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## **Strengthening Mozambican Capacity for Agricultural Productivity Growth, Policy Analysis, and Poverty Reduction**

**Annual Project Narrative Report - FY06 (2005/06)  
Mozambique Associate Award / Food Security III LWA CA  
(656-A-00-04-00058-00)**



# Annual Narrative Report 2005/06

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# **Strengthening Mozambican Capacity for Agricultural Productivity Growth, Policy Analysis and Poverty Reduction**

## **Introduction**

The Center for Socio-Economic Studies (CESE) was formally created in January, 2006 as a unit within the Directorate of Training, Documentation and Technology Transfer (DFD TT) after the approval of the internal regulation of IIAM by the Minister of Agriculture on 27<sup>th</sup> January 2006. FY06 saw the completion of key activities initiated in FY 05 related to building research capacity in IIAM. Most notable activities include: the conclusion of the definition of agricultural research priorities (Annex 1), conclusion of IIAM investment plan and its submission to the Ministry of Plan and Rural Development, initial establishment of the IIAM website, and provision of vehicles to the Central and Northeast Zonal Center to support socio-economic research. Income and poverty analysis using the TIA panel was also initiated during this period in collaboration with staff from the Department of Policy (DP) of MINAG within the Directorate of Economics.

Gilead Mlay, the new MSU country coordinator, was hired on August 1<sup>st</sup> to replace Tom Walker, who left the project at the end of FY06. The two-month overlap ensured a smooth transition in substantive and administrative matters pertaining to the project. Participation of campus-based staff in Mozambique at this time also facilitated the transition to a new in-country coordinator. A debriefing by Tom Walker was held for USAID staff on the project in late September. Gilead Mlay and Duncan Boughton attended that meeting that reviewed project progress, prospects, and future activities. As part of the transition activities, a visit was made to the Northeast Zonal Centre in September by the new country Director accompanied by Dr. Duncan Boughton.

This report will present the principal accomplishments of the project and shortcomings encountered during implementation and it is organized by project objectives. Annex 2 details the cumulative outputs of the project, based upon the website.

**Objective 1: Strengthen capacity of the new agricultural research institute (IIAM) to identify and disseminate improved crop, livestock and natural resource management technologies through the integration of social sciences with effective zonal research centers**

### **1.1 Integration of Socio-Economists into IIAM and Provision of Vehicles for use at Zonal Centers**

Progress was made in integrating the 8 socio-economists into IIAM. Employment contracts were signed between the candidates and IIAM and were sent to the Administrative Tribunal for approval. Contrary to the expectation of IIAM, the approvals were not realized this year and as such IIAM had no legal basis to pay their salaries and other benefits. The project was therefore obliged to continue to support their remunerations for the whole of FY06. Housing for the Zonal Center Socio-Economists also remained unresolved during this period.

Two vehicles were purchased, with long delays due to importation and licensing issues. The vehicles were delivered to the Center and Northeast Zonal Centers and drivers were contracted by the project to ensure maintenance and enable appropriate use. These vehicles will be used by the CESE analysts and their collaborators to support social science field research in those Zonal Centers. The easing of the transport constraint has facilitated increased field work.

## **1.2 Priority setting for IIAM Agricultural Research**

Priority setting work for public agricultural research initiated in FY05 was concluded during this period and the results published as Research Report No. 3E in the IIAM Research Report Series under the title “Priority setting for public-sector agricultural research in Mozambique with the national agricultural survey data”. A workshop with all key IIAM management and technical program leaders was held to discuss the priority setting and its implications for IIAM planning. The main conclusions drawn from the priority setting work are presented in annex 1.

## **1.3 IIAM Investment Plan**

With the efforts of Tom Walker, Cynthia Donovan, Duncan Boughton and CESE analysts, as well as IIAM leadership, a five year investment plan for IIAM was concluded and formally submitted to the Ministry of Plan and Rural Development on 31<sup>st</sup> July, 2006. Once approved and financed, it will provide six million dollars annually from 2007 to 2011. IIAM Directors and Division Leaders contributed information that complemented earlier work on priority setting in laying the foundation for the investment plan. IARC scientists based at IIAM were also involved in the formulation of the investment plan. The plan was set in motion by IIAM Director Calisto Bias who subsequently presented the plan at a Ministry of Plan and Rural Development seminar on 22<sup>nd</sup> September 2006.

## **1.4 Establishment of Research Report Series**

The new working paper series has been designed and includes working papers, policy briefs and special reports. For FY06 three research reports were produced and made available on the newly designed IIAM website at <http://www.iiam.minag.org.mz/index.htm> . (See Annex 2 for a listing). The following research reports are available in English and Portuguese:

Research Report No. 1E: S. McSween, T. Walker, V.Salegua, and R. Pitoro. August 2006. Economic Impact on Food Security of Varietal Tolerance to Cassava Brown Streak Disease in Coastal Mozambique.

Research Report No. 2E. R. Uaiene. August 2006. Introduction of New Agricultural Technologies and Marketing Strategies in Central Mozambique.

Research Report No. 3E. T. Walker, R.Pitoro, A.Tomo, I. Siteo, C. Salencia, R.Mahanzule, C. Donovan, and F. Mazuze. Priority Setting for Public-Sector Agricultural Research in Mozambique with the National Agricultural Survey Data.

## **1.5 Research activities**

a) Diagnostic research on prospects for potato production in Mozambique

Diagnostic research was carried out in late November in Angonia and Tsangamo Districts of Tete Province. These two districts account for about 90% of potato production in Mozambique. The opportunity for making an impact via research and extension was documented. Priorities for production research, market research, and extension were described in a thematic trip report and subsequently integrated into a wider assessment report by Dr. Paul Demo, a seed specialist from CIP who will be posted in Malawi to also work on potatoes in Mozambique. The 51-page report is titled, "The Potato Sub-Sector and Strategies for Sustainable Seed Production in Mozambique: Report of a two-week potato sub-sector study conducted from 21 November to 4 December 2005." The report was submitted to the Director of IIAM and to USAID earlier this year. The Demo et al. report covers in detail the steps needed to establish an effective seed production program in Mozambique. Other recommendations focus on research on priority traits required in varietal identification, selection, and clean-up, on extension with farmer training in bacterial wilt recognition and management, on fertilizer policy in Malawi and its effects on potato production in Mozambique, and on the desirability of market information about the Angonia and Tsangamo potato-producing region that accounts for about 85% of potato production in Mozambique.

b) Inventory of seed and vegetative material distributed by the Northeast Zonal Center

The work was carried out by two socio-economists posted to the Northeast Zonal Center near Nampula. In the report produced, seed and vegetative material production and multiplication by zonal unit are described for seven commodities, for five years, and four sites.

Beneficiaries are identified for each seed production activity. This report serves as the basis for follow-up research on the productivity of seed production and multiplication by type of variety, crop, and beneficiary in the Northeast Zonal Center.

c) Survey research on the fate of improved maize varieties and chemical fertilizer introduced to farmers in Manica District

This was the main activity of socio-economists in the Central Zonal Research Center. More than 260 farmers were interviewed in about 35 days starting in March. Of the two improved cultivars, high QPM Sussuma and SC513 (hybrid), the hybrid was more widely grown in this border district with Zimbabwe because of significantly greater seed availability. In general, farmers have a positive attitude towards improved maize seed, especially hybrids. These seeds are perceived as highly productive, as drought tolerant, and as a source of food early in the season. But SC513 grain cannot be kept in storage for many months using traditional methods; thus, farmers are forced to sell maize just after the harvest when the price is low (2.5-2.7 MtN). Moreover, the husks of SC513 do not close completely resulting in more damage from rot, insects, and fungi. This work forms the basis for a Ph.D. in Extension at MSU by Eunice Cavane who directed the survey in Manica and who shared her initial results with us. Although Ms Cavane's graduate training is not funded by the project, MSU campus backstop analyst Cynthia Donovan is a member of Ms Cavane's thesis research committee and helped promote linkages with the zonal center socio-economists. Additional quantitative analyses are expected to be carried out to supplement descriptive results.

d) Impact assessment on varietal tolerance to CBSD

A detailed study on of the economic impact of varietal tolerance to CBSD based on Save the Children and its partners experience on the Nampula coast was completed and report produced. This is the first impact assessment of an agricultural research/extension project in Mozambique. Returns to investing in this USAID-funded project were very high. Implications for further extension and research are emphasized in this evaluation.

e) Economic Impact of Cashew Powdery Mildew Disease Spraying: A Smallholder Perspective from Southern Mozambique

IIAM's Center for Socio-Economic Studies (CESE) in collaboration with the Institute for Cashew (INCAJU) drafted a 15-page study proposal to analyze the economic impact of public-sector cashew spraying. The proposal was presented by the Head of CESE Feliciano Mazuze and MSU analyst Raul Pitoro in an annual meeting held in Inhambane on June 5<sup>th</sup> as part of INCAJU's annual meeting and its work plan for 2006/07. The proposal was considered a potentially important instrument to guide future investments in the cashew sub-sector. The Director of INCAJU appreciated the proposal as a potential source of important insights for the sector "Plano Director" that is being updated. The study is being conducted in the provinces of Inhambane and Gaza. The first round of data collection involving four hundred households was concluded and data entry initiated. A second round of data collection for the same households was planned for October and November (FY07).

f) Small farmer irrigation in Southern and Central Mozambique

A baseline survey was carried out as part of the small scale irrigation project whose objective is to contribute to the improvement of rural household income and food security. The baseline study is intended to produce (a) recommendations which will be taken into account during project implementation and (b) information that will be used to evaluate the project impact.

The activity is being directed by Feliciano Mazuze, the Head of CESE. During FY06, Six months of scientific staff time were invested in this activity that covered three irrigation schemes in Maputo province, six in Sofala province, and four in Zambezia. Field work was concluded and data entry initiated during this period. Data cleaning, analysis and report writing are expected to be concluded in the first quarter of FY07.

## **1.6 IIAM Web Site**

Strong demand for a new website for IIAM saw the involvement of the project through MSU campus backstop resource person Steve Longabaugh in designing the site and initial implementation. Through the excellent leadership of the Director of the Training, Documentation, and Technology Transfer Directorate, Dr Paula Pimentel, a draft website was made operational at <http://www.iiam.minag.org.mz/index.htm> during FY06 and DFTT research reports have been made available on the site. Future efforts will focus on ensuring transition of the website to local management on a local server.

## **1.7 Training**

a) Training in the use of the internet accessible electronic journal library system (AGORA)

The AGORA workshop was held as planned on January 24-26, 2006. Representatives from five Portuguese-speaking countries attended. MSU campus backstop analyst and co-Principal Investigator Mike Weber was a trainer and resource person for this workshop, and also made a presentation to the USAID mission on the potential contribution of AGORA in agricultural research and health sector activities. Seven IIAM scientists were among the 32 participants from the agricultural and health sectors. A project-supported analyst, Isabel Siteo, was one of two national trainers in the agricultural sector. The final day of the workshop gave AGORA a wider public hearing in one of Maputo's best-known hotels.

Many people attended that event. Subsequently, two more training sessions were held at IIAM for staff in the Animal Sciences Directorate.

b) MS level studies at MSU

Alda Tomo one of the socio-economists of IIAM was accepted for post-graduate degree training in agricultural economics at MSU and was admitted for the fall semester.

## **Objective 2: Strengthen Capacity of the Directorate of Economics to Implement the National Agricultural Survey (TIA)**

### **2.1 Training**

Three technicians were trained in the statistical software package STATA including application for the production of TIA 2005 data tables. As part of the training, the technicians wrote about 75% of the basic cleaning programs for the 2005 National Agricultural Survey (TIA) dataset. This represents significant progress towards completing the training in the technical aspects of the implementation of the TIA. Past efforts have focused on questionnaire design, layout and pre-testing, enumerator and supervisor training, design of the data entry application, and survey documentation.

### **2.2 TIA 2005 Data collection, processing and dissemination**

TIA 05 data collection was successfully concluded during this period. Data were collected from 6,065 households in 94 districts. The project financed the additional survey costs related to the panel survey design as well as testing improvements to the survey instrument. The panel component of TIA 05 will be extremely valuable for policy analysis.

Data processing was implemented successfully. Apart from technical support provided by MSU country based survey specialist Ellen Payongayong, additional campus-based technical support was provided by Margaret Beaver of MSU, and by David Megill of the Census Bureau. Margaret Beaver assisted with the processing of TIA income data. David Megill provided the templates for the calculation of the (non-panel) sampling weights for TIA.

TIA 2005 database with documentation was completed and first release was made in August, 2006. Preliminary analysis of changes in the level and composition of household incomes by province between 2003 and 2005 was conducted by MSU consultant David Mather and project supported graduate student Benedito Cunguara (who is doing a more in-depth analysis of this topic for his MS thesis).

Ellen Payongayong provided intensive support to USAID funded PVOs and their staff to apply the income proxy method based on TIA to complete their final Development Assistance Program (DAP) reports. Campus-based support staff Margaret Beaver also devoted a major part of her time in Mozambique to preparing the INCPROX programs in SPSS for later distribution to the PVOs).

### **2.3 Staff situation**

The Department of Statistics has a critical shortage of qualified staff. Compounding the problem, the department lost the head of methodology, Eng. Sambo through an untimely

death in a car accident. Also the department remains very vulnerable to the departure of the few staff trained by the project. Therefore recruitment of qualified staff to strengthen the department's technical capacity cannot be overemphasized if TIA work is to be sustainable.

### **Objective 3: Strengthen capacity of the Directorate of Economics to provide a supportive policy environment**

#### **3.1 Support integration of productivity concerns in sectoral and/or commodity subsector policy opinions, studies or strategy papers**

Building on earlier analysis of household incomes using TIA 2002, the new Poverty Reduction Strategy Paper (PARPA II) finalized in December 2005 explicitly recognizes the importance of the link between agricultural productivity and rural poverty. This provides an approved GOM policy foundation for the expansion of investment by government and donors in agricultural research and technology transfer over the next five years.

Following a presentation by the World Bank of an agricultural development strategy paper to MINAG managers, the Minister requested the Economics Directorate's Policy Analysis Department to coordinate the preparation of a new agricultural strategy. This request has created a great deal of confusion since much strategy work has been done over the past three years. DE leadership believes that what is needed is a synthesis document that pulls together the work that has been done rather than starting from scratch. No consensus on what is required appears to have been reached with the Minister at this point.

MSU analyst Danilo Abdula, and staff of the Policy Analysis Department, CEPAGRI and SIMA have produced a draft document on priorities for agricultural development during the period 2006 to 2009. This is a strategic document that guides the formulation of MINAG's PAAOs for 2007 and lays a foundation for the preparation of more detailed individual subsector strategic plans in the future.

#### **3.2 Graduate level training for Mozambican analysts**

Rui Benfica concluded his PhD and returned to Mozambique to take up a position as the World Bank's Poverty Economist in Maputo. The Minister stated that he sees advantages for MINAG in having a trained Mozambican analyst who understands MINAG at the World Bank office in Maputo.

Benedito Cunguara has made good progress on his MS program. He returned to Mozambique for the summer to work on the cleaning and analysis of TIA data and begin preliminary analysis for his MS thesis, based on the TIA panel data. He returned to MSU at the end of August to undertake further course work and thesis analysis.

#### **3.3 Research output and outreach related work**

During this period, three professional publications were produced and a number of policy presentations were made. These can be accessed at the project website [www.aec.msu.edu/fs2/mozambique/index.htm](http://www.aec.msu.edu/fs2/mozambique/index.htm). Analysis of the TIA panel dataset was initiated on income, marketing, and morbidity/mortality components. The Department of

Policy Analysis faces severe shortage of qualified staff and unless new staff members are recruited soon for training, policy analysis work in the Ministry will be highly affected.

#### **Objective 4: Strengthen the National Market Information System (SIMA)**

##### **4.1 Provide SIMA staff with technical backstopping**

a) MSU staff members with SIMA staff members modified the SIMA webpage to be a self-contained page which will in the future be managed by SIMA or other MINAG staff. Market bulletins and other publications will be easily available.

b) MSU campus backstop staff worked with the SIMA team to support efforts to overcome the bureaucratic hurdles in the implementation of a Rockefeller Foundation grant to expand provincial market information services in selected provinces. A vehicle and cell phones have been obtained for the Tete SIMAP development and the SIMAP is now operational, collecting and disseminating price and other market information on a biweekly basis.

The SIMA team took advantage of a visit by campus backstop team member Boughton to review SIMA strengths and weaknesses. The team agreed on the need to recruit and train two additional staff and to form an internal editorial committee to review *Quente Quente* each week.

##### **4.2 Training of SIMA enumerators**

SIMA staff members conducted re-training of SIMA enumerators in the provinces and included training on revised data collection procedures for maize meals and other products, as recommended. The SIMA team developed a new price collection system with scales for roots and tubers, beginning with cassava, white potatoes, and sweet potatoes, after discussions with campus backstop team. The new price series is already appearing in the weekly bulletin *Quente Quente*.

##### **4.3 Facilitate linkages with market information systems in the region**

a) DAP and SIMA team members Pedro Arlindo, Danilo Abdula, and Higinio de Marrule, along with campus backstop Weber participated in a regional policy dialog on the topic "Creating a Conducive Policy Environment for a Food Secure SADC" organized by the Food and Natural Resources Policy Analysis Network (FANRPAN), and held in South Africa.

b) SIMA participated in a trip to Tanzania, to assess cross border trade between Mozambique and Tanzania in the Rovuma River area.

c) SIMA team members participated with FEWSNET and WFP in their cross-border study, looking at trade between Malawi and Mozambique to understand the dynamics of regional trade.

##### **4.4 Research and outreach related work**

a) SIMA staff have continued regular production and dissemination of *Quente-Quente*, a bulletin of weekly market information and ESISAPO also a bulletin of weekly market information for Nampula province. A draft of SIMA statistical series update was completed by Danilo Abdula.

b) SIMA made a presentation in meetings with farmers and traders in Niassa and Cabo Delgado Provinces on domestic and regional market opportunities for several agricultural commodities produced in Northern Mozambique. The presentation was based on results obtained from a windshield survey in rural areas of central and northern Mozambique. These results are available in [flash 47p](#).

c) SIMA staff in collaboration with MSU campus based staff have produced the following *flash* policy briefs:

- i. Comerciantes de pequena escala esperam boas colheitas, mas preços ao produtor são baixos nas zonas de difícil acesso: O que fazer para incentivar a produção e comercialização agrícola. Por Equipa Técnica do SIIMA. [Volume 47P](#) Maio, 2006
- ii. Learning from 2003/03 food crisis in Southern Africa for the current year. David Schirley, Pedro Arlindo, Jan J. Nijhoff, Billy Mwinga, Michael T. Weber and T.S Jayne. [Volume 46E](#). October, 2005
- iii. Mudanças no Mercado e na produção para melhorar a segurança alimentar em Moçambique. David Tschirley, Danilo Abdula e Michael T. Weber. [Volume 45P](#). Setembro, 2006.
- iv. A contribution to USAID's "Telling Our Story" webpage was prepared.

## Annex 1

# Priority Setting for Public-Sector Agricultural Research in Mozambique with the National Agricultural Survey Data

T. Walker, R. Pitoro, A. Tomo, I. Siteo, C. Salencia, R. Mahanzule, C. Donovan, and F. Mazuze

Extract from [Research Report 3E](#)

### Conclusions

In this priority-setting exercise for Mozambique's recently consolidated and de-centralizing public-sector agricultural research institute, we focused on what the national agricultural survey data had to say about commodities, agroecologies, economic importance, and absolute poverty. Several observations and findings weave their way throughout our study, and they bear repeating here in order of importance. The productivity of IIAM in the next 15-20 years is directly tied to the success of the cassava and maize programs. These two food security commodities represent more than half of the value of production and more than half of the potential for alleviating poverty via technological change across the 30 most economically important commodities in the country. The roles of maize and cassava in Mozambique are similar to the role of rice in Asia; technological change in either crop will be a powerful force for development.

As IIAM decentralizes its scientific human resources to its four zonal center locations, it should not lose sight of the primacy of the Northeast Zonal Research Center in both economic importance and the potential for poverty reduction. Our analysis suggests that the Northeast Zonal Research Center contributes about 40% to value of commodity production and to absolute poverty alleviation. The temptation is that too many resources are allocated to the South Zonal Research Center because the research infrastructure in the South is wider and deeper than in the Center and North of the country. Much of that research infrastructure is located in agro-ecologies R1 and R3 that rank 8<sup>th</sup> and 9<sup>th</sup> (among Mozambique's 10 agro-ecologies) in economic importance and scope for poverty alleviation. If the three other zonal research centers are to fulfill their promise, a few key facilities need to be rehabilitated and strengthened in the Center and North. The scarcity of research infrastructure is most constraining in the Coastal Agroecologies. And, as we saw from a comparison of regional with Mozambican value of production, the commodities on the coast are largely unique to Mozambique. Their relative importance is significantly less in the rest of southern African region which limits the scope for borrowing technologies from other countries.

It may also be tempting to merge the activities of the Northwest Zonal Center with a neighboring Zonal Research Center because its mandate contains only one agro-ecology, the higher altitude (largely) border districts (R10). However, with a sustained investment in research, this agro-ecology offers the best hope for rapid technological progress and for crop-livestock integration of any of the 10 agro-ecologies. It benefits from being more market-oriented than the other agro-ecologies and also has greater access to productivity-enhancing inputs. From the perspectives of economic importance and poverty reduction, the Northwest Zonal Research Center is on a par with the South Zonal Research Center that covers three

agro-ecologies. A greater commitment to adaptive research in Angonia and Tsangamo Districts of Tete is required to exploit this potential.

Targeting agricultural research to marginal regions of low production potential to tackle chronic poverty is one temptation that the management of agricultural research in Mozambique does not have to face. In analyzing the national rural survey data over two years, we did document geographic traps of chronic poverty: districts in the lowest mean income quintile in one year are also in the lowest mean household income quintile in the next year. But many of these same districts are characterized by reasonable agricultural production potential in terms of soils, rainfall, and higher population densities. Hence, the trade-off between localized chronic poverty and production potential is not steep.

In contrast, geographic relief traps, areas that have a higher incidence of food insecurity than other regions largely because of a greater likelihood of drought, can be a source of distraction for agricultural research. However, the national survey results show that these areas are not characterized by more widespread or deeper poverty than others as households tend to have more diversified income sources of both agricultural and off-farm income. In almost any agricultural year, some areas will be declared food insecure and pressure will be placed on research administrators to assist in “drought proofing” these regions. Unfortunately, production potential in these regions is low and the opportunity costs of working in these localities are high given IIAM’s limited resources. Public-sector research in Mozambique will be more successful in addressing chronic poverty than in tackling transitory poverty.

Our results do not generate many surprises. We found that economic importance and the potential for poverty reduction went hand in hand. The more important is the commodity in household income, the greater is the scope for poverty reduction. Income poverty is pervasive in rural Mozambique. Increasing producer income via technological change is almost always going to have a positive effect on reducing rural poverty. In reality, these effects are much more complicated than our simple methodology suggests, but we believe that our emphasis on relative magnitudes underestimates the effect of technological change on poverty because most producers are net consumers in Mozambique; i.e., they can benefit from lower prices without adopting the technology as long as others do so to increase supply.

IIAM’s “vital statistics” in agricultural research are also not that much different from the rest of Sub-Saharan Africa. The estimated research intensity is about 1.0% of value of agricultural production, considerably below several countries approaching middle-income status in southern Africa and but slightly above the All-African norm of 0.8%. If we take 2.0% as the recommended level, IIAM’s 120 scientists are consistent with that norm, but expenditure per scientist only appears to be about half of the All-African average. Finding that IIAM’s scientific staff is constrained by operating budget is also not surprising. The ratio of total support staff to scientific staff at about 9:1 is also in line with the All-African average of 9.6:1. The comparison with the All-African data also suggests that IIAM should accelerate the trend towards decentralization. The All-African average ratio is 40:60 Headquarters to Out-posted scientists; IIAM’s ratio is 60:40.

We assembled a human resources data base that shows that about 55 of IIAM’s scientists can be attributed to crop and livestock commodity research. It is perhaps surprising that we could not account for the time of more scientists in commodity research, but IIAM has a broad mandate and the definition of what constitutes commodity research needs to be established with greater care.

The present research resource allocation at IIAM does broadly reflect economic importance and poverty reduction criteria as the actual allocation of 55 scientists does not depart that much from our illustrative best-bet allocation owing mostly to the analysis of the national survey data. More emphasis could be given to the staple food crops maize and cassava and to potato, sesame, and goats. IIAM seems to be over-invested in rice and the livestock species (other than goats). Any over-investment in livestock is not that much of a problem because the country is still recovering its livestock populations decimated by the civil war and the longer-term demand for livestock products is strong. An over-investment in rice is inefficient particularly if IIAM makes the investment and the rest of the government does not follow suit. Rice growing areas in the Center and North require tens of millions of dollars of investment to make rice a paying proposition.

Because it was based on the national survey data with a rigorous sample design, this priority-setting exercise was less subjective than most. But it also suffers from most of the same limitations as the other conventional exercises. Coverage is incomplete in several respects. Forestry products were not included because data on timber production is not covered in the national agricultural survey. Provincial data on timber harvested needs to be collected. Information on on-farm consumption of fruits and vegetables is also not available. Only about 50% of IIAM scientists were included in this round of priority setting that focused on the more macro-commodity level. Setting priorities for the non-commodity scientists at IIAM is considerably more difficult. A review of priorities within commodities with some organized stakeholder involvement is most likely the next priority for priority setting at IIAM. Moving to a project-based research and accounting system would facilitate priority setting. Updating these results with data from the TIA 2005 is yet another priority.

## Annex 2

### Cumulative Output Report FY 2005/2006



## Strengthening Mozambique's Capacity for Agricultural Policy Analysis, Productivity, Growth and Poverty Reduction

### Projecto de Apoio ao Fortalecimento da Capacidade em Análise de Políticas, Produtividade Agrícola, Crescimento Económico e Redução da Pobreza em Moçambique



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## Project Overview

MSU has worked with the Ministry of Agriculture (MINAG) in Mozambique since 1991 to increase MINAG's capacity to formulate and implement facilitative agricultural sector policies, strategies, and institutional reforms. Since 2004, assistance has also been provided to the National Agricultural Research Institute (IIAM). The twin goals of the current project are to expand the availability of appropriate crop, livestock and natural-resource management technologies for smallholder farmers, and to accelerate the uptake of those technologies by strengthening policy institutions and market information services. The project seeks to achieve this goal through formal and on-the-job training in the identification of priority policy issues, collection and timely analysis of relevant information, and prompt dissemination of actionable results to managers and policy makers.

- [Current/Recent Outreach](#)
- [Project Proposal](#)
- Project Output Reports ([2004/05](#), 2005/06, 2006/07, 2007/08)
- [Prior Project Fact Sheet](#): summarizes project approach and output up to Sept 2004.
- [Capacity Building Accomplishments](#)
- [Contact Information](#): in-country personnel, U.S. based backstop and collaborative institutions.
- Quick Links - Mozambique on the Food Security and Food Policy Information Portal for Africa-FSIP ([English](#) and [Portuguese](#))
- Quick Links - Building Professional Skills-FSIP ([English](#) and [Portuguese](#))

## Most Recent Research and Outreach

"Flash": series of short papers, closely focused on issues of relevance for understanding the Mozambican food and agricultural system. [Top](#)

- [Comerciantes de Pequena Escala Esperam Boas Colheitas, Mas Preços ao Produtor São Baixos nas Zonas de Difícil Acesso: O Que Fazer para Incentivar a Produção e a Comercialização Agrícolas?](#) Por: Equipa Técnica do SIMA. volume 47P - 31 Maio 2006.
- [Learning from the 2002/03 Food Crisis in Southern Africa: Lessons for the Current Year](#). David Tschirley, Pedro Arlindo, Jan J. Nijhoff, Billy Mwinga, Michael T. Weber, and T.S. Jayne. volume 46E. October, 2005
- [Mudanças no mercado e na produção para melhorar a segurança alimentar em Moçambique](#). David Tschirley, Danilo Abdula, e Michael T. Weber volume 45P - Setembro 2005.
- [Improving Production and Marketing to Enhance Food Security in Mozambique](#). David Tschirley, Danilo Abdula and Michael T. Weber. volume 45E, September 2005

[See Complete List of Flash series](#)

**Research Reports:** over 50 have been produced, most of them published and downloadable in both English and Portuguese. [Top](#)

### IIAM

- Definição de Prioridades na Investigação Agrária no Moçambique Baseado nos Dados do Trabalho do Inquérito Agrícola (TIA). T. Walker, R. Pitoro, A. Tomo, I. Siteo, C. Salência, R. Mahanzule, C. Donovan, and F. Mazuze. IIAM-DFTT Relatório de Pesquisa 3P. August 2006.
- [Priority Setting for Public-Sector Agricultural Research in Mozambique with the National Agricultural Survey Data](#). T. Walker, R. Pitoro, A. Tomo, I. Siteo, C. Salência, R. Mahanzule, C. Donovan, and F. Mazuze. IIAM-DFTT Research Report No. 3E. August, 2006.
- [Introduction of New Agricultural Technologies and Marketing Strategies in Central Mozambique](#). Rafael N. Uaiene. IIAM-DFTT Research Report No. 2E. August, 2006.

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- RP60E. [Toward Improved Maize Marketing and Trade Policies to Promote Household Food Security in Central and Southern Mozambique](#). David Tschirley, Danilo Abdula, and Michael T. Weber. June 2006.
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- Benfica, Rui M.S. [An Analysis of Income Poverty Effects in Cash Cropping Economies in Rural Mozambique: Blending Econometric and Economy-Wide Models](#). PhD Dissertation. 2006. (1 MB)\*
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- [SIMA Web site](#) - Full set of SIMA and SIMA Provincial (SIMAP) Publications and presentations.

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  - RP 33E - [Household Food Consumption in Mozambique: A Case Study in Three Northern Districts](#). Donald Rose, Paul Strasberg, José Jaime Jeje, David Tschirley (February 1999).
  - RP 32E - [What Makes Agricultural Intensification Profitable for Mozambican Smallholders? An Appraisal of the Inputs Subsector and the 1996/97 DNER/SG2000 Program](#). Volume II: Main Report. José Jaime Jeje, Clementina Machungo, Julie Howard, Paul Strasberg, David Tschirley, Eric Crawford, and Michael Weber (October 1998).
  - RP 31E - [What Makes Agricultural Intensification Profitable for Mozambican Smallholders? An Appraisal of the Inputs Subsector and the 1996/97 DNER/SG 2000 Program. Volume I: Summary](#). Julie Howard, José Jaime Jeje, David Tschirley, Paul Strasberg, Eric Crawford, and Michael Weber (October 1998).
  - RP 30P - [Históricas dos Preços de Grão de Milho Branco e suas Tendências Reais em Alguns Mercados do País](#). Ana Paula Santos, Anabela Mabote, Pedro Arlindo, Rafael Achicala and Jean Charles Le Vallée (Maio de 1998).
  - RP 29P - [Planificando pela Seca em Moçambique: Balanceando os Papéis da Ajuda Alimentar e dos Mercados de Alimentos](#). David Tschirley (Maio 1998).
  - RP 29E - [Planning for Drought in Mozambique: Balancing the Roles of Food Aid and Food Markets](#). David L. Tschirley (May 1998).
  - RP 28P - [Desafios Para Garantir a Concorrência e Reduzir os Custos No Sistema Alimentar de Moçambique](#). David L. Tschirley and Ana Paula Santos (Maio de 1998).
  - RP 27P - [Micro e Pequenas Empresas no Centro e Norte de Moçambique: Resultados de um Inquérito realizado em 1996](#). Rui Benfica, Donald Mead and Pedro Arlindo (Maio de 1998).
  - RP 27E - [Micro and Small Enterprises in Central and Northern Mozambique: Results of a 1996 Survey](#). MOA/MSU Research Team (September 1997).
  - RP 25E - [Small-Holder Cash Cropping, Food Cropping and Food Security in Northern Mozambique: Summary, Conclusions and Policy Recommendations](#). MAP/MSU Research Team (June 1997).
  - RP 21E - [Small-Holder Cash Cropping, Food Cropping and Food Security in Northern Mozambique: Research Methods](#). MOA/MSU Research Team (March 1996).
  - RP 20E - [Micro and Small Enterprise Baseline Survey in Central and Northern Mozambique. Summary of Survey Objectives, Methodology and Contents](#). (1996)
  - RP 19P - [Diagnóstico da Estrutura, Comportamento, e Desempenho dos Mercados Alimentares Rurais de Moçambique](#). Departamento de Estatística e Projecto de Segurança Alimentar da Direcção de Economia Agrária Equipa de Pesquisa (Julho de 1995).
  - RP 18P - [Quem Come Milho Amarelo? Alguns Resultados Preliminares de um Inquérito sobre as Preferências dos Consumidores de Farinha de Milho na Cidade de Maputo](#). MOA/MSU Equipa de Pesquisa (Novembro de 1994).
  - RP 18E - [Who Eats Yellow Maize? Some Preliminary Results of a Survey of Consumer Maize Meal Preferences in Maputo](#). MOA/MSU Research Team (October 1994).
  - RP 16P - [A Evolução da Economia Rural no Período Pos-Guerra: Lições duma Missão de Sondeio no Distrito de Monapo na Província de Nampula](#). MOA/MSU Equipa de Pesquisa (Janeiro de 1994).
  - RP 16E - [Evolution of the Rural Economy in Post-War Mozambique: Insights From a Rapid Appraisal of Monapo District of Nampula Province](#). MOA/MSU Research Team (January 1994).
  - RP 12P - [Política de Preços e Distribuição da Ajuda Alimentar de Milho Amarelo em Moçambique: Uma Análise de Alternativas](#). MOA/MSU Equipa de Pesquisa (Setembro de 1993).
  - RP 12E - [The Pricing and Distribution of Yellow Maize Food Aid in Mozambique: An Analysis of Alternatives](#). MOA/MSU Research Team (October 1993).
  - RP 10E - [The Organization, Behavior, and Performance of the Informal Food Marketing System in Maputo](#). MOA/MSU Research Team (May 1993).
  - RP 9E - [The Maputo Market Study: Research Methods](#). MOA/MSU Research Team (March 1993).
  - RP 6E - [The Determinants of Household Income and Consumption in Rural Nampula Province: Implications for Food Security and Agricultural Policy Reform](#). MOA/MSU/UA Research Team (August 1992).

- RP 5P - [Inquérito ao Sector Familiar da Província de Nampula: O Algodão na Economia Camponesa](#). MOA/MSU/UA Equipa de Pesquisa (Novembro de 1991).  
RP 5E - [A Socio-Economic Survey in the Province of Nampula: Cotton in the Smallholder Economy](#). MOA/MSU/UA Research Team (January 1991).
- RP 4P - [Inquérito ao Sector Familiar da Província de Nampula: Comercialização Agrícola](#). MOA/MSU/UA Equipa de Pesquisa (Janeiro de 1992).  
RP 4E - [A Socio-Economic Survey in the Province of Nampula: Agricultural Marketing in the Smallholder Sector](#). MOA/MSU/UA Research Team (January 1992).
- RP 3P - [Inqêrito ao Sector Familiar da Província de Nampula: Observações Metodológicas](#). MOA/MSU/UA Equipa de Pesquisa (Novembro de 1991).  
RP 3E - [A Socio-Economic Survey of the Smallholder Sector in the Province of Nampula: Research Methods](#). MOA/MSU/UA Research Team (January 1992).
- RP 1P - [Processo de Reformas do Mercado Agrícola em Moçambique: Progressos Alcançados](#). MOA/MSU Equipa de Pesquisa (Outubro de 1990).

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## Policy Presentations

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The following are a series of selected policy presentations made by or with the assistance of MSU personnel since October 2001.



### IIAM

- [Strengthening Mozambican Capacity for Agricultural Productivity Growth, Policy Analysis, and Poverty Reduction](#). Gilead Mlay. A Presentation to the SAKSS-SA Regional Workshop in Johannesburg, October 4th 2006.
- [Debriefing on IIAM/MSU Collaboration with AGORA/HINARI Portuguese Training](#), Maputo, Jan 24-26, 2006 (Note file size = 1.6 mb)
- [List of Participants in AGORA/HINARI Trainer of Trainer Workshop](#), Maputo, Jan 24-26, 2006
- Power Points
  - [Insights from the Analysis of Rural Household Income in Mozambique](#). A Presentation on work by the IIAM/Minag/MSU team at the EC Delegation. December 5, 2005. EC Delegation, 2820 Julius Neyere, Maputo, Mozambique.

### MINAG

- Power Points
  - [Markets, Livelihoods and Vulnerability Assessment](#). Cynthia Donovan. Presentation to the Analytical Workshop on the GAV/SETSAN Baseline Study 2006. Held November 14, 2006, Hotel Cardoso, Maputo.
  - [Perspectivas de Mercado Nacional e Regional do Grão de Milho](#). Apresentação de Pedro Arlindo e Danilo Abdula no Fórum de Comercialização Agrícola, iniciativa PAMA e AMODER, em Cuamba e Chiúre, Maio 2006.
  - [Avaliação da Campanha de Comercialização Anterior](#). Apresentação de Danilo Abdula e Pedro Arlindo no Fórum de Comercialização Agrícola, iniciativa PAMA e AMODER, em Cuamba e Chiúre, Maio 2006.
  - [Developing an Effective Marketing Information System: The SIMA Experience](#). Presentation by the SIMA team to the USAID Mission, Maputo, Mozambique, November 21, 2005.
  - [Análise da Comercialização Agrícola nas Zonas Rurais de Moçambique: Implicações para Estratégias de Segurança Alimentar e Alívio à Pobreza. Resultados do TIA 2002](#). Apresentado por Danilo Abdula e Pedro Arlindo. Direcção de Economia do MINAG, Departamento de Análises de Políticas (DAP). Maputo, Setembro, 2005
  - [Análise do Crescimento do Rendimento dos Agregados Familiares Rurais em Moçambique 1996-2002: Implicações para o Desenvolvimento Agrário no contexto do ProAgri 2e PARPA II](#). Preparado por técnicos da Direcção de Economia, MINAG, e da Universidade Estadual de Michigan. Maputo, Julio, 2005
  - [Using Empirical Information in the Era of HIV/AIDS to Inform Mitigation and Rural Development Strategies: Selected Results from African Country Studies](#). Presentation by D. Mather at American Agricultural Economics Association Annual Meeting, Principal Paper Session 1: What Role for Agricultural Economists in Addressing the HIV/AIDS Pandemic? Providence, Rhode Island, July 25th, 2005.
  - [Learning from the 2002/03 Crisis in Southern Africa: Lessons for the Current Year](#). Pedro Arlindo, David Tschirley, Jan Nijhoff, Billy Mwiinga, Michael T. Weber, and T.S. Jayne. Presentation at workshop on Maize Marketing and Trade Policies in Southern Africa: Toward Defining Appropriate and Mutually Supportive Roles for the Public and Private Sectors, Centurion Lake Hotel, Centurion, South Africa, June 21/22, 2005
  - [A Economia dos Agregados Familiares em Áreas de Fomento de Algodão e Tabaco do Vale do Zambeze, Moçambique](#). Presentation of research results from RP59E made by Rui Benfica (MSU) at the Ministry of Agriculture of Mozambique. Maputo, May 2005.
  - [Competition and Coordination in Cotton Market Systems in Southern and Eastern Africa](#). Cross-Country Workshop. Lusaka, Zambia. February 2005
  - [What do we know about smallholder input use in Mozambique? Background information from MADER's national agricultural surveys](#). Tom Walker, Raul Pitoro, and Duncan Boughton MADER/IIAM/MSU. Presentation to AID Partners Planning Meeting, December, 2004.
  - [Determinantes do Rendimento, Pobreza, e Percepção do Progresso Económico dos Agregados Familiares nas Zonas Rurais de Moçambique em 2001-2002](#). Apresentado na Reunião Nacional da Direcção de Economia do MADER. Pemba, Junho de 2004
  - [Household Responses to Prime Age Adult Mortality in Rural Mozambique: Implications for HIV/AIDS Mitigation Efforts and Rural Economic Development Policies](#). David Mather, Cynthia Donovan, Michael Weber, Higinio Marrule, and Albertina Alage. Presentation at the Center for the Study of African Economies Conference, St. Catherine's College, Oxford, March 2004.
  - [Mozambican Experience with Agricultural Market Information Systems](#). Danilo Abdula on behalf of DE/SIMA/MADER Team. Presentation made to the USDA, Washington DC, February 2004.
  - [Mortalidade de Adultos na Idade Activa e Sobrevivência dos Agregados Rurais em Moçambique: Resultados Preliminares e Implicações dos Esforços de Mitigação do HIV/SIDA](#). (Portuguese)
  - [Prime Age Adult Mortality and Household Livelihood in Rural Mozambique: Preliminary Results and Implications for HIV/AIDS Mitigation Efforts](#). (English)
  - [Morbidez e Mortalidade dos Adultos no Moçambique: Prevalência e Estratégias para os Agregados Familiares Rurais que Enfrentam Adversidade](#). (Portuguese). Presentation made by Higinio Marrule to the VETAID Workshop on Mitigating the Effect of HIV/AIDS on Food Security and Agriculture in Eastern and Southern Africa, Maputo, November 6, 2003. Albertina Alage (MADER/DNER), David Mather (MSU), and Cynthia Donovan (MSU) assisted in the preparation.
  - [Adult Illness and Death in Mozambique: Prevalence and Strategies for Rural Households Dealing with Adversity](#). (English)

- [Dinâmica do Sector Agrário em Moçambique](#). O Papel da Agricultura Comercial Familiar na Redução da Pobreza. (English translation-Agricultural Sector Trends: The Role of Commercial Smallholders in Poverty Reduction.) MADER seminar. Maputo. March 19, 2003 .
- [Qual o Papel da Agricultura Familiar Comercial no Desenvolvimento Rural e Redução da Pobreza em Moçambique?](#) Presentation by Vice Minister of Agriculture and Rural Development Joao Carrilho to the Mozambican Association of Science and Technology. Maputo, October 2002. Rui Benfica and David Tschirley of MSU assisted in preparation.
- [Property Rights for Poverty Reduction: Mozambique's Land Law](#). Presentation by Minister of Agriculture and Rural Development Helder Muteia at the World Summit on Sustainable Development. Johannesburg, September 2002. Duncan Boughton, MSU In-Country Representative in Mozambique, assisted in preparation.
- [Desenvolvimento do Sector Agrário em Moçambique: Constrangimentos, Estratégias e Prioridades](#). Presentation by Minister of Agriculture and Rural Development Helder Muteia at the USAID/Mozambique seminar on its five year country strategy development. Maputo, October 2001. Jan Low and Duncan Boughton assisted in preparation.
- Papers
  - [Mortalidade de Adultos na Idade Activa e Sobrevivência dos Agregados Rurais em Moçambique: Resultados Preliminares e Implicações dos Esforços de Mitigação do HIV/SIDA - Anexo Tabelas](#). (Portuguese). Presentation made by Higinio Marule (MADER) and Michael Weber (MSU) in Maputo. November 20 and 22, 2003. David Mather (MSU), Cynthia Donovan (MSU), and Albertina Alage (MADER/DNER) assisted in the preparation.
  - [Prime Age Adult Mortality and Household Livelihood in Rural Mozambique: Preliminary Results and Implications for HIV/AIDS Mitigation Efforts-Annex Tables](#). (English)
  - [Opening Address at the International Workshop "Food Aid - Contributions and Risks to Sustainable Food Security"](#) Presentation by Minister of Agriculture and Rural Development Helder Muteia, at the workshop in Berlin, Germany, September 2-3, 2003. Duncan Boughton and others assisted in the preparation of this talk.

## Reprint Series - Theses

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- Abdula, Danilo Carimo. [Improving Maize Marketing and Trade Policies to Promote Household Food Security in Southern Mozambique](#). M.Sc. Thesis, May, 2005. (555 KB)\*
- Uaiene, Rafael N. [Maize and Sorghum Technologies and the Effects of Marketing Strategies on Farmers' Income in Mozambique](#). M.Sc. Thesis. 2004. (500 KB)
- Mazuze, Feliciano M. [Analysis of Adoption and Production of Orange-fleshed Sweetpotatoes: the Case Study of Gaza Province in Mozambique](#). M.Sc. Thesis. 2004. (640 KB)\*
- Pitoro, Raul Oscar. [Assessing The Potential Economic Benefits of Transgenic Cotton in Mozambique](#). M.Sc. Thesis. 2004. (590 KB)\*
- Mole, Paulo. [An Economic Analysis of Smallholder Cashew Development Opportunities and Linkages to Food Security in Mozambique's Northern Province of Nampula. \(Note: 1 megabyte download\)](#) Ph.D. Dissertation. June 2000. (970 KB)\*
- Benfica, Rui. [An Analysis of the Contribution of Micro- and Small Enterprises to Rural Household Income in Central and Northern Mozambique](#). M.Sc. Thesis. March 1998. (765 KB)
- Marrule, Higinio. [Land-Poor in a "Land-Abundant" Setting: Unraveling a Paradox in Mozambique](#). M.Sc. Thesis. March 1998. (730 KB)\*
- Strasberg, Paul. Smallholder Cash-Cropping, Food-Cropping and Food Security in Northern Mozambique. Ph.D. Dissertation. December 1996.\*
- Donovan, Cynthia. The Effects of Monetized Yellow Maize Food Aid on Local Maize Prices in Mozambique. Ph.D. Dissertation. February 1996.\*
  - [Chapters 1-5](#) (Note: 4.4 megabyte download)
  - [Chapters 6-8 and annex](#) (Note: 5.1 megabyte download)
- Dengo, Maria Nita. Household Expenditure Behavior and Consumption Growth Linkages in Rural Nampula Province, Mozambique. M.Sc. Thesis. December 1992. PN ABS 943.\*

\* by MSU graduate students supported by the project



## Strengthening Mozambique's Capacity for Agricultural Policy Analysis, Productivity, Growth and Poverty Reduction

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### Professional Publications

#### 2005

- Benfica, Rui M.S., David Tschirley and Duncan Boughton. 2005. [Interlinked Transactions in Cash Cropping Economies: The Determinants of Farmer Participation in the Zambezi River Valley in Mozambique](#). Accepted as a contributed paper for the 26th International Association of Agricultural Economics Meeting, Brisbane, August 2006.
- Boughton, Duncan, David Mather, David L Tschirley, Thomas Walker, and Ellen Payongayong. 2005. Pro-Poor Rural Economic Growth for Post-Civil War Recovery: Myth or Reality in Mozambique? Accepted as a poster paper for the 26th International Association of Agricultural Economics Meeting, Brisbane, August 2006.
- Walker, Thomas, Duncan Boughton, David Tschirley, Raul Pitoro and Ada Tomo. 2005. [Using Rural Household Income Survey Data to Inform Poverty Analysis: An Example from Mozambique](#). Accepted as a contributed paper for the 26th International Association of Agricultural Economics Meeting, Brisbane, August 2006.
- Jayne, T.S., M. Villarreal, P. Pingali, and G. Hemrich. 2005. HIV/AIDS and the Agricultural Sector: Implications for Policy in Eastern and Southern Africa. *Electronic Journal of Agricultural Development Economics*, Vol. 2 (1).
- Mather, D., C. Donovan, T.S. Jayne, and M. Weber. 2005. Using Empirical Information in the Era of HIV/AIDS to Inform Mitigation and Rural Development Strategies: Selected Results from African Country Studies. *American Journal of Agricultural Economics*, Vol. 87 (5): 1289-1297.

#### 2003

- Jayne, T.S. T. Yamano, M. Weber, D. Tschirley, R. Benfica, A. Chapoto, and B. Zulu. 2003. Smallholder Income and Land Distribution in Africa: Implications for Poverty Reduction Strategies. *Food Policy*, Vol. 28(3): 253-275.

#### 2001

- Tschirley, David and Rui Benfica. 2001. Rural poverty and poverty alleviation in Mozambique: what does the evidence tell us? *Journal of Modern African Studies*, 39(2).

#### 1996

- Jayne, T.S., L. Rubey, F. Lupi, D. Tschirley, and M. Weber, 1996. Estimating Consumer Response to Food Market Reform Using Stated Preference Data: Evidence from Eastern and Southern Africa. *American Journal of Agricultural Economics*, Vol. 78, No. 3 (August): 820-824.

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## Survey Instruments and Data Documentation

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### Introduction

Since 1991, FSP has carried-out or assisted in a large number of household surveys in Mozambique. These surveys have ranged from geographically focused studies designed to address specific policy issues, to assistance to Ministry of Agriculture and Rural Development in its National Agricultural Survey. Below are brief descriptions of each survey, links to downloadable questionnaires, and links to Research Reports which provide methodological background or research results from the surveys. Many of the downloadable questionnaires are "synthetic questionnaires". These are based on the original, but are redesigned to reflect the final structure of the SPSS/Windows data files. If the questionnaire is an original, and not a synthetic version, that is indicated in parentheses.

### 2005 National Agricultural Household Survey (TIA05)

- [Panel Questionnaire](#)
- [Nova Questionnaire](#)

### 2003 National Agricultural Household Survey (TIA03)

- Village/Community Questionnaire ([English](#), [Portuguese](#))
- Small and Medium Farms - with Field Measurements ([English](#), [Portuguese](#))
- [Pequenas E Médias Explorações - Sem Medição](#)
- [Grandes Explorações](#)

### 2002 National Agricultural Household Survey (TIA02)

During 2002 the project is working intensively in support of MADER's national agricultural household survey, referred to as TIA02. Field work is scheduled to be launched in July 2002 and completed during October. A total of over 4,000 households will be interviewed. Final questionnaires are now available.

- [Household Questionnaire](#)
- [Community Questionnaire](#)

### Agricultural Market Information System (SIMA)

Since 1991, MSU has assisted MADER in implementing an Agricultural Market Information System (SIMA). This system produces weekly (Quente-Quente) and monthly (Boletim Mensal) bulletins with domestic prices of 25 products in 27 producer, wholesale, and retail markets throughout the country. The bulletins also include regional and international prices of selected commodities, and market commentary.

- [Questionnaires](#)
- [SIMA Web site](#) - Full set of SIMA and SIMA Provincial (SIMAP) Publications and presentations.

### 2000/01 Cotton Monitoring Surveys

In October 2000, Mozambique embarked on a phased liberalization of its cotton sector, and the Ministry of Agriculture and Rural Development's Policy Analysis Department was charged with monitoring this process and recommending follow-on reforms. As part of the monitoring process, FSP assisted the Policy Analysis Department in conducting a survey of cotton growers in Nampula province during December, 2000.

#### Questionnaires

- [Household Level](#): this questionnaire is based in the income proxy methodology developed from the 1998 Income Survey, and will allow the calculation of estimates for each household of income from 10 different sources. (original in Portuguese)
- [Grower Level](#): this questionnaire focuses on the cotton growing practices and experience of the grower. (original in Portuguese)

### 1998 Income Survey

In 1998, FSP worked with USAID-funded NGOs to conduct a survey of households in NGO target areas. The stratified cluster sample design covered 490 households, each of whom was visited twice during the year. The primary purpose of the survey was to develop income proxy models for use by NGOs in impact monitoring.

#### Questionnaires

- [Round 1](#) (June 1998; original in Portuguese)
- [Round 2](#) (November 1998; original in Portuguese)

Research Reports: See [#38](#) for more detail on research methods, and for the income proxy models developed on the basis of these data.

## 1996 National Agricultural Survey (TIA96)

FSP assisted MADER in carrying out this national rural household survey. The stratified cluster sample design covered 3,851 households in all 10 provinces of the country. FSP added a microenterprise module to this survey, covering all sampled households in the provinces of Nampula, Zambezia, Manica, and Sofala.

### Questionnaires

- [Main Questionnaire](#)
- MSE Module
  - [Rural, Part I](#) (translated original)
  - [Rural, Part II](#) (translated original)
  - [Rural, Closed Enterprises](#) (translated original)
  - [Urban](#) (translated original)

### Reports

- [Lessons Learned](#)
- Documentation and selected results: [text of the report](#), and [statistical tables](#).

## Small-Holder Cash Cropping, Food Cropping and Food Security in Northern Mozambique

This survey was carried out over five rounds in 1994 and 1995. It focused on three "Joint Venture Companies" operating cotton outgrower schemes with smallholders in Nampula and Cabo Delgado provinces in northern Mozambique. The objective of the research was to examine the effects of alternative technological packages and institutional arrangements for cotton on smallholder incomes and food security. The stratified cluster sample covered 472 households, with modules on agricultural production, field level agricultural activities (including labor hiring), off-farm wage and microenterprise activities, expenditure, and 24-hour recall food consumption.

### Questionnaires

- [Agriculture, Demography, Employment and Expenditure](#)
- [Household Level Questions](#)
- [24-hour Recall Consumption](#)
- [Maize Milling Module](#)
- [Land Conflict Module](#) (done in collaboration with Land Tenure Center, U. of Wisconsin)

Research Reports: See [#21](#) for details on research methods; [#25](#) for selected research results.

## Socio-economic Survey of the Smallholder Sector in Three Districts of Nampula Province, 1991

This survey covered 343 households in the districts of Ribaué, Monapo and Angoche, Nampula province. It examined the food security strategies that households had adopted under the extremely difficult circumstances created by civil war and degradation of infrastructure.

- [Original Questionnaire](#)
- Related Research Reports: See Research Reports [3](#) and [3P](#) (Portuguese) for more detail on research design. For research results, see Research Reports [4](#), [4P](#), [5](#), [5P](#), and [6](#)