

Fact Sheet • MOZAMBIQUE PROJECT RESEARCH AND POLICY DIALOGUE

► FOOD SECURITY COOPERATIVE AGREEMENT¹ ◄

between
► U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT/ MOZAMBIQUE MISSION & MICHIGAN STATE UNIVERSITY ◄
► TIME PERIOD: NOVEMBER 1997 - JUNE 2002² ◄

1. Cooperating Institutions

Directorate of Economics, Ministry of Agriculture and Rural Development, Mozambique (MARD/DE)
Agency for International Development, Mozambique Mission (USAID/Mozambique)
Agency for International Development, Bureau for Economic Growth, Agriculture and Trade, Office of
Agriculture and Food Security (AID/EGAT/AFS)
Department of Agricultural Economics, Michigan State University (MSU)

2. Researchers Involved

Ministry of Agriculture and Rural Development: HE Helder Muteia, Minister of Agriculture and Rural Development; HE João Carrilho, Vice-Minister of Agriculture and Rural Development; Carlos Mucavele, National Director, Directorate of Economics (DE); Arnaldo Ribeiro, National Director, National Sugar Institute (INA) and Head, Office of Commercial Agricultural Sector Promotion Office (GPSCA); Erasmo Muhate, National Director, Mozambique Cotton Institute (IAM); Calisto Bias, National Director, National Institute of Agronomic Research (INIA); Victorino Xavier, MARD Institutional Reform Coordinator; Higino De Marrule, Coordinator, Department of Policy Analysis (DAP); José Jaime Jeje, Head, Department of Statistics (DEST); Domingos Diogo, National Coordinator for TIA 2002; Ana Maria Menezes, Environmental Specialist (DE); Jaqueline Anselmo Massingue, Danilo Carimo Abdula, Arlindo Rodrigues Miguel, Raúl Óscar Pitoro, Guilhermina Salvador Rafael, Olívia António Govene, Líria Alfredo Sambo, and António Manuel Paulo, trainee Policy Analysts, Department of Policy Analysis (DAP)

Market Information System Collaborators: António Manuel Paulo, Acting National Market Information System Coordinator; Argentina Balate, analyst; Simão Capito Nhane, Abel Frechaut, and Francisco Monteiro (Central Team); Anli Falume (Cabo Delgado Provincial MIS); Julião Augusto Nhanquila (Inhambane Provincial MIS); Mário Armando (Manica Provincial MIS); Francisco Guerra (Nampula Provincial MIS); and 50 market enumerators distributed throughout the country's 10 provinces

Private Sector Collaborators: Sergio Chitará, Executive Director, Federation of Mozambican Business Associations (CTA); Ana Paulo Negrão, CITRUM (formerly Secretary, Mozambican Cotton Ginners' Association)

MSU In-Country Researchers: Ana Paula Manuel dos Santos, José Jaime Jeje, Higino Francisco De Marrule, Pedro Arlindo, Donald Rose, Jan Low (Policy Training Coordinator), David Tschirley (Country Coordinator thru 8/98), and Duncan Boughton (Country Coordinator 10/98 - 6/02)

¹ The Cooperative Agreement was revised in May 1999, and formally amended in November 1999, to reflect the Ministry of Agriculture and Rural Development's capacity building needs in the context of the PROAGRI agricultural sector investment program.

² Version of Fact Sheet: Final Report June 2002

MSU Campus Backstop: David L. Tschirley, Cynthia Donovan, Julie Howard, and Michael T. Weber

3. Project Objective

The principal goal of MSU assistance under this Cooperative Agreement was to increase the Ministry of Agriculture and Rural Development's (MARD) capacity to formulate and implement facilitative agricultural sector policies, strategies, and institutional reforms. The project sought 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 within and beyond MARD.

4. Project Approach

- The project approach to capacity building was based on a collaborative model of policy dialogue, applied policy research, and in-service and formal training. This model emphasized: 1) joint definition of policy issues and research problems with host country analysts and policy makers; 2) participation of local analysts in the entire research and policy analysis process thereby generating local capacity and increasing local ownership of the results; and 3) timely dissemination of policy analysis and research findings through short internal policy memos for senior decision makers, research notes and policy syntheses, meetings and seminars, and in-depth research reports.
- To reflect the expanded capacity-building needs to implement MARD's agricultural sector investment program (PROAGRI), MSU's proven collaborative model was broadened in terms of number of participants and range of content areas, and strengthened by the addition of a special program of short-term formal training activities. The project was housed within the Departamento de Análise de Políticas (DAP) of DE, having a direct impact on policy formulation and dialogue. Joint activities were also developed with DE's Departamento de Estatística (DEST) and the Departamento de Planificação (DP), as well as provincial directorates of agriculture and rural development (DPADRs). These linkages helped to ensure MARD's ability to quantitatively monitor key agricultural sector variables over time, and improve the responsiveness of MARD planning to the needs of rural producers and the private sector.
- Michigan State University's project team expresses sincere thanks to all collaborators in the Ministry of Agriculture and Rural Development of Mozambique and USAID/Mozambique for the outstanding collaboration and support provided during the life of this Cooperative Agreement. Successful institution building is a long-term team effort, and the outputs reported below are indeed the fruit of dedicated teamwork on the part of all.

5. Outputs

5.1. Overview

During the four years and nine months of the Cooperative Agreement, major progress was made in the following areas:

- i. Institutional Development
- ii. Formal, In-service and Postgraduate Training
- iii. Policy Analysis and Advising

- iv. Market Information Services
- v. Socio-economic Research and Data Collection Methods

A summary of accomplishments in each area follows.

Institutional Development

- Support for MARD's institutional reform process was provided at three levels: ministry-wide, National Directorate of Economics, and the Policy Analysis Department. At ministry-wide level, initial training of focal points was provided through two courses conducted by the International Management Development Institute (IMDI). Subsequently, DAP and project staff participated in institutional reform workshops for central and provincial services, assisted the national coordinator in the analysis and compilation of follow-up survey results, and advised on the advantages and disadvantages of alternative options for a revised ministry structure.
- MARD officially established a new policy analysis department, the Departamento de Análise de Políticas within the Directorate of Economics. DAP was presented to the Vice Minister in March 2000, and to the full MARD decision making council under the leadership of the Minister in June. The Minister boosted the department's visibility within the ministry and among its stakeholders by publicly announcing a lead role for DAP in two important policy initiatives: a joint government and private sector working group to review policy and strategy for the cotton sector; and a new partnership with the private sector involving the establishment of a dedicated unit within the Ministry to ensure a more facilitative environment for commercial agricultural development. A proposed set of policy analysis department functions and staffing levels was completed as part of the broader institutional reform effort.
- The planning department of DE developed a preliminary framework for identifying strategic actions to provide greater focus to the development of the ministry's 2002 annual work plans (PAAOs). DAP supported the planning department's effort by: i. conducting a seminar for national directors on the potential for accelerating rural economic growth through market-oriented crop diversification and productivity improvement strategies; and ii. coordinating the development of strategic actions for the seed sector in collaboration with the directorates of agriculture, rural extension and the National Agronomic Research Institute. DAP also assisted with Ministry-wide reviews of submitted work plans with specific attention to consistency with environmental sustainability and poverty reduction principles.
- An environmental specialist, Ana Menezes, was recruited for DAP. Menezes traveled to Tete, Inhambane, and Nampula to work closely with provincial level personnel in incorporating environmental concerns into their planning process for 2001. This was followed by a two-day national workshop sponsored by PROAGRI to ensure the prioritization of environmental impact studies and harmonization of central and provincial level activities in the PAAO 2001. An environmental guide for use by provincial agricultural and rural development services covering irrigation, livestock, forestry and extension was completed. The environmental specialist also coordinated a study of livestock carrying capacity in Manica province and evaluated the current status and future on minimization of the environmental and health impacts of insecticide use. Studies of the potential impact of small scale irrigation projects on the environment were undertaken in coordination with the national hydraulics directorate. A joint assessment of progress made to date in the integration of environmental considerations into PROAGRI workplans, and the potential future role of remote sensing to enhance environmental monitoring, held September 2002.

Formal, In-service, and Postgraduate Training

- Training oriented towards senior and/or planning staff sought to sensitize participants to the role of public sector investment in agriculture, the nature and importance of facilitative agricultural policies, and simple tools and practical examples that help focus planning on potentially high payoff interventions. The training usually took the form of half- or one-day seminars of interest to senior MARD managers.
- Training oriented to the Policy Analysis Department's trainee policy analyst group, who mostly had a university degree in agronomy, focused on providing trainees with a set of tools necessary to carry out policy analysis. The core text for the course was a Portuguese translation of the award-winning book *Food Policy Analysis* by Timmer, Falcon and Pearson. The training also included survey design, data management and analysis skills necessary to provide an empirical basis to policy advice. Eight trainees successfully completed the program and were awarded contracts by MARD. Short-course training opportunities inside and outside Mozambique were subsequently organized for individual analysts according to their area of specialization. At the end of project life, three were undertaking or about to undertake MS-level training, three were working as DAP analysts, one was acting national coordinator of SIMA, and one was working in the private sector support office (GPSCA).
- Three courses on analysis of the financial profitability of improved agricultural technology were offered for research and extension workers from the public and PVO sectors. Two courses were organized in Maputo and one in Nampula. Training manuals originally published by the International Wheat and Maize Improvement Center (CIMMYT) were translated into Portuguese.
- In addition to DAP analysts, six project-affiliated staff completed and/or initiated graduate-level training in agricultural economics during the life of the Cooperative Agreement. One Mozambican completed Ph.D. level training at MSU. Three Mozambicans completed MS level training at MSU (one of whom is now undertaking Ph.D. level training), one completed MS level training through the Wye College external program, UK, and one began MS level training at Ohio State University. All have conducted or are conducting field research on topics of direct relevance to agricultural policy in Mozambique. USAID's Atlas program was the primary source of funding in most cases, and the termination of USAID/Mozambique contribution to it is unfortunate.

Policy Analysis and Advising

- During the first half of 2002, the project and DAP prepared briefing papers at the request of MARD's Conselho Consultivo on strategy options for grain storage, agricultural mechanization and rural credit.
- In preparation for Mozambique's participation in the SADC Trade Protocol, DAP staff coordinated MARD's review, together with key agro-industry representatives, of: 1) the speed with which various products and inputs of importance to the Mozambican agricultural sector can be liberalized within the SADC framework; and 2) the level of import duties and value added taxes to be applied to imports as MARD's contribution to the revision of the *Pauta Aduaneira* (Customs Duty Manual). Proposals arising from the review were presented to, and approved by, MARD's decision making body (the Conselho Consultivo), as well as at a MARD senior management training seminar on trade liberalization and agricultural sector development.
- DAP staff took part in a conference on the Strategy for Cashew Nut Marketing and Processing held in Nampula in 2001, and subsequently prepared a memorandum detailing the problems inherent in the new proposal for regulating cashew nut trade, suggesting alternatives that would help strengthen the cashew nut industry without severely discouraging cashew nut producers. Further contributions were made by DAP at

a second meeting held in Maputo, 2002. With the exception of the export restriction on raw cashew embodied in the 1999 Cashew Law, the new marketing regulation that came into effect for the 2002 marketing system is a valuable example of a facilitatory regulatory framework to encourage and enable quality improvement throughout the system.

- DAP staff made key presentations and provided organization and facilitation services for the National Seed Seminar in March 2001. The seminar was co-sponsored by two national directorates (Agriculture and Economics) and the National Agronomic Research Institute (INIA). Recommendations emerging from the national seminar emphasized the need for a policy environment that will encourage greater seed choice through the entry of more seed companies, harmonization of import, registration, and release laws with neighboring countries, revision of laws to encourage greater commercialization of local seed production, substantial increases in public sector investment in breeder and pre-basic seed production, and implementation of pilot seed projects to test demand for new seed and channel emergency seed distribution through commercial outlets. Some but not all of these recommendations were embodied in the 2001 revised seed sector regulation, principally due to the unwillingness of the National Seed Service to embrace an interdisciplinary and intersectoral approach to seed regulation.
- As coordinator of the joint private sector/government Cotton Sector Working Group, DAP took a lead role in facilitating the development of a vision and policy framework for improved long-run competitiveness that was approved at a sector-wide stakeholder meeting held in Nampula in October 2000. New rules to allow farmers choice of commercial partner while protecting the integrity of seasonal input credit recovery were also agreed and published. Farmers and concession companies remained polarized on pricing policy issues when the newly competitive environment resulted in farmers receiving cotton prices 10-20% above those otherwise expected to prevail. In the absence of satisfactory contract enforcement mechanisms, cotton companies successfully lobbied for a roll-back to a non-competitive monopoly environment with predictable effects on farm-level prices. A comparative study of seven Sub-Saharan African countries confirmed that, under the current regulatory environment, Mozambican cotton farmers receive the lowest share of world market prices despite easy access to coastal ports, and achieve the second lowest value of marketed lint per hectare cultivated.
- In collaboration with the ACDI/VOCA staff from Malawi, DAP staff provided policy advice on a tobacco regulatory framework approved in 2001. Like cotton, a key policy challenge is to ensure credit recovery for exporters providing inputs to farmers on credit in the absence of rural credit markets and alternative private sector input supply channels. Project staff were instrumental in the removal of area restrictions for producers who wish to remain independent of tobacco company-managed input provision schemes, but were unsuccessful in including provisions to allow independent traders to purchase tobacco from independent producers. While this restriction was deemed necessary to encourage new international companies to invest in Mozambique's tobacco sector, it removes incentives for the development of alternative supply channels.
- DAP staff provided policy advice on agricultural minimum wage negotiations. A paper prepared by DAP staff entitled *The Challenge of the Agricultural Minimum Wage in Mozambique: Theoretical and Practical Considerations* was distributed to members of the Comissão Consultiva do Trabalho (CCT), unions and employers, and contributed to a rapid and constructive resolution of the potentially contentious issue of closing the gap between minimum wages for agricultural and non-agricultural workers.
- In addition to the major policy themes of agricultural trade liberalization, development of the cashew, cotton, tobacco, and seed sectors, and agricultural minimum wage negotiations, DAP staff prepared policy advice for senior management on a wide range of current issues including the national poverty reduction strategy paper, national agricultural marketing strategy, European Union agricultural product market access,

minimum prices for cotton, proposed draft regulations for cashew marketing, agricultural extension system development, and food security research priorities.

- Mozambique participated in the Partnership to Cut Hunger initiative at the invitation of President Konare of Mali, and Michigan State University President M. Peter McPherson. The Partnership's objective was to develop, jointly with African partners, a new long-term strategy for U.S. efforts to cut hunger on the African continent. The Mozambican delegation to the Partnership's June 2001 conference held in Washington, D.C. to review a draft action plan was headed by Prime Minister Mocumbi, and included Vice Minister of Agriculture Carrilho, and Executive Director of the Confederation of Mozambican Business Associations, Chitará. Prior to the conference, a national working group facilitated by Professor José Negrão of Eduardo Mondlane University studied and critiqued a strategy paper on cutting hunger in Africa prepared by Jerome Wolgin. Further information on the Partnership to Cut Hunger Initiative, including background documents and the draft strategy and action plan, can be found on the web at: <http://www.africanhunger.org/>

Market Information Services

- SIMA staff actively participated in the development of a national agricultural marketing strategy coordinated by the Ministry of Industry and Commerce and approved by the Conselho do Ministros in July 2001.
- During the national flood emergency of 2000, staff from the national market information system (SIMA) provided weekly updates to the national disaster coordination meetings and expanded electronic circulation of the weekly bulletin *Quente Quente*.
- During 2000, the in-country SIMA team, with assistance from Tschirley and Donovan, completed a User Needs Assessment of SIMA. This assessment sought to evaluate the usefulness of the current information produced by SIMA, and explore what types of new information would increase the usefulness of SIMA for the commercial decisions of farmers, traders, and processors. The team conducted interviews with farmer associations, informal and formal traders, and processors in Maputo, Beira, and Nampula. The content and distribution mechanisms for SIMA's weekly and monthly bulletins were improved to take account of users' comments.
- A direct result of the user needs assessment was the launch of a new pilot provincial market information initiative for northern Mozambique, centered in Nampula province. The initiative aims to improve linkages between farmer associations, provincial traders, regional and international markets. The initiative was launched at joint private sector and public sector seminars in Nampula and Maputo where market outlook information for the upcoming crop marketing year was provided for key food and cash crops.
- Training workshops for all SIMA enumerators were held to discuss the findings of the SIMA user needs survey and implement improvements in price collection methods.

Socio-economic Research and Data Collection Methods

- The integration of applied socio-economic research with policy analysis and advising, and in-service training of trainee policy analysts, was a hallmark of the Cooperative Agreement approach.
- Project staff and collaborators were involved in all stages of the design and testing of the TIA 2002 national agricultural sample survey questionnaire. The approved questionnaire provided a comprehensive dataset on the farm and non-farm economic activity of a nationally representative sample of 5,000 rural households.

In two of Mozambique's ten provinces, data entry and cleaning was performed in the village using laptop computers to compare the quality and timeliness of data and analysis obtained with conventional data collection and processing methods. The data was used to assess contribution of the agricultural sector to rural household incomes, and helped plan future agriculture and rural development strategy.

- In June 2001, in collaboration with the recently established Office for Commercial Agricultural Sector Promotion, DAP initiated a study to assess the implications of different strategies for agribusiness development on rural employment and poverty reduction. Reconnaissance surveys were conducted in Zambezia and Nampula provinces, and secondary data collection on agriculture sector investment projects undertaken in collaboration with the Investment Promotion Center. The results were published in a DE research paper, and also contributed to a speech by the Minister of Agriculture and Rural Development to the 2002 Commonwealth Investors Conference in Maputo, and a presentation by the Vice Minister of Agriculture and Rural Development to the Mozambican Association of Science and Technology.
- Two collaborative studies of the seed sector were completed and presented at the National Seed Seminar in March 2001, co-sponsored by two national directorates (Agriculture and Economics) and the INIA. Recommendations emerging from the national seminar emphasized the need for a policy environment that will encourage greater seed choice through the entry of more seed companies, harmonization of import, registration and release laws with neighboring countries, revising laws to encourage greater commercialization of local seed production, substantially increasing public sector investment in breeder and pre-basic seed production, and implementation of pilot seed projects to test demand for new seed and channel emergency seed distribution through commercial outlets. The studies were published in the DE research paper series.
- In November and December 2000, DAP team members in collaboration with the IAM and the Provincial Directorate of Agriculture and Rural Development, designed and implemented a survey of 900 cotton-growing households in Nampula province to determine the quality of service provision by cotton companies, and to assess trends in cotton area and production during the last two seasons when world market and farm-gate prices have been very low. The results were intended to provide a baseline to monitor the impact of the new cotton sector policy of gradual liberalization on service provision, productivity, and environment. The results were published in DE's research paper series, and also contributed to an article on cotton input systems submitted to the journal *Food Policy*, and an article on the comparative performance of cotton policy frameworks submitted for the International Association of Agricultural Economists conference to be held in South Africa in 2003.
- An analysis of the impact of maize trade liberalization with Malawi on maize prices at farmer level in central and northern Mozambique was undertaken. The results were presented at the Agricultural Transformation in Africa conference in Nairobi, Kenya, in June 1999, and were published in both research report and policy brief (*Flash*) formats. The analysis shows that liberalization has had significant positive impacts on producer prices, and encouraged Mozambican policymakers to maintain open trade even in years of production shortfalls.
- An analysis of nutritional adequacy in central and northern Mozambique, with careful attention to seasonal variation, was prepared using the household level data set collected in Nampula and Cabo Delgado during 1995-1996. The results were published in research report and policy brief (*Flash*) formats, and presented at two national seminars. A method for predicting dietary adequacy in Mozambique on the basis of easily recorded food consumption variables (proxy indicators) was subsequently developed, tested, and documented. The methodology is complementary to the income proxy work, providing additional insights into the extent to which income changes are translated into dietary improvement, and currently in use by several PVOs in Mozambique.

- Field work for a comprehensive study of rural incomes in central and northern Mozambique was completed in November 1998, and the results were presented at the USAID SO1 partners conference in February 1999. The results formed the basis for the SO1 team's contribution to USAID/Mozambique's R4 report, and were subsequently used to develop an income proxy methodology to simplify future reporting by USAID-funded PVOs in Mozambique and Kenya. The questionnaire also informed the design of MARD's national agricultural sample survey questionnaire in 2002.
- Research on non-farm and off-farm employment was undertaken using data from the 1996 national agricultural sample survey (TIA) and the 1998 rural income survey. The results were used to formulate rural development strategy and inform agricultural minimum wage policy and debate, and published in the DE research paper series.
- Further details of the above activities can be found in subsequent sections as follows:
 - 5.2. Institutional Development
 - 5.3. Training Activities
 - 5.4. Policy Analysis and Advising
 - 5.5. Socio-economic Research
 - 5.6. Publications
 - 5.7. Presentations

5.2. Institutional Development

Support to Institutional Reform

- Support for MARD's institutional reform process was provided at three levels: ministry-wide, DE, and DAP. At ministry-wide level, initial training of focal points was provided through two courses conducted by the IMDI in 1999. Subsequently, DAP and project staff participated in institutional reform workshops for central and provincial services, assisted the national coordinator in the analysis and compilation of follow-up survey results, and advised on the advantages and disadvantages of alternative options for a revised ministry structure.
- During January-April 2002, Miguel served as the focal point representing DAP on the technical team preparing the preliminary document to describe the structure and functions of DE. The work involved analyzing the weaknesses, strengths, opportunities, and threats posed affecting the Directorate and more clearly defining each department's functions within the Ministry. Miguel and the DE team joined forces with Institutional Reform Coordinator Xavier to hold a week long workshop to consult with department heads and other interested parties on revised functions and structure of DE.
- In January 2002, Low assisted Institutional Reform Coordinator Xavier in facilitating the preparation of document by nominated provincial technical staff outlining the options for the structure and function of MARD at the provincial and district levels. Low participated and continued to facilitate the subsequent week-long workshop held in Pemba, Cabo Delgado, at which all provincial directors, key district and central-level representatives, representatives from civil society and several donors debated and finalized a proposal describing new provincial and district level structure that will enable MARD to better serve its client base.
- During the first six months of 2001, the Ministry undertook a functional analysis of all national directorates and institutes under the leadership of National Institutional Reform Coordinator Xavier. DAP staff Santos,

Menezes, and Miguel participated in the week-long February institutional reform workshop. Miguel subsequently co-led the functional analysis for the Directorate of Economics, coordinated the preparation of DAP's functions, and assisted the national reform coordinator in the analysis and compilation of results. Santos and Boughton finalized proposed staffing levels to accomplish the policy analysis functions, and Low prepared a brief on the advantages and disadvantages of alternative options for a revised ministry structure.

- The planning department of DE developed a preliminary framework for identifying strategic actions to provide greater focus to the development of the Ministry's 2002 annual work plans (PAAOs). DAP supported the planning department's effort by: i. conducting a seminar for national directors on the potential for accelerating rural economic growth through market-oriented crop diversification and productivity improvement strategies; and ii. coordinating the development of strategic actions for the seed sector in collaboration with the directorates of agriculture, rural extension and the National Agronomic Research Institute. DAP staff Menezes and Low took part in a Ministry-wide review of work plans with specific attention to consistency with environmental sustainability and poverty reduction principles.

Establishment of the Department of Policy Analysis

- During 2000, MARD officially established a new policy analysis department, DAP within the Directorate of Economics. DAP was presented to the Vice Minister in March 2000, and to the full MARD decision making council under the leadership of the Minister in June. The new Minister has boosted the department's visibility within the ministry and among its stakeholders by publicly announcing a lead role for DAP in two important new policy initiatives: a joint government and private sector working group to review policy and strategy for the cotton sector; and a new partnership with the private sector involving the establishment of a dedicated unit within the Ministry to ensure a more facilitative environment for commercial agricultural development.
- Eight out of 10 recently-graduated trainee policy analysts completed their introductory training and received contracts signed by the Minister. Two graduates are responsible for the national market information system (SIMA), which is being integrated with the statistics department of the Economics Directorate, while a third is expected to work full time with the new commercial sector support unit.
- An environmental specialist, Ana Menezes, was recruited for DAP. Menezes traveled to Tete, Inhambane, and Nampula to work closely with provincial level personnel in incorporating environmental concerns into their planning process for 2001. This was followed by a two-day national workshop sponsored by PROAGRI to ensure the prioritization of environmental impact studies and harmonization of central and provincial level activities in the PAAO 2001.
- A review of the status of the integration of a gender perspective within MARD was conducted in collaboration with the DE gender consultant to determine possible strategies for overcoming constraints which have prevented full consideration of gender issues in planning and evaluation activities during the past two years.
- DAP began to draw on its first budgetary allocation under PROAGRI in the second quarter of 2000 and, subject to cash flow constraints, has successfully implemented key activities using PROAGRI funds.

Market Information System (SIMA) Development

- During the first six months of 2001, SIMA launched a new pilot provincial market information initiative for northern Mozambique, centered in Nampula province. This initiative is a direct result of the SIMA user needs study carried out last year, and will improve linkages between farmer associations, provincial traders, regional and international markets. The initiative was launched at joint private and public sector seminars, held in Nampula and Maputo, where market outlook information for the upcoming crop marketing year was provided for key food and cash crops. In preparation for the initiative, SIMA team members Abdula and Arlindo visited the market information system in Mali and participated in a West African regional market outlook conference bringing together over 200 private sector traders, market information system specialists, and trade and commerce ministry representatives.
- SIMA staff actively participated in the development of a national agricultural marketing strategy coordinated by the Ministry of Industry and Commerce (MIC), which was approved by the cabinet (Conselho de Ministros) in July 2001. SIMA staff involvement resulted in the approved strategy giving greater emphasis to collaboration between MIC and MARD.
- A training workshop for all SIMA enumerators from Nampula, Cabo Delgado, Niassa, and Zambezia provinces was held in April 2001 to discuss the findings of the SIMA user needs survey and improvements in price collection methods. By the end of the year all SIMA enumerators throughout the country will have received this training program.
- During 2000, the in-country SIMA team, with assistance from Tschirley and Donovan, completed a User Needs Assessment of SIMA. This assessment sought to evaluate the usefulness of the current information produced by SIMA, and explore what types of new information would increase the usefulness of SIMA for the commercial decisions of farmers, traders, and processors. The team conducted interviews with farmer associations, informal and formal traders, and processors in Maputo, Beira, and Nampula. Results from these interviews were reviewed, and informed the design of new information packets that SIMA produced.
- During the national flood emergency of 2000, staff from SIMA provided weekly updates to the national disaster coordination meetings and expanded electronic circulation of the weekly bulletin *Quente Quente*.
- The weekly bulletin *Quente Quente* and the monthly bulletin (*Boletim Mensal de Informação do Mercado*) of the national market information system were significantly revised in terms of programming and hard copy format. SIMA data is extensively used by other government departments (e.g., MARD's national early warning system, the Ministry of Industry and Commerce), by donors (including the USAID-funded FEWS and EU-funded RESAL projects), as well as by the NGO community.
- As part of a long-term strategy to make SIMA sustainable and responsive to regional needs, site visits and training were carried out to establish two new provincial market information systems in Cabo Delgado and Inhambane.
- In October 1999, Abdula, the national SIMA coordinator, visited Malawi with Santos and Tschirley to participate in a workshop on food security information systems and to build linkages with the Malawian market information system.

5.3. Training Activities

The project conducted or supported training for two principal target groups within MARD. Training oriented towards senior and/or planning staff sought to sensitize participants to the role of public sector investment in agriculture, the nature and importance of facilitative agricultural policies, and simple tools and practical examples that helped focus planning on potentially high payoff interventions. It usually involved half- or one-day seminars, but occasionally longer for specific target groups (e.g., research and extension planning staff). Future training will focus on policy issues currently under debate (e.g., input policy, cash crop sector development policies) involving the technical directorates who have responsibility for policy in a particular area as co-presenters.

Training oriented to the Policy Analysis Department's trainee analyst group, who mostly have a background in agronomy, is focused on providing trainees with a set of tools necessary to carry out policy analysis. The training also includes survey design, data management, and analysis skills necessary to provide an empirical basis to policy advice. Once basic formal training was completed, the emphasis shifted to in-service training through direct participation alongside senior staff in policy analysis and advising.

Short Term Training Activities for Senior and/or Planning Staff

- As of January 2002, in-service training activities shifted to assisting the Coordinator and Technical staff of DEST, along with three policy analyst trainees, in the design and implementation of the *Trabalho do Inquérito Agrícola* (TIA), the nationally representative household survey on the performance of the agricultural sector. Over two and a half months were spent on working with the team in designing separate questionnaires to capture relevant information on agricultural production, commercialization, and rural incomes at the smallholder, commercial, and community levels.
- December 2001. A major change for DEST will be the introduction of the CSPRO software package developed by the U.S. Bureau of Census for entering and cleaning data. MSU has contracted SERPRO International, one of the developers of the software package, to assist in training Mozambican staff in developing data entry applications and testing the technique of data entry in the field in two of Mozambique's ten provinces.
- November 2001. Low taught a session entitled Markets and Commercialization of Processed Products Made from Cassava and Sweet Potato: Principles for Market Development as part of the Nutrition and Agro-Processing course for Cassava and Sweet Potato sponsored by SARRNET/INIA.
- September 2001. Low lectured to the newly formed Commission to revise MARD's Livestock Strategy on Principal Models of Agricultural Development, and How Policy Research Contributes to Policy Formulation. Miguel is a permanent member of the Commission which will engage in consultations with civil society and extension personnel at the provincial level as part of the year-long strategy revision.
- July 2001. In collaboration with MIC, DAP organized a seminar on Trade Liberalization and the Implications of the Implementation of the SADC Trade Protocol for Agricultural Sector Development in Mozambique. Thirty-five participants attended, including national directors and deputy directors of MARD, representatives from Customs, the Ministry of Industry and Commerce, the private sector, and a Farmer's Cooperative. The seminar was chaired by MARD's Director of Economics, with discussion led by the Vice-Minister of MARD. DAP analyst Massingue presented the Basic Concepts of Trade Liberalization, while Santos gave a talk entitled, Is the Liberalization of Maize Trade Advantageous for Mozambique? based on her master thesis work completed in December 2000. The MIC representative made a presentation on the current status of the SADC protocol implementation.

- April 2001. The Vice-Minister of MARD chaired a half-day seminar and discussion session for all national directors and their deputies based on DAP study, *Strategies for Accelerating Rural Economic Growth*. The seminar served as a starting point for all branches of the Ministry to discuss ideas on sectors that could be emphasized for key investments in the year 2002 work plans. The study was also presented at the annual national meeting of DE where provincial staff also had an opportunity to participate in the debate.
- April 2001. Two seminars were organized where Weber presented results on land access based on a comparative study of five African countries concerning access. The first seminar was chaired by the Vice Minister for a select group of senior decision makers within MARD, and the second included a broad audience including university and private sector representatives as well as MARD staff.
- March 2001. In collaboration with DINA and INIA, DAP organized a two-and-a-half-day national seed seminar for 60 participants (private and public sector stakeholders, international organizations) to review progress in implementing the 1999 Seed Plan of Action, share results from seed studies completed in 2000, and debate viable strategies for improving seed sector performance.
- November 2000. In collaboration with INCAJU, DAP organized a half-day seminar for private and public sector stakeholders to review options and progress for improved productivity, and discuss policy and applied research priorities.
- October 2000. Low assisted Director Uaiene of INIA and the Southern Africa Roots and Tubers Network to plan and implement a half-day workshop entitled *Integrating Nutritional Concerns into Agricultural Research and Extension*. The workshop, attended by 65 participants, focused on the introduction of pro-vitamin A rich sweet potatoes as an example of this type of intervention.
- October 2000. Head of DAP Matola, together with Low and Howard, participated in a regional workshop on the *Impact of Policy Reforms on the Input Sector*, sponsored by the International Fertilizer Development Corporation (IFDC). Key findings from the workshop will be incorporated into training materials for an input policy course to be conducted in the third quarter of 2001.
- September 2000. Low, Massingue, and Miguel conducted a week-long intensive course on the economic evaluation of agronomic data held at the Centro de Formação Agrária in Maputo. A total of 25 participants comprising researchers from INIA and extension personnel from Maputo, Gaza, and Manica successfully completed the course. Participants now have the capacity to design protocols for on-farm adaptive trials that include the collection of data necessary to conduct economic analysis, as well as undertake and interpret economic analysis.
- July 2000. DAP conducted a two-day national workshop for 85 participants on the incorporation of environmental considerations into PROAGRI work plans for 2001. Participants included all national directors, provincial directors, and their planning staff. The results were presented and approved at MARD's coordinating council.
- July 2000. Low, Massingue, Miguel, and Sambo conducted a three-day intensive course for 22 participants on *Economic Evaluation of Agronomic Data* at the Provincial Directorate of Agriculture and Rural Development in Nampula. INIA and NGO researchers, as well as extension personnel participating in the course, will now be equipped to make recommendations to farmers based on the potential economic return of the proposed change. Fourteen participants successfully completed the course.
- May 2000. DAP conducted a one-day seminar for 32 participants on the environmental evaluation of PROAGRI in Maputo. Participants included national directors and planning staff from each MARD

directorate, and the same participants will continue to receive training in environmental evaluation during 2001.

- March 2000. All DAP staff attended two half-day sessions looking at Integrating a Gender Perspective into Agricultural Programs and Policy conducted by gender specialist Rachel Waterhouse.
- February 2000. Low, De Marrule, and Miguel, in collaboration with Ministry of Plan and Finance organized a two day workshop on the implications of the national poverty action plan for agricultural sector interventions for 75 staff from MARD, NGOs, and farmer associations.
- December 1999. The project co-financed with the former Ministry of Agriculture and Fisheries (MAF) a week-long training for 23 staff involved in institutional reform provided by staff from the International Management Development Institute, University of Pittsburgh. Low assisted in organizing the course, and with De Marrule, lectured on The Market Economy and the Role of the State.
- August 1999. De Marrule participated in the design of a training workshop for the development of provincial food security and nutrition strategies, and made a presentation on the linkage between food security and the PROAGRI public sector investment program. Miguel was a participant in the same course.
- June 1999. The project co-financed (with MAP) a training for 30 staff involved in institutional reform provided by staff from the International Management Development Institute, University of Pittsburgh. Boughton also made a presentation on the role and nature of agricultural policy during the training.
- June 1999. João, Santos, and Jeje participated in the third USAID-funded Agricultural Transformation in Africa Workshop in Nairobi, Kenya. Santos presented a paper on the impact of trade liberalization with Malawi on maize prices in northern Mozambique, and Jeje presented a paper on the potential for productivity gains in maize and cotton in northern Mozambique. This was the first time that Mozambique had been represented at a conference in this triennial “think-tank” series.

Short Term Training Activities for Trainee Analysts

- February 2002. DAP policy analyst trainees participated in a two-day workshop at Kaya Kwanga in Maputo on how to prepare and market effective research proposals. The workshop was sponsored by the 2020 Vision Initiative of the International Food Policy Research Institute. At their request, Low served as one of the facilitators at the workshop.
- August 2001. Rafael attended a three-day course and subsequent weekly follow-up sessions on Incorporating Gender Considerations into MARD activities conducted by the Gender Unit of MARD.
- June-August 2001. Policy trainee analyst Sambo, seconded to MARD’s commercial sector promotion office (GPSCA) worked alongside Rui Benfica, an MSU Ph.D. candidate, conducting field research on the Impact of Alternative Agro-industrial Investments on Poverty Reduction in Rural Mozambique.
- July 2001. National SIMA Coordinator Abdula attended a three-week course on Trade Policy and Macro-Economic Analysis conducted by IFPRI and the University of Cape Town in South Africa.
- June 2001. Trainee Policy Analysts Govene, Miguel, Rafael, and Massingue attended a two-week course on Monitoring and Evaluation sponsored by the Directorate of Rural Extension and the University of Pretoria.

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- March 2001. National SIMA Coordinator Abdula took part in a ten-day study tour in Mali to visit the national market information system and take part in the West African regional market outlook conference.
- January 2001. Trainee Policy Analyst Miguel attended a week long course on institutional reform, emphasizing how to conduct a functional analysis.
- July 2000. Eight trainee policy analysts completed a policy analysis course based on the first five chapters of the Portuguese translation of *Food Policy Analysis* by Peter Timmer, Walter Falcon, and Scott Pearson. The course was held bi-weekly in 3-hour discussion sessions accompanied by practical exercises.
- June 2000. Six trainee policy analysts received Australian aid-funded scholarships for two months of intensive study of English in an immersion environment in South Africa, which they completed in November 2000.
- May 2000. Ten trainee policy analysts participated in a three-day training on economic analysis of on-farm trials, based on material developed by CIMMYT. Two days of lectures were given by Howard, followed by a series of sessions to work through and improve upon practical exercises conducted by Low. Trainees practiced solving and presenting their results as practice for becoming trainers in subsequent courses.
- April 2000. Six trainee policy analysts received 12 sessions of basic training in Time Series Analysis and Introduction to Multi-variate Analysis, based on practical sessions using SPSS version 10.0.
- March 2000. Six trainee policy analysts began English language classes held at the Instituto de Linguas (two hours daily for three months). AusAid provided the scholarships to fund this training based on a proposal submitted by Low and Santos in January 2000. Competence in English language is critical to be able to access relevant literature and effectively conduct policy analysis using English-based computer software.
- March 2000. Pitoro participated in a three-week course in Lilongwe, Malawi on Quantitative Analysis, emphasizing the use of Social Accounting Matrices (SAMs) for macroeconomic analysis. Conducted by the International Food Policy Research Institute, a model developed for Mozambique served as the basis for training sessions undertaken by Pitoro.
- March 2000. Miguel and Govene participated in a three-day short course on Privatization of Services in the Livestock Sector.
- February 2000. Sambo began working two days a week with technical staff at the National Sugar Institute (INA) to learn about the sugar sector and accompanying policies, and to strengthen collaborative links between DAP and INA.
- February 2000. Ten trainee policy analysts received basic training in the use of a bibliographic software package, ENDNOTES, with which they have been subsequently documenting all references used in their sub-sector studies.
- February 2000. Sambo participated in a week-long training course on Tax Policy in Mozambique sponsored by the Gabinete de Estudos, Ministry of Plan and Finance, held in Maputo.
- January 2000. Pitoro and Massingue completed a three-part course on improving communication and dissemination skills. The course was organized by DEST and FAO.

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- December 1999. Rose conducted a training on the nutritional adequacy prediction methodology for Miguel, Pitoro, Govene, and Rafael, along with one analyst from DEST and one analyst from the Ministry of Health nutrition section.
- December 1999. Low taught SIMA staff how to organize the SIMA distribution list into a database which can be easily transferred in a variety of different formats into major word processing packages.
- November 1999. Miguel participated in a multi-disciplinary two-week training course held in Maseru, Lesotho on data analysis, presentation, and advocacy techniques using recent data from the Health and Demographic Survey in Mozambique. The course was organized by the Commonwealth Regional Health Community Secretariat, financed by USAID.
- November 1999. Low initiated bi-weekly in service-training sessions to study the 300-page book *Food Policy Analysis* by Timmer, Falcon, and Pearson with the objective of deepening the staff's understanding of the complex nature of policy analysis and establishing a common foundation within DAP regarding the range of potential policy interventions.
- October 1999. Miguel participated in the Food and Poverty Policy Analysis Course jointly organized by Universidade Eduardo Mondlane and the Ministry of Planning and Finance.
- September-October 1999. Low completed proofing of a translation into Portuguese of the award-winning book *Food Policy Analysis* by Timmer, Falcon, and Pearson.
- July 1999. LeVallée provided a two-week training for DEST and DAP staff on time series and cross-section analysis using SPSS.
- April 1999. Rose and De Marrule trained USAID-funded NGOs on income proxy methodology and spreadsheet application.
- 1999. De Marrule served on the academic advisory committee for the theses of three UEM undergraduates, including Miguel.
- December 1998. LeVallée, Santos, and Tschirley provided a two-week training for SIMA staff and three new graduates recruited to DAP on time series analysis using SPSS, and tested the new monthly bulletin format.

Long Term Training Activities

- Low participated in planning sessions on the design of the curriculum for the proposed policy analysis section within the Master's program to be initiated at Eduardo Mondlane University in 2001.
- Arlindo returned to Mozambique in February 2001 after completing requirements for an MS in Agricultural Economics at MSU (Atlas Program Funding).
- Santos was awarded her MS in Agricultural Economics from Wye College (University of London) in December 2000.
- Rui Benfica began Ph.D. course work in Agricultural Economics at MSU in January 2000 and undertook the first phase of his doctoral research in Mozambique from June to August 2001.

- Anabela Christina da Conceição Mabote began MS course work in Agricultural Economics at Ohio State University in January 2000 (Atlas Program Funding).
- Paulo Mole returned to Mozambique in December 1999 after defending his Ph.D. dissertation at MSU (Atlas Program Funding).

5.4. Policy Analysis and Advising

- September and October 2001. DAP and project staff assisted MARD to develop a policy position on agricultural credit and the role of its development funds. In September 2001, Santos outlined DAP's assessment of the consultant's report on the Fundo do Fomento Agrário in the Conselho Consultivo do MADER, emphasizing the need to clearly define the role of the Fundo, which should only engage in activities appropriate for the public sector. In October, a similar presentation was made to the PROAGRI consultative forum.
- During the first half of 2002, the project and DAP prepared briefing papers at the request of MARD's Conselho Consultivo on options for grain storage, agricultural mechanization, and rural credit.
- March 2002. Low and De Marrule prepared an extensive memo outlining what should be the focus of MARD's strategy to prevent and mitigate the impact of AIDS, both on its own staff and within its target communities as well. De Marrule presented the key points of this memo at an International Forum for Agricultural Research held in Maputo in mid-March.
- December 2001. Low and Massingue examined the request made by private industry to begin producing genetically modified tobacco within Mozambique. The evaluation stressed the potential contribution of these types of varieties, but called for biosafety mechanisms and clear policies to be established before permitting their introduction.
- October 2001. DAP and project staff assisted in preparations for Mozambique's participation at the Paris Donors' Club meeting. Miguel, Low, Uate, and Lopez (Planning Department) revised the agricultural section (updating key indicators of progress) of the Poverty Reduction Action Plan (PARPA). Low prepared a submission concerning progress and priorities for the agricultural sector.
- October 2001. DAP and project staff prepared detailed comments on the position paper of the African Ministers of Agriculture for the future negotiations with the European Union. The comments were subsequently forwarded to the Ministry of Commerce and Industry and the Ministry of Foreign Affairs.
- September 2001. Massingue participated as part of a Mozambican team attending a four-day regional seed harmonization workshop in Zimbabwe. Participating SADC countries adopted a regional seed policy document based on findings from national seed conferences held in four SADC countries earlier in the year (including Mozambique) which clearly promotes streamlined regulatory procedures between SADC countries for seed registration and importation and improved regional mechanisms for dealing with emergency seed provision.
- August 2001. In collaboration with the ACDI/VOCA staff from Malawi, DAP staff provided policy advice on a tobacco regulatory framework. Like cotton, a key policy challenge is to ensure credit recovery for exporters providing inputs to farmers on credit in the absence of rural credit markets and alternative private sector input supply channels. Project staff were instrumental in the removal of area restrictions for producers who wish to remain independent of tobacco company-managed input provision schemes, but

were unsuccessful in including provisions to allow independent traders to purchase tobacco from independent producers.

- July 2001. DAP staff took part in a conference on the Strategy for Cashew Nut Marketing and Processing held in Nampula, and subsequently prepared a memorandum detailing the problems inherent in the new proposal for regulating cashew nut trade, suggesting alternatives that will help strengthen the cashew nut industry without severely discouraging cashew nut producers. Further contributions were made by DAP at a second meeting held in Maputo in 2002. With the exception of the export restriction on raw cashew embodied in the 1999 Cashew Law, the new marketing regulation that came into effect for the 2002 marketing system is a valuable example of a facilitatory regulatory framework to encourage and enable quality improvement throughout the system.
- June and July 2001. In preparation for the next phase of Mozambique's participation in the SADC Trade Protocol, DAP staff coordinated MARD's review, together with key agro-industry representatives, of: 1) the speed with which various products and inputs of importance to the Mozambican agricultural sector can be liberalized within the SADC framework; and 2) the level of import duties and value added taxes to be applied to imports as MARD's contribution to the revision of the *Pauta Aduaneira* (Customs Duty Manual). Proposals arising from the review were presented to MARD's decision making body, the Conselho Consultivo, and at a MARD senior management training seminar on trade liberalization and agricultural sector development.
- June and July 2001. DAP staff prepared memos for the Vice Minister and the National Director of Economics on access to European agricultural produce markets, with an emphasis on interventions needed in the area of grades and standards
- May 2001. DAP staff prepared a policy memo for the Minister on the implications of a proposal from the Cotton Institute advisory board to allow cotton companies with statutory exclusive crop purchase rights to unilaterally determine raw cotton prices paid to farmers. DAP staff subsequently prepared a policy memo for the National Director of Economics on minimum prices for raw cotton for the 2000/2001 crop marketing season.
- April 2001. DAP staff were invited by the Vice-Minister of MARD to prepare a memo reflecting on what stance MARD should take regarding the differential between the agricultural and industrial minimum wage. DAP advisors accompanied the Vice-Minister to the Minimum Wage Negotiations, where it was noted that both the trade unions and the employer associations were utilizing the DAP report on Minimum Wage prepared in 2000 as a key reference point during the negotiations.
- April 2001. DAP staff prepared a memo for the Minister summarizing progress and problems in the implementation of the new cotton sector rules, and recommending necessary action.
- March 2001. At the request of the Livestock Directorate, DAP staff reviewed three proposals submitted to conduct an eight-week study examining the potential impact of various components of the livestock sector on poverty reduction in Mozambique to determine how PROAGRI funds should be invested to maximize that impact.
- February 2001. DAP staff collaborated with other MARD departments in preparing a draft contribution to the Poverty Reduction Strategy for 2001-2005 (PARPA).

- January 2001. DAP staff prepared a memorandum outlining key areas of research needed in food security and nutrition which served as the basis for the national director of agriculture's (DINA) presentation at the 2020 Vision workshop held in Maputo in early February 2001.
- January 2001. DAP staff represented MARD in the Mozambican delegation to the World Trade Organization meetings in Geneva.
- December 2000. DAP prepared a draft "think-piece" at the request of the Vice Minister for Agriculture and Rural Development on opportunities for accelerating rural economic growth. The paper identifies characteristics of pro-poor growth strategies and analyzes the reasons underlying the recent slowdown in growth in agricultural output. The paper examines the challenges and potential for enhancing the contribution of traditional cash crops (cotton, cashew, maize), as well as diversification into new crops (sunflower, sweet potato, and rice). For both traditional and new crops, a subsector approach is advocated, beginning with a clear definition of the market opportunity (including quality and processing characteristics), and then optimizing technology, input and output marketing systems to be competitive in the long term.
- October 2000. At the request of the Minister of Agriculture and Rural Development, DAP, in collaboration with the Cotton Institute (IAM), prepared a working paper on the future of the cotton sector including a vision for competitiveness, policy framework, and next steps toward liberalization of the sector. The paper was presented at a meeting in Nampula of all stakeholders in the sector, and chaired by the Minister. The vision and framework were adopted, new rules the 2000/2001 season were agreed upon permitting new entrepreneurs to invest in the sector, and DAP was instructed to monitor performance of the sector.
- September 2000. The Vice Minister requested DAP to prepare a major policy paper on agricultural minimum wages in Mozambique. Given the dearth of published information available, three weeks of research were undertaken to interview key informants, collect data on wage rates, and analyze data on rural employment. The paper, entitled *The Challenge of the Agricultural Minimum Wage in Mozambique: Theoretical and Practical Considerations* was distributed by the Vice Minister to members of the Comissão Consultiva do Trabalho (CCT), charged with the determination of minimum wages for agricultural and non-agricultural workers. The paper was also sent to the office of the Prime Minister.
- May to July 2000. DAP staff participated in an internal working group formed by the Minister under the leadership of the National Director of Agriculture and the Director of the National Sugar Institute. DAP prepared an internal policy memo on establishing action-oriented dialog with the private sector, helped develop the program for the 3 August commercial sector seminar, and prepared a vision statement to orient the Minister's opening speech.
- During the first half of 2000, DAP provided two policy briefs for the Vice Minister, the first on agricultural subsidies in Mozambique and the second on options for encouraging growth in rural labor markets.
- February 2000. An analysis of constraints to input market development was presented to a joint MARD and private sector working group. The draft was submitted to the Ministry of Plan and Finance as a key MARD contribution to the policy framework matrix agreed between the Government of Mozambique and the IMF, and contains specific recommendations for consideration by MARD's KRII reform working group.
- During 2000. DAP also prepared internal policy memos for the National Director of Economics on:
 - the justification for whether raffia and jute sacks should be exempt from value-added and importation taxes;

- the validity of the request by the Association of Sugar Producers in Mozambique for exemption from value-added tax;
 - the potential use of PROAGRI funds for activities of the cashew working group;
 - the potential use of PROAGRI funds for a baseline study from which to monitor the impact outsourced extension services;
 - assessment of an environmental impact assessment of the Sasol gas project; and
 - preparation of terms of reference for an environmental study of livestock in Manica province.
- During 1999, an analysis of world market cotton price trends was prepared, together with recommendations on pricing policy, and technological and institutional innovations needed in the short and long run to ensure the competitive position of Mozambique's cotton sector. The analysis was submitted through the National Director to the Office of the Minister in September 1999, and the recommendations will be considered by the joint government-private sector working group established in February 2000 by the Minister to review cotton sector strategy and legislation.
 - An analysis of the impacts of a proposed raw cashew export ban proposal on development of the sector compared to alternative measures was prepared and submitted in April 1999 through the National Director of Economics to the Office of the Minister. The findings were also presented to the Cashew Working Group, published as a policy *Flash* in English and Portuguese, and published in the daily newspaper *Noticias*. The analysis provided the basis for MAP's opposition to the proposed raw cashew export ban.
 - Internal policy memos prepared in 1999 also addressed the following topics:
 - a. the potential contribution of PROAGRI to poverty alleviation (review of matrix of poverty alleviation initiatives for Ministry of Plan and Finance);
 - b. review of a food reserve strategy consultancy report (in collaboration with FAO food policy advisor);
 - c. SADC trade protocol (options for accelerated reduction of tariff protection for agricultural products);
 - d. cotton pricing for the 1998/99 crop season (the need to take account of futures prices rather than spot market prices in annual price negotiations);
 - e. private sector (opportunities for improved dialogue and participation in PROAGRI); and
 - f. the sugar industry protocol (trade-offs between consumer and industry interests with variable tariff protection).

5.5. Socio-economic Research

- In the first six months of 2002, DAP prepared a cotton subsector overview report with the National Cotton Institute as part of a regional study of the impact of liberalization on cotton sector performance coordinated by Wye College, UK. MS candidate, Ofiço, conducted semi-structured interviews with cotton ginner and farmers' associations. MS candidate, Mabote, completed a research proposal to look at cotton farmers' awareness and application of pesticide safety measures.
- Project staff and collaborators were involved in all stages of the design and testing of the TIA 2002 national agricultural sample survey questionnaire. The approved questionnaire provided a comprehensive dataset on the farm and non-farm economic activity of a nationally representative sample of 5,000 rural households.
- March 2002. Massingue and Rafael, under the supervision of Low, designed and implemented a rapid assessment of progress made by the commercial seed sector in the past year. This study is part of DAP's commitment to monitor the seed sector as improving access to seed is one of the key strategic actions of MARD. DAP staff continue to collaborate with other ongoing activities related to seed, particularly the ICRISAT-INIA initiative on emergency seed (with Rafael and Low serving on the steering committee), the

SARRNET-INIA initiate on cassava and sweet potato multiplication, and tentative efforts to date on the part of the INIA maize program to promote high quality protein maize.

- February 2002. Balate and Nhane, in collaboration with two colleagues from DEST, and under the supervision of Low, initiated a study of densities, volumes of local measures, and conversion ratios between states (for example, threshed to unthreshed) for all major crops in Mozambique. This was undertaken in response to the realization that accurate conversion data were not available from the agricultural census. Upon completion of the study, DAP/DEST will publish a reference manual of conversion factors to ensure consistency between agricultural studies done in Mozambique.
- July 2001. DAP team members completed preliminary analysis of a baseline survey of 900 cotton-growing households in Nampula province and presented the results to the Cotton Sector Working Group (GTA). A research paper and *Flash* were prepared, and final results were presented at a national cotton sector stakeholder meeting in October 2001.
- June 2001. In collaboration with the recently established Office for Commercial Agricultural Sector Promotion, DAP initiated a study to assess the implications of different strategies for agribusiness development on rural employment and poverty reduction. Reconnaissance surveys were conducted in Zambezia and Nampula provinces, and secondary data collection on agriculture sector investment projects were undertaken in collaboration with the Investment Promotion Center.
- June 2001. In collaboration with the recently established Office for Commercial Agricultural Sector Promotion, DAP initiated a study to assess the implications of different strategies for agribusiness development on rural employment and poverty reduction. Reconnaissance surveys were conducted in Zambezia and Nampula provinces, and secondary data collection on agriculture sector investment projects were undertaken in collaboration with the Investment Promotion Center.
- May 2001. Key informant surveys were conducted in Nampula province to monitor the implementation of new rules to allow cotton farmers choice of cotton ginning company for sourcing production inputs on credit and extension services.
- March 2001. In collaboration with the national seed service (DINA/SNS), INIA and ICRISAT, DAP completed a study examining priorities for investment in the seed sector. Study teams combined researchers from DAP and ICRISAT with technical staff from Mozambique's Seed Department and National Agronomic Institute. The study stressed the need for a multi-disciplinary and multi-sectoral approach to resolving constraints to smallholder *access* to quality seed. The results of the study were highlighted at a keynote presentation at the National Seed Seminar held 14-16 March.
- January 2001. DAP completed a study examining the key constraints restricting the development of the national seed sector. The study detailed key activities to be undertaken by each potential partner – public sector, private sector, non-governmental organization, and donor – to overcome these key constraints.
- November and December 2000. DAP team members, in collaboration with the Instituto do Algodão de Moçambique (IAM) and the Provincial Directorate of Agriculture and Rural Development, designed and implemented a survey of 900 cotton-growing households in Nampula province to determine the quality of service provision by cotton companies, and to assess trends in cotton area and production during the last two seasons when world market and farm-gate prices have been very low. The results will provide a baseline to monitor the impact of the new cotton sector policy of gradual liberalization on service provision, productivity, and environment.

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- September and October 2000. DAP team members conducted field research in Nampula and Sofala provinces in collaboration with DINA/SNS and INIA on the seed multiplication efforts of NGOs, the public sector and the private sector. Extensive secondary data were collected to complement key informant and farmer group interviews.
- May 2000. A preliminary assessment of the potential role that farmer associations could play in various aspects of agricultural development of different sub-sectors (especially the cotton, oilseed, bean, and maize sectors) was made by James Bingen and Howard of MSU, along with Massingue and Low, for two weeks. Special attention was paid to the constraints regarding the successful integration of women into associations assisted by CLUSA.
- January 2000. A draft report analysing constraints to input market development was prepared and presented to a joint MARD and private sector working group. This research drew extensively on a three-year study on the profitability of maize intensification, as well as other case studies of technological innovation. The draft was submitted to the Ministry of Plan and Finance as a key MARD contribution to the policy framework matrix agreed between the Government of Mozambique and the IMF, and contains specific recommendations for consideration by MARD's KRII reform working group.
- A method for predicting dietary adequacy in Mozambique on the basis of easily recorded food consumption variables (proxy indicators) was developed, tested, and documented. The methodology is complementary to the income proxy work, providing additional insights into the extent to which income changes are translated into dietary improvement. The methodology is designed for use by government (e.g., future annual surveys conducted by MARD's statistical department) and NGOs.
- December 1999. Research work was initiated on subsector studies of major food and non-food crops of Mozambique. Initial work involved identifying relevant secondary sources of information and establishing contacts and a database of relevant individuals and institutions working on the different crops.
- November 1999. Final round interviews with farmer associations were carried out as part of a study of the profitability of intensive maize production in two districts of Nampula province. The associations (assisted by CLUSA, a USAID-funded NGO) have been able to access seed and fertilizer in a more timely way, and maize yield response to purchased inputs has improved over previous years. An analysis of financial and economic profitability is underway.
- June 1999. An analysis of the impact of maize trade liberalization with Malawi on maize prices at farmer level in central and northern Mozambique was undertaken. The results were presented at the Agricultural Transformation in Africa conference in Nairobi, Kenya, and were published in both research report and policy brief (*Flash*) formats. The analysis shows that liberalization has had significant positive impacts on producer prices.
- November 1998. Field work for a comprehensive study of rural incomes in central and northern Mozambique was completed and the results were presented at the USAID SO1 partners conference in February 1999. The results formed the basis for the SO1 team's contribution to USAID/Mozambique's R4 report, and were subsequently used to develop an income proxy methodology to simplify future reporting by USAID-funded NGOs. Spreadsheet software and related materials were distributed at a training of NGO staff in April 1999. A revised comprehensive manual was distributed to NGOs in July. Experience from the rural income study helped inform the design of the 1999/2000 agricultural census (CAP), and the data set will also be used for training DAP policy analysts.

- A study of cashew management practices and yields in a farming systems context was completed in Nampula province. A typology of cashew farming and the implications for the adoption of improved management practices was presented to the Cashew Working Group in April 1999 and a draft research report has been prepared. A detailed analysis of the data set was undertaken by Mole at MSU for his Ph.D. dissertation.
- An analysis of nutritional adequacy in central and northern Mozambique, with careful attention to seasonal variation, was prepared using the household level data set collected in Nampula and Cabo Delgado during 1995-1996. The results were published in research report and policy brief (*Flash*) formats, and presented at two national seminars.

5.6. Publications

Training materials

April 2000. A new publications series entitled *Material de Formação* was added to the existing policy brief and research report series of the Economics Directorate. The purpose of the new series is to make applied policy research and analytical tools more broadly accessible to MARD staff.

June 2000. CIMMYT - Programa de Economia. (Traduzido para português por Angela Remane). *A Formulação de Recomendações a Partir de Dados Agronómicos: Um Manual Metodológico de Avaliação Económica*. Material de Formação No. 1.

June 2000. CIMMYT - Programa de Economia. (Traduzido para português por Angela Remane). *A Formulação de Recomendações a Partir de Dados Agronómicos: Livro de Exercícios*. Material de Formação No. 2.

June 2000. CIMMYT - Programa de Economia. (Traduzido para português por Angela Remane). *A Formulação de Recomendações a Partir de Dados Agronómicos: Respostas aos Exercícios*. Material de Formação No. 3.

Research Notes (“Flash”)

Flash is a series of policy briefs and short papers, closely focused on issues of relevance for understanding the Mozambican food system. The papers are designed to be read in less than a half hour and to make a limited number of clear points about the issue at hand. Publications in this series can be downloaded from MSU’s FSII Website: <http://www.aec.msu.edu/agecon/fs2/mozambique/index.htm>

Boughton, Duncan, David Tschirley, Higinio De Marrule, Afonso Osório, and Ballard Zulu. December 2002. *Cotton Sector Policies and Performance in Sub-Saharan Africa: Lessons Behind the Numbers in Mozambique and Zambia*. Volume 34E.

Benfica, Rui, David Tschirley, and Liria Sambo. November 2002. *Agro-industry and Smallholder Agriculture: Institutional Arrangements and Rural Poverty Reduction in Mozambique*. Volume 33E.

Equipe Técnica do SIMA. Julho 2002. *Confirmada Baixa Produção de Cereais no Centro e Uma Melhoria no Norte do País Expectativas dos Comerciantes Rurais de Pequena Escala no Norte e Centro de Moçambique*. Volume 32P.

Equipe Técnica do SIMA. Abril 2002. *Como Será a Comercialização Agrícola em Moçambique em 2002/03? Expectativas dos Comerciantes Rurais de Pequena Escala no Norte e Centro de Moçambique*. Volume 31P.

Pitoro, Raúl, Higino De Marrule, Olívia Govene, Duncan Boughton, e David Tschirley. Dezembro 2001. *Porque é que o “Ouro Branco” não está a Gerar Riqueza? Caminhos para Torná-lo de Novo numa Cultura Rentável*. Volume 30P.

Tschirley, David L. February 2002. *Some Characteristics of Pro-poor growth, and Policy Implications for Mozambique*. Volume 29E.

Equipe Técnica do SIMA. Fevereiro 2002. *Exportação de Milho: Ameaça contra a Segurança Alimentar Rural? Resultados de um Inquérito às Famílias Rurais do Norte de Moçambique*. Volume 28P.

SIMA Research Team. February 2002. *Maize Exportation: Threat to Rural Food Security? Results of a Survey of Rural Households in Northern Mozambique*. Volume 28E.

Arlindo, Pedro, Ana Paula Santos, Danilo C. Abdula, and David Tschirley. August 2001. *A Economia Agrícola do Norte de Moçambique: Desenvolvimentos Recentes e Perspectivas*. Volume 27P.

Santos, Ana Paula, António Paulo, Arlindo Miguel, Danilo C. Abdula, Pedro Arlindo, and Simão C. Nhane. April 2001. *Confirmada Baixa de Produção de Cereais e Feijões no Norte de Moçambique e no Malawi: Implicações sobre as Exportações para o Malawi e os Preços ao Produtor*. Volume 26P.

Low, Jan, Higino De Marrule, Duncan Boughton, and Raúl Pitoro. August 2001. *A Regulamentação de Comercialização da Castanha de Caju: Como Torná-la um Instrumento Revitalizador do Sub-Sector Cajueiro em Moçambique?* Volume 25P.

Santos, Ana Paula, António Paulo, Danilo C. Abdula, Pedro Arlindo, and Simão C. Nhane. April 2001. *Perspectivas Preliminares dos Comerciantes Rurais Sobre a Presente Campanha de Comercialização na Zona Norte*. Volume 24P.

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Research Reports

Research reports present detailed study findings and document carefully the methods used and data collected. Since 1990, 52 research reports have been published on issues such as food and cash crop productivity, input market development, food market development and food aid policy, food security effects of cash cropping, rural micro enterprises and rural employment, and proxy indicators for rural incomes and nutrition. Publications in this series can be downloaded from the FSII Website:

<http://www.aec.msu.edu/agecon/fs2/mozambique/index.htm>

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- Santos, Ana Paula, Cynthia Donovan, Danilo Carimo Abdula, David Tschirley, and Pedro Arlindo. 2002. *Passado, Presente e Futuro do Sistema Informação de Mercados Agrícolas (SIMA)*. Research Report 50P.
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- Market Information System. 2001. *Information for the Private Sector in Agriculture: New Information Services from SIMA for Producers, Traders and Processors in the Agricultural Sector in Nampula Province*. Research Report 46E.
- Market Information System. 2001. *Avaliação das Necessidades dos Utentes do SIMA*. Research Report 45P.
- Rohrbach, David D., Jan Low, Raúl Pitiro, Alfredo Cucu, Jaqueline Massingue, Duncan Boughton, Guilhermina Rafael, Antonio Paulo, and Domingos Jocene. 2001. *Constrangimentos e Estratégias para o Desenvolvimento do Sistema de Sementes em Moçambique*. Research Report 44P.
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- Mole, Paulo. 2000. *Smallholder Cashew Development Opportunities and Linkages to Food Security in Nampula Province, Mozambique*. Research Report No. 42E.
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- Jeje, José Jaime, Clementina Machungu, Julie Howard, David Tschirley, Paul Strasberg, Eric Crawford, and Michael Weber. 1998. *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*. Research Report No. 32.
- Howard, Julie, José Jaime Jeje, David Tschirley, Paul Strasberg, Eric Crawford, and Michael Weber. 1998. *What Makes Agricultural Intensification Profitable for Mozambican Smallholders? An Appraisal of the Inputs Subsector and the 1996/97 DNER/SG2000 Program. Volume I: Summary*. Research Report No. 31.
- Santos, Ana Paula, Anabela Mabote, Pedro Arlindo, Rafael Achicala, e Jean-Charles Le Vallée. 1998. *Séries Históricas dos Preços de Grão de Milho Branco e suas Tendências Reais em Alguns Mercados do País*. Relatório de Pesquisa No. 30P.
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Examples of research reports published during earlier phases of the project include:

PSA MA/MSU Research Team. 1997. *Micro and Small Enterprises in Central and Northern Mozambique: Results of a 1996 Survey*. Research Report No. 27.

PSA MA/MSU Research Team. 1997. *Smallholder Cash-Cropping, Food-Cropping and Food Security in Northern Mozambique: Summary, Conclusions, and Policy Recommendations*. Working Paper No. 25.

PSA MA/MSU Research Team and Department of Statistics, Ministry of Agriculture. 1995. *Diagnóstico da Estrutura, Comportamento e Desempenho dos Mercados Alimentares Rurais de Moçambique*. Working Paper No. 19.

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PSA MA/MSU Equipa de Pesquisa. 1993. *Política de Preços d distribuição da ajuda alimentar de milho amarelo em Mocambique: Uma Análise de alternativas*. Working Paper No. 12P. PN-ABS-410.

PSA MA/MSU Research Team. 1993. *The Pricing and Distribution of Yellow Maize Food Aid in Mozambique: An Analysis of Alternatives*. Working Paper No. 12. PN-ABS-745.

PSA MA/MSU Research Team. 1993. *Determinantes do Rendimento e Consumo Familiar nas Zonas Rurais da Província de Nampula: Implicações para a Segurança Alimentar e as Reformas de Política Agrária*. (Translated from English.) Working Paper No. 6P. PN-ABS-743.

PSA MA/MSU Research Team. 1993. *The Determinants of Household Income and Consumption in Rural Nampula Province: Implications for Food Security and Agricultural Policy Reform*. Working Paper No. 6. PN-ABS-742.

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Santos, Ana Paula. 2000. *The Impact of Trade Liberalization on Maize Prices in Mozambique and Malawi*. M.S. thesis, Wye College.

Mole, Paulo Nicua. 2000. *An Economic Analysis of Smallholder Cashew Development Opportunities and Linkages to Food Security in Mozambique's Northern Province of Nampula*. Ph.D. dissertation, Michigan State University.

Benfica, Rui. 1998. *An Analysis of the Contribution of Micro- and Small Enterprises to Rural Household Income in Central and Northern Mozambique*. M.S. thesis, Michigan State University.

De Marrule, Higinio. 1998. Land-Poor in a 'Land-Abundant' Setting: Unraveling a Paradox in Mozambique. M.S. thesis, Michigan State University.

Theses published during earlier phases of the project include:

Strasberg, Paul. 1996. Smallholder Cash Cropping, Food Cropping and Food Security in Northern Mozambique. Ph.D. dissertation, Michigan State University.

Donovan, Cynthia. 1996. The Effects of Monetized Yellow Maize Food Aid on Local Maize Prices in Mozambique. Ph.D. dissertation, Michigan State University.

Dengo, Maria Nita. 1992. Household Expenditure Behavior and Consumption Growth Linkages in Rural Nampula Province, Mozambique. M.S. thesis, Michigan State University. PN-ABS-943.

5.7 Presentations

Selected presentations by Mozambican policymakers can be downloaded at:

<http://www.aec.msu.edu/agecon/fs2/mozambique/policypres/index.htm>

September 2002. HE Muteia, Minister of Agriculture and Rural Development presented Mozambique's Land Law as an Example of the Linkage Between Property Rights and Environmental Management at World Summit on Sustainable Development, in Johannesburg.

August 2002. Massingue made a presentation on genetically modified U.S. corn to the interministerial Biosafety Working Group. The presentation focused on the types of genetic events and human health approvals.

May 2002. Abdula made two presentations: The Results of the Rapid Market Appraisal Survey of Traders in Central and Northern Mozambique; and The Impact of South Africa's Maize Market on Mozambican Markets at the SIMA Market Outlook Seminar.

May 2002. Paulo made a presentation on the Impact of Maize Exports to Malawi on the Food Security of Rural Households in Northern Mozambique at SIMA market outlook seminar.

May 2002. Abdula made a presentation on The Past, Present, and Future Development of the Market Information System (SIMA) at the national DE meeting, Vilanculus.

March 2002. De Marrule made a presentation on The Development of MARD's HIV/AIDS Strategy at an International Forum on Agricultural Research, Maputo.

January 2002. Arlindo made a presentation on The Progress and Challenges in Establishing Provincial Market Information Systems to provincial directors of agriculture attending an institutional reform workshop, Cabo Delgado.

December 2001. DAP Coordinator Simão made a presentation on Data Needs for Policy Analysis at Seminar on Integrated Agricultural Statistics, Pequenos Libombos. The data needs are to be incorporated into the design of the 2002 national agricultural sample survey (TIA 2002).

November 2001. Boughton made a presentation on MSU's Capacity Building Program with MARD, and the Implications of Recent Policy Trends for Smallholder Development and Food Security.

November 2001. De Marrule made a presentation on The Operationalization of Policies in the Context of MARD's Monitoring and Evaluation System at the PROAGRI review meeting.

October 2001. HE Muteia, Minister of Agriculture and Rural Development, made a presentation Mozambique's Agricultural Sector Priorities and Constraints at USAID seminar on its future country development strategy.

September 2001. Low made a presentation on Principal Models of Agricultural Development, and How Policy Research Contributes to Policy Formulation to the newly formed Commission to revise MARD's Livestock Strategy .

July 2001. Massingue made a presentation on the Basic Concepts of Trade Liberalization, and Santos gave a talk entitled, "Is the Liberalization of Maize Trade Advantageous for Mozambique?" at a seminar sponsored by DAP on Trade Liberalization and Implications of the Implementation of the SADC trade protocol.

June 2001. Santos made a presentation on recent developments and opportunities for the agricultural economy of northern Mozambique at a joint public/private sector seminar held in Maputo on the new Pilot Provincial Market Information System in Nampula.

June 2001. Arlindo made a presentation on new market information products at a joint public/private sector seminar held in Maputo. on the new Pilot Provincial Market Information System in Nampula.

June 2001. António made a presentation on the results of pre-harvest windshield surveys at a joint public/private sector seminar held in Maputo. on the new Pilot Provincial Market Information System in Nampula.

June 2001. Abdula made a presentation on world maize production and price trends at a joint public/private sector seminar held in Maputo. on the new Pilot Provincial Market Information System in Nampula.

June 2001. Arlindo made a presentation on market prospects for key crops grown in northern Mozambique at an INIA/UEM workshop in Morrumbala. to develop a framework for joint private/public sector collaboration on research into crop diversification.

May 2001. Nairobi. Low made a presentation at the invitation of the International Potato Center on Mozambique's experience distributing orange-flesh sweet potatoes to combat vitamin A deficiency at a workshop held to launch a major initiative along the same lines throughout Eastern Africa.

April 2001. Arlindo made a presentation on recent developments and opportunities for the agricultural economy of northern Mozambique at a workshop to launch the Pilot Market Information System in Nampula.

April 2001. António made a presentation on the results of pre-harvest windshield surveys at a workshop to launch the Pilot Market Information System in Nampula .

April 2001. Abdula made a presentation on world maize production and price trends at a workshop to launch the Pilot Market Information System in Nampula.

April 2001. António made presentations on the international market outlook for cotton and sunflower at a workshop to launch the Pilot Market Information System in Nampula.

April 2001. Donovan made a presentation on the historical behavior of maize prices in Mozambique at a workshop to launch the Pilot Market Information System in Nampula.

April 2001. Arlindo made a presentation on new information products for the agricultural private sector at a workshop to launch the Pilot Market Information System in Nampula.

April 2001. Abdula presented key results from the SIMA users survey at a workshop to launch the Pilot Market Information System in Nampula.

April 2001. Weber made two presentations on the relationship between household income and land access in five African countries.

April 2001. De Marrule, Low, and Boughton made a presentation on the potential for increasing rural incomes through crop diversification and productivity improvement at the National Directorate of Economics meeting in Bilene.

April 2001. De Marrule made a presentation on the content of and approach to agricultural policy analysis at the National Directorate of Economics meeting in Bilene..

April 2001. Arlindo made a presentation on the proposed Nampula pilot provincial market information service at the National Directorate of Economics meeting in Bilene.

April 2001. Abdula made a presentation on the accomplishments of the Mozambican national market information system 1998 - 2000 at the National Directorate of Economics meeting in Bilene.

March 2001. Abdula made a presentation on the organization of the Mozambican national market information system at the West African Regional Market Outlook Conference in Bamako, Mali.

March 2001. Arlindo presented key results from the SIMA users survey and proposed activities for the Pilot Market Information System in Nampula province at the CLUSA association workshop in Nampula.

March 2001. Low presented some observations from field visits to farmer's associations made in 2000 concerning increasing women's participation in association and development activities at a CLUSA workshop in Nampula.

March 2001. Pitoro and Massingue presented a paper on Constraints to Seed Sector Development and Priorities for Investment at the National Seed Seminar in Bilene.

February 2001. De Marrule facilitated an IFPRI/UEM Vision 2020 one-day workshop held in Maputo to discuss priorities for food security research in Mozambique.

January 2001. Boughton made a presentation on collaboration with MARD to build capacity for policy analysis at the USAID annual results review meeting.

November 2000. Mole presented a paper on smallholder cashew development opportunities and linkages to food security at a seminar sponsored by the Economics Directorate and INCAJU for cashew sector participants.

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November 2000. Boughton made a presentation on overcoming constraints to seed sector development at a joint ICRISAT/MSU workshop on constraints to seed and fertilizer market development in Sub-Saharan Africa held in Bulawayo, Zimbabwe..

October 2000. Low presented a case study of the introduction of pro-vitamin A rich sweet potatoes in Kenya at a half-day MARD workshop on integrating nutritional concerns into agricultural research and extension training. The presentation emphasized the importance of income generating activities and nutrition education as key factors for assuring sustained adoption of new varieties.

October 2000. Howard presented cross-country experiences on the impact of input sector policy reforms on fertilizer use at a regional workshop sponsored by IFDC, and attended by senior staff from MARD in Cape Town, South Africa.

July 2000. Miguel presented the methodology for analyzing diet quality developed by Rose and Tschirley at the Food Security Seminar sponsored by the União Nacional de Camponeses (UNAC) held in Maputo.

July 2000. Massingue presented results from the 1998/99 analysis of maize profitability in Northern Mozambique at the Provincial MARD headquarters in Nampula..

June 2000. Menezes presented the incorporation of environmental concerns within the year 2001 PROAGRI work plans to MARD's expanded council of directors.

May 2000. Bingen, Howard, and Low made a presentation to the Vice Minister on the findings of their exploratory survey of farmer associations in Nampula and Zambezia provinces.

February 2000. DAP and the Ministry of Plan and Finance sponsored a two and a half day seminar held at CFA looking at the implications for the agricultural sector of the poverty study completed in 1998 and priority areas of action with agriculture to maximize poverty reduction. Over 50 participants from MARD, farmers organizations, and selected NGOs attended.

February 2000. Boughton, Howard and Mole presented a draft report on constraints to input sector development to the a government/private sector working group.

February 2000. Boughton presented the role of MARD's Policy Analysis Department and approach to capacity building at the USAID/Mozambique annual results review meeting.

December 1999. Maputo. De Marrule and Low made a presentation on the role of the state in the institutional reform process at a training workshop for MARD focal points.

October 1999. Mole made a presentation on Strategies for Cash Crop Development, and Policy Implications: Experiences from Mozambique to the International Sustainable Tree Crop Development Forum, Washington, D.C. jointly organized by the American Chocolate Industry and USAID.

October 1999. De Marrule took part in an evaluation of the World Bank rural development strategy for Mozambique in Maputo.

October 1999. De Marrule facilitated a working group on the revision of the logical framework for the forestry component of PROAGRI in Bilene.

September 1999. De Marrule facilitated a working group on indicators for monitoring and evaluation of PROAGRI in Pemba.

August 1999. De Marrule made a presentation on the linkage between PROAGRI components and food security at a national workshop on the development of provincial food security strategies in Maputo.

July 1999. Monitorar a Qualidade da Dieta Moçambicana: Estudo de Caso Sobre Consumo Familiar de Alimentos. Rose presentation at a Food Security Seminar of the Secretariado Técnico de Segurança Alimentar e Nutrição, Maputo.

July 1999. Chitará and Boughton made a joint presentation on the agricultural sector investment program and the role of agricultural policy at the first national seminar on the private sector in agriculture held in Chimoio.

July 1999. De Marrule made a presentation on growth opportunities for the rural sector for a post-graduate course jointly organized by Universidade Eduardo Mondlane and SADC.

June 1999. Santos made a presentation on the impact of trade liberalization on producer prices for maize in northern Mozambique at the Agricultural Transformation in Africa conference, Nairobi, Kenya.

June 1999. Jeje made a presentation on the potential for productivity increases in maize and cotton in northern Mozambique at the Agricultural Transformation in Africa conference, Nairobi, Kenya.

June 1999. Boughton made a presentation on the nature and purpose of agricultural policy at a training of trainers workshop for MAP reform focal points Maputo.

April 1999. Rose and De Marrule presented the Income Proxy methodology to USAID-funded NGOs, Maputo.

March 1999. Jeje and Howard made a presentation to INIA and DNER staff on the profitability of fertilizer use on maize in northern Mozambique, and implications for research and extension strategies, Maputo.

March 1999. Jeje and Howard made a presentation to Nampula Provincial Directorate of Agriculture and NGO staff on the profitability of fertilizer use on maize in northern Mozambique, and implications for research and extension strategies, Nampula.

February 1999. Tschirley, De Marrule, and Rose presented results from the Income Survey in the USAID Focus Area at the USAID SO1 Partners Meeting, Maputo.

October 1998. Rose and Jeje presented a paper on rural household food consumption in northern Mozambique, co-authored with Strasberg and Tschirley, at the Conferência de Segurança Alimentar e Nutrição, Maputo.

October 1998. De Marrule and Benfica presented an assessment of growth opportunities for the rural sector at the Conferência de Segurança Alimentar e Nutrição, Maputo.

6. The Future

Institution and capacity building are long-term activities. Michigan State University's Department of Agricultural Economics will continue serving the Ministry of Agriculture and Rural Development's capacity building goals under a new Cooperative Agreement financed by USAID/Mozambique and the Government of Mozambique through PROAGRI. Fact Sheets on the new Cooperative Agreement can also be downloaded from MSU's FSII Website: <http://www.aec.msu.edu/agecon/fs2/mozambique/index.htm>