

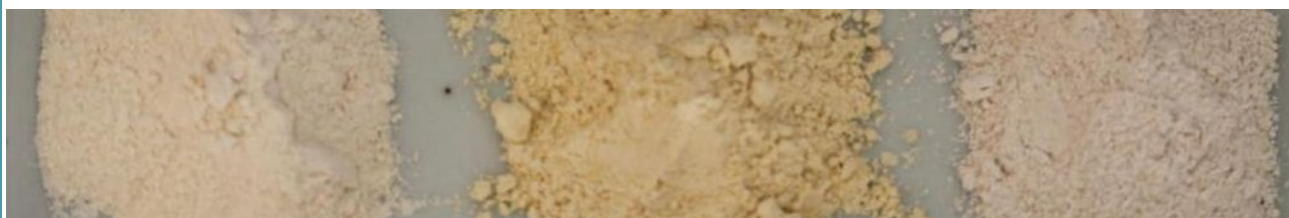
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FEED THE FUTURE INNOVATION LAB FOR LEGUME SYSTEMS RESEARCH

March 2023



The Feed the Future Innovation Lab for Legume Systems Research fosters dynamic, profitable, and environmentally sustainable approaches that contribute to resilience, productivity, and better nutrition and economic opportunities. The lab is managed by Michigan State University.

From the Management Office

Legume Systems Innovation Lab Partners with Media Company dedicated to Zambian Youth Empowerment

The Feed the Future Innovation Lab for Legume Systems Research has teamed up with Zambian media house, Chibolya Media Farm to produce several videos highlighting the program's research in Zambia and Malawi.

Chibolya Media Farm is an initiative of Every Moment Connections, a full service media agency based in Lusaka. The initiative is focused on youth empowerment and skills transfer targeting the disenfranchised Chibolya, Zambia area.

Chibolya, which is located approximately 35 kilometers from the capitol of Lusaka, experiences high crime, unemployment, extreme poverty, and gender-based violence. Youth from this challenging environment are brought into the filmmaking program and taught all aspects of the industry including scriptwriting, editing, camera operations, producing, editing, and marketing. After an intensive training the students are then provided an internship with industry leaders to further hone their skills. Several graduates of the program are now fully employed in the industry.

The first video shoot took place on the University of Zambia (UNZA) campus and highlights the program's dedication to building the capacity of the next generation of legume researchers. The video features three generations of global legume researchers supported through USAID funding to earn their advanced academic agricultural degrees.

Dr. Juan Osorno is currently a plant breeder at North Dakota State University. He received degree training at the University of Puerto Rico under the USAID Dry Grain Pulses Collaborative Research Program (Pulse CRSP) program led by Michigan State University. Juan currently leads the Legume Lab project working on bruchid-resistant common bean varieties for Southern Africa.

Leading the project work in Zambia is Dr. Kelvin Kamfwa. Kelvin, a Zambian native, received his PhD in plant breeding from Michigan State University which was supported by the Feed the Future Innovation Lab for Collaborative Research on Grain Legumes. After graduation Kelvin returned to Zambia and now leads the bean breeding lab located at the University of Zambia.

The Feed the Future Innovation Lab for Legume Systems research is also supporting the advanced degrees of four future legume researchers. Modreen Chinji from Zambia, Isabel Mugovo from Mozambique, and Rebecca Thole from Malawi are studying for their Masters degree at UNZA and working in Dr. Kamfwa's lab. Zambian, Maria Mazala is currently studying for her Master's degree at North Dakota State University under Dr. Osorno.

The photo shoot at UNZA brought all six of these current and future global legume researchers together to share their experiences and how integral the Legume Systems Innovation Lab has been in their journeys.

The Legume Lab is partnering with Chibolya Media Farm on this and other project videos in Zambia and Malawi. Chibolya Media Farm is an initiative of Every Moment Connections, a full service media agency based in Lusaka. The initiative is focused on youth empowerment and skills transfer targeting the disenfranchised Chibolya, Zambia area.

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Juan Osorno, North Dakota State University, is prepped for his video segment shot at the UNZA seed store where hundreds of bean varieties are stored.



Maria Mazala is a Masters Degree student from Zambia studying at North Dakota State University. She is pictured here in the UNZA bean breeding screenhouse.



The entire Chibolya Media Farm crew and Legume Lab team celebrate the wrap of a long day of video shooting and production.

In the Field

Getting Lifeline Through Improved Bean Variety

by Yohane Chideya

Even though she has been farming beans for many years, raking yields season-in-season-out, Esther Jere was still not satisfied. Her yields were never enough for her family of six to make ends meet.

Today, the middle-aged farmer from Emfeni area in Malawi's northern region district of Mzimba is no longer the same.

After being selected under the Multi-Stakeholder Project (MSP) as one of the demonstration farmers for the new NUA45 variety bean seeds, she has seen her yields more than triple.

This was after the Alliance of Bioversity International & CIAT provided the Catholic Development Commission (CADECOM) in Malawi with NUA45 bean seeds to be used for demonstration plots, with Mzimba district being among the districts that was selected to be part of the initiative.

"I got one kilogram of NUA45 variety of beans from CADECOM through CIAT. This is NUA45 type of beans. After planting, I ended up harvesting 18 kilograms. I reserved five kilograms as seeds and used the rest. After replanting, I have harvested 60 kilograms.

My life has really changed for the better. NUA45 is by far much better than other varieties we used to plant in the past, because this variety is giving us [farmers] bumper yields," explains Jere.

This, she says, was the case despite planting the variety in summer season, a period where the country receives little or no rainfall.

Bean farming as a game-changer

Researchers under the MSP ascertain that the NUA45 cultivar, that has a yield potential of 2.9 tonnes per hectare, has been widely adapted since it was released on the market regionally in Malawi, Swaziland, Zambia and Zimbabwe.

Similarly, experts are of the view that common bean could be crucial to Malawi's food security and poverty reduction, as cultivation of improved varieties could be a real game-changer. Studies have shown that smallholder farmers have limited scope to generate cash but their venture in legume production may offer a valuable source of income.

However, these farmers face challenges accessing improved variety and certified seeds.



Esther Jere, a bean farmer in Malawi's Mzimba District has enjoyed success in growing a new bean variety provided through the multi-stakeholder platform she has joined. Photo courtesy of Eunice Magwaya.

Concerted efforts

Upon realizing that there was low production and accessibility of improved bean varieties, different stakeholders proposed a joint collaboration for increased production of prebasic, basic and certified seed, for improved and more beneficial bean business in the country.

Because of this, the players in the MSP agreed to intensify seed production of other bean varieties and decided that this be guided by market demand. Established in 2019 through the bean corridor approach, the platform seeks to respond to bean variety demand through MSPs, with funding from USAID through the Feed the Future Innovation Lab for Legume Systems Research at Michigan State University.

Grain traders on the other hand, have been partnering with farmers in the platform and supporting them to access quality seed of improved varieties through soft loans.

Milele Agro-Processors and Afriseed are the two companies that have supported farmers with seed of the haricot bean variety through loans. Since then, farmers have been able to access quality seed of the right variety which was not possible before.

Operations Manager for Milele Agro-processors, Ngale Phekani says through this approach, they would like to meet the requirements of the markets in terms of volumes and quality.

“We are targeting an export market and the market we have is unique; it has specific demands and these can only be met through quality seed,” says Phekani.

Furthermore, to address the increased demand for the certified bean seeds, one of local seed production companies, Seed Co Malawi pledged to produce 40 metric tons of NUA45 prebasic seed which will see the company producing 800 metric tons of certified seed in 2023 alone.

Consequently, the platform has opened bean grain market opportunities through market linkages such that offtakers have secured grain market offer of 10,000 metric tons.

This has excited grain offtakers, including Managing Director for Afriseed Grace Mijiga Mhango, who is also President for the Grain Traders Association of Malawi.

She says they have intensified recruitment of bean growers in the country’s productions hubs to reap off from the market opportunities.

“The Multi-Stakeholder Platform is unique market led business model that has recognized participation of private sector as key to sustained markets and broadens the market base for bean commodities,” says Mhango.

MSP’s future prospects

Following the impact that the MSP has had on farmers in recent months and the enormous potential that it has to improve bean farming in Malawi and neighboring countries, different players are impressed with the strides the project has made within a shortest time possible.

During project support mission visit, after noting what had been accomplished within the shortest period of time, one of the members of the platform Barry Robertson says there is need to capitalize on the opportunities for continued growth.

“The Multi-Stakeholder Platform is a very interesting and exciting investment. It is a profoundly logical approach in order to understand what are the challenges and opportunities in the system that are going to effect real change.

“By linking producers with those that are buying, processing, moving things in the value chain; we realize this is a logical model moving forward,” he explains. Barry’s sentiments are also echoed by platform members and they are looking forward to a sustainable and more impactful platform.

Moving forward a number of activities have been aligned to maximize the benefits of the platform. This include recruiting other key value chain actors

such as agricultural inputs dealers and putting in a place private sector-based platform steering committee.

Featured Legume of the Month

BEAN FLOUR



A recent blog featured on California Beans [website](#) explains how you can make your own bean flour.

Bean flours are naturally gluten free and high in protein. You can use it as a substitute for all-purpose flour in both baking and cooking. There are many great bean flour recipes on the internet - so search for a favorite and give bean flour a try!

Cooking with Bean Flour...

Speckled Chocolate Chip Cookies

We found this recipe for speckled chocolate chip cookies from [Pulses.org](#) that uses bean flour in place of traditional all-purpose flour.

The recipe calls for black bean flour, but as noted any whole bean flour will work. However, you may not get the speckled effect if using other varieties of bean flour. We suggest trying the recipe using different bean flours to see which is your family's favorite!



[Get recipe here](#)

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Feed the Future Innovation Lab for Legume Systems Research**

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