



**Feed the Future Food Security Innovation Labs:
Collaborative Research Programs**

Innovation Lab: Collaborative Research on Grain Legumes

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Legume Innovation Lab Extension



- Extension Period
(February 1, 2013 –
September 29, 2017)
- Refocused program in
alignment with Feed the
Future Strategic Research
Objectives
- Utilize modern science to
achieve substantive gains



Strategic Objectives for Legume Innovation Lab

SO1. Advancing the Productivity Frontier for Grain Legumes: To sustainably and substantively increase pulse productivity by improving plant adaptation to diverse agroecologies and reducing smallholder farmer vulnerability to climate change with special consideration to livelihoods of women

SO1.A. Genetic enhancement

SO1.B. Reduction of yield gap



Strategic Objectives for Legume Innovation Lab

SO2. Transforming Pulse Systems and Value Chains: To transform dry grain pulse-based systems through improved smallholder production management decision-making and more effectual governance management of pulse value-chains by stakeholders including smallholder farmers and consumers



Strategic Objectives for Legume Innovation Lab

SO3. Enhancing Nutrition: To improve the nutritional quality of diets and enhance the nutritional and health status of the poor especially young children and women through the consumption of pulses

- Role in pulses in gut health and function
- Improving nutrition and health of young children and women



Strategic Objectives for Legume Innovation Lab

SO4. Improving Outcomes of Research and Capacity Building: To assess impacts of CRSP and Legume Innovation Lab investments in research, institutional capacity building and institutional capacity building for improved program effectiveness



Salient Features of Legume Innovation Lab (FY 2013 – 2017)

1. Continued focus on tropical legumes (common bean, cowpea, lima bean, pigeon pea, chickpea)
2. Focus on USAID FTF priority cropping systems
3. Exploiting advances in research tools and innovations in science
4. Expanded partnerships (CGIAR, USDA, Africa Rising, Tropical Legumes, etc.)



FTS Priority Cropping Systems

1. Cereal-legume system of the Sudano-Sahel of West Africa
2. Maize-legume system of Eastern and Southern Africa
3. Maize-bean hillside system of Central America



Regions and Countries for Legume Innovation Lab Engagement

West Africa- Benin, Burkina Faso, Ghana, Mali
Niger, Senegal

Eastern and Southern Africa- Malawi,
Mozambique, Tanzania, Uganda, Zambia

Latin America and Caribbean- Haiti, Honduras,
Guatemala, Nicaragua and Ecuador



Expanded U.S. University Partners

- Iowa State University
- Kansas State University
- Michigan State University
- North Dakota State University
- Pennsylvania State University
- University of California-Riverside
- University of Illinois
- University of Hawaii
- University of Nebraska
- University of Puerto Rico
- Washington State University



Feed the Future Food Security Innovation Labs: Collaborative Research Programs

Available Technology and Knowledge



- Improved bean varieties with drought tolerance and bruchid resistance
- Community-based seed systems
- Governance of legume value chains
- Role of legume-based foods in enhancing child nutrition



Strategic Legume Innovation Lab Partnership with CG Grain Legume Program

- Collaboration between CGIAR and Legume Innovation Lab scientists on common research objectives
- Complementary activities that support achievement of CG Grain Legume product lines
- Beneficial research that addresses SOs for grain legumes but are technical gaps or low priorities in CG Grain Legume Program



Other CG and Legume Innovation Lab Linkages



- Scholarship Program for MSc and PhD training of CGIAR-nominated young scientists
- Jointly sponsored scientific meetings
- Reciprocal representation on Program Research Advisory Committees



Feed the Future Food Security Innovation Labs: Collaborative Research Programs

Partnering to Exploit Future Opportunities



1. Identification of pulse research needs and opportunities and priority setting
2. Partnering in competitive research grants (USDA/NIFA, USAID, NSF and other donors)
3. Leveraging of new resources for research and capacity building





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Dry Grain Pulses CRSP



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