



collaborative policy-oriented research and outreach, and focuses on working with African colleagues to identify high-payoff, sustainable development programs and policies, and on human and institutional capacity building to support them. Agenda items include:

**Developing stronger value chains to serve the poor, particularly for the large and important domestic and regional markets for staple crops and horticultural products** – Improving agricultural marketing information and extension systems and the policy environment, and fostering stakeholder collective action will be key elements of this effort. Increasing the productivity of value chains serving domestic and regional markets for lower- and middle-income consumers complements work by other MSU colleagues that connects small farmers to export and high-end (supermarket) value chains.

**Developing strategies to deal with the agriculture-health-environment nexus** – In the coming decade, interactions among the physical environment, disease, and agriculture will pose special food security challenges. For example, climate change will likely affect the spatial distribution of crop production and disease vectors, requiring farmers to develop new strategies to manage the environment while trying to coax a living out of the ground. MSU will work with African partners to develop policies and technologies that address these interactions simultaneously, rather than in a piecemeal fashion, so that food security also contributes to environmental and health security, and vice versa.

**Designing development-friendly social safety nets** – African countries need to design social safety nets for vulnerable populations that are effective and affordable and that contribute to long-term development. MSU-FSG is committed to building on its great experience in African development and emergency response, and on its deep history of working partnerships with African colleagues and institutions, to help design the next generation of innovative safety net programs.

**Strengthening human and institutional capacity to support African development objectives** – MSU will help educate the next generation of African food security champions – scientists, policy makers, and leaders of civil society – through graduate training at MSU, partnerships to strengthen programs at key African universities, and in-service programs with African partner organizations. This next generation will be critical to the sustainability of Africa's efforts to build a food-secure future. The capacity of MSU's partner organizations will also be strengthened, especially in the area of technology evaluation and policy analysis, not only through training but also through experience gained from collaborative in-country research and outreach programs. Examples are development of production, marketing, and processing technologies adapted to the needs of the poor or to emerging market conditions, and formulation of policies with respect to biotechnology and regional or international trade.

**Generating new knowledge about promising development programs and policies** – MSU-FSG and its African research and outreach colleagues will continue to generate new knowledge about how African governments can most effectively meet their development goals. Changing circumstances call for new approaches, and the performance of newly implemented approaches must be evaluated to ensure sustainability and effective use of scarce development resources.

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For more information, contact:  
John Staatz  
Professor and Co-Director, Food  
Security Group  
Department of Agricultural  
Economics  
205 Agriculture Hall  
East Lansing, MI 48824-1039  
517-355-1519  
staatz@msu.edu

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## MSU at Work in Africa: Promoting Food Security and Agricultural Development



### The challenge

Hunger and poverty plague sub-Saharan Africa. More than 215 million people, nearly a third of the population, are malnourished, and almost half live on less than a dollar a day. Strengthening Africa's food security – the capacity to assure that all Africans have access at all times to enough food for an active and healthy life – remains a fundamental challenge.

Achieving this goal requires reinforcing the three pillars of food security: increased food availability through greater production and trade; enhanced access of the poor to food through increasing their incomes, access to markets, and productive capacity; and better utilization of food through improved food preparation and processing, better health and nutrition practices, and improved sanitation.

Few countries have developed economically without rapid productivity growth in their agricultural sectors; strengthening agricultural development and food security is critical to Africa's future prosperity. At stake is whether Africa will benefit from, or be left behind by, increasing globalization and worldwide economic growth.

Making the challenge even more daunting, the continent's scientific, institutional, and policy analysis capacity in food security and agricultural development is still developing. Tragically, the HIV/AIDS pandemic weakens this capacity, robbing Africa of some of its most skilled farmers, extension agents, agricultural scientists, and policy makers and burdening rural communities with large numbers of orphans.

Yet there are strong reasons for hope. Recent economic and political reforms in Africa, combined with the information and biotechnology revolutions, have opened the door for much more rapid progress in improving food security over the next decade.

### MSU's involvement and accomplishments

Michigan State University has been deeply involved in strengthening agricultural development in Africa since 1960, with a special focus on food security since 1984. The work has been spearheaded by the Food Security Group (FSG) of faculty and graduate students in MSU's Department of Agricultural Economics, working in partnership with colleagues in other MSU units and with African colleagues throughout the continent.

African partner institutions have included universities, government ministries and agencies, national and regional agricultural research institutes, private sector organizations, and non-governmental organizations (NGOs) in 17 countries. Currently, the FSG has major country-level projects in Kenya, Mali, Mozambique, and Zambia, and regional research projects in Southern and West Africa. In some countries, MSU's partnerships have spanned decades. The work has been supported by organizations such as the U.S. Agency for International Development (USAID), the Rockefeller Foundation, the World Bank, and the World Food Programme and the Food and Agriculture Organization of the United Nations.

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## What others are saying about MSU

“The largest aggregation of individuals focusing on African agricultural development anywhere . . .”

– Rockefeller Foundation

“ . . . has a world-class international development program, especially in Africa. This program has had a major impact on policies, institutions, and human capital development in many developing countries. It is the preeminent U.S. university for training of African graduate students in agricultural development.”

– U.S. Department of Agriculture External Review Committee

“We know of no other land-grant university in the United States which has made such a sustained effort to provide . . . African institutions with high-quality resources to assist in economic development.”

– U.S. Agency for International Development External Review Team



MSU's work seeks to:

**Improve the policy environment to make markets work for the poor** – Well-functioning markets for food, cash crops, and agricultural inputs are essential to strengthening food security. Often, poorly designed policies hurt poor farmers, traders, and consumers by hindering competition, raising costs unnecessarily, and increasing the risk to private investment. FSG-led research and outreach have been instrumental in reducing restrictions on regional grain and livestock trade among countries in Southern, Eastern, and West Africa, opening new markets for small farmers and allowing poor consumers in food-deficit countries access to low-cost basic staples. Policy reforms on maize milling in Zimbabwe in the 1990s resulting from MSU-led research increased cash incomes of at least 200,000 rural consumers by 10 percent to 25 percent and real incomes of more than 100,000 poor urban consumers by 7 percent to 13 percent.

**Connect small farmers to profitable market opportunities through better market information** – MSU has played a critical role in helping African partners build sustainable market information systems in Mali, Zambia, Mozambique, Ethiopia, and Rwanda and in promoting cross-country learning through the creation of regional market information system networks. These systems provide small farmers and traders reliable, up-to-date information on their crops in local, national, and regional markets, and they provide policy makers a much more solid empirical basis for designing effective pro-poor market actions. In 2004, the Development Gateway Foundation cited MSU's work on improving market information in Mali as the most exemplary use of information and communication technology for development in sub-Saharan Africa over the past decade.

**Strengthen agricultural research systems** – Research by FSG in the 1990s documented high payoffs to agricultural research in Africa, thereby helping to reverse a trend that began in the 1980s among donors and African governments to reduce investment in agricultural research. FSG has played key roles in helping national agricultural research systems in Mali and Mozambique establish research priorities so that scarce research expenditures contribute optimally to food security, poverty alleviation, and sustainable development. In Mozambique, the FSG team worked recently with research program managers to develop a five-year, \$30 million investment plan to be financed by the Mozambican government.

**Understand the links between health and food security** – FSG research across several countries in Southern, Eastern, and Central Africa has provided a more detailed and nuanced understanding of the impact of HIV/AIDS on rural households and has contributed to appropriate policy and investment responses to help affected households, communities, and countries cope with the crisis. Similarly, work by FSG-African teams on links between agricultural growth and child malnutrition in Mozambique and Mali is being used to design more effective hunger alleviation projects.

**Improve food security while protecting the environment** – Agricultural area expansion into marginal lands is leading to widespread deforestation, destruction of wildlife habitat, erosion, desertification, and depletion of scarce water sources. MSU researchers and their African partners have been at the forefront of analyzing and proposing new strategies for sustainable land and water management in the Sahel, conservation farming in Zambia, and improved, sustainable agricultural input markets, which are essential to promoting sustainable agricultural intensification, throughout Africa.

## Improve emergency responses to food crises and prevent crises before they happen –

Over the past 20 years, Africa has suffered through many natural and human-induced disasters in Rwanda, Niger, Sudan, and Ethiopia, to name but a few countries. Often, the emergency responses deployed to save lives in the short run – free distribution of food and agricultural inputs – can undermine incentives for longer-term agricultural development. MSU-FSG members, working with the United Nations' World Food Programme, have developed training materials to help emergency personnel diagnose the situation better to ensure that responses that save lives in the short run also contribute to long-term development. FSG members are also currently working to help all 700 townships in Mali develop local food security plans intended to raise local production and incomes, thereby reducing the need for emergency relief. With USAID's Office of Food for Peace, FSG has helped design approaches to local food aid procurement to maximize the effectiveness of food aid resources and has provided innovative thinking on how to design emergency response in light of real needs on the ground.

**Strengthen African scientific and policy-analysis capacity** – Africans themselves must make the fundamental decisions about Africa's food security. MSU-FSG, through its education and outreach roles, has made major contributions to the training of Africa's agricultural scientists and policy analysts, through degree training in East Lansing and continual mentoring, and in-service training in Africa. MSU African graduates play critical roles in agricultural research institutes, ministries, NGOs, the private sector, and international organizations. MSU-FSG is currently helping strengthen policy analysis and agricultural economics programs in Mozambique, Kenya, Zambia, and Mali as well as through regional research networks. The Food Security and Food Information Portal for Africa (<http://aec.msu.edu/fs2/test/index.cfm>) connects African scientists and policy makers to the wealth of information available regarding food security on the Internet, provides them and their students with online teaching materials, and allows them to post their own work.

**Put agriculture back on the African development agenda** – From the mid-1980s to the turn of the 21st century, agriculture fell off the development agenda of many international donors and African governments. By demonstrating the key role of agriculture in poverty alleviation and broad-based economic growth, the FSG's work has played a critical role in reversing that situation. Working with several African presidents through the Partnership to Cut Hunger in Africa, MSU-FSG contributed to agricultural development being featured prominently in the African Union's New Partnership for Africa's Development (NEPAD), which has been endorsed by all major international donors.

## New opportunities and an MSU action agenda

New opportunities abound to confront the food security and agricultural development challenges faced by Africa. Political and economic reforms have unlocked the potential for greater private sector and civil society participation in rural development. New information technologies allow much more rapid sharing of scientific knowledge. If the proper regulatory frameworks can be established, biotechnology offers opportunities to expand agricultural production in ways that are safe for consumers and the environment. Thanks to the efforts of MSU-FSG and others, agriculture and food security are now at the center of most African leaders' development agendas.

MSU is committed to helping Africans eliminate food insecurity and abject poverty and face the future with hope and confidence. The action agenda builds on MSU-FSG's strengths in

