

# Fact Sheet • MALI AGRICULTURE-NUTRITION LINKAGES PROJECT

LINKAGES BETWEEN AGRICULTURAL PRODUCTIVITY GROWTH AND CHILDHOOD NUTRITION

► FOOD SECURITY II COOPERATIVE AGREEMENT

between

► U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT and MICHIGAN STATE UNIVERSITY ◀

► IN-COUNTRY TIME PERIOD: May 1998 - May 2002 <sup>1</sup> ◀

Web site: [http://www.aec.msu.edu/agecon/fs2/mali\\_nut/index.htm](http://www.aec.msu.edu/agecon/fs2/mali_nut/index.htm)

## 1. Cooperating Institutions

Institut du Sahel (INSAH) CILSS, Bamako, Mali  
Food and Nutrition Situation Monitoring Division (DSSAN), Planning and Statistics Unit (CPS),  
Ministry of Health  
National Public Health Research Institute (INRSP), Ministry of Health  
Rural Economic Institute (IER), Ministry of Rural Development and Water  
Central Statistical Office (DNSI), Ministry of Planning  
Agency for International Development, Mali Mission (USAID/Mali)  
Agency for International Development, Global Bureau, Economic Growth Center, Office of  
Agriculture and Food Security (G/EG/AFS)  
Department of Agricultural Economics, Michigan State University (MSU)

## 2. Researchers Involved

**INSAH:** Idrissa Al Farouk, Director General; Researchers: Mbaye Yade, and Daouda Keita  
**DSSAN/CPS:** Mamadou Ballo, Modibo Diarra, and Boubacar Diarra  
**INRSP:** Fatimata Ouattara  
**DNSI:** Guédouma Tangara  
**IER:** Aissata Zouboye Diani  
**MSU Campus Backstop:** James Tefft, John Staatz, Valerie Kelly, John Strauss, Christopher Penders,  
and Lorraine Weatherspoon  
**USAID/Mali:** Paul Tuebner, Roger Bloom, Amadou Camara, Ursula Nadolny, Salif Coulibaly, and  
Ousmane Haidara  
**USAID/West Africa Regional Strategy Team:** Rod Kite  
**USAID/Washington:** Ralph Cummings (G/EG/AFS)

---

<sup>1</sup> Note: These Fact Sheets were used to record project activities from 2002-2004. Starting in 2004, on-line reporting of activities was initiated using the FS-III Web site. Obtaining a complete picture of project activities therefore requires taking into consideration both the Fact Sheets and the on-line reporting system. See [http://www.aec.msu.edu/fs2/mali\\_nut/index.htm](http://www.aec.msu.edu/fs2/mali_nut/index.htm)

### **3. Objectives of the Research and Policy Outreach Activities**

The research and outreach investigates how increased agricultural production and productivity in the cotton and rice producing areas of Mali (southern Mali and the Office du Niger) relative to arid coarse grain zones (Mopti region) have affected individual food security, as measured in terms of the incidence of protein-calorie malnutrition among children under five years old.

The study aims to: (a) establish how basic factors affecting childhood malnutrition rates have changed over the past 10 years, and (b) identify causal relationships and suggest policies to increase the positive effects and reduce the negative effects of agricultural-led income growth in order to reduce childhood malnutrition. The research/outreach is taking place in two phases: an exploratory/hypothesis-generating phase and an in-depth research/action phase.

The research is carried out jointly by MSU staff, researchers at INSAH, and analysts in the departments of several government ministries. There is will close collaboration with the Ministry of Health, which has the lead for nutrition activities in Mali and with its new nutrition coordination unit, the Food and Nutrition Situation Monitoring Division (DSSAN).

### **4. Research Approach**

#### **4.1. Phase I: Examining the Existing Information, Establishing Basic Facts, and Generating Hypotheses**

The first phase of the research consisted of the following activities: an analysis of trends in the major determinants of early childhood protein/calorie malnutrition; a review of the current state of knowledge in Mali and elsewhere about the relationships between these factors and nutritional status; an examination of the data sets in Mali that would allow testing potential hypotheses that explain these relationships; and the development of strategies to carry out these tests, to monitor these relationships on an ongoing basis and to use this information for planning project activities.

These activities were completed collaboratively by MSU campus- and Bamako-based staff, and INSAH and Malian government analysts in 1999. Results are presented in the report entitled *Linkages Between Agricultural Growth and Improved Child Nutrition in Mali* and in numerous policy briefs.

#### **4.2. Phase II: In-depth Field Research and Outreach**

Following the presentation and discussion of the first phase research findings by the Ad-hoc Nutrition Group created by DSSAN in the Planning and Statistics Unit (CPS) of the Ministry of Health, government, donor, and NGO representatives elected a technical research committee to plan and monitor Phase II activities. Committee members worked with the inter-ministerial research team to develop a conceptual framework, to specify research priorities, and to plan data collection activities over the next two years. Following a series of informal interviews with men and women groups and community health center personnel in villages in the Ségou and Sikasso regions, research team

members used findings to assist in drafting questionnaires and interview guides for household-level research currently being conducted in the second phase.

Phase II consists of the following research activities to be implemented through May 2002:

1. An income/expenditure/anthropometric survey to be conducted on a subsample of approximately 750 households from the DHS III sample frame in the regions of Segou, Sikasso, and Mopti;
2. An ethnographic case study (on subsample of the 750 households) of women's time allocation, family consumption, and child feeding practices. An initial round was conducted in September 2000 with subsequent interviews and observations scheduled to be completed on a quarterly basis;
3. A series of community interviews will be conducted in 2001/02 with men and women groups, health center management committees, farmer organizations, and commune leaders to discuss the capacity/feasibility of using agricultural revenues to invest in social infrastructure and finance health and nutrition-related activities; and
4. To carry out the research, participating ministry and research institute analysts will be trained in statistical analysis techniques.

## **5. Outputs to Date**

### **5.1. Collaborative Research, Short-term Training, Outreach Activities, and Long-Term Training**

- November 2000. Presentation of nutrition project results by USAID/Mali to Nairobi meeting of USAID agricultural and environmental officers.
- April 1999. Presentation to USAID staff of project progress and intermediate results of analysis of DHS surveys.
- April 1999. Presentation/discussion with USAID/World Bank staff involved in the health/nutrition sector on project activities and potential areas for collaboration.

### **5.2. MSU Backstop Trips to In-Country Team**

- August 2001. Tefft trip to work with researchers and survey staff on questionnaire control, data cleaning and analysis.
- July 2001. Kelly trip to design and test questionnaires for agricultural component of the survey and improve enumerator data collection and supervisor control procedures.

- May 2001. Tefft trip to work with researchers on analysis of the first pass of case study and to set up data management and cleaning procedures for quantitative survey.
- April 2001. Kelly trip to complete questionnaire design and testing, to do follow up field training of enumerators, and to develop procedures for checking completed questionnaires.
- February 2001. Penders trip to design and test questionnaires for income/expenditure/anthropometric survey and plan enumerator training and survey implementation.
- December 2000. Tefft trip to complete case study data entry, design data entry module, and complete 2001 task planning with research team.
- October/November 2000. Penders trip to complete sampling and finalize questionnaire design.
- September/October 2000. Kelly trip to complete design and field test income/expenditure survey.
- September 2000. Tefft trip to design case study work and work on income/expenditure survey planning.
- June/July 2000. Penders trip to plan, conduct, and analyze rapid reconnaissance trips to Segou and Sikasso regions.
- April 2000. Tefft trip to work with consultants, to collect additional survey data sets, and to plan for first-phase workshop in early 2000.
- February 2000. Tefft, Penders, and Staatz trip to organize and participate in a workshop presenting the results from the first phase of the Agriculture-Nutrition Linkages Project to the various parties involved in the project, including Malian governmental ministries, donor organizations, and USAID/Mali, and to plan future activities.
- December 1999. Penders trip to work with consultants, to collect additional survey data sets, and to plan for first-phase workshop in early 2000.
- October-November 1999. Trip by Staatz, MSU Vice President Robert Huggett, and Agricultural Economics Department Chairperson Larry Hamm to meet with high-level Malian officials (President Konaré, Ministers of Rural Development and Health, officials of APCAM, and the University of Mali) to discuss project impact and broader MSU-Mali collaboration in the areas of agriculture, nutrition, and food security.
- August 1999. Tefft trip to finalize negotiations with Malian institutions to gain access to national data bases and to develop terms of reference for work to be completed by participating analysts.
- April 1999. Penders trip to collect data and begin preliminary analysis of Demographic and Health Surveys (DHS I and II), Enquete Budget-Consommation (EBC), and Enquete Malienne de Conjoncture Economique et Sociale (EMCES).

- December 1998. Staatz trip to work on research plan.
- September-October 1998. Staatz trip to meet with USAID and participating institutions to develop project work plan.
- September-October 1998. Trip by Rosie Kelly to work with INSAH team to set up nutrition project accounting and administrative procedures.

### **5.3. Written Reports/Publications**

#### **Research Reports**

Tefft, James, Christopher Penders, Valerie Kelly, John M. Staatz, Mbaye Yade, and Victoria Wise. 2000. *Linkages Between Agricultural Growth and Improved Child Nutrition in Mali*. MSU International Development Working Paper No. 79. East Lansing: Michigan State University.

#### **Policy Syntheses**

Penders, Christopher L., John M. Staatz, and James F. Tefft. 2000. *Développement Agricole et Malnutrition Infantile: Qu'en Savons Nous?* MSU Policy Synthesis No. 52F. East Lansing: Michigan State University.

Penders, Christopher L., John M. Staatz, and James F. Tefft. 2000. *Agricultural Development and Child Nutrition: What Do We Know?* MSU Policy Synthesis No. 52. East Lansing: Michigan State University.

Penders, Christopher L., John M. Staatz, and James F. Tefft. 2000. *Comment le Développement Agricole Affecte -t- il la Nutrition Infantile au Mali?* MSU Policy Synthesis No. 51F. East Lansing: Michigan State University.

Penders, Christopher L., John M. Staatz, and James F. Tefft. 2000. *How Does Agricultural Development Affect Child Nutrition in Mali?* MSU Policy Synthesis No. 51. East Lansing: Michigan State University.

Tefft, James F., John M. Staatz, and Christopher L. Penders. 1999. *Un plan d'action pour renforcer les liens entre la croissance de la productivité agricole et l'amélioration de la nutrition infantile*. MSU Policy Synthesis No. 48F. East Lansing: Michigan State University.

Tefft, James F., John M. Staatz, and Christopher L. Penders. 1999. *An Action Plan to Strengthen Linkages between Agricultural Productivity Growth and Improved Childhood Nutrition*. MSU Policy Synthesis No. 48. East Lansing: Michigan State University.

#### **Theses**

Penders, Christopher L. 1999. Examining the Links between Agriculture and Child Malnutrition in Mali. M.S. thesis, Michigan State University.

## **6. General Research Activities**

- Collaboration with several national teams of researchers in analysis of nutrition, agriculture, health, consumption, and income data bases.
- Design of survey and sampling methods to collect nutrition, agriculture, health, consumption, and income data for same set of households preferably using ongoing surveys in Malian ministries.
- Identification of immediate actions and policy recommendations to improve child nutrition in Mali.

## **7. Outputs Anticipated**

### **7.1. Research Reports**

#### **Phase I**

The Phase I research report, *Linkages Between Agricultural Growth and Improved Child Nutrition in Mali*, lays out what is known about (a) how various factors that can influence early childhood protein-calorie malnutrition have evolved recently in Mali, and how those changes correlate with the geographical distribution of malnutrition; (b) agricultural production-childhood malnutrition linkages in Mali; (c) what the knowledge gaps are about those linkages; and (d) a strategy of applied research and outreach to fill the gaps. The report discusses how, on the basis of findings either from the preliminary or the more in-depth research of the second phase, action programs could be designed to strengthen the positive effects of agricultural-led income on child nutritional status.

First phase results were presented at a national workshop in Bamako in February 2000 and served as the basis for developing a research and action plan for the second phase of the project.

#### **Phase II: In-Depth Research and Action Plan**

Phase II research has been designed to test the key hypotheses advanced in the first phase. Interim research findings will be presented periodically in working papers, policy briefs and in oral presentations throughout the course of the field work. Feedback from the dissemination of preliminary findings will be used to improve subsequent household and community surveys in the last six months of the twelve month survey. Final research results will be presented in a series of regional workshops and a national conference in 2002. These meetings with key policymakers and health, agricultural, and education specialists will serve as the basis for developing action plans for programs to improve the nutritional payoff of agricultural-led income growth.

## **7.2. Sponsored Regional Seminars and Workshops**

- February 2000. Discussion of results from first phase and plans to develop activities in second phase.

## **7.3. Project Impacts**

- The project has helped launch the newly-created Food and Nutrition Situation Monitoring Division (DSSAN) of the Planning and Statistics Unit (CPS) in the Ministry of Health. By coordinating all project activities collaboratively with this unit, the project has assisted in establishing the legitimacy of this division to carry out its mandate to coordinate nutrition policy in Mali.
- By emphasizing the links between higher incomes and improved child nutrition, the project has expanded the nutrition debate from a singular focus on child feeding practices and nutritional education to encompass the important role played by income in procuring sufficient food as well as paying for health services.
- The decision to conduct upcoming household surveys on a subsample of the national Demographic Health Survey III helped underscore to the Ministries of Health, Planning, and Rural Development the importance of conducting national surveys on similar sample frame in order to obtain a rich data set on the Malian population.