



In Malawi

## Why peanuts?

Peanuts, or groundnuts as they are called in much of the world, are an important food source. Nearly 40 million tons of peanuts are produced each year, 95 percent of them in developing countries.

### Nutrition

- Peanuts are a great source of protein. An ounce of peanuts has nearly as much protein as a cup of milk.
- Peanuts have become the standard base for Ready to Use Therapeutic Food (RUTF), which is used to treat severe malnutrition.

### Income

- Peanuts are an important cash crop in many countries.
- Women often grow and process the peanuts, making the crop an important source of income to families in the developing world.
- Due to problems with contaminants and low yields, farmers' income is limited.

### Environment

- Peanuts improve the soil by fixing nitrogen.
- Peanuts use water efficiently, making them drought tolerant.

## What are mycotoxins?

Molds that can grow on peanuts and crops such as corn create poisonous aflatoxin, a type of mycotoxin, that stunts growth and causes cancer. The toxins not only make people sick, they also prevent farmers from marketing the crop.

Find out more at [www.pmil.caes.uga.edu](http://www.pmil.caes.uga.edu)



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## Innovation Lab for Collaborative Research on Peanut Productivity and Mycotoxin Control



In Ghana

## What is Feed the Future?

Feed the Future is the U.S. government's global hunger and food security initiative. Working together with partners developing countries, Feed the Future forges long-term solutions by:

- Building capacity in partner countries
- Promoting collaboration between partners
- Empowering women, who are vital to agriculture
- Embracing innovative partnerships with the private sector, civil society and the research community
- Fostering policies that enable private investment
- Advancing big ideas and climate-smart agriculture through research and innovation
- Integrating agriculture and nutrition, with a particular focus on mothers and children
- Maximizing cost-effective results that create the conditions where our assistance is no longer needed



In Malawi



In Uganda

Through a network of researchers in the U.S. and partner countries, PMIL works to increase food security and reduce poverty by empowering farmers to produce nutritious, environmentally sustainable peanuts. This approach follows Feed the Future's belief that hunger and poverty can be alleviated through innovation and collaboration.

# Peanut & Mycotoxin Innovation Lab (PMIL)

## What we do

The Feed the Future Innovation Lab for Collaborative Research on Peanut Productivity and Mycotoxin Control, headquartered at the University of Georgia in Athens, brings together researchers from a dozen top universities and other agencies in the U.S. to work with colleagues in partner countries solving problems in production, storage, processing and marketing that lead to food insecurity.

Along the way, graduate students in the U.S. and partner countries work on components of those solutions, gaining valuable experience as they become the next generation of innovators.

PMIL's work happens around the world. Here are just a few of the projects:

Mark Manary (top left) has spent his career as a pediatrician addressing childhood malnutrition in countries like Malawi. With PMIL, the Washington University in St. Louis professor has treated more than 1,000 pregnant women for malnutrition and tracked how the peanut supplement provided to them improved their outcomes and the health of their newborn children.

David Jordan and Rick Brandenburg at North Carolina State study the entire value chain of peanuts – from field to market – in target countries in Africa to find where to intervene to



In Haiti

keep aflatoxin out of the crop. Greg MacDonald, an agronomist at the University of Florida, leads similar work in Haiti.

Boris Bravo-Ureta examines the complicated value chain to see how new varieties, agronomic and post-harvest activities or market conditions impact the bottom line of farmers. He is a member of the faculty at the University of Connecticut.

By silencing the gene that allows certain molds to make aflatoxin, U.S. Department of Agriculture researcher Renee Arias is working to prevent those molds from contaminating peanuts and other crops. Abdi Hassen (right) worked with Arias while completing his doctorate and returned to his home country of Ethiopia with new tools to combat aflatoxin.



## Partners

U.S.: Mississippi State, Virginia Tech, University of Georgia, North Carolina State, Washington University, University of Connecticut, University of Florida, U.S. Department of Agriculture

Ghana: Savanna Agricultural Research Institute, Crops Research Institute,

Kwame Nkrumah University of Science and Technology, University of Ghana

Haiti: Meds & Food for Kids, Acceso Peanut Enterprise Corporation

Malawi: University of Malawi, Lilongwe University of Agriculture and Natural Resources (LUANAR), Chitedze

Agriculture Research Service, Exagris Africa Ltd., ICRISAT

Mozambique: Eduardo Mondlane University, Instituto de investigação Agrária de Moç.

Zambia: Zambia Ag. Research Institute (ZARI)

