

Overview: Food Security Program at Michigan State University

Presentation to Dr. Rob Bertram, USAID
May 20, 2011

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Outline of presentation

- 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

- 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

- 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

- 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

- 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

- 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

- 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

- 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

- (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

- 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.)

- 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

- 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

- 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.

- 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:

- 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.):

- 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.):

- 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

- 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

- 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

- 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

- 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?

Publications

- FSG Web site (www.aec.msu.edu/fs2/index.htm)
- “Lessons learned” syntheses:
 - Full paper
(www.aec.msu.edu/fs2/papers/idwp101.pdf)
 - 4-page brief
(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

- [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

