

# Overview: Food Security Program at Michigan State University

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# Outline of presentation

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- Food security projects at MSU:
  - FS III LWA cooperative agreement
  - Related projects
- FSG team and approach/philosophy
- Research themes and country applications
  - Focus on relevance to Feed the Future research strategy
- Future Directions

# Food security projects at MSU

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- USAID-funded cooperative agreements housed in Dept. of Ag., Food, & Resource Econ. (AFRE)
  - Food Security in Africa (1983-1992)
  - Food Security II (1993-2002)
  - Food Security III (2003-2012)
- “Food Security Group (FSG)” refers to:
  - \$40 million portfolio of projects in AFRE
  - Food Security III Leader + associate awards (2/3 \$)
  - [Related projects](#) involving same faculty team (1/3 \$)

# FS III Cooperative Agreement

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- Leader award funded by USAID/BFS
- Associate awards from USAID missions/bureaus (flexible collaborative design; non-competitive)
- Leader award provides core funding for:
  - Management of overall Cooperative Agreement by campus-based team
  - Development of associate awards
  - Cross-cutting research, outreach, and capacity building, drawing on country/regional projects

# FS III Associate Awards

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- Mali
- Mozambique
- Zambia
- Past FS III: AFR/SD (support to COMESA), Mali, West Africa, Malawi
- Earlier FSA and FS II country projects: Ethiopia, Rwanda, Senegal, Zimbabwe

# Related projects

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- Tanzania (Ohio State, USAID funding)
- Brazil-Mozambique (U. Florida, USAID funding)
- Kenya (Egerton/Tegemeo, USAID funding)
- Zambia (SIDA; linked to USAID-funded proj.)
- Gates Foundation (staple food markets)
- COMESA/AAMP (ag. markets; World Bank \$)
- Syngenta Foundation (econs. of rice & maize)
- Hewlett Foundation (market info., reg'l trade)
- Mozambique (MCC: land, coconut rehab.) [Back](#)

# FSG team

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- 2 Co-Directors
- 9 other faculty based in the U.S.
- 8 faculty based overseas
- 12-15 graduate research assistants
- 7 administrative and tech support staff
- Numerous analysts/support staff hired by country offices (Mali, Mozambique, Zambia)

# Goal and conceptual framework

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- Goal: to integrate applied research findings into policy dialogue and program design to promote agricultural growth as a means to cut hunger and poverty and improve food security
- Strategies are identified within a structural transformation (economic growth) framework
- Single-factor solutions are not adequate: need improved technology, institutions, and policies to address growth and food security challenges

# FS III approach

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- Demand-driven, collaborative design and implementation (host country, USAID, MSU)
- Policy orientation supported by empirically based research and analysis
- Integration of research, outreach, and capacity building (human, institutional)
- Team approach, including local researchers and analysts (boosts quality and credibility)
- Sustained focus on selected themes and countries/regions, sometimes over 20-25 years

# FS III Research Themes

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- (1) Improving food systems performance:
  - (a) Farm productivity and technology use
  - (b) Staple food and input markets, market information, market reform, “food sheds” and regional trade
- (2) Improving the food security of vulnerable groups: understanding household income and livelihood dynamics
- (3) Food security interactions with the environment and natural resource management

# Relevance of FSIII to FTF Research Strategy Objectives

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- Access to improved technology:
  - What does it take to land a global public good in a farmer's field (or stable) that brings sustainable improvements in income, food security and nutritional outcomes?
  - How can the share of the potential farming population benefiting from improved technologies be increased?

# Relevance of FSIII to FTF Research Strategy (cont.)

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- Effective *utilization* of improved technology:
  - How can the outcomes of adoption of an improved technology be maximized?
- Ensuring *sustainability* of adoption and outcomes
  - What policies and improvements in the off-farm parts of the food system will enhance sustainability?

# Farm-level agricultural research and productivity themes

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- Determinants of farm productivity
- Economic returns to agricultural research
- Strategies for soil fertility improvement
- Economic and policy dimensions of increasing fertilizer & improved seed use
- Cash crop/food crop synergies
- Cotton sector development and reform

# Research on off-farm dimensions of ag productivity

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- Organization & performance of markets for staple foods and horticultural crops
- Design and impacts of market information systems
- Extent and impacts of market reforms
- Determinants of farmer participation in staple food and cash crop markets
- “Food sheds” and regional trade flows

# Research to enhance food and nutrition security outcomes.

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- Distribution of household income & assets
- Income and poverty dynamics
- Difficulties of targeting poorest households
- Impacts of ag. growth on nutritional status
- Emergency responses to food insecurity
- Pro-development design of food aid
- Incidence & impacts of HIV/AIDS on ag.

# Applying FSII research and capacity building on the ground:

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- Mali (IER, CPS, CSA)
  - Articulating role of agricultural research and productivity in Mali CAADP compact
  - Assessment of promising technologies for USAID Mali FTF strategy
  - Conducting studies with IER's subsector research program (ECOFIL)
  - Membership of national research advisory board (CNRA)
  - Strengthening agricultural training (IPR)

# Applying FSII research and capacity building (cont.):

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- Mozambique (IIAM, DE)
  - Establishment of a socio-economic analysis unit (CESE) in IIAM
    - Adoption and impact assessment studies
    - Analysis of payoffs to agricultural research to inform research priority setting
    - Preparation of an ag research investment plan
  - Articulate role of ag research in national agricultural development strategy
  - Participation in CGIAR platform

# Applying FSII research and capacity building (cont.):

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- Zambia (ACF, MACO, GART)
  - Analysis of economics of conservation farming packages in cotton production systems
  - Cassava value chain development
  - Analysis of agricultural sector budget allocations
  - Impacts of fertilizer subsidies and marketing board interventions
  - Establishment of a competitive research fund

# Agenda for future research

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- Overall theme: successful development transitions and drivers of change
- Sub-themes:
  - Sustainable increases in productivity
  - Marketing and value chain efficiency
  - Land policy and access
  - Poverty alleviation and safety nets
  - Managing food price and supply instability
  - Building agricultural sector information capacity
- Cross-cutting:
  - Gender, nutrition, climate change
- Current/planned expansion of activities:
  - Asia and Central America
  - Collaboration with other MSU areas of strength (nutrition, climate change and land use, water resources)

# Future research agenda: sustainable productivity

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- Regional perspective
  - Food shed mapping and analysis in East & West Africa to capture TDT economies of scope and technology/trade policy synergies
- Nutrition-agriculture linkages and gender
  - Nutrition outcome pathways
  - Gender access and nutrition interactions
- Climate change adaptation
  - Add socio-economic and nutritional impact analysis to climate change and crop, land use, and water modeling

# Capacity Building Initiative

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- Theme: modernizing African food systems
  - Anticipate human capacity needs in private and public sectors to support required transformation of African food systems
  - Strengthen capacity of African universities to supply graduates and undertake applied research and outreach
  - Partnership with NEPAD, University of Pretoria and Makerere University

# Importance of Core Funding

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- Partial funding for the core team and bridging funds in case of variability in other funding
- Core \$ leverage AA \$ and outside funding
- Cross-country synthesis of findings
- Outreach to AID/W and other dev. partners
- Rapid response to AID/W requests
- Preparation of training and analysis materials
- Human capacity building through training of African and non-African graduate students

# Questions?

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# Publications

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- FSG Web site ([www.aec.msu.edu/fs2/index.htm](http://www.aec.msu.edu/fs2/index.htm))
- “Lessons learned” syntheses:
  - Full paper  
([www.aec.msu.edu/fs2/papers/idwp101.pdf](http://www.aec.msu.edu/fs2/papers/idwp101.pdf))
  - 4-page brief  
([www.aec.msu.edu/fs2/polsyn/number84.pdf](http://www.aec.msu.edu/fs2/polsyn/number84.pdf))
- In-country publication series
- Policy Synthesis briefs
- International Development Papers and Working Papers
- Journal articles, books, etc.

# Online FSG Resources

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- [Agricultural Market Information](#) Virtual Library
- Survey research [training materials](#)
- [Learning resources](#) for applied food security policy analysis
- [Food Security Information Portal](#) (demo site; includes links to many Web-based research and learning resources)

# Agricultural Intensification: Determinants and Impacts

