

FEED THE FUTURE INNOVATION LAB FOR LEGUME SYSTEMS RESEARCH

The Feed the Future Innovation Lab for Legume Systems Research is a five-year research capacity building development program managed by Michigan State University that focuses on grain legumes in West and Southern Africa. Legumes are a nutrient-dense staple crop that have multifunctional roles in smallholder farm systems in developing countries including food and nutrition security, generating income, providing livestock feed and fodder, and contributing to the sustainability of soil systems through their nitrogen-fixing capabilities. Cowpea and common bean are the focal crops of the Legume Systems Innovation Lab.



The Legume Systems Innovation Lab goals include:



Inclusive and sustainable agriculture-led economic growth



Strengthened resilience among people and systems



A well-nourished population, especially among women & young children

The strength of the Legume Systems Innovation Lab's design lies in its innovative and vibrant research to scaling strategy using a systems approach. Supported projects are diverse in research focus and address both the development and placement of innovative technologies with a thorough understanding of the systems they will impact thus leading to successful adoption. Projects are focused in three areas of inquiry:

- Integration of legumes into sustainable smallholder farming systems and agricultural landscapes
- Integration of legumes within local and regional market systems, including trade
- Analysis of sociocultural and/or economic motivators or barriers to legume utilization at various stages and scales within production and market systems

In addition, the Legume Systems Innovation Lab will focus on opportunities that address nutrition; the unique needs of women and youth; ensure greater resilience of people and systems under stress and shocks; and contribute to the development of human and institutional capacity for a resilient agricultural innovation system. Project activities are focused in the Feed the Future target and aligned countries of Benin, Burkina Faso, Ghana, Mali, Malawi, Mozambique, Niger, Nigeria, Senegal, and Zambia.

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PROJECT OVERVIEW:

How Input Subsidy Policies Change the Legume Farming Landscape



Principal investigator/Lead institution
Dr. Melinda Smale, Michigan State University

Collaborating institutions

- Economie de la Filière (ECOFIL), Institut d'Economie Rurale, Mali
- Université Norbert Zongo, Unité de Formation et de Recherche en Sciences Economiques et de Gestion (UFR-SEG), Burkina Faso

Project Overview

Policies promoting farm input subsidies on starchy staples and cotton may distort land allocation to cowpeas and reduce crop diversity on farms, with adverse consequences for the resilience of the farming landscape, nutrition, and rural incomes.

Subsidies may particularly affect the situation of women and young family members who rely on them to meet personal needs. Yet, we know of no empirical evidence on these points in our two study countries and scant evidence for other countries in a vast literature on economic impacts of fertilizer subsidies in Sub-Saharan Africa.

Through this project, we will address this gap by conducting rigorous analyses with existing large-scale datasets while strengthening the linkages between research and policy formulation as well as supporting the analytical capabilities of young professionals in Mali and Burkina Faso.

Our research will enhance comprehension of the unanticipated consequences of fertilizer subsidies on the cowpea value chain in Burkina Faso and Mali by examining: 1) the effect of fertilizer subsidies on production diversity (cowpea area shares, plot counts, and spatial indices of crop diversity on farms and villages); 2) the gender- and youth-differentiated effects of fertilizer subsidies on cowpea production, quantities sold and revenues; 3) whether on-farm crop diversity or market participation most influences the dietary intake of women of reproductive age.

The project builds capacity through short-term training workshops conducted virtually in each country and through involvement of six students, four of whom are women, in MSc and PhD degree training advised by local co-PIs.