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Sorghum Millet and Other Grains CRSP, Leader with Associates Cooperative Agreement No. EEP-A-00-06-00160: The New Program

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Sorghum Millet and Other Grains CRSP

Leader with Associates Cooperative Agreement
No. EEP-A-00-06-00160

The New Program

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(INTSORMIL)
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INTSORMIL

USAID
FROM THE AMERICAN PEOPLE

INTSORMIL

–**Created by USAID and BIFAD as a long-term mechanism for agriculture development**

–**Utilize capacity of Land Grant Universities**
Increase research capacity
Increase food production
Mutual benefit

–**INTSORMIL: International Sorghum and Millet CRSP 1979 – 2006**

–**SMOG: Sorghum, Millet and Other Grains CRSP 2006 – Present**

Focus

Sorghum, Pearl Millet and Other Grains

- **Finger Millet (E. & Southern Africa)**

- **Tef (Ethiopia)**

- **Fonio (West Africa)**

Technical Focal Areas

- Soil and water (environmental considerations)
- Integrated pest management
- Nutrition and health
- Broadening market access
- Mitigating post-harvest constraints
- Enhancing productivity and livelihood in marginal areas
- Increasing income
- Improving food quality, processing and safety
- Biodiversity
- Biotechnology

Vision

- Improve food security
- Enhance farm income
- Improve economic activity

In the major sorghum
and pearl millet producing countries
in Africa and Central America

INTSORMIL ORGANIZATION

Management Entity
University of Nebraska - Lincoln

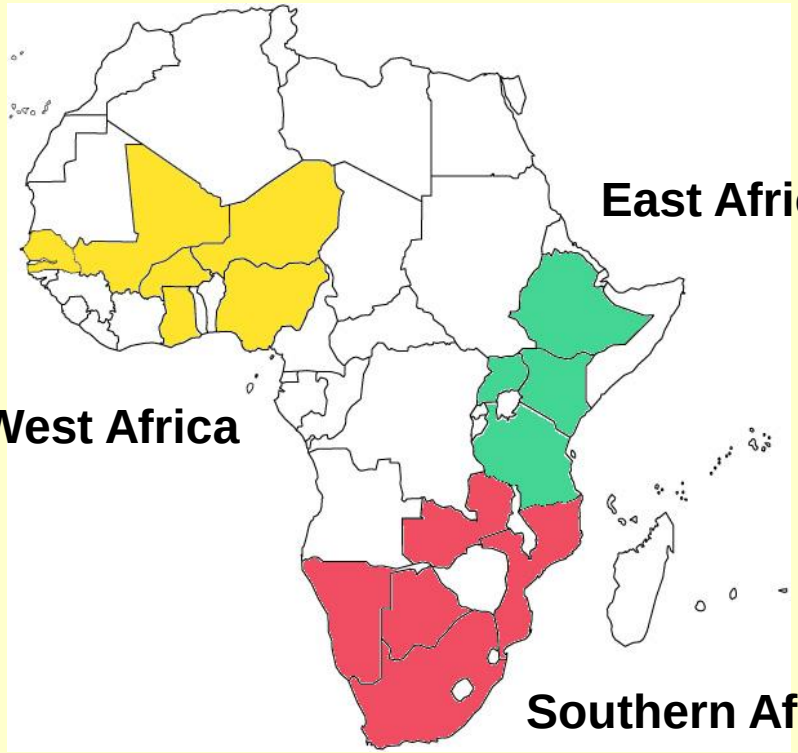
Nebraska	Texas A&M	Ohio State	West Texas A&M	Purdue	Kansas State	USDA-ARS
Agronomy Food Science/ Entrepreneurship	Breeding(2) Food Science	Socio-Economic	Entomology	Breeding (2) Economics Food Science Striga	Agronomy Pathology Utilization	Breeding

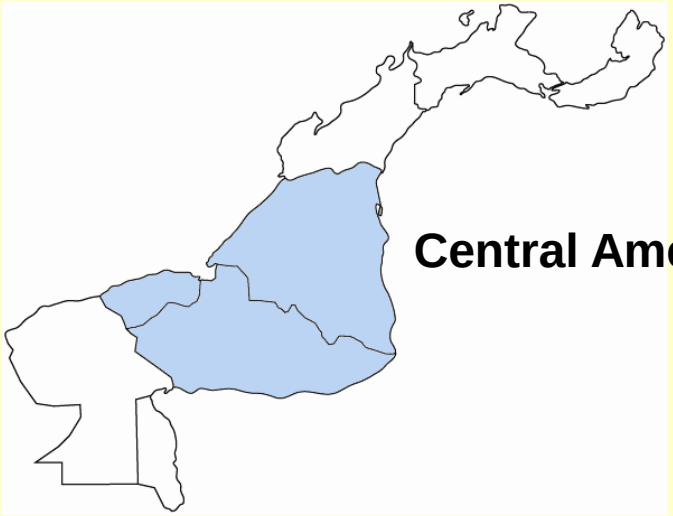
Projects - 16

Principal Investigators - 17

Countries: Africa – 15
Central America - 3

INTSORMIL CRSP REGIONS





1979 – Present

Breeding, Entomology, Pathology, Food Science, On- and Off-campus

Total

Faculty	**± 17**
Funding	**± $13,000,000**

Education	**Total**	**Full**	**Partial**	**SADC**
B.S.	**46**	**18**	**19**	**9**
M.S.	**443**	**114**	**280**	**49**
Ph.D.	**428**	**138**	**263**	**27**
Post-Doc	**105**	**27**	**73**	**5**
Visiting Scholar	**130**	**30**	**73**	**2**
Total	**1152**	**352**	**708**	**92**

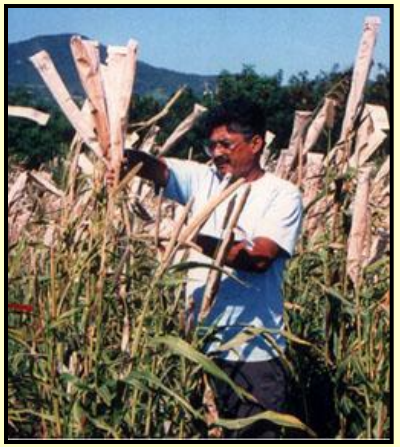
Major Objectives

1. Facilitate the growth of the rapidly expanding markets for sorghum and pearl millet

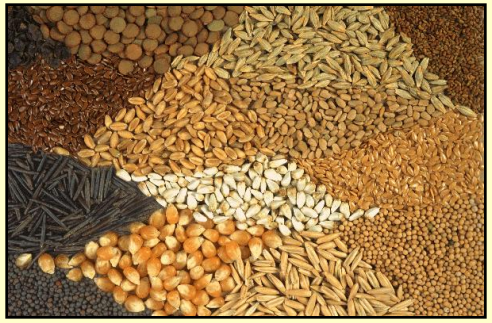
2. Improve the food and nutritional quality of sorghum and pearl millet to enhance marketability and consumer health

3. Increase the stability and yield level of sorghum and pearl millet through crop, soil, and water management while maintaining or improving the natural resources of soil

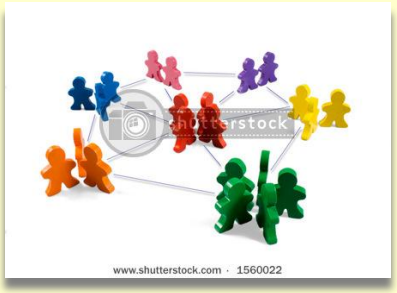
4. Enhance the stability and yield of sorghum and pearl millet though the use of genetic technologies



5. Enhance global sorghum and pearl millet genetic resources and the conservation of biodiversity



6. Develop effective partnerships with national and international agencies engaged in the improvement of sorghum and pearl millet production and the betterment of people dependent on these crops



Participating U.S. Universities

University of Nebraska – ME

Texas A&M University

Ohio State University

Purdue University

Kansas State University

West Texas A&M University

Kansas State University

USDA/ARS

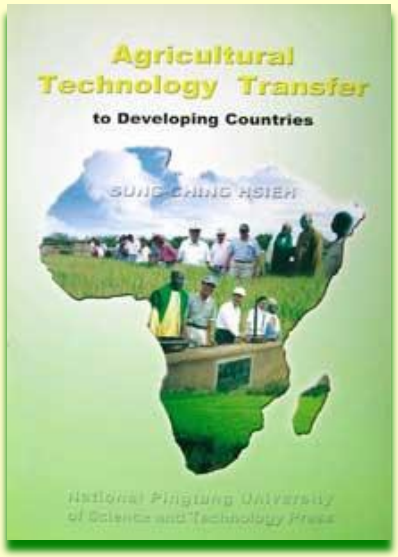
INTSORMIL Research Operations

- Team approach
  - Mutual benefits
  - Proven and new techniques
- Technology development & transfer
  - Obtain important stakeholder inputs
  - Generate new knowledge & technology
  - Test technology for economic viability

Key Elements of INTSORMIL Research

- Training of developing-country and US scientists
- Mutually beneficial partnerships:
  - USG, LG universities, NGO's, private sector
  - Developing countries and USA
  - Small Entrepreneurs, Businesses, Value Added Endeavors
- Generation and application of new knowledge and technologies
- Economically benefits developing countries and USA

Projects



- **Genetics (Breeding/Biotechnology) - 5**
- **Economics & Marketing - 2**
- **Agronomy - 2**
- **Food Science - 3**
- **Entomology - 1**
- **Pathology – 1**

All will emphasize Africa and sorghum/pearl millet. Other grains research projects will be dependent upon USAID Mission funding.

Sorghum, Millet and Other Grains CRSP
Projects and Principal Investigators

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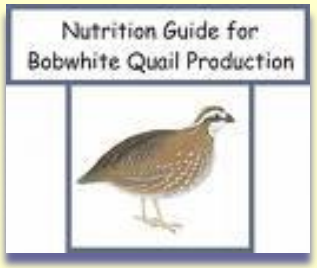
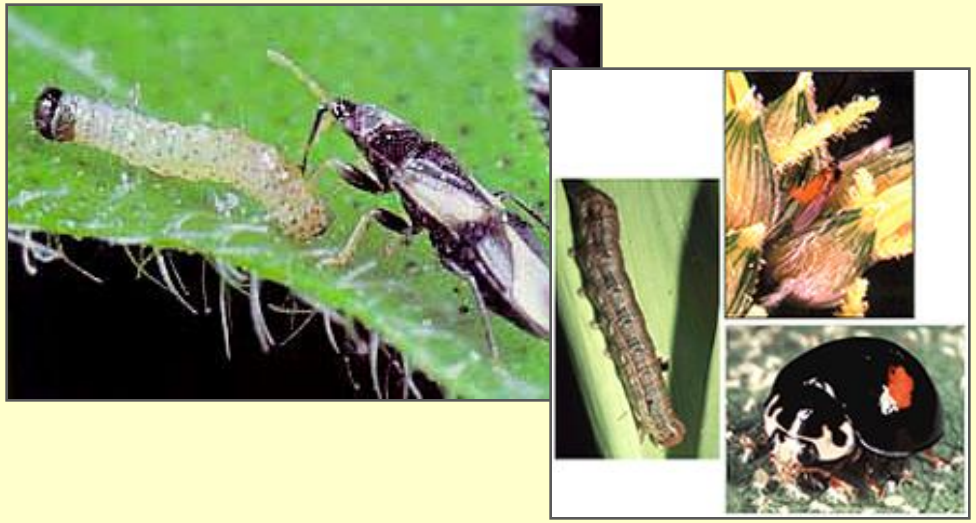
Institution	Project no.	National Programs	Lead Scientist	Project Title
ARS/USDA Georgia	ARS 101	Mali, Burkina Faso, Senegal,Ghana,	Jeff Wilson	Breeding Pearl Millet with Improved Performance, Stability and Resistance to Pests

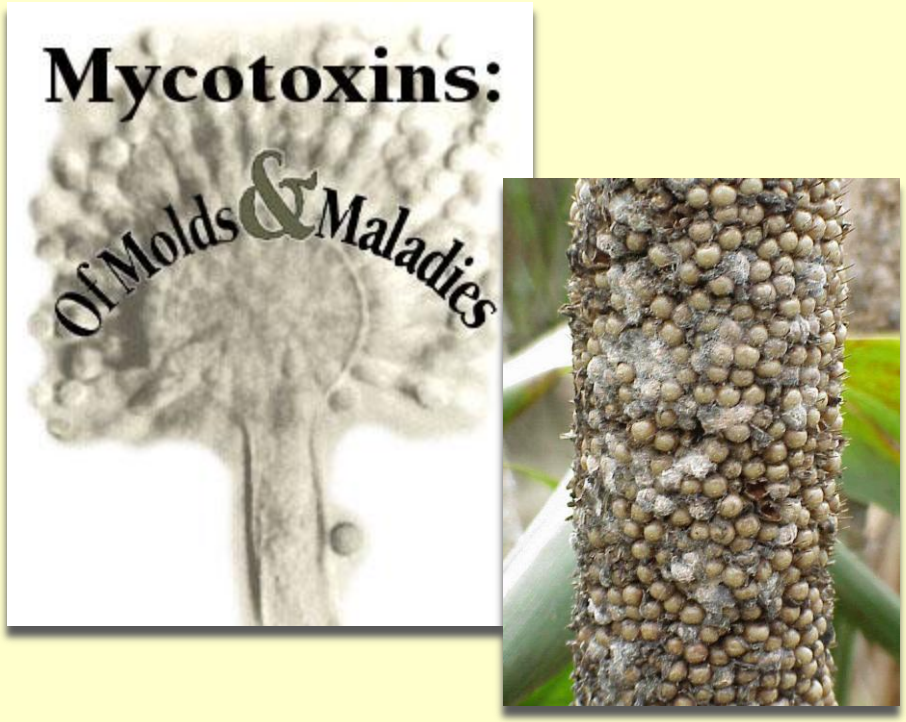


Institution	Project no.	National Programs	Lead Scientist	Project Title
West Texas A&M	WTAM 101	Mali, Niger, Botswana, Mozambique, South Africa	Bonnie Pendleton	Ecologically-Based Management of Sorghum and Pearl Millet Insect Pests in Africa and the United States

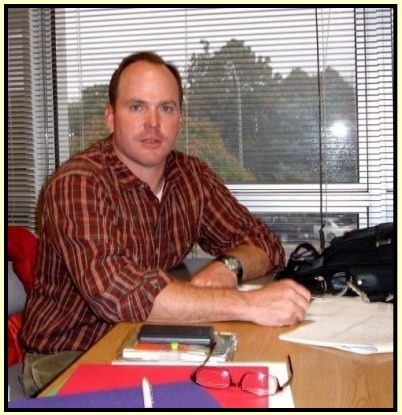


Institution	Project no.	National Programs	Lead Scientists	Project Title
Ohio State University	OSU 101	Tanzania, Zambia	Donald Larson, Mark Erbaugh	Market Development in Support of Farmers in Tanzania and Zambia

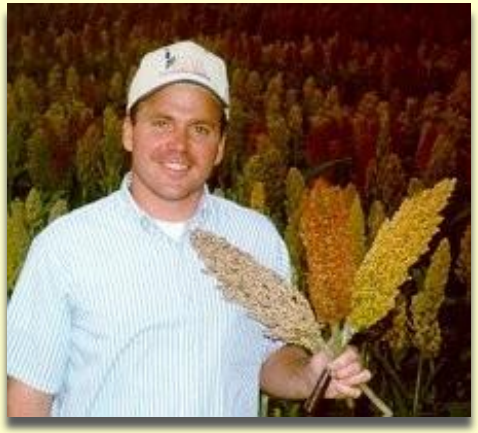
Institution	Project no.	National Programs	Lead Scientist	Project Title
Kansas State University	KSU 101	South Africa	John Leslie	Grain Molds, Mycotoxins and Stalk Rots of Sorghum and Millet



Institution	Project no.	National Programs	Lead Scientist	Project Title
Kansas State University	**KSU 102**	**Mali, Burkina Faso, Niger, Nigeria, Senegal**	**Joe Hancock**	**Enhancing the Utilization and Marketability of Sorghum and Pearl Millet through Improvement in Grain Quality, Processing Procedures and Technology Transfer to the Poultry Industry**

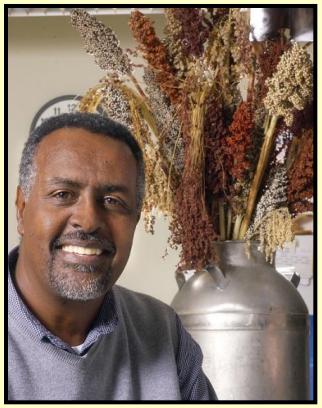


Institution	Project no.	National Programs	Lead Scientist	Project Title
Purdue University	**PRF 104**	**Mali, Burkina Faso, Senegal, Ghana, Nigeria**	**Mitch Tuinstra**	**Developing Sorghum with Improved Grain Quality, Agronomic Performance and Resistance to Biotic and Abiotic Stresses**



Institution	Project no.	National Programs	Lead Scientists	Project Title
Kansas State University	**KSU 104**	**Mali, Burkina Faso, Niger, Ghana**	**P.V. Vara Prasad, Scott Staggenborg, David Mengel**	**Integrated Soil, Water, Nutrient and Crop Management Strategies for Improving Productivity in Sorghum and Millet Based Cropping Systems**

Kansas State University
Agronomy
a GROWING profession



Institution	Project no.	National Programs	Lead Scientist	Project Title
Purdue	**PRF 101**	**Mali, Burkina Faso, Ethiopia, Uganda,Tanzania, Uganda, Kenya, Botswana, Zambia**	**Gebisa Ejeta**	**Breeding Sorghum for Improved Resistance to *Striga* and Drought**

Institution	Project no.	National Programs	Lead Scientist	Project Title
Purdue	PRF 102	Mali,Burkina Faso, Niger, Senegal, Ghana, Nigeria	Bruce Hamaker	Product and Market Development for Sorghum and Pearl Millet in West Africa

Institution	Project no.	National Programs	Lead Scientist	Project Title
Purdue	**PRF 103**	**Mali, Burkina Faso, Senegal,Ghana, Nigeria**	**John Sanders**	**Development of the Input and Product Markets in West Africa for Sorghum and Millet**

Institution	Project no.	National Programs	Lead Scientist	Project Title
Texas A&M	**TAM 101**	**El Salvador, Nicaragua**	**William Rooney**	**Breeding Sorghum for Improved Grain, Forage Quality and Yield for Central America**

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Institution	Project no.	National Programs	Lead Scientist	Project Title
Texas A&M	TAM 102	Mozambiqe, South Africa, Zambia	Gary Peterson	Breeding Sorghum for Improved Resistance to Biotic and Abiotic Stresses and Enhanced End-Use Characteristics for Southern Africa

Vice Chancellors Award for Excellence in International Involvement

Institution	Project no.	National Programs	Lead Scientist	Project Title
Texas A&M	TAM 103	El Salvador, Nicaragua, Botswana, Mozambique, South Africa, Zambia	Lloyd Rooney	Product and Market Development for Sorghum and Pearl Millet in Southern Africa and Central America

Presidential Award of Excellence for Faculty Service to International Students Awarded To Lloyd Rooney

Institution	Project no.	National Programs	Lead Scientist	Project Title
University of Nebraska	UNL 101	Tanzania, Ethiopia, Mozambique	Charles Wortmann	Crop, Soil and Water Management to Optimize Grain Yield and Quality for Value-Added Markets in Eastern and Southern Africa

Institution	Project no.	National Programs	Lead Scientist	Project Title
University of Nebraska	UNL 102	Tanzania, Zambia	David Jackson	Building a Sustainable Infrastructure for Product Development and Food Entrepreneur/Industry Technical Support: A Strategy to Promote increased Use of Sorghum & Millet in East Africa

Food Scientist David Jackson's team devised a new process that solves some of the problems associated with a time-honored method of making masa, the special dough used for corn tortillas.

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