SHARE:

Join Our Email List

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

FEED THE FUTURE INNOVATION LAB FOR LEGUME SYSTEMS RESEARCH

August 2019

Welcome from the Director

Greetings,

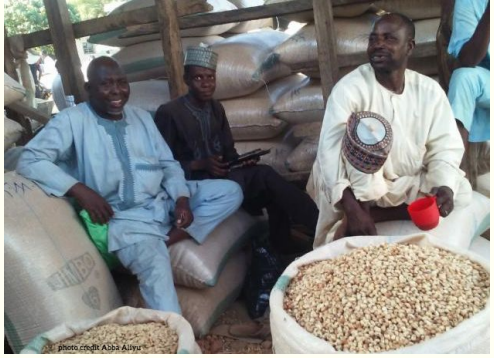
The year 2020 will mark the 40 th anniversary of the first partnership between Michigan State University (MSU) and the U.S. Agency for International Development (USAID) to support global legume and dry grain pulse research.

MSU competed and was awarded *Feed the Future Innovation Lab for Legume Systems Research,* the latest program iteration. Decades of MSU managed research by men and women committed to furthering legumes as an important global agricultural crop helped the University win the competitive grant.

Why legumes? Grain legumes play important roles in improving the livelihoods of smallholder farmers through income and farm productivity. They are easy to grow and enhance soil health. In addition, legumes provide notable benefits for human health. As a food source they are affordable, rich in protein, high in fiber, vitamins and minerals.

Read More

Michigan State University Researchers to Study Legume Value Chains in West Africa



Pieces of a puzzle hardly ever make sense individually, but chained together they form a complete picture. In the same way, completely connected links in a chain can yield success. Lose a piece and the whole chain fails. Making value chains work can be especially challenging in developing countries. Agricultural value chains link value-adding activities at every stage of a product's life cycle, from farmer to consumer. Unfortunately, the links of the chain are often undefined and policymakers are forced to design farm-to-market interventions without identifying and understanding all the pieces.

To provide policymakers with all the pieces, researchers from Michigan State University (MSU) led by Dr. Michael Olabisi and Dr. Mywish Maredia, will study the legume value chain in three cities in or near the West African Sahel – Kano and Ilorin in Nigeria, and Niamey in Niger. The goal of the research is to provide information on how these value chains function and what makes them resilient. The project is commissioned by the Feed the Future Innovation Lab for Legume Systems Research.

Read More

From the Field

Dr. Manuele Tamò Fighting the Legume Pod Borer in West Africa with Non-Traditional Approaches

The Legume Systems Innovation Lab has funded six initial activity projects focused on creative legumes systems research. One of these activities includes inventive approaches to pest management. The project is led by Dr. Tamò from the International Institute of Tropical Agriculture in Benin and focuses on sustainable insect pest management techniques for cowpea in West Africa.

We've all swatted at flies, listened to crickets chirping on a quiet evening, and wondered at the beauty of the butterfly. Insects are everywhere. To most, insects are just pests, to some they represent a lifetime of research and discovery.

Dr. Manuele Tamò, has spent over 30 years researching cowpeas and the insect pests that invade them. One of the most prolific pests is the Legume pod borer (*Maruca vitrata*). While it spends just 14 days in the larva stage, these very hungry caterpillars feast relentlessly on cowpea plants boring into the pods seeking their ultimate prize – the young tender seeds. Once sated, the larva falls to the earth and emerges a week later as a nocturnal moth returning to the plant ready to lay eggs and begin the cycle anew. A cycle, Dr. Tamò would love to see disrupted.

His team's approach is to use biocontrols to combat the destructive legume pod borer. They have successfully introduced parasitoids as a biocontrol and through the Lab's funding are implementing neem tree seed biopesticide solutions. The project also benefits local residents by creating neem seed biopesticide production and distribution units that are community run.

Read More

The legume pod borer is a significant pest accounting for up to 80% cowpea crop loss if left

Dr. Tamo has introduced the parasitoid, *Therophilus javanus* to smallholder farmers in

untreated. Traditional control methods include use of chemical pesticides.

West African communities where it has proven to be an effective biological control of the pod borer.

Featured Legume of the Month

Central American Red Beans

Beans play a major role in Central American diets. They are high in fiber and contain many vitamins and minerals. Red beans are particularly popular. They often are a part of a family's daily diet.

Cooking with Central American Red Beans

Most Central American bean recipes begin with the preparation of dry beans. Although canned beans are more convenient, the cost of using dry beans is about 1/3 less than that of canned beans. Plus preparing dried beans is easy! Just follow these simple steps:

1. Place the beans on a single layer in a plate or on a counter.
2. Pick out any non-bean materials such as small stones, twigs, leaves, etc.
3. Rinse the beans under cold running water in a strainer.
4. Soak the beans by using the "Hot Soak" method which includes placing your beans in a pot with 10 cups of water for every 2 cups of beans and heating to boiling. Boil for 2-3 minutes, remove from heat, cover and let stand 4 to 24 hours.
5. Drain beans and rinse with cold water.

Your beans are now ready for your favorite recipe! Why not try Gallo Pinto? See link to the recipe at the end of this article.

Rice and beans are a popular dish throughout Central America. This simple combination goes by several names depending on geographic location and has countless recipe variations handed down through the generations. Each however, showcase two star ingredients; **beans and rice**.

Gallo Pinto (pictured above), is a favorite red bean recipe in Nicaragua.

Get Recipe Here

This newsletter is made possible by the generous support of the American people through the United States Agency for for International Development (USAID) under the Feed the Future initiative. The contents are the responsibility of Michigan State University and do not necessarily reflect the views of USAID or the United States Government.

USAID FROM THE AMERICAN PEOPLE

MICHIGAN STATE UNIVERSITY