

USAID's
Feed the Future Innovation Laboratory
for Soybean Value Chain Research
**Soybean Innovation
Laboratory**

Peter Goldsmith
Project Director

Annual Soybean Breeders' Workshop
St Louis February 17-19, 2014



Soybean Key Numbers

- ▶ \$126,000,000,000 USD
- ▶ What is it?



Soybean Key numbers

- ▶ .8%
- ▶ What is it?



Soybean Key numbers

- ▶ .48%
- ▶ What is it?



The Goal of SIL: Help African farmers participate in the soybean revolution

- ▶ Global Farmer Soybean Revenue
 - ▶ \$126,000,000,000
- ▶ African Farmer Soybean Revenue
 - ▶ \$1,012,500,000 (.8%)
- ▶ African Farmer Soybean Revenue (ex-South Africa)
 - ▶ \$610,000,000 (.48%)
- ▶ The driver is poultry feed
- ▶ Soybean is a proven powerful driver of rural economic development and malnutrition reduction
 - ▶ Very high human development indices in districts where soybean is grown



SIL: Why it is so important, now (1/2)

- ▶ Tremendous source of high quality protein and oil
 - ▶ Protein and oil are scarce in tropical settings
 - ▶ Highly productive in tropical settings
- ▶ Tremendous Demand growth
 - ▶ Fueled by poultry, pork, and fish demand increases
 - ▶ \$126,000,000,000 of farmer revenue in 2012
- ▶ Historically USAID has not invested in soybean research for development
 - ▶ Many other commodities
 - ▶ This is the first CRSP/Innovation Laboratory



SIL: Why it is so important, now (1/2)

- ▶ But.....Soy is different
 - ▶ Non-Native
 - ▶ Non-Stable
 - ▶ Commercial
- ▶ The implications of these differences are not well understood among the development community
 - ▶ Requires adapted germplasm for tropical environments
 - ▶ Requires management on low pH, high AL, low P, low organic matter, high pest pressure environments
 - ▶ Interaction with the household economy fundamentally different
 - ▶ Highly value chain dependent



Outline

- ▶ USAID's Soybean Innovation Laboratory
 - ▶ **Research for Development: A Research Program**
 - ▶ **Not Research to Development: an outreach/extension/development project**
 - ▶ 2014-2018
 - ▶ \$25,000,000
 - ▶ Phase I = Ghana, Zambia, Mozambique, Malawi, Ethiopia
 - ▶ Lead institution: University of Illinois
 - ▶ Key Partners:
 - ▶ University of Missouri
 - ▶ Mississippi State University
 - ▶ International Institute of Tropical Agriculture
 - ▶ University of Georgia
 - ▶ Key Associates
 - ▶ Catholic Relief Services
 - ▶ International Fertilizer Development Council
 - ▶ TechnoServe
 - ▶ Various in-Country partners



Peter Goldsmith, PD, SIL

SIL Challenge

- ▶ Demand for soybean very high
- ▶ Interest by funders, development agencies, private sector, and NGO implementers to develop soy in Africa is very high
- ▶ **Implementation has outrun the research infrastructure**
 - ▶ Research is expensive
 - ▶ Research is time consuming
 - ▶ Research requires rigor
- ▶ African researchers have scarce resources
- ▶ SIL will help build a sustainable research foundation across the soybean value chain
 - ▶ Equipment
 - ▶ Training
 - ▶ Findings



SIL Mission

- ▶ The mission
 - ▶ To help the African soybean research system establish a foundation to support the soybean development efforts of farmers, funders, implementers, USAID, and the private sector.



The Soybean Innovation Laboratory Team

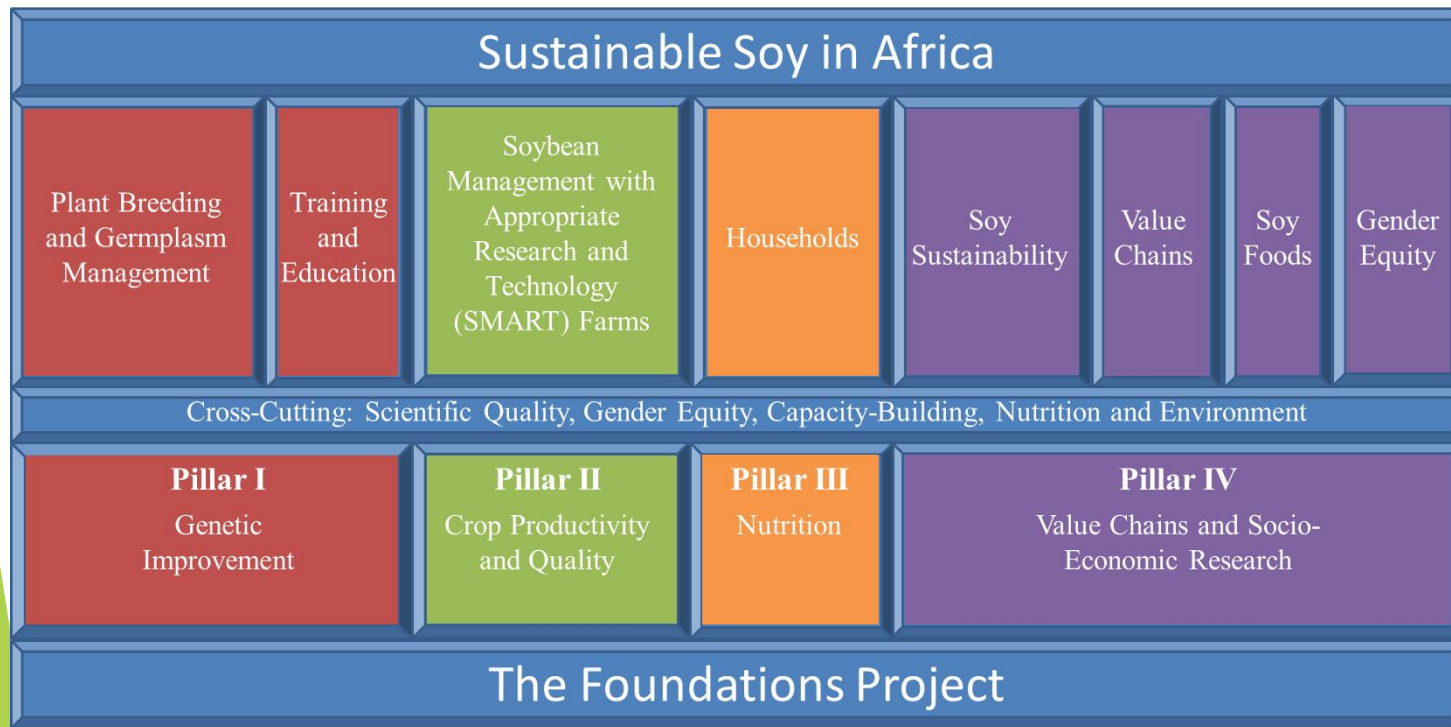
► Faculty Led

► Eight Research Leaders

1. Plant Breeding and Germplasm: Brian Diers and Randy Nelson, University of Illinois
2. Production and Agronomy: Dan Reynolds, Mississippi State University
3. Plant Breeder Education: Rita Mumm, University of Illinois
4. Grain and Seed Quality: Kristin Bilyeu, University of Missouri
5. Utilization for Human Nutrition: Craig Gunderson and Bridget, National Soybean Research Laboratory
6. Utilization for Livestock Nutrition: Mike Lacy, University of Georgia
7. Economic Impacts: Jill Findeis, University of Missouri
8. Gender Impacts: Kathleen Ragsdale and Lindsey Peterson, Mississippi State University



Soybean Innovation Laboratory: Four Research Pillars



Soybean Innovation Laboratory: Phase I Activities and Geography

Table 1. Funds Dedicated and Activities by Country

	Target Countries				
	Ghana	Mozambique	Zambia	Malawi	Ethiopia
Funds Dedicated (%)	67%	23%	8%	1%	1%
Activity List					
1. Plant breeding testing sites					
2. Implementation of the Integrated Breeding Platform					
3. Upgraded plant breeding capacities and equipment					
4. Master's program in plant breeding					
5. SMART Farm research center					
6. Environmental Practices and Impact Assessments					
7. Human Nutrition with "At Home" interventions (3 villages)					
8. Soy in weaning foods study (2 villages)					
9. VitaGoat enterprises (case study)					
10. Savings and Internal Loan Community (case study)					
11. Controlled study on soy sustainability (9 villages: 3 control; 6 test sites)					
12. Women's Empowerment in Agriculture Index (9 villages: 3 control; 6 test sites)					



Contact Information:

Peter Goldsmith, Principal Investigator
Soybean Innovation Laboratory

217-333-5131

pgoldsmi@Illinois.edu

