food production is by increasing the efficiency of rainwater collection in order to produce more 'green' water available for crop use (with groundwater storage that also can enhance water availability for human use). He indicated that this can be achieved by storing more rainfall in drier soils, making water available during the critical inter-monsoonal rainless periods. This also will reduce runoff and thus cut erosion.

Mr. Worqlul's research focuses on the Blue Nile Basin (three small watersheds), in Ethiopian highlands under the supervision of Dr. Charlotte Macalister at the International Water Management Institute (IWMI). The research aims to contribute to the Nile Basin Development Challenge Team, particularly in assessing and anticipating the consequences of innovation in Rainwater Management Systems, which is a fully interdisciplinary research and development project at IWMI. Eventually, these projects and other projects at IWMI intend to improve the livelihoods of poor farmers in Ethiopia. Mr. Worqlul also worked with Dr. Tammo Steenhuis, who is a respected professor and researcher at Cornell University. He served as Mr. Worqlul's mentor and advisor throughout the fellowship and continues to advise his PhD studies.

---

## **Beverly Agesa Liavoga**

**Country:**  
Kenya

**University:**  
University of Nairobi, Kenya

**Department & Degree:**  
Soil Science, MSc

**US Mentor institution:**  
Oklahoma State University

**CGIAR Mentor Institution:**  
International Crops Research Institute for Semi-Arid Tropics (ICRISAT)

**Research:**  
Climate Change Effects on Growth and Yield of Sorghum and Cassava in Yatta District, Kenya.

**Email:**  
[beverlyagesa@gmail.com](mailto:beverlyagesa@gmail.com)



Beverly Liavoga is a Research Assistant at the International Plant Nutrition Institute (IPNI), located in her home country of Kenya. In 2012 she was selected as a Borlaug LEAP Fellow from the University of Nairobi in partnership with Oklahoma State University. Ms. Liavoga's research investigated farmer's fields in the arid/semi-arid eastern province of Kenya. The McKnight Foundation and Oklahoma State University helped fund her research and the University of Nairobi provided laboratory facilities for analytical analysis of soils and crop tissues. Ms. Liavoga's US mentor was Dr. Jeffrey Vitale, who has over 15 years of experience working and conducting research in Africa and he helped support the modeling elements of her research.

Her research studied the climate change effects on growth and yield of sorghum and cassava in Yatta District, Kenya. Her research incorporated what farmers already had and combined them with basic farming systems to better their crops. Farmers often focused on crops that were not as adaptable, such as maize. She believed sorghum and cassava were very adaptable crops and that farmers could produce enough to sell in the market. Once farmers changed their mindset, they were able to improve the nutritional status of their families.

Ms. Liavoga is known for her clear and methodical strategy, demonstrated technical integrity, and leadership characteristics. She has a clear vision of leadership traits and indicated that true leaders should have a vision, know what they want to achieve, be assertive and disciplined, have integrity, and lead by example.

---

## **Moses Owori**

**Country:**

Uganda

**University:**

University of Wyoming

**Department & Degree:**

Agricultural and Applied Economics, MSc

**US Mentor institution:**

University of Wyoming

**CGIAR Mentor Institution:**

International Center for Tropical Agriculture (CIAT)

**Research:**

Assessment of the Socioeconomic Indicators of Progress in the Implementation of Conservation Agriculture Practices in Western Kenya and Eastern Uganda

**Email:**

[mowori@uwyo.edu](mailto:mowori@uwyo.edu)

In 2012, the Borlaug LEAP fellowship supported Moses Owori's masters degree in Agricultural and Applied Economics research at the University of Wyoming. He received academic and professional mentorship by Dr. Dannele E. Peck and his CGIAR mentor Dr. Saidou Koala at IITA. They both helped Moses in analyzing the data he collected during his field research, with the writing of his thesis and by putting him in contact with others in his field.

In 2013, after completing his Borlaug LEAP fellowship and his MSc, Moses traveled back to Uganda and joined CARE International Inc. where he served as Program Quality and Learning Manager for CARE's Women Empowerment Program (WEP). WEP's goal is the socioeconomic empowerment of women in northern Uganda that is still recovering from two decades of civil war. He is currently working at USAID's Famine Early Warning Systems Network (FEWSNET) project in Uganda, which allows him to make a direct contribution to development and food security in Uganda.

Together with other experts in FEWSNET, Moses compiles data on the food security situation in Uganda using political, economic, environmental and weather-based markers. Effective communication of their analysis to partners and decision-makers has helped USAID and other national partners plan effectively and respond to food insecurity problems as they present themselves. In addition, Moses works with local organizations to improve their ability to handle any food related issues in the future using the skills he learned as a student and on the job.



## **Oyeyemi Ajayi**

**Country:**

Nigeria

**University:**

University of Ag Abeokuta, Nigeria

**Department & Degree:**

Animal Genetics, PhD

**US Mentor institution:**

Cornell University

**CGIAR Mentor Institution:**

International Livestock Research Institute (ILRI)

**Research:**

Responding to Global Climate Change: Identification and Analysis of Heat Stress Genes in *Bos indicus* and *Bos taurus* Cattle.

**Email:**

[yemijay2002@yahoo.com](mailto:yemijay2002@yahoo.com)

Oyeyemi Ajayi became a Borlaug LEAP Fellow in the Winter of 2012, while studying the underlying connections between global climate change and heat stress in tropically-adapted and temperate adapted cattle species. The objectives of this research project were to carry out the computational genome-wide identification of heat stress genes in the bovine genome; to study the thermoregulatory organs [skin, kidney, heart, brain (hypothalamus), and adrenal glands] in African *Bos indicus* (White Fulani, Sokoto Gudali) and African *Bos taurus* (Muturu, N'dama) compared to representative taurine and indicus cattle in the USA (Angus, Brahman) to identify differentially expressed genes involved in heat stress; and to report upon the results of the population genetic analysis of mutations in some identified heat stress genes that in the long term may be useful in selection and molecular animal breeding of heat tolerant cattle. This last part of his research was recently published in the [Journal of Genomics](#).

Ajayi is dedicated to the mission of providing everyone in his home country of Nigeria with access to safe, nutritious, and affordable food for sustenance and good health. He believes science and technology play a significant role in overcoming the barriers and challenges many rural Nigerians face as they begin trying to develop more sustainable livelihoods. He has plans to work with smallholder farmers in Sub Saharan Africa to improve their livelihood and economic potentials through research and education.

He is currently a PhD student in the Department of Environmental and Plant Biology at the Ohio University. He utilizes molecular biology, genetics, and biochemistry to investigate the molecular basis of plant growth and development under normal growth and drought stress conditions. In addition, he utilizes his computational skills to investigate molecular pathways involved in abiotic stress signaling in diverse species of plants to better understand the molecular dynamics of plant responses to climate change.

---



## **Saul Daniel Ddumba**

**Country:**

Uganda

**University:**

Michigan State University

**Department & Degree:**

Geography, Environmental Science and Policy, PhD

**US Mentor institution:**

Michigan State University

**CGIAR Mentor Institution:**

International Potato Center (CIP)

**Research:**

The Impact of Climate Variability and Change on Sweet potato Production in Uganda.

**Email:**

[ddumbasa@msu.edu](mailto:ddumbasa@msu.edu)

Saul Daniel Ddumba received his PhD in Geography with a specialization in Environmental Science and Policy from Michigan State University in December 2014. His thesis research focused on the impact of climate variability and change on sweet potato production in his home country of Uganda. His Borlaug LEAP Fellowship enabled him to plan, organize and carry out field-based experiments at Uganda's National Crops Resources Research Institute (NaCRRRI) to quantify growth and development patterns for several representative sweet potato varieties.

Dr. Ddumba worked with mentors Dr. Jeffery Andersen of Michigan State University and Dr. Robert Mwangi of the International Potato Center (CIP). Dr. Ddumba also traveled to headquarters in Lima, Peru to work with Dr. Robert Quiroz, head of the Production Systems and Environment Division at CIP.

Upon graduation, Dr. Daniel Ddumba returned to Uganda and continues his research examining the impact of climate change on crop production, particularly sweet potatoes and maize. He is a Lecturer in the Department of Geography, Geo-Information and Climatic Sciences at Makerere University in Kampala.

---



## **Sibusisiwe Caroline Kamanga-Limuwa**

**Country:**

Malawi

**University:**

University of Nairobi

**Department & Degree:**

Soil Science, MS

**US Mentor institution:**

University of California, Davis

**CGIAR Mentor Institution:**

CIAT-TSBF

**Research:**

Soil Fertility Gradients: Effects of Long-term Fertilizer Application on Soil Properties, Striga Density and Maize Yields.

**Email:**

[busiekam@yahoo.com](mailto:busiekam@yahoo.com)



Sibusisiwe Caroline Kamanga-Limuwa received her Master's from the University of Nairobi for her research titled: "Soil Fertility Gradients: Effects of Long-term Fertilizer Application on Soil Properties, Striga Density and Maize Yields." Ms. Kamanga-Limuwa is known for her strong passion for effective leadership and the ability to make a difference in the agricultural sector. She has a background in forestry, and this led her to her research soil fertility and the use of fertilizers in the African context, and how this could help contribute to improved livelihoods. She was awarded a Borlaug LEAP Fellowship in 2012 and she remains grateful for the opportunity to conduct her research at the University of California, Davis, where she was able to access more technologically advanced equipment than she would have otherwise been able to use at her home institution. She completed her studies and graduated with her Master's in August 2013. Prior to graduation, thanks to the networks she created via the fellowship, she secured a job as a program manager with the Civil Society Agriculture Network (CISANET). CISANET works to address the needs of the smallholder farmers by linking agriculture with nutrition and social protection and advocating for better agriculture policies in Malawi.

The position at CISANET gave Ms. Kamanga-Limuwa the opportunity to work in a leadership position in the field of agriculture and lead a team of people thanks to the skills she gained from her experience in the LEAP fellowship. She also began mentoring upcoming future female agricultural scientists and, to date, has mentored five women. Two of her mentees have been awarded African Women in Agriculture Research and Development (AWARD) fellowships, two have been awarded scholarships to pursue their Masters' degrees in agriculture with Transdisciplinary Training for Resource Efficiency and Climate Change Adaptation in Africa (TRECCA), and one has been awarded a fellowship with Young African Leaders Initiative (YALI)-Mandela Washington Fellowship.

In January 2014, Ms. Kamanga-Limuwa submitted a paper based on the research she conducted while at UC Davis to the 20th World Congress of Soil Scientists. The paper was accepted for presentation and, thanks to funding from AWARD, she was able to attend the

conference in June 2014 in Jeju, South Korea. From May to July 2014, she joined the International Center for Tropical Agriculture (CIAT) where she worked in partnership with the Pan African Bean Research Alliance (PABRA) and carried out various data analysis studies in order to better understand gender issues in agricultural research. She was able to write a proposal with partners from Lilongwe University of Agriculture and Natural Resources (LUANAR) in Malawi, University of Zambia, and Mulungushi University in Zambia to receive funding for a research project using biochar. She currently serves as a co-investigator for this project. In June 2015, Ms. Kamanga-Limuwa joined the Clinton Foundation and is currently serving there as their Trees of Hope Manager at the Clinton Development Initiative in Malawi.

---

## **Borlaug LEAP- Past Fellows Directory (Summer 2012)**

### **Francis Asiimwe**

**Country:**

Uganda

**University:**

Makerere University, Uganda

**Department & Degree:**

Agriculture, MSc

**US Mentor institution:**

University of California, Riverside

**CGIAR Mentor Institution:**

Bioversity International

**Research:**

Genetic Diversity and Relationships in East African Musa Germplasm Using Microsatellite Markers

**Email:**

[asiimwefx@hotmail.com](mailto:asiimwefx@hotmail.com)



Former Borlaug LEAP fellow Francis Asiimwe completed his MSc in Crop Science at Makerere University in Uganda in January 2014. Asiimwe believed that by working with over 100 cultivars of cooking, dessert, and non-edible banana, he could help provide the genetic resources necessary to impart improved resistance to the variety of challenges banana production is facing. His thesis research entitled “Genetic Diversity and Relationships within East African Musa Germplasm”, employed new micro-satellite markers to study the banana genome, and to compare relationships within different cultivars. Food security in Eastern Africa, Asiimwe believes, is dependent on developing banana that tolerant to drought and diseases challenging banana production.

During his Borlaug LEAP fellowship, Asiimwe was mentored by Dr. Norman Ellstrand, a geneticist at the University of California, Riverside, and Dr. Deborah Karamura, at Bioversity International in Uganda. Asiimwe traveled to California to receive hands-on training in his molecular and statistical assessment activities. Asiimwe was also working as a research assistant with the National Agricultural Research Laboratories in Uganda where he was developing in vitro selection techniques for drought and stress tolerance among tissue cultured banana plantlets. He is interested in the genetics and physiology of the banana plant and well as agriculture-based business incubation projects. After graduating, Asiimwe planned to continue studying the drought stress physiology of major staples in order to understand the mechanisms by which these crops withstand unprecedented changes in climate.

---



## **Lauretta Ngere**

**Country:**

Nigeria

**University:**

Texas A&M University, AgriLife Research and Extension Center

**Department & Degree:**

Animal Breeding, PhD

**US Mentor institution:**

Texas A&M University, AgriLife Research and Extension Center

**CGIAR Mentor Institution:**

International Livestock Research Institute (ILRI)

**Research:**

Genetic Enhancement of Ruminant Resistance/Tolerance to Internal Parasites

**Email:**

[lauretta.ngere@gmail.com](mailto:lauretta.ngere@gmail.com)

Former Borlaug LEAP fellow Dr. Lauretta Ngere used her time as a fellow to work towards her PhD in Animal Breeding at Texas A&M University. Her doctoral project was entitled "Genetic Enhancement of Ruminant Resistance/Tolerance to Internal Parasites". Through her research work, she was looking to develop selection programs to improve resistance and/or tolerance to internal parasites in ruminants, thereby increasing livestock productivity and enhancing availability of food.

Dr. Ngere began her Borlaug LEAP fellowship in the summer of 2012 and was mentored by Dr. David Riley at Texas A&M University and with Dr. Karen Marshall at the International Livestock Research Institute (ILRI) in Kenya. She returned to her home country of Nigeria after completing her PhD in 2015 to join the Animal Breeding Teaching and Research faculty at an institution there in Nigeria.

Dr. Ngere aspires to be a leader in the agricultural field. Her vision is to become a professional Animal Scientist, who is trained and equipped to contribute to the improvement of African indigenous breeds of livestock, increase their productivity by selecting for disease resistance, and address the problem of nutrition and hunger. She wants to help in improving the economic state of farmers by disseminating knowledge, solutions and strategies for improvement and ultimately enhance long-term and equitable solutions for agriculture and food production. She has is strongly interested in being a part of the movement for reducing hunger, malnutrition and alleviating poverty in developing countries, particularly her country, Nigeria through International Agricultural development and Animal production. Ultimately, she wants to contribute to the development of agriculture worldwide.

---



## **Mariam Mtunguja**

**Country:**

Tanzania

**University:**

Sokoine University of Agriculture, Tanzania

**Department & Degree:**

Food Science, PhD

**US Mentor institution:**

University of California, Davis

**CGIAR Mentor Institution:**

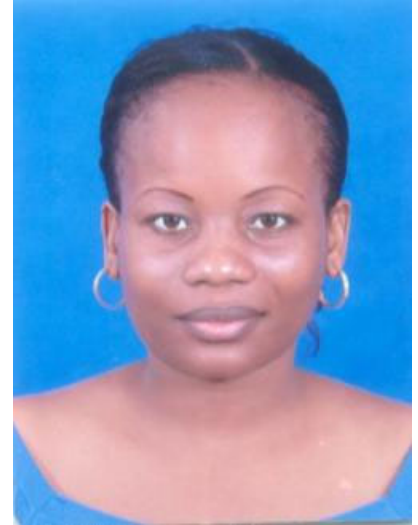
International Institute of Tropical Agriculture (IITA)

**Research:**

Genetic Diversity, Starch Physicochemical Properties and Cyanide Levels in Farmers' Preferred Cassava Landraces in the Eastern Zone of Tanzania

**Email:**

[mammieMt@yahoo.co.uk](mailto:mammieMt@yahoo.co.uk)



Former Borlaug LEAP fellow Dr. Mariam Mtunguja believes that good leaders develop through a never-ending process of self-study, education, training, and experience. She saw her Borlaug LEAP Fellowship as an opportunity to increase her knowledge, enhance her skills and expand her professional network. She took a study leave from her position as a research scientist at the Mikocheni Agricultural Research Institute (MARI), under the Ministry of Agriculture Food Security and Cooperatives (MAFSC) in Tanzania, in order to pursue her doctoral studies. Dr. Mtunguja was working towards a PhD in Food Science at Sokoine University of Agriculture at the time that she received her fellowship.

Dr. Mtunguja's research focused on identifying cassava varieties with high starch content that could be recommended for commercial production. A better understanding of the properties of cassava starch will hopefully help to identify different industrial applications for the starch. Cassava starch has the potential to be used in baking, textile, pharmaceutical and paper industries. Her studies contributed to moving cassava from a subsistence to a commercial crop and, in turn, helping farmers to generate income and improve household food security.

During the Borlaug LEAP fellowship, Dr. Mtunguja traveled to the University of California, Davis to work with Dr. Neelima Sinha in the Department of Plant Biology. Dr. Mtunguja's work was cross-disciplinary, involving skills in molecular techniques as well as the post-harvest traits of cassava. She worked closely with the local Tanzanian growers in her selection of cassava land-races to use in her study. Dr. Edward Eneah Kanju from IITA -Tanzania mentored her activities related to cassava breeding. Dr. Mtunguja graduated with her PhD in Food Science in November 2015 is currently a senior agriculture research officer at MARI where she is heading the Post-harvest and Technology Transfer unit. The unit is working on distributing improved cassava to smallholder farmers in the region as well as working on improved orange-fleshed sweet potato varieties.

---

## **Mary Oyunga**

**Country:**

Kenya

**University:**

Maseno University, Kenya

**Department & Degree:**

Maternal and Child Nutrition, PhD

**US Mentor institution:**

Emory University

**CGIAR Mentor Institution:**

International Potato Center (CIP)

**Research:**

Prevalence and Predictors of Vitamin A Deficiency in Children 6 - 23 Months in Western Kenya

**Email:**

[oyungam2010@gmail.com](mailto:oyungam2010@gmail.com)



Dr. Mary Oyunga, a 2012 Borlaug LEAP fellow, is currently a Senior Research Officer at KALRO in Kenya, heading up their Root & Tuber program. She completed her PhD at Maseno University in, Kenya. From the early 90s, Oyunga focused her research on the orange-fleshed sweet potato as dietary source vitamin A for children under-five and women of childbearing age. She had the opportunity to work with Dr. Jan Low at the International Potato Center (CIP) during her fellowship as well as Dr. Aimee Webb of Emory University, and has worked at many other national and international organizations since then. She has helped create and implement intervention studies in sub-Saharan Africa where Vitamin A deficiency is prevalent based on her research.

Dr. Oyunga worked on a project that integrated agriculture and health approach into an existing health project in Western Kenya, focusing on improving the well-being of vulnerable target groups, especially pregnant/lactating mothers and children two years and under. This approach was designed to encourage healthy behavior through the delivery of nutrition and health communication messages via various community channels, such as local agricultural extension services, local NGOs, and health centers. It was the first intervention study that explicitly linked orange fleshed sweetpotato distribution to an existing public health service, which was educating the public on the importance of Vitamin A in the diet.

Oyunga received the Borlaug LEAP fellowship in 2012 while conducting her research focused on Maternal & Child Nutrition. Her thesis was titled “Burden of Vitamin A Deficiency and Nutritional Status among Children Aged 6 - 23 months in Bungoma and Busia Counties of Western Kenya”. In her studies, Oyunga looked for simple, yet indisputable, estimates of prevalence of vitamin A deficiency (VAD) and nutritional status, predictors/risk factors of VAD, investigated and demonstrated geo-spatial distribution of VAD, and examined the perceptions and experiences of frontline nutritionists and caretakers/mothers on their knowledge about VAD among children 6-23 months in Western Kenya. Before this study was conducted, Kenya lacked sufficient information which often made decisions any on interventions inaccurate. Oyunga is grateful for her Borlaug LEAP fellowship experiences, which has enabled her to implement tasks associated with her new roles, especially with respect to Maternal and Child nutrition.

Oyunga was a 2009 African Women in Agricultural Research and Development (AWARD) recipient.

---

## **Mustafa Jibrin**

**Country:**  
Nigeria

**University:**  
Ahmadu Bello University, Nigeria

**Department & Degree:**  
Crop Protection, MSc

**US Mentor institution:**  
University of Florida

**CGIAR Mentor Institution:**  
International Institute of Tropical Agriculture (IITA)

**Research:**  
Molecular Characterization and Race Classification of Bacteria Spot Pathogen of Tomato in Northwestern Nigeria.

**Email:**  
[jibrinmo@gmail.com](mailto:jibrinmo@gmail.com)



Borlaug LEAP Fellow Mustafa Jibrin worked towards an MSc in Crop Protection at Ahmadu Bello University in Zaria, Nigeria. His MSc thesis was entitled, “Molecular Characterization and Race Classification of Bacterial Spot Pathogen of Tomato in North-Western Nigeria.” Based on fieldwork in northern Nigeria, Mustafa worked to identify the races as well as the actual species of the bacterial spot pathogen present, because recent research has shown that the different races of the pathogen actually belong to four different species. Unfortunately, information about this devastating disease is lacking in Nigeria, hence the poor management measures currently being adopted. Jibrin’s research will hopefully form the bedrock for a well-informed integrated disease management approach that would be developed afterwards.

Mustafa began his Borlaug LEAP Fellowship in 2013 and was mentored by Prof. J.B. Jones of the University of Florida, and Dr. Fen Beed of the International Institute for Tropical Agriculture (IITA) in Tanzania. Mustafa, who currently holds an assistant lecturing position in his university, planned to return to Nigeria and join the leadership front in improving agriculture and the livelihood of the rural poor. Mustafa both completed his fellowship and received his master's degree in 2014.

Mustafa is currently a PhD student at the University of Florida where he is researching the evolutionary studies of worldwide strains of *Xanthomonas* species that causes bacteria spot disease on tomato and pepper, while also attempting to manage the disease using sustainable approaches. Mustafa is using phylogenetic and comparative genomics approaches to trace their evolution and how the bacteria have adapted to their host plants. His work on strains from Nigeria additionally explore pathogen population dynamics over a period of time. Mustafa has also been working in a project entitled *Extension: Development of Novel Extension Methods for*

*the Adoption of Animal Traction by Women Farmers*, which is being sponsored by the Bill & Melinda Gates Foundation. He continues to serve as a leader for the those he works with and credits the Borlaug LEAP Fellowship with exposing him to excellent mentors and study opportunities, which have helped him in advancing his education and career.

---

## **Samuel Mutiga**

**Country:**

Kenya

**University:**

Cornell University

**Department & Degree:**

Plant Pathology and Plant Microbe Biology, PhD

**US Mentor institution:**

Cornell University

**CGIAR Mentor Institution:**

International Livestock Research Institute (ILRI)

**Research:**

Prevalence and Factors for Aflatoxin and Fumonisin Accumulation in Maize

**Email:**

[skm88@cornell.edu](mailto:skm88@cornell.edu)



Borlaug LEAP Alumnus Dr. Samuel Mutiga joined the program as a PhD candidate in the department of Plant Pathology and Plant-Microbe Biology at Cornell University, where he was mentored by Dr. Rebecca J. Nelson. His thesis focused on understanding the epidemiological and genetic factors that are associated with mycotoxin accumulation in maize. Upon completion of two years of course work at Cornell University, Dr. Mutiga got a placement at Biosciences eastern and central Africa (BecA) – ILRI, Nairobi, where he continued with his thesis research with a co-mentorship of Dr. Jagger Harvey. Through the Cornell – BecA collaboration, Dr. Mutiga's work on the “prevalence of aflatoxin in eastern and western regions of Kenya” set foundation for a bigger aflatoxin project, now termed as “Capacity and Action for Aflatoxin Reduction in Eastern Africa (CAAREA)”. Under CAAREA, BecA in collaboration with Cornell University, Tanzania Agricultural Research Institute (ARI), Harvest Choice and CSIRO now has a \$2 million funding from AusAID, which has established a modern mycotoxin platform at BecA-Nairobi, among other related research projects.

Dr. Mutiga's LEAP fellowship helped facilitate an analysis of the association between maize kernel structural and chemical composition and colonization of maize by the aflatoxin producing fungi and the subsequent levels of contamination, and to map genes for aflatoxin resistance trait. The fellowship also enabled him travel back to Cornell University where he was able to continue finalizing his manuscript and dissertation writing. He completed his PhD in Plant Pathology in 2014.

Upon graduation, Dr. Mutiga joined Correll lab at the University of Arkansas as a Postdoctoral Research Associate where he has been characterizing a collection of rice blast causing fungi

from different rice growing African countries. He hopes to be able to breed plants for more durable blast resistance for the sub-Saharan African region. In addition, Dr. Mutiga is involved in establishment of a biobank which houses the collection of the blast pathogen at BecA-ILRI, for use by African scientists.

---

## **Semagn Kolech**

**Country:**

Ethiopia

**University:**

Cornell University

**Department & Degree:**

Horticulture, PhD Candidate

**US Mentor institution:**

Cornell University

**CGIAR Mentor Institution:**

International Potato Center (CIP)



**Research:**

Analysis of Genetic Diversity of Ethiopian Potato (*Solanum tuberosum* L.) varieties resilient to climate change and suiting local market demand.

**Email:**

[sk2564@cornell.edu](mailto:sk2564@cornell.edu)

Semagn Kolech is from Ethiopia and is working towards a PhD in Horticulture at Cornell University. His doctoral research project is entitled, "Analysis of Ethiopian Potato (*Solanum tuberosum* L.) Varieties Resilient to Climate Change and Suiting Local Market Demand." The aim of the project is to assess Ethiopian potato genetic resources in relation to biotic and abiotic stresses and local market demand using semi-structured survey, screen house and participatory field experiments. Kolech hopes that this research project will provide critical information necessary to devise a potato research strategy targeting resource poor farmers using available genetic resources.

Kolech was awarded a Borlaug LEAP Fellowship in 2012. He has had a distinguished career as a leader of the National Potato Breeding Program at the Amhara Agricultural Research Institute in Ethiopia and is a published author. During his fellowship he worked with Dr. Steffen Schultz at the International Potato Center (CIP). Dr. Schultz is an agronomist with 20 years experience in agricultural research and development. His US mentor, Dr. Donald Halseth, Associate Professor in Horticulture supervised his DNA analysis work. Kolech aspires to be at the forefront in bringing change to the agricultural development process in Ethiopia. He plans on completing his PhD in 2015.

---