



Collaborative Research  
on Sorghum and Millet

# Sorghum and Millet Innovation Lab Program Overview

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*Feed the Future Innovation Lab Meeting-Lilongwe*

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## Summary Program Information

- 5 year program: July 2013-July 2018
- Build upon INTSORMIL achievements
- Focus on fewer countries and only in Africa
  - Senegal, Niger and Ethiopia
- Focus on three areas
  - Genetic enhancement of sorghum and Pearl millet
  - Production systems management
  - Added-value products and market development

## Priority identification

- Stakeholder consultations and prioritization
- Development of reference documents
- Project solicitation via concept notes (58/\$56M)
- 15 selected for full development
- External board and ad-hoc reviewers





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## Sorghum and Millet Innovation Lab Collaborators

### ETHIOPIA

#### Collaborating institutions/programs

**United States:** *USDA-ARS, Purdue University, Kansas State University, KSU/Hays Research Station, Texas A&M University*

**International:** *University of Pretoria (South Africa)*

**National:** *EIAR (Melkassa Research Center, Sirinka Research Center, Pawe Research Center, Asosa Research Center, Bako Research Center) Tigray Agricultural Research Institute, Holleta Biotechnology Center, Oromia Regional Program, Haramaya University, Hawassa University*

# Future directions in Ethiopia

- Identifying value-added opportunities for sorghum in the food industry







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## Sorghum and Millet Innovation Lab Collaborators

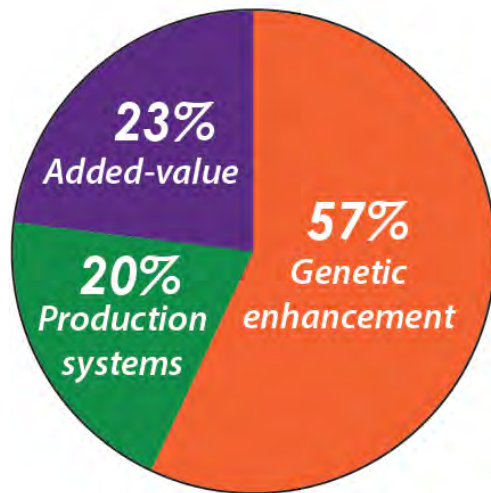
### WEST AFRICA

#### Collaborating institutions/programs

**United States:** *Kansas State University, West Texas A&M University, Texas A&M AgriLife Research, Purdue University, Virginia Tech University, IPM Innovation Lab*

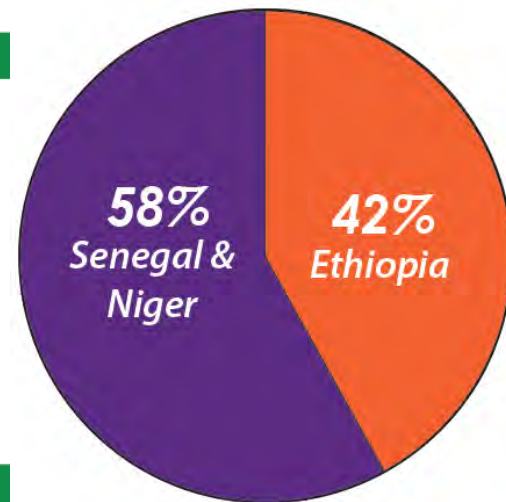
**International:** *CIRAD (France), University of Hohenheim (Germany)*

**National:** *ISRA, CERAAS, CNRA, University Cheik Anta Diop de Dakar, University of Maradi, INRAN, ICRISAT, LSDS HALAL, ITA, Fuma Gaskiya, WAAPP*



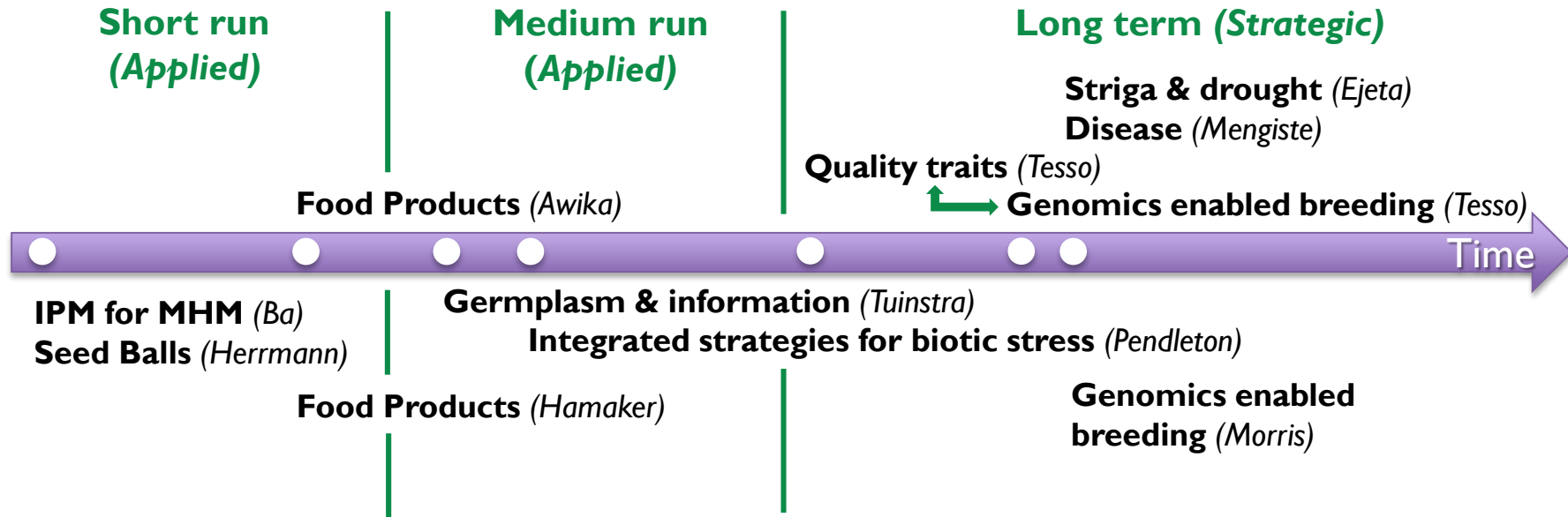
Funding by area of research

Area of research	Funding
<b>Genetic enhancement</b>	<b>\$4.8 mil.</b>
Ethiopia - (Ejeta, Mengiste, Tesso)	
West Africa - (Morris, Tuinstra, Pendleton)	
<b>Production systems management</b>	<b>\$1.7 mil.</b>
Ethiopia - (Tesso)	
West Africa - (Ba, Herrmann, Pendleton)	
<b>Added-value products</b>	<b>\$2.0 mil.</b>
Ethiopia - (Awika)	
West Africa - (Hamaker)	



Funding by country

# Product Availability Timeline





# Student Training

- M.S. and Ph.D. training—approximately 30 planned
  - U.S.-based training
  - University of Pretoria; WACCI at the University of Ghana
  - Host country theses
- New student internship program
  - Links US-based students with counterparts in target countries
  - Joint research contributing to project needs
  - Pilot basis, starting 2015



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## Our vision

- To build a coalition of science and industry around sorghum and millet research to reduce poverty and hunger
- Incubate and nurture a new wave of feed and food products to stimulate demand
- Create an economically-rationalized business and research investment plan



## Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet

Home

About the Innovation  
Lab

What we do

Focus countries

Current projects

Sorghum for food  
applications

Genetic enhancement of  
sorghum for seed supply

Sorghum resistance to  
fungal pathogens

Improved crop genetics  
and processing

Improving sorghum  
adaptation with  
genomics-enabled  
breeding

Development of biotic  
stress-resistant cultivars

Sorghum trait  
development pipeline

Biological control of the  
millet head miner

Seed ball technology  
optimization

Expanding markets  
through processors and  
product promotion

### Current projects

The projects selected for funding by the Sorghum and Millet Innovation Lab contribute to improving food security, household resilience and private sector growth in the Ethiopia, Senegal and Niger through the enhancement of production and value-added product development. They were identified through a competitive call for proposals in late 2013, with 10 projects selected from the 58 proposals received, based on the recommendations of the Lab's external advisory board and dozens of ad-hoc reviewers.



#### Ethiopia

Developing superior functionality in sorghum for food applications to promote sorghum value chain in Ethiopia

*Principal investigator: Joseph Awika (Texas A&M University)*

Genetic enhancement of sorghum to promote commercial seed supply and grain market development in Ethiopia

*Principal investigator: Gebisa Ejeta (Purdue University)*

Questions?  
[ksu.edu/smil](http://ksu.edu/smil)