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EVALUATION OF THE INTEGRATED AGRICULTURE AND AGRIBUSINESS PROJECT

July 30, 2012

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DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ACRONYMS

AMCEF	Association Marocaine des Conditionneurs Exportateurs de Fraise
AMP	aromatic and medicinal plants
ANOC	Association Nationale des Eleveurs Ovins et Caprins (National Sheep and Goat Breeder Association)
CAM	Crédit Agricole du Maroc (Agricultural Credit Bank of Morocco)
COP	Chief of Party
COR	Contracting Officer Representative
DERD	Department of Research and Development
DPA	Direction Provinciale de l'Agriculture
DPAE	Direction de la Programmation et des Affaires Economiques
EACCE	Établissement Autonome de Contrôle et de Coordination des Exportations (Autonomous Establishment of Export Control and Coordination)
EG	Economic Growth
GIS	geographic information system
HACCP	Hazard Analysis Critical Control Points
HCEFLCD	Haut Commissariat aux Eaux et Forêts et à la Lutte Contre la Désertification (Office of Water and Forests and Anti-desertification Program)
IAA	Integrated Agriculture and Agribusiness
INDH	Initiative Nationale de Développement Humain (National Human Development Initiative)
INRA	Institut National pour la Recherche Agronomique (National Agronomic Research Institute)
MAMF	Ministry of Agriculture and Maritime Fisheries
MCI	Ministry of Commerce and Industry
MIS	Market Information System
MoA	Ministry of Agriculture
OCE	Office de Commercialisation et d'Exportation (Office of Marketing and Exports)
ORMVA	Office Régional de Mise en Valeur (Regional Agricultural Office)
SFDA	Société de Financement du Développement Agricole - Agricultural Credit Financing Group (linked to Crédit Agricole)
SIAM	Salon International d'Agriculture du Maroc - Moroccan Agricultural Trade Fair
SOMAPAM	Moroccan Society for Aromatic and Medicinal Plants
UPOV	International Union for the Protection of New Varieties of Plants
UDOM	Union pour le Développement de l'Olivier de Meknès (Olive Development Organization of Meknès)
US	United States
USG	US Government
USAID	United States Agency for International Development
USDA	United States Department of Agriculture

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EXECUTIVE SUMMARY

The Morocco Integrated Agriculture and Agribusiness (IAA) Project was implemented between 2005 and 2009 by Chemonics and partners. It provided equipment, information technology, marketing tools, outreach, and strategy training for the Ministry of Agriculture and the Autonomous Export Promotion Authority. The project conducted multiple studies, provided guidance on irrigation and drought control, and worked in five value chains (sheep, olives, aromatic and medicinal plants, capers, berries) mostly in three regions of the country.

The project aimed to achieve the following four results:

Result 1. Improve public policies and institutions in support of more competitive agriculture and agribusiness

Result 2. Increase productivity and variety in agriculture and livestock production

Result 3. Increase competitiveness of agro-processing industries

Result 4. Enhance the capacity of agribusinesses, firms, and institutions to support competitive value chains

USAID contracted Development and Training Services, dTS to conduct a performance evaluation of the IAA project in April – July 2012. The purpose of the evaluation was to evaluate the effectiveness, impact, and sustainability of IAA; to discuss lessons learned; and to provide recommendations for future programming. Since the evaluation was performed more than two years after the project ended, the evaluation methodology was based on studies of available secondary data from project reports, USAID and other donors' documents, and collection of the primary data about the project performance from key informant interviews with IAA project beneficiaries and stakeholders. dTS fielded a three-person evaluation team to Morocco in May -June 2012. The evaluation team included a Team Leader (expatriate), an Agriculture Specialist (local), and local research assistant. The team received additional support from a short-term research assistant. The team conducted forty meetings with beneficiaries and other stakeholders in the capital of Morocco and main agribusiness centers in other parts of the country. It also conducted a short phone survey of informants who were not able to participate in a face-to-face meeting.

The evaluation team found evidence confirming the project's success in achieving all of its intended results through effective activities with the Government of Morocco and with all five value chains, even though there were a number of activities that did not work as planned or that turned out somewhat differently than expected. The evaluation team also found that most of the activities that were reported by the project as successful were sustainable, lasting until the time of this evaluation, more than two years after the project ended. A listing of all the activities under those results and their sustainability is discussed in the findings and recommendations section of this report.

Government officials complimented the IAA training, the web sites developed, the market information generated and disseminated, work on value chains, and the cost-benefit analysis. They said these new tools gave them new perspectives and led to changes in Moroccan policies and procedures. Similarly the team received very positive comments with respect to the five value chain projects, including production and post-harvest training, marketing assistance, processing equipment, published production and quality guides, and cooperative management training. Many efforts had important and lasting impacts but a few activities did not. Work to support the drought observatory (begun in 2001 and continued by IAA) and work on geographic

information system (GIS) satellite-assisted mapping in Meknes reportedly did not have lasting results, nor did attempts to establish a policy unit to pursue model farm analysis. An organizational mapping exercise requested by the Ministry did not achieve its goals of helping to reorganize Ministry functions.

The Moroccan Government reorganized its irrigation systems during the time of the IAA project. Government officials indicated that they valued the advice of the experts from the United States Drought Mitigation Center at the University of Nebraska that were brought to Morocco by the IAA. Their advice was geared to small-scale irrigation projects, particularly with respect to the valuation of water. The modified Moroccan irrigation systems will save water by converting from gravity irrigation to drip irrigation. The new systems will also attempt to charge farmers individually for the water they use. One area where greater support was desired than IAA provided, according to the Ministry of Agriculture's irrigation office, related to planning and guidelines for larger-scale irrigation projects.

The project conducted in-depth studies of the five value chains and the world-wide market for the four export sectors. The studies commissioned by the project were also valued by the government and the market participants, and had an effect on the policy-making in Morocco. For example, a study on aromatic and medicinal plants (AMP) was developed into a joint strategy document for the sector, pursued with Ministry authorities. Another example is a study on the logistics of berries. This study helped industry efforts to achieve marketing policy changes in the Tangier port that greatly reduced the delays for exporting highly perishable fresh berries. The IAA project also commissioned a study on the credit system. This study answered important questions about the need for and availability of credit. It was intended to help establish a new financing program to help farmers, cooperatives and agribusiness access financial resources. The new program was developed but it did not generate usable bank credit for small farmers or cooperatives, because the agricultural bank (Credit Agricole) felt these new credits had high risks. As a result, the program to provide credit for these groups was abandoned.

IAA marketing activities in Morocco, Europe and the US were useful in expanding marketing contacts, finding new partners, and improving Moroccan understanding of how to access markets. These activities created relationships with a number of business people and university scientists that led to partnerships and business deals for production and annual exports of $11 million of new berry varieties. Other outreach and marketing activities helped to expand exports of consumer food products. Trade liberalization agreements with the US and other countries as well as improved shipping connections with the United States created new trading opportunities that were explored via project marketing opportunities, some of which resulted in new trade or investment (e.g., in berries and in processed products). In addition, there was considerable work on certifications, quality control, and other activities to help Moroccan suppliers meet requirements to access foreign markets in Europe and elsewhere.

Among achievements reported by the project relative to indicators were made evident by figures on training, sales, and investments shown in detail in appendix C. The project reported that 4,236 people were trained during the project, of which 953 were in various cross-cutting areas (such as, Ministry staff training) and 3,283 in the five value chains. The project reported that its work on the value chains resulted in new investments of $27 million and additional sales of $56 million. The evaluation team was not able to verify the precise numbers reported by the project to USAID, except for numbers of live sheep sales via supermarkets and value of berry exports resulting from the project. Most of the numbers reported by the project were consistent with reports and comments of partners and beneficiaries. The evaluation team was unable to substantiate the claim by the project that $45 million of sheep feed sales resulted from the IAA early weaning feeding trials. The team learned that substantial commercial sheep feed was sold for many years prior to the project. The figure of $45 million is the total amount of sales of the feed, and the team

concluded that all of the sheep feed sales cannot be attributed to the early weaning trials by the IAA. The team estimates that the actual result attributable to the project is lower. At the same time, the evaluation team found that the exports of raspberries and blueberries, which resulted in large part from the project activities, were substantially higher than those estimated and reported by IAA, reaching $11 million dollars per year in 2009 in these new export items for Morocco. The evaluation was not able to meet all of the beneficiaries and most of those met were not willing and/or able to share detailed financial data on their individual operations. But the team was able to verify with partners and beneficiaries whether benefits were real and lasting.

The evaluation team noted that IAA reinforced and influenced the development of the Government's Green Morocco Plan for 2008-2020, which had principles that mirrored USAID value chain principles. In particular, in each value chain the Green Morocco Plan calls for seeking out and helping to develop a key player in processing and/or trade in the value chain that has strong financial, marketing and technical expertise. When identified and developed, these key players (called "aggregators" in the Green Morocco plan) were expected to reach back to suppliers, help them improve timeliness and quality, add value to the product, and share some of that added value with producers in win-win relationships.

The project had important and lasting results particularly in cases where the project worked with an aggregator. One example is the project work with the Marjane supermarket chain, which served as an aggregator for the sheep value chain. The supermarket helped farmers better market their sheep. Another good example is the partnerships that were developed with berry export companies. These companies work with farmers, by providing them with seedlings and then buying and exporting the resulting crops. A third example is an olive exporter that was assisted by the project. In this instance, the export company provided farmers with advice on quality control and also achieved traceability back to the farms as required by European buyers. In some other cases, the project started with an overview of the value chain, but then concentrated efforts on small cooperatives of poor farmers within the olive sector, focusing on improved techniques for pressing oil from olives, or with harvesters of wild products (capers and rosemary). All of these activities provided lasting benefits for some deserving beneficiaries. Nonetheless, some of the work with tiny cooperatives did not take full advantage of opportunities to link up with other value chain partners to improve marketing, which remained among the greatest challenges for many beneficiaries at the end of the project. In these areas (capers, olive oil, and rosemary oil), the project could have made stronger efforts to find an aggregator.

All beneficiaries interviewed by the evaluation team were highly complimentary about most training activities conducted by the project. They also complimented the project work on the new perspectives such as the value chain concept and cost-benefit analysis in water use or in other government and private sector programs. Finally, the key informants mentioned the computers, processing equipment, and related training with great appreciation. It appears that sustainable changes were achieved by beneficiaries in both the public and the private sectors. The evaluation team observed that several government offices became more effective in outreach to other agencies and to the private sector. Private firms in the five targeted value chains reported increased productivity, value added and sales due to activities of the IAA project.

The evaluation team identified several lessons learned from the implementation of the IAA project:

1. The timing of the project implementation was ideal to link with activities of the national agenda. The IAA was implemented at a time when government of Morocco was ready to introduce a variety of changes in its programs for the agricultural sector, which contributed to the achievement of the results by the project.

2. Government and industry buy-in is also an important contributor to the success of projects. The IAA project influenced the development of the 2008 – 2020 Green Morocco Plan by the government, and its field activities were very consistent with Pillars I and II of this plan.

3. One of the most important impacts for USAID programs is to make government-business interaction more effective. The IAA improved this interaction by conducting industry research such as a useful berry sector study, and assisted the agriculture industry to advocate for reforms with the Government of Morocco using that study. In advising a government export control agency, EACCE, on how to make its website more useful to the private sector, the project first canvassed private sector producer and export associations to find out their views. This work by the project resulted in sustainable changes in the government's information systems to assist the agribusiness sector.

4. Resolving marketing problems by involving larger market players rather than concentrating on cooperatives could have led to more lasting results. IAA project work with big traders, processing industries or industry associations (done well with berries but not so well with capers, olive oil, and rosemary) could have helped address key marketing issues with lasting innovations. Similarly, the IAA work with sheep feeding trials was limited to a small segment of the market, and could have benefited from cooperation with the national sheep and goat association.

Programs are usually much more effective if there is substantial contribution from local partners. The main recommendations to USAID/Morocco by the evaluation team are the following:

1. Recognizing the importance of buy-in by host country government authorities, substantial efforts should be pursued in future projects involving national issues and national centers of expertise - such as activities relating to drought - to keep central government authorities informed and to seek their advice, while not necessarily giving them any control over regional projects.

2. In future work with government institutions, it is important to incorporate a focus on value chains since it can improve incomes, value added, and competitiveness in individual product sectors.

3. The sheep production and marketing value chain is an attractive area for future work because there are many poor farmers involved and many opportunities for improvement of their incomes. The evaluation team concluded that the technical assistance provided by the IAA effectively increased farm income for the target farmers. Other activities linked to production and marketing could be pursued and the target groups could be broadened in the future. Potential activities that might be considered are changes to the legal environment, including the status of cooperatives and associations with respect to financial transactions and the restrictions on transporting meat. Work with the sheep and goat association or other private sector groups could help to identify the best areas of focus and could widen the impact of activities.

4. In value chain work, the best way to achieve success is to find what the Green Morocco Plan calls an "aggregator" – a processor or trader willing and able to help add value at the producer level and share the value added while working with producers to improve quality, timeliness, quantity or other important conditions of production and delivery.

5. Future projects can seek to promote more private sector activity within the framework of government objectives. In such activities, USAID should try to discourage excessive government controls that add unnecessary time or cost and damage competitiveness.

6. USAID's future work could reach out to the Moroccan private sector for input and ideas and could help the Government develop a positive relationship with the private sector in its efforts to encourage cooperation across value chains and development of competitive agriculture.

7. Providing useful marketing and regulatory information for the industry should continue to be a focus for assistance to the EACCE and other government agencies.

8. Programs that target the poorest farmers should concentrate on working with cooperatives, which seem to be the best way to reach this population group and are consistent with the Green Morocco Plan. Activities should focus on improved linkages to other marketing players in the value chain.

INTRODUCTION

The Morocco Integrated Agriculture and Agribusiness (IAA) Project (2005-2009) was the latest in a series of USAID projects focused on the agricultural sector in Morocco, seeking to promote the productivity and incomes of farmers and agribusinesses by increasing production, improving practices related to quality and marketing, and promoting exports. The project also improved government policy and programs. It provided training to Ministry of Agriculture staff, worked on websites and provided training on cost-benefit analysis and farm management analysis. Assistance was also provided to the Moroccan Export Promotion and Control organization to improve price collection and develop a website that would be useful to sister government agencies and to private sector agribusiness exporters. Assistance was also provided to raise farm incomes in five product value chains. The project results framework (in Appendix B) included the following results as intermediate steps in developing competitive agriculture and benefits for farmers and others in the value chain:

Result 1. Improve public policies and institutions in support of more competitive agriculture and agribusiness.

Result 2. Increase productivity and variety in agriculture and livestock production.

Result 3. Increase competitiveness of agro-processing industries.

Result 4. Enhance the capacity of agribusinesses, firms, and institutions to support competitive value chains.

dTS was asked to conduct the IAA project evaluation and also prepare a separate report on "trade and competitiveness in the agricultural sector."

dTS' evaluation team consisted of Tom Pomeroy, Team Leader, Mohammed Bajeddi, Agricultural Expert, Abdelkader Haddioui, Senior Researcher and Anass Homane, Junior Researcher. The team received support from the dTS home office project management team: Karen Dawes, Oleksandr Rohozynsky, and Avinesh DeSilva. The evaluation was implemented during May – July 2012, and included three weeks of interviews and data collection in Morocco in June 2012.

The evaluation team studied various reports on the above activities and then met with key partners and beneficiaries as well as with businesses involved in the value chains and donors implementing agricultural programs. The team's objective was to evaluate the effectiveness of the programs and to understand the context in which they were planned and implemented.

The IAA reports explained successes in capacity building and durability of most of the activities undertaken. The officials in the Ministry of Agriculture and in EACCE provided information that confirmed many of these successes, but indicated a few efforts that did not lead to durable results, or led to results that were not originally foreseen. In the sections below, this report provides a summary of findings on each activity, followed by lessons learned, conclusions and recommendations for each major activity and then a final set of more general conclusions and recommendations for consideration in future programs.

Background

The IAA project was implemented at a time when the Government of Morocco was re-evaluating and revising its agricultural policy priorities, reorganizing government services, and seeking to launch many new

initiatives. The project made important contributions, both conceptually at the Ministry level (supporting information management and outreach, value chain concepts, cost-benefit analysis, business promotion) and in the Ministry's interaction with the agricultural sector (demonstrating how the broad ideas of new policies could be adapted to specific value chain activities in five product areas).

Moroccan Agriculture Overview

Agriculture represents about 15 percent of the Moroccan Gross Domestic Product (GDP), varying annually, and about 40 percent of the work force. According to Ministry of Agriculture data, in 2009 the country had 1.5 million farms producing cereals, potatoes, olives, citrus, and a number of fruits and vegetables, some of which are actively exported. About 1 million farmers have livestock (chickens, sheep, goats, cows) mostly producing products consumed within Morocco. Overall, smallholder farming predominates across the Moroccan landscape with over 50 percent of farmers occupying less than 3 hectares of land, 43 percent have 3 to 20 hectares, 4 percent have 20 hectares or more and only 0.7 percent of farmers have more than 50 hectares. Some major crops such as cereals and olives are largely rain-fed, but about fifteen percent of land is irrigated, including water pumped out of boreholes by small farmers or in large government-controlled irrigated perimeters, using surface water from dams. Some Moroccan and international studies indicate that the climate in Morocco is becoming dryer over time. This concern has led the Government to try to change the irrigation system to save water, providing subsidies to shift from gravity or sprinkler irrigation to drip irrigation, which could save up to 50 percent of the water used by the older systems.

Income Disparity

Although Morocco's 32 million people have an average per capita income of $4,593 (purchasing power parity) or $2,073 in nominal per capita income, there is a large gap between the rural poor and people in the cities. According to the World Bank, the gap between the rural poor and the urban population is more pronounced in Morocco than in other countries of North Africa and the Middle East and other countries with an average income level similar to Morocco.[1] Consequently the government has sought to provide help to small farmers, particularly in areas depending completely on rainfall.

Cooperatives

In 2008 Morocco published its Green Morocco plan for 2008 to 2020, which set forth priority areas of action in Pillar I (increase the competitive sector of modern agriculture) and Pillar II (help the poor farmers in unfavorable zones who are organized in cooperatives or associations). While there are exceptions, such as in the dairy sector, the majority of poor small holders do not belong to cooperatives and, even so, many of the country's over 3,000 agricultural cooperatives are tiny. For example, some of those helped by IAA had fewer than 20 members. A banking contact indicated that less than 5 percent of Moroccan farmers belong to cooperatives. Some of the small cooperatives in olives and capers were established to benefit from special subsidy programs. Those without paid staff often have limited managerial or marketing ability. Nevertheless, some sort of cooperative, association or other grouping is necessary for programs to reach small farmers with production and post-harvest training and with marketing programs.

[1] Banque International pour la Reconstruction et le Développement, Premier Prêt de Politique de Développement d'Appui au Plan Maroc Vert, le 3 février 2011, Rapport no 59499-MOR, p. 20.

Aggregators

A key concept in the Green Morocco Plan is to find and encourage "aggregators" – such as processors or traders or other organizations with technical, financial and managerial and marketing skills that could be assisted to establish win-win relationships along the entire value chain from the farm to the market. Aggregators are marketing players who are already active, but who can be encouraged to reach back and help improve the value added and incomes of the farmers in activities that will also help the aggregator. For instance, an olive exporter visited by the team sends agents to farms to ensure quality and to provide traceability of products back to the farm and seeks a long term relationship with the supplying farmers. Similarly, large industrial berry exporters work with cooperatives of farmers to provide the farmers with planting material and to purchase and export the farmers' production. The private sector value chain leader (or aggregator) is a concept that was closely linked to concepts in USAID's value chain training. Government officials indicated that many of these concepts influenced the Green Morocco Plan. The World Bank points out that the sustainability of Pillar II projects to help poor farmers in marginal areas depends in large part on the success of the contract agriculture model (the system of aggregators), that is, linkage of small cooperatives to larger market players further up the value chain who can help with marketing, technology and financing.[2]

Subsidies

Although recognizing the value of private sector activities and helping some of the big companies that dominate some export sectors, the government also seeks to intervene with subsidies and regulatory policies to bring about change. Government subsidies cover many activities, including, for instance, sheep feed when conditions are dry, the construction of basins to store water, digging wells, providing irrigation material and clearing rocks from land, olive pressing equipment, helping farmers and agribusinesses to invest in machinery, buying certified seeds or seedlings, shifting from wheat production in marginal areas to more drought-resistant olive trees, and olive oil exports. International donors have been supporting many of these efforts, including the $326 million Millennium Challenge Corporation tree-planting program, mostly for planting olive trees, but with smaller programs for almonds, figs and dates. A recent Moroccan Government program is also experimenting with crop insurance for grains to respond to the risk of drought.

Regional Focus

The Green Morocco Plan called for moving many development activities from the control of central ministries to the regions. The government is also trying to set up multidisciplinary and multiagency extension offices providing soil sample testing and advice to farmers in the regions around the country. Most of the recent donor programs of IAA and others have been focused on particular geographic areas in conformity with this regional focus of the Government.

Exports

Faced with new export opportunities and new competitive challenges as provisions of free trade agreements with Europe and America are gradually phased in, Morocco, buttressed by substantial donor funding, is seeking to promote private sector competitive agriculture. Morocco's proximity to Europe facilitates export of berries by trucks to Spain and ship borne trade in fruits from Agadir to Europe. The country has excellent marketing opportunities for fruits and berries, many permitted into Europe under seasonally adjusted duty

[2] Banque International pour la Reconstruction et le Développement, Premier Prêt de Politique de Développement d'Appui au Plan Maroc Vert, le 3 février 2011, Rapport no 59499-MOR, p. 20.

preferences. Europe has been Morocco's main export market for a long time and Moroccan exporters have sought to adopt traceability back to the farm and certification programs that meet European requirements such as HACCP, Global Gap, British retail certifications, fair trade, organic or other certifications. Though some of the certifications are expensive, they can be essential for shipment of products to European market segments. The feasibility of maintaining the certification requirement varies by product and market condition. The caper study, provided to the team by EACCE, indicated that certified "organic" capers command nearly twice the value of non-organic capers. However, the certification and traceability requirements can be expensive and may not be feasible for some exporters, particularly the smaller ones. For citrus, another set of important export products, USDA's latest Morocco Citrus Annual report indicates that Moroccan exporters are leaving some European Union citrus quotas unfilled and shifting to the Russian market due to less stringent (and less costly) import requirements.[3] Because marketing conditions change, private sector exporters with strong marketing connections tend to be best at finding the most cost-effective ways to promote exports. Processing and packaging or seeking special certifications can be a good way to add value, but profitability depends on competitive market conditions and those conditions change. Sometimes fresh products are more profitable than processed products and bulk products can sometimes be more profitable than exports in retail packages, depending on competitive market conditions.

Morocco has also been exploring and expanding markets in the United States with substantial shipments of clementines, olives, and olive oil. Efforts are being made for both private and government branding and marks of geographic origin to increase the value and consumer demand for Moroccan products.

Integrated Agriculture and Agribusiness Project (IAA): 2005- 2009

The Integrated Agriculture and Agribusiness Project (IAA) came at an opportune time to have a substantial impact. The IAA was a $14.8 million program implemented by Chemonics and partners between 2005 and 2009. Its main activities were:

1. To improve the Ministry of Agriculture's planning, analysis, and outreach , principally working with the Department of Programming and Economic Affairs/Direction de la Programmation et des Affaires Economiques (DPAE),

2. To partner with the Autonomous Export Control Agency (EACCE) to improve its collection of market information and establishment of a website to help provide useful information to government agencies and the private sector. EACCE controls quality of exports through laboratory tests and provides information to exporters, e.g. market prices and linkages to permit certifications for exports to Europe. It has agronomists, veterinarians, chemists, economists, and specialists in international trade and information systems. An earlier USAID program in the 1990's helped EACCE to develop laboratories and get them accredited. For instance, Moroccan olive oil exports are now required to be tested for acidity, purity and pesticide residues. IAA consulted with agro-industries to determine what useful information EACCE could provide them on regulations and market conditions and trained EACCE staff to obtain and distribute the information via a new website.

3. To develop five value chains – including sheep meat, olives and olive oil, aromatic and medicinal plants, capers, and berries.

[3] Morocco Citrus Annual Gain Report, no MO 1113 12/1/2011 USDA/FAS

a. Sheep meat

   i. Early weaned lambs: working with several cooperatives on production issues including feeding trials to show that purchasing compound feed for early weaned lambs could be cost-effective.

   ii. Slaughterhouse rehabilitation: doubling the cold storage capacity of the Oujda municipal slaughterhouse in the center of a sheep production area.

   iii. Marketing: working with a major supermarket chain to switch from purchase of sheep from brokers to marketing by individual farmers for the annual "feast of the lamb" Aid El Kebir – sales of live sheep for household slaughter. The sales and pricing were organized between the supermarket chain and several sheep cooperatives.

b. Olive oil: providing small cooperatives with training and with olive presses and storage tanks and training in production, processing, management, and computers

c. Rosemary: working with cooperatives to improve sustainability of harvesting of rosemary from public lands under contract and improving distillation equipment to produce rosemary oil.

d. Capers: providing small cooperatives with calibration machines to separate the valuable small capers and also with barrels to preserve capers, coupled with training to improve processing and marketing of the products and with organizational training and computers.

e. Berries: introducing new varieties of blueberries, blackberries and raspberries for export markets, supplementing and expanding the traditional export trade in strawberries

f. Several other activities were implemented including a study on rural credit and advice on planning for irrigation activities and drought control.

The implementers of the IAA project led by Chemonics reported training 4,236 people and also reported substantial sales, investments resulting from project activities. The total number of vulnerable households benefiting directly from USG assistance is reported as 6,080. The full list of indicators and results shown by Chemonics is provided in Appendix C. A selection of the main results is shown in Table 1.

Table 1. Value Chains: Sales, Investments, number of people affected

Product/Market	Number of People in Cooperatives and Associations that Worked with IAA	Sales Value of Program-assisted Products in Agriculture, Agro-processing, and Agribusiness	Investments in Farms and Agribusinesses
Olives	682	$1,541,030.00	$4,791,574.00
Lamb	4,443	$50,569,609.00	$6,109,860.00
AMP	795	$423,473.00	$1,604,141.00
Capers	64	$2,663,020.00	$3,288,472.00
Berries	96	$929,526.00	$11,887,188.00
TOTAL	6,080	$56,126,658.00	$27,681,235.00

METHODOLOGY

As stated in the Statement of Work (SOW) in Appendix A, the evaluation was targeted to provide answers to the following questions:

1. Impact: To what extent was the IAA project effective in achieving the stated objectives? What was the intended/unintended impact of the IAA project?
2. Challenges: What were the main challenges faced by the IAA project? How did the project face them?
3. Sustainability: To what extent were the IAA project activities sustainable? What are the key tools or methodologies that were essential for continued implementation or scale-up of successful IAA initiatives? Which partners played pivotal roles during the life of the project and how has their continued engagement been important to post-closeout sustainability?
4. Lessons learned: What were the key lessons learned from the project that should inform future Economic Growth (EG) programming in Morocco?

The dTS framework for the evaluation component consists of four inter-connecting analyses:

1. Ascertaining what has changed with respect to the relevant value chains and the agri-business trade situation overall since the project began in 2005;
2. Determining the major causes, influences and opportunities associated with these changes;
3. Assessing the IAA's contributions to the changes as linked to the intended program results; and
4. Identifying new or continuing needs for assistance within USAID's manageable scope.

Consistent with the questions posed in the SOW, the focus of the evaluation is on the project's outcomes, the challenges they have overcome and that remain, and useful interventions USAID could support in the years ahead.

The assessment component, a separate report, will focus on describing the current status and competitiveness of the agricultural sector; the issues and challenges it faces; trends and expectations for the coming decade; recommended policy changes and technical assistance needs; and appropriate roles for USAID/Morocco and other donors in meeting these needs.

For the evaluation component, dTS reviewed the project design; indicators of project management; organizational and operational effectiveness; interactions with other projects working in the arena of Moroccan agribusiness and trade; and lasting impacts on individuals, public and private sector enterprises, and policies and practice of the Government of Morocco (GOM). The aim was to identify what aspects of the program went well; what could have been done better or differently for greater relevance, efficiency, effectiveness, impact, and sustainability; what opportunities were taken and/or not taken; and what challenges emerged as the context changed and how these were or were not addressed. The evaluation team met with local IAA implementing partners, producers, processers and traders, GOM personnel, and representatives of other donors and USAID projects working with similar populations. From these interviews the team obtained a frank assessment of IAA, including its challenges, opportunities and what was accomplished. The team also interviewed some groups that were not knowledgeable about IAA activities such as agro-industrial

companies in Casablanca (olive oil and other vegetable oils for export and the domestic market), in Meknes (food packaging company), and Fez (aromatic oils exporter). Interviews included organizations knowledgeable about sector activities but not directly involved such as the national sheep and goat association in Rabat (ANOC) and the major feed miller in Oujda. These interviews helped provide background on the value chains and factual data for use in the analysis of impact. Similarly the team met several major foreign donors or managers of other assistance programs in Morocco to discuss issues related to the IAA program.

In discussions with beneficiaries and other stakeholders in these sectors, the team sought to assess the success, impact, and sustainability of program activities. A number of contacts were reluctant to meet with the evaluation team, but in most cases the team overcame this reluctance, in some cases with help from the USAID office, particularly for meetings in Rabat and Casablanca. The regional agricultural office in Meknes was also very helpful in arranging meetings that might have otherwise been difficult to get. The team sought to reach some of the cooperatives and other beneficiaries by phone, in cases where the team was not able to meet them. This approach yielded some useful information, e.g. from sheep cooperatives, but in most cases the contacts either were not receptive to telephone interviews, or could not be reached. In some cases telephone contact information was no longer available (e.g. for many of the cooperative managers). Nonetheless, the team met with contacts who were able to provide assessments on the full range of IAA activities, giving a relatively complete picture of the impact and sustainability of activities. A listing of the sectors covered and types of activities reported as beneficial in the forty meetings and five successful telephone calls is provided in Appendix D. The complete list of the key informants is provided in Appendix G.

In general, responses other than the almost universal positive reports on the usefulness of training were not conducive to quantitative analysis. But the responses and comments, coupled with the analysis of the value chains, provided insights into the strengths and weaknesses of the project.

FINDINGS, CONCLUSIONS, RECOMMENDATIONS

The discussion in this chapter is focused around seven major activities implemented by the project:

1. To improve the Ministry of Agriculture's planning, analysis, and
2. To partner with the Autonomous Export Control Agency (EACCE) to improve its collection of market information and to help provide useful information to government agencies and the private sector.
3. To develop five value chains – including:
    a. sheep meat,
    b. olives and olive oil,
    c. aromatic and medicinal plants,
    d. capers, and
    e. berries.

For each activity we provide the main findings, derive conclusions, and provide recommendations. Lessons learned and the recommendations based on the overall project design are provided in the following chapters.

IAA WORK WITH MINISTRY OF AGRICULTURE IN RABAT

FINDINGS

Most of the technical assistance provided by IAA to the Ministry of Agriculture (MoA) was provided to the DPAE. This department is responsible for setting agricultural policy within the Ministry of Agriculture. Substantial reorganization and refocusing of the MoA was undertaken during the project, resulting in the department being renamed the Strategy and Statistics Directorate.

IAA reports indicated that the project helped the Ministry of Agriculture in five main areas:

1. Institutional support - training, equipment, new Ministry website link to price collection from Casablanca (EACCE).
2. Policy tools development: Ministry functions mapping, policy cell, customs duty on berry plants, rural finance study.
3. Natural resources management improvement: Work on aromatic and medicinal plants (AMP) harvesting and processing, drought observatory, GIS mapping, irrigation planning advice.
4. Gender integration (work with DERD and others, discussed in the Gender section of this report).
5. Training and workshops: value chain, cost-benefit analysis, model farm analysis, risk analysis

The key informants at the MoA interviewed by the evaluation team included officials at the Strategy and Statistics Directorate, DERD, and the irrigation office. All key informants at the ministry demonstrated strong familiarity with the IAA project and its activities. They expressed the opinion that the project had a major positive impact on the ministry, and introduced significant changes in the government's policy outlook. The focus of the project's assistance to the ministry was related to the development of value-chain and cost-benefit analysis. The project helped develop the MoA website and provided several trainings to the ministry staff. The most notable policy change introduced with the assistance of the project was the Green Morocco Plan. The plan was published in 2008, and outlines priorities and policies for the Morocco agriculture sector through 2020. Project support to the ministry on value chains helped the government to develop principles that were included in the Green Morocco Plan. The follow-on activities of IAA also helped the government learn how implement field projects based on principles of the Green Morocco plan. The key informants also noted the project assistance in setting up the Ministry website was regarded as a very useful initiative. The MoA was not able to develop the site on its own since no individual ministry office had the authority or ability to put the website together. The website, launched in 2011, based on IAA work, has been accessed over 30,000 times, over 6,000 times per month.

IAA was involved in several other attempts at policy change, including

- a proposal to lower customs duties on blueberry seedlings (under Ministry of Finance authority but with Ministry of Agriculture input – not successful),
- urging the Government to sign the international plant protection (UPOV) convention to permit use of internationally protected varieties in Morocco (successful),
- land tenure reform, an area of focus suggested by the Ministry, but without major activities by IAA.
- The berry industry was able to use a transport study by IAA to successfully convince the government to establish a priority for perishable berry exports and speed up its export procedures for berries in Tangiers.

Key informants in MoA complemented the IAA activities with the Office of Water and Forests. The project changed the office's opinion about the importance of determining the value of water while planning the operation of irrigation projects. The irrigation programs of the ministry are now trying to deal with individual farmers instead of groups in large irrigation systems, trying to meter farmer use of water, give farmers more freedom to consider alternative crops, and to charge them for water used. Charging farmers for water use is a controversial practice in Morocco. The project in collaboration with the University of Nebraska also assisted the MoA in irrigation planning. This work was oriented toward smaller-scale irrigation systems and was regarded as very useful. At the same time, the officials at the MoA indicated that they would have benefitted from more assistance in planning for larger irrigated perimeters, managed by the government, to switch from gravity irrigation to drip irrigation.

Other valuable aspects of the project assistance mentioned by the key informants included:

- Linking the Ministry to an improved wholesale price collection and reporting system.
- Training staff on cost-benefit analysis.
- Preparing a joint strategy paper on the potential for aromatic and medicinal plants.
- Influencing the development of the governments Green Morocco Plan in 2008 and on setting priorities and targets until 2020, through training on value chains.

Although the key informants at MoA were in general complimentary about the IAA training and activities, there were some criticisms. The first criticism concerned project assistance with the registration and reporting of market prices. The software provided by the project to the ministry was developed in Bolivia. It could not be modified without involvement of the firm that developed the software, and the MoA had to contact the firm in Bolivia for every program modification, which was impractical. As a result, the MoA and EACCE had to develop a different computer program to continue this work. Nevertheless, the key informants acknowledged that the technical assistance and the software initially provided by IAA allowed them to obtain experience and better understand the technical functionality that would ultimately be needed in the software.

The second criticism concerned the ministry request for IAA assistance to develop a map of the functions of different units of the MoA. The original idea was that the results of the functional mapping would be used to propose organizational changes at the ministry. Although the project developed the map of the functions, it was later determined that changing functions of the units in the MoA was not politically acceptable, and the work done by the IAA did not result in any tangible result. Similarly, the plan developed with IAA assistance to set up a special strategy unit in DPAE was not successful. The idea was to create a group of experts within the DPAE (the strategy unit) to develop policies based on farm modeling analysis. However, this unit would have taken over the functions of several other offices at the MoA. These offices were not willing to give up their authority, and, as a result, creation of the strategy unit was determined politically unfeasible.

Other project activities that did not have lasting effects, in the view of the key MoA informants, included the following:

1. Trainings for the staff in the ministry. The key informants expressed the opinion that some of these trainings targeted people who could not use the training effectively.

2. Development of GIS maps of olive areas in Meknes that was conducted as part of the work on the strategy for aromatic and medicinal plants value chains. The ministry indicated that this work did not have a lasting effect due to political reasons. The strategy work was coordinated with the Office of Water and Forests; however, the office handling GIS analysis (satellite imagery) in the ministry felt that it had been bypassed by this activity.

3. Project assistance in creating the drought observatory did not result in sustained changes.

The key informants also commented on IAA's work on financing for the agricultural sector. The IAA financed a national-level study on rural credit. The study was implemented in cooperation with Credit Agricole, the major agricultural bank and a new financing program was developed and implemented, but the objective of providing credit to small farmers and cooperatives was not achieved. According to key informants, small farmers and cooperatives are not credit worthy and commercial banks found that they could provide the loans to farmers even within the framework of the new financing program.

CONCLUSIONS

In general, the work of IAA supporting MoA produced tangible successes and the project was able to accomplish results planned for this component of the IAA work. Based on the opinions of the key informants, the introduction of the aggregator concept in the value chain by the Moroccan government and incorporation of this concept into the Green Morocco plan were important policy changes that can at least partially be attributed to the IAA project. While the concept of a supply chain and an exporter controlling the supply chain was present in the French colonial export system, the USAID/IAA approach puts emphasis on a different win-win negotiation focus. The approach suggested by IAA implies more focus on the well-being

of farmers. This approach was incorporated into the Green Morocco Plan. The language used in the Plan about seeking an aggregator who could be supported to develop win-win development is very much akin to concepts in the U.S. value chains that were presented at the seminars held during the project. It also appears that other trainings provided by IAA, in particular the training on cost-benefit analysis influenced the government approach to develop competitive agricultural systems and related policies.

Another big change in ministry approaches was related to the concept of putting a value on water, which is expressed in the Green Morocco plan. The concept of valuing the water used by farmers is a controversial concept. Switching to drip irrigation is expensive and may not be cost effective in some places or suitable for some crops, because the cost of investment may be much greater than the value of savings in water use. Not surprisingly, the idea of getting farmers to pay for the water they use met resistance, and may be difficult to implement. However, the Green Plan may provide funding for the development of more efficient irrigation system that would help to fight droughts. Although key informants suggested that the IAA work on drought and irrigation was small relative to the efforts of the Moroccan Government and the other international donors, this work had a meaningful impact at least with respect to concepts and methods being applied by the ministry.

American experts seem to have credibility and influence with the government of Morocco. The complaints of DPAE officials about the lack of departmental involvement in regional work on drought and in GIS development may hold lessons for better coordination with national officials in future USAID-funded programs. The evaluation team notes that the Green Morocco Plan called for many of the development programs to be moved to regions. The part of the Green Morocco Plan that suggests moving development activities to the regions and involving all the stakeholders instead of being controlled from the center seems to be a sensible move. However, the evolution in roles and responsibilities, could lead to similar tensions between different parts of the government institutions. Perhaps the personnel of USAID-funded projects should place more attention on coordination with national authorities. Such coordination for highly technical programs at the local level, such as work on drought, would at least keep ministry officials informed and permit them to comment on plans. This approach will not necessarily resolve issues of dissatisfaction in the ministry with project activities outside their control, but it could help to increase a sense of buy-in from the ministry. Improved coordination will also help ensure that project personnel consider all elements that would make programs sustainable.

Sustainability seems to be a concern of the government as well. Key informants at the ministry explained to the team that the government hopes to rely on public and private extension agents, funded at first by the state and later by charges levied on marketed products, to implement the Green Morocco Plan objectives and ensure their sustainability. There are also plans to fund agriculture research with marketing fees. The evaluation team notes that the idea of eventually setting up a structure including marketing fees to privatize funding for extension and research may not be fully consistent with low-cost, competitive agriculture. It is true that some private sector marketing groups in the United States and elsewhere use marketing fees to fund various activities, with industry control over expenditures, but there is a danger of too much government control adding unnecessary costs to value chains. Clearly, Morocco wants to make government services more relevant. But it appears there may be unresolved tradeoffs between the public sector tendency to want more control, versus providing more freedom to the private sector. This finding suggests that future USAID projects should consult with industry associations and help the government reach its goals of helping rather than hurting competitiveness.

It is apparent that the IAA project came at a crucial time when the government was ready to implement reforms. Counterparts were attentive to IAA experts' perspectives, which allowed the project to have an

impact on the Government's long term agricultural policy and on analytical and communications systems. Clearly the work on wholesale market prices, the website, cost-benefit training and value chains was appreciated. Most activities of the project were successful, though a few – the policy unit, the drought observatory, and the proposal on reduced customs duties for imported berry seedlings – were not.

RECOMMENDATIONS

In light of the importance of local buy-in, future projects should apply significant attention to involving national centers of expertise to keep central government authorities informed and to seek their advice, without necessarily giving them control over regional projects.

In future work with government institutions, the value chain focus will remain relevant and important. The project did significant work to develop value chains in Morocco but opportunities for additional impact exist.

Future projects can seek to promote more private sector activity and should try to discourage excessive government controls. USAID's future work could reach out to the private sector and help the Government develop a positive relationship with the private sector in its efforts to encourage cooperation across value chains and develop greater competitiveness in agriculture.

EACCE

BACKGROUND AND FINDINGS

EACCE is an autonomous export control agency. It received substantial technical assistance from the project with respect to:

- dissemination of the market information, in particular development of a computer program to gather market price information and a web site,
- training of EACCE personnel in gathering and analyzing data,
- providing useful information to the Ministry of Agriculture and to the private sector, and
- accessing and distributing international market information on changing conditions and regulations that would have an impact on competitiveness.

Key informants at the EACCE indicated that technical assistance from the IAA project was valuable, an assertion supported by project reports and other available information. For example, IAA brought retired USDA Agricultural Marketing Service experts to help EACCE develop and standardize its wholesale price information system and to develop a website to provide private sector access to this information. IAA also provided computers to ensure quick transmission of the wholesale market prices to the Ministry of Agriculture in Rabat. It also provided training to the EACCE experts on methods for data collection and analysis. The improved system now provides advance information on world market conditions, and information on current and new regulations about to come into force in Europe. Between 2006 and 20011 the EACCE website was accessed 36,000 times, averaging 6,000 times per year. The EACCE officials directly acknowledged that prior to the work with IAA, the EACCE did not have adequate analytical and technical capacity to run such a system. The USAID project that followed IAA, MEC, has been working with EACCE to explore opportunities for further extension of this activity by transmission of EACCE data by SMS telephone text messages. Key informants also suggested that EACCE could benefit from more training on how to access and analyze international market information, such as that related to market competition, temporary blockages in port traffic, and other logistics and regulatory information.

The IAA project also provided assistance to the EACCE and Moroccan Government Office of Marketing and Exports (OCE) to develop Morocco-specific brands and geographic origin labels and to participate in international marketing activities. The evidence collected by the evaluation team suggests a mixed record of success for this work. Key informants from the government and these two organizations indicated that the project provided valuable assistance to develop a new law on regional labels that would be provided by the government for use by private exporters. The public labeling activity is still in its infancy. Private labeling was actively pursued but its current status is uncertain. Mustapha's Fine Foods, a private exporter based in the US, received assistance from the project to begin exporting retail packaged goods under the Moroccan labels. It started exporting 2008, reportedly exporting a container of retail packaged goods every few months for sale in the United States. However, as of the time of this evaluation, the warehouse in Meknes was not functioning due to the ending of certain local tax advantages, according to the company. The team received conflicting reports about the company's intentions to restart operations for export elsewhere, such as in Tangiers.

The Office of Marketing and Exports (OCE) has continued to actively promote new initiatives since the IAA project. OCE has been trying to get "fair trade" status for small producer/exporters and to set up an organization ("Maroc Taswiq") to promote the small producers in what it characterizes as the "solidarity economy". Recently, OCE helped small-scale producers and cooperatives, including some of those helped earlier by IAA, to develop new branded retail products such as olive oil, cactus oil, and cosmetic oils. OCE also developed a web site and "solidarity" retail and display store in Casablanca to promote the unique Morocco-specific products.

CONCLUSIONS

The project succeeded in helping EACCE improve its data collection, international information gathering, and analysis and outreach to the private sector. However, it was not a good sign that EACCE could not provide export data requested by the evaluators on the four target value chains (capers, rosemary/medicinal plants, olives/olive oil, raspberries/blueberries). Instead the evaluation team had to obtain these data from the FAO website (except for capers export data through 2008 contained in an EACCE report). Websites of the Ministry of Finance (Office des Changes) provide export data on some products. The website of the Ministry of Agriculture does not provide these data. It would be useful to have such data easily available on Moroccan websites in the future. Better, more accessible data could help traders and investors in the agriculture sector of Morocco. Reportedly, the government proposed a law that would require increasing transparency and improving data availability. It may be beneficial if future USAID projects would support these efforts.

The work on promoting Morocco-specific brands is important, and in line with government initiatives. There are only a few examples of Moroccan agribusinesses attempting to enter the US market with their own retail brands. The Government of Morocco hopes to promote new brands/labels established by government authorities in the hope that exporters will pay to use these brands after a year of free use.

In the view of the evaluation team, there is a market for locally-branded products in the United States and elsewhere. However, the difficulty in getting recognition of Morocco brands in the United States may not be fully appreciated by government authorities. More than likely, the private sector will be more effective in promoting local brands in cooperation with foreign distributors, or using distributor-owned brands that show Moroccan origin. Some private sector brands have already been developed to access foreign markets and there is much potential for more of these efforts. Efforts to develop government brands and geographic

labels for foreign markets are worth trying even if success remains uncertain. Government labels may be particularly useful for the smaller exporters.

RECOMMENDATIONS

Future USAID programs should continue to help EACCE in its mission. The EACCE has the mandate to test agricultural exports to ensure conformity with quality and safety standards. It seeks to supplement this regulatory function by providing useful information to exporters on regulations and conditions in export markets. Consistent with this mission, USAID could support EACCE in the following ways:

1. Information available to the public could be improved, including detailed export and import statistics for all major commodities.
2. Useful information for the industry should continue to be a focus of the technical assistance project. Public access to information on export practices and regulations is useful to exporters.
3. USAID projects should also help the Government avoid overly expensive or time-consuming controls on exports as it pursues mandatory testing and quality assurance.

VALUE CHAINS

In the following section, the findings, conclusions, and recommendations of the evaluation team are provided for each of the five value chains (sheep meat, olives and olive oil, capers, aromatic and medicinal plants, and berries) and specific IAA activities within each value chain.

SHEEP MEAT

Production Trials

Findings

The IAA project identified a two-stage compound feed formula for early weaned lambs and convinced some poultry feed companies in Casablanca to produce and market it in the Oriental region. IAA started feeding trials with two farmers in the Beni Guil cooperative with 200 sheep and later expanded to six cooperatives with 1,800 sheep. The project paid three-fourths of the price of the feed and for the vaccinations used in the trials. According to Chemonics, its local consultant conducted a survey of cooperatives on their sheep feed purchases and attributed these purchases to the program, estimating that feed sales of about $45 million were generated during the program. (See more details in Annex C.) Increased early weaning can also accelerate reproduction for the ewes. The project also expressed an interest in encouraging farmers to space production of lambs better throughout the year, for instance providing lambs for the market in August, when supplies are typically short. Early weaning methods could be part of such a program.

The evaluation team interviewed the cooperative with the largest number of sheep in the feeding trials. The key informant reported that the feeding trial was successful and the cooperatives would continue the new feed practice. The national sheep and goat association in Rabat (ANOC) and the industrial feed miller in Oujda confirmed that the purchase of compound feed for early weaned lambs was newly introduced by the project. Previously, early weaned lambs were fed on less nutritious bran or barley.

Although sheep feed had been sold for many years in Oujda, the major feed miller in Oujda, Sonabetail, advised that beginning around the year 2000 sales of compound sheep feed began increasing and changed from 10 percent of his sales in 2000 to half his sales more recently.

ANOC did not work with the IAA program but the management of the association heard about the project from its members. According to ANOC senior managers, the IAA activities were useful, but very small relative to the total number of sheep marketed in Morocco. In their opinion, although the practice of using purchased feed for early weaned lambs was new to Morocco, the benefits of the project did not expand beyond the targeted cooperatives to other farmers.

Conclusions

The IAA activities for the sheep meat value chain seem to have been successful. The evaluation team notes that in the early 1980's the US Feed Grains Council tried to introduce better feed of early weaned sheep by feeding them on soybean meal and locally available barley through a special, inexpensive, and locally-made feeder into which a sheep could put in its head but not its feet. However, demand for this feeder did not materialize in Morocco at that time. ANOC's comments do not support the claim of widespread adoption of the new practice indicated by the project, though it appears that some farmers in the cooperatives that ran the trials have adopted the new practice of purchasing feed for early weaned lambs, formerly fed on barley or bran. The evaluation methodology used by Chemonics that attributed all purchased sheep feed to the early weaned lamb trials seems questionable. (See Appendix C.) While the IAA project reports implied that producing compound sheep feed was new to Morocco, the COP of the project confirmed to the evaluation team that it was the early weaning feed formulation that was new, not all commercially-produced sheep feed. Other results reported by the project seem plausible but the claim that all sheep feed sales in the Orientale region ($45 million) resulted from the IAA program seems questionable.

The project did not work with the national sheep and goat association, which seems to have substantial programs in useful areas including feed, veterinary services and breed improvement. Certainly the IAA program hoped to make its own impact, but it could have focused on a program that would be continued and expanded by ANOC. Work with ANOC would have been consistent with value chain principles.

Recommendations

Future projects developing new varieties of animal feed should consider working with major local organizations. One example of such organizations is the national sheep and goat association. These organizations will provide the project work a wider reach and more longevity to achieve greater impact and lasting results.

Slaughterhouse Cold Storage

Findings

The IAA program doubled the freezer capacity of the slaughterhouse in Oujda that was originally built in 1958. The slaughterhouse had the capacity to slaughter about 2,000 sheep a day. However, according to the manager, due to the lack of freezer capacity, the storehouse sometimes had to keep 600 sheep overnight instead of slaughtering them the same day. The expansion by the IAA project of the freezer capacity solved this problem. There were some issues with the failure of two of the nine compressors shortly after installation, but the other seven seem to have operated well.

The facility is vital to sheep farmers but they must go through authorized meat wholesales to slaughter their animals there. A new private sector facility outside of Oujda has been approved for construction that will

have twice the capacity of the Oujda facility. The current facility is constrained because the municipality takes the revenue and does not provide a sufficient budget for repairs or renovations.

Conclusions

The IAA expansion of freezer capacity appears to have been useful, preventing delays in marketing during busy seasons. It is worth noting, however, the problems with the compressors that occurred shortly after installation. The project helped to resolve the problem quickly. However, it is possible that the problem could have been prevented earlier if IAA staff had checked the equipment soon after installation. A follow-up check by the project could help determine the machines were operating properly and propose potential solutions as needed. The facility seems to have overcome the freezer space problem, despite the installation problem.

Management of the facility by the municipality does not seem to work effectively since the slaughterhouse is experiencing shortfalls in funding for upgrades or repairs. Plans to privatize some of the slaughter houses or permission for the construction of new private slaughterhouses may improve the situation.

Recommendations

Future projects should consider working with private slaughterhouses as partners or beneficiaries. To the extent that private slaughterhouses come into being either through new investment or privatization, a private slaughterhouse might be an excellent partner, particularly if it provides services for small farmers or their cooperatives.

Future projects should send have a follow-up procedure to ensure appropriate functioning of equipment after installation

Marjane Supermarket Sales

Findings

The IAA project introduced a program to supply live sheep to the customers of the Marjane supermarket in Oujda under a big tent outside the store for the Aid El Kabir holiday (allowing purchase of sheep for slaughter at home). This program was highly regarded by the key informants in the area. Previously the Marjane supermarket arranged for holiday sheep to be sold next to its supermarkets by intermediaries, involving a trader who would put up the tent for the sheep. Under the new program introduced by the project, the supermarket puts up the tent and the supermarket buyer in Oujda (for instance), deals with a single person representing three cooperatives, and negotiates the changing price with that representative, based on current market prices in the souks. The farmers come with the sheep and have their sales recorded in a book, paid at the end net of a small commission to Marjane. Marjane runs this program in several cities and another supermarket company reportedly has implemented a similar program.

Key informants from the cooperative supplying the most sheep to the program confirmed that this program was a good one. In addition, they expressed an interest in getting marketing help throughout the year, not just during the holiday. According to the national sheep and goat association about 100,000 Aid El Kabir sheep are sold outside the souks (public markets) out of the total 5.5 million sheep sold during Aid El Kebir. Some of these sales are done in garages rented out in certain neighborhoods. The total sheep sold via all the Marjane stores in several cities as been expanding and now totals 10,000 live sheep per year.

Another issue is that large supermarkets like Marjane cannot centralize the purchase of meat during the rest of the year because laws preclude the shipping of meat more than 80 kilometers. Sheep meat shipped for longer distances must be sent as live animals for slaughter near the point of consumption. There is strong

opposition to changing this law by municipalities that fear they may lose the fees they get from local slaughter. Meat traders may also be involved in the opposition to change.

Conclusions

The supermarket marketing program was effective in establishing win-win relations between the aggregator and farmers in a particular value chain. Farmers can get a better deal by accompanying their sheep to market instead of selling to intermediaries. The supermarket also benefits from increased sales. The program has continued and expanded to a number of other cities because it is in the interest of both the supermarket and the farmers. However, at the moment it supports trade of about 10,000 sheep, which is small compared to total Aid El Kabir sales of 5.5 million sheep and compared to total annual sales of 11 million sheep.

Recommendations

Sheep should remain a focus for future programs. Sheep are a key source of income for small farmers and do not require irrigation or good farming land. The Marjane supermarket sales program by IAA demonstrated how the program's support to the sheep meat industry can be quickly scaled up and become sustainable because of the common interests of the private supermarket, cooperative, and sheep producers. However, this program is small compared to total market size but there are a lot of opportunities to replicate the program in other areas or develop similar programs.

Future programs should identify avenues for having an impact on a larger scale. Working with cooperatives and poor farmers is consistent with Pillar II of the Green Morocco Plan and of USAID's general orientation, but coordination with the national sheep and goat association in any future effort could have an even bigger impact.

Also, future programs could support changes to the legal environment and status of cooperatives and associations with respect to financial transactions, rules on meat trade, and other market impediments. Any such effort should determine how to deal with powerful local interests that may resist changing meat trade rules.

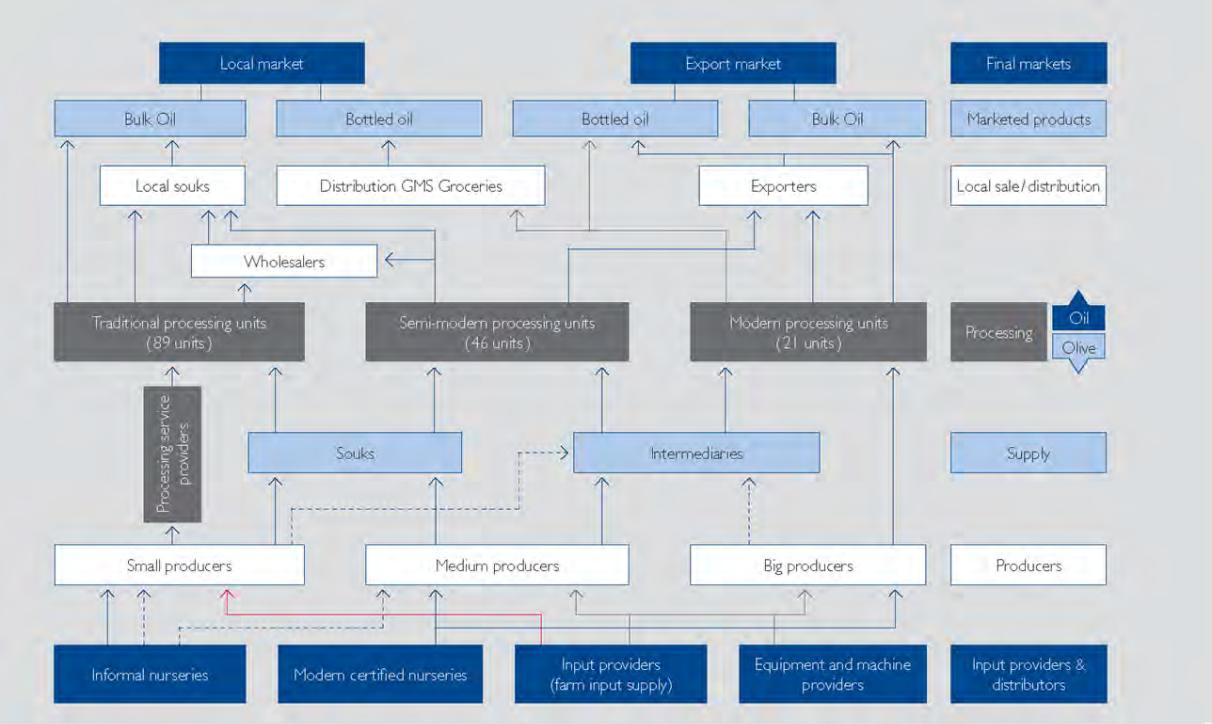
OLIVES AND OLIVE OIL

Olives are Morocco's most important agricultural product, valued at $1.1 billion dollars in 2009 according to FAO data (see Appendix E for production, imports and exports of major products). Government policy has promoted planting of new trees and has encouraged replacement of wheat with olives in areas of low rainfall, since olives are more drought resistant. Preserved whole olives are a major export ($131 million in 2009) and olive oil is also exported, depending on local supplies and international market conditions. Olive oil consumption in Morocco is about 80,000 MT and production in recent years has varied between 85,000 and 120,000. The government predicts that production of olive oil will double by 2020 and production of whole olives for consumption or exports will triple.

The olive sector and the diagram shown below is a good example of the "value chain" concept that the project promoted and that influenced the Green Morocco Plan. The value chain was a key concept in the project's technical advice and in the training of officials at the national level and for the Government's Green Morocco Plan. The concept is that all aspects of inputs, credit, production, processing, and marketing from "farm to fork" must be considered with opportunities for increased cooperation among the various stakeholders. The value chain is similar to the ancient supply chain ("filière") concept of French colonial export industries, but value chain analysis puts more stress on cooperation that will benefit farmers. There are many intermediaries in the value chains, and often individual firms monopolize the markets for particular product. The ideal changes to the value chain would provide incentives to the power players in the particular

market to be more collaborative with the supplying farmers through mutually benefiting activities (win/win). The Green Morocco Plan adopted the value chain approach and focuses on the prospect of finding an aggregator, such as a processor or major trader, in each of the value chains as the way to implement the changes. The aggregator should reach back to the farmer to supply the agricultural inputs and provide funding or other incentives to improve quality and reliability of shipments through the win-win agreement between suppliers, processors, and traders. The Government of Morocco is prepared to subsidize some of these efforts to get them started.

Figure 1. Olive Value Chain Analysis (SAISS)



Value chain maps, such as the olive map featured above, are helping staff within the Ministry of Agriculture (MAMF) to better understand the complex relationships throughout the value chain. By adopting the value chain methodology, MAMF staff are supporting the Minister's vision for the *Plan Maroc Vert*.

Olives are important to farmers in rain-fed areas. They are resistant to drought and require no substantial purchased inputs. Many of the olive trees are grown in close proximity to wheat fields. These characteristics make olives a good source of family food and income, and have strong potential to get farmers out of poverty. The Government of Morocco has launched a major program to help farmers plant more olive trees, encouraging them to switch from wheat to olives in areas of unreliable rainfall, where wheat yields are low and where crops are most likely to fail due to drought.

According to key informants, the cost of the wheat produced in some areas of Morocco, for example in Meknes, is almost equivalent to the production costs. However, small farmers near Meknes express reluctance to switch from wheat production to olives. They explained that wheat provides family food in addition to the monetary income. Despite this reluctance, new olive groves were being planted in many places along the road from Meknes to Oujda, including fairly large-scale industrial plantations as well as smaller groves. The

government has a major planting program for olives. The MCC–funded program, concentrating particularly in the mountain regions, has been covering 100 percent of the cost of seedlings and of planting.

Once the olive trees are well established, the major cost in production of olives is harvesting. It costs about 1,500 dirhams per metric ton (MT) to harvest olives. The traditional harvest method, particularly for taller trees is "gaulage" – striking the branches with a rod to make the olives fall to the ground. The gaulage is typically being done by men and the harvesting from the ground is typically done by women. The gaulage practice hurts the trees, which reduces production and the quality of the olives for the next year. Another method is used to harvest whole olives for export. Whole olives require more careful harvesting. Farmers must climb the trees to harvest the olives into a harvesting box instead of allowing them to fall on the ground (the normal method for harvesting olives for crushing). Industrial plantations usually have short trees that are easier to harvest.

Findings

The IAA worked with the olive exporters to introduce Hazard Analysis & Critical Control Points (HACCP) food safety controls on its industrial process which could provide another method for quality control. HACCP would make the quality control processes work better and help to meet an essential requirement in obtaining some European certifications for export products. However, the project counterparts reported that the first expert sent by IAA to assist them in this process had no expertise in olives and wasted two years of their time. Eventually the IAA sent another expert who managed to help them to introduce HACCP. The key informants agreed that, in the end, this activity of IAA was eventually successful and was very useful to them. A key informant who exports whole olives is buying from a standard market place, but sends agents to farms to ensure traceability and appropriate practices and try to keep farmers as suppliers year after year.

On average, Morocco produces about 100,000 MT of olive oil per year. Domestic consumption is about 80,000 MT (see production data in Appendix E). The production fluctuates in wide ranges from 85,000 MT to 120,000 MT a year.

The government and private sector informants predict that olive oil production may double. The exporters in Casablanca informed the evaluation team that in their opinion, Morocco can sell any quantity of olive oil it can produce. One option is for expanded local consumption. At present the average Moroccan consumes only about 2.5 liters of olive oil a year versus about 10 liters of grain oil a year. Grain oil is cheaper but is largely imported. Other olive-producing countries have much higher consumption of self-produced olive oil than Morocco.

The domestic and export market profiles for Moroccan olive are different. Export markets prefer extra virgin oil with low acidity; the domestic market is used to high-acidity lower-quality oil. According to the key informants, both the Moroccan exporters and Spanish cooperatives (main competitors to the Moroccan oil) generally sell olive oil in bulk, not in retail bottles. Consumers in the internal market often purchase the oil in simple unsanitary containers dipped from bulk containers. Finally, the export markets are highly volatile; while the internal market is stable.

The marketing system for the small farmers does not seem to provide strong incentives for quality for olive oil production. The farmers interviewed by the evaluation team said that they do not get a sufficient price premium for quality olive oil. Although cooperatives in the country can test oil acidity, the farmers reported no strong effort to improve quality and market jointly with the cooperatives. Joint marketing also requires confidence in the capability and honesty of the cooperative managers. According to the key informants, larger

exporters, such as large industrial packagers and traders of olive oil, prefer to develop their own plantations so they can control the supply and quality and ensure traceability of the final product.

Experts in Casablanca indicated that as olive production increases with new plantings the price of olive oil in Morocco is likely to fall. This price decline could encourage domestic consumption. Since harvesting of olives costs 1.5 dirhams/kg and pressing costs 0.5 dirhams/kg, farmers will likely continue to pay for harvesting, providing that the market price remains well above 2 dirhams per kg for olives, equivalent to about 10 dirhams per kg or about 9 dirhams per liter of oil before the cost of bulk packaging and transport. Farmers in Meknes reported that the current market price is about 27 dirhams per liter.[4]

The team visited three olive oil cooperatives that IAA assisted. To these cooperatives, IAA provided training, office furniture, a computer, a small olive pressing machine with capacity of 550 kg of olives per hour, and a kit to test acidity. People were trained to manage the unit. The project also helped the cooperatives to establish a schedule for the local farmers to bring in olives. The regional Ministry of Agriculture in Meknes provides a director to help manage the cooperatives as part of the government support to disadvantaged people. Most cooperatives do not have paid staff and lack the skills to move into marketing, packaging and exporting of their products.

One of the cooperatives, which has 24 members, provides a good example how the olive business is organized. The olive oil is sold by individual members of the cooperative, not the cooperative as the marketing entity. The members pay 0.5 dirhams per kg of olives for pressing oil at the press owned by the cooperative. The farmer will also ask to test oil acidity but only if the farmer needs that to sell the oil at higher price. The olive waste after pressing is sold to a soap factory. The cooperative would like to start a soap factory but is unsure if it could be cost competitive with the big soap factories.

In assessing the IAA project support, the key informants from the cooperatives acknowledged that the quality and revenue from olives production went up due to the project activities. The cooperative members also appreciated the IAA training and the IAA-sponsored visit to a trade fair. The key informants expressed the opinion that the additional trainings for farmers on olive tree agronomy and on increasing oil quality would be valuable technical assistance in the future. Farmers expect that they could achieve substantial increases in production of high quality oil as result of this training. The expectation is that the high quality oil would produce higher income and will also attract more traders to the farms. The highest quality olive oil sells for a premium of 10 to 15 dirhams more per liter; currently the market price of bulk oil is 27 dirhams per liter. Due to the price premium, the traders might be interested in coming directly to farms to purchase and transport the high quality oil, while at present the farmers market and transport their oil themselves. Marketing was mentioned as another challenging area where technical assistance from the future donor-funded projects would be highly appreciated.

Finally, the key informants at the cooperative explained that their attempt to expand from production of oil into trade and marketing was not successful. The cooperatives tried bottling oil and selling to Marjane supermarket; however the program was not successful.

Conclusions

The project strategy to focus on the small cooperatives did not seem to have much of an impact. The farmers appreciated the training and the olive presses provided by the project but the hopes of achieving improved quality of the olive oil, and establishing joint marketing of the oil produced by cooperatives were not realized.

[4] A kg of oil is slightly more than a liter. Olive oil is 20 to 25 percent of the weight of the olives.

IAA activities were consistent with government policy under Pillar II of the Green Morocco Plan. The project provided assistance to small farmers in cooperatives as specified in the Plan. But the project was not able to help to find an aggregator in the olive oil value chain that would be capable of effectively marketing the products. Apparently the quantities of the olive oil produced in the areas assisted by the project were too small or the quality control too weak to attract intermediaries that would be interested in actively working with the small producers.

The greatest opportunity for olive oil may be in developing the domestic market where consumption is currently low and has potential to increase. The lack of control over the international market and the big variation in annual production in Morocco make it difficult to develop good international market prospects for higher than average quality products.

There is a strong Moroccan desire to develop value-added products (including branded olive oil) and to educate consumers in the United States to get them to buy olive oil as a premium product. Moroccan efforts to accomplish these goals have included government attempts to develop a Morocco label, providing it free for a year to exporters and then charging them for its use. Some attempts have been made to package Moroccan olive oil and market it under local brands, but these attempts have not been successful so far. For example, Mustapha's Fine Foods of the US had some success in marketing olive oil and other retail packaged products at fairly high prices in the United States. However, as explained earlier in this report, it is unclear what operations the company still has in Morocco.

The evaluation team thinks that it makes more sense to concentrate on private labeling. For instance the Lesieur vegetable oil company has just gained the right to use its name as brand for exports due to stock ownership changes. Slight modification of this approach may include using a well-known international brand like Trader Joe's or Whole Foods while mentioning on the label that the oil is produced in Morocco. This approach may be a better strategy than trying to get US and other consumers to become familiar with Morocco local brands and its food products and to pay a premium for these local brands.

The IAA program took some of the cooperative members to trade fairs where they exhibited their products for the purposes of the fair in hand-filled retail size bottles. The team thinks a better strategy would have been to seek a relationship with an aggregator rather than hoping that volunteer leaders of very small cooperatives would become proficient in marketing or be able to source bottles at the same cost as a large facility. The training, olive presses and acidity testing were useful, but would have been more effective in a broader value chain effort.

Recommendations

Future projects should concentrate on marketing activities that are realistic about the marketing capabilities of potential exporters. Sustainable improvement for poor farmers could be achieved better by identifying a large market player interested in seeking higher quality and value added through win-win relationships with suppliers from small farmers. This aggregator could possibly receive direct or indirect support from a USAID project and/or Moroccan "government programs". To complement this marketing support, a future project could support supplying farmers through technical assistance to make their production more reliable

CAPERS

IAA worked with four cooperatives that produce capers to improve their management, production and marketing capabilities.

Findings

Capers are immature flower buds of wild prickly plants. The small ones are more valuable and usually should be harvested every two or three days to get the small buds. If fresh, the small capers must be sold within a day. The capers can also be preserved in salt or vinegar. The preserved capers have a sharp flavor and are used as a food condiment for fish or in sauces.

The new branches of the capers plants produce flowers the first year and regenerate between harvesting and can keep producing capers for about 60 years. The capers are generally grown wild in the main production area in Morocco located around Meknes/Fez. Meknes authorities estimate that farmer's net profit is 5,000 to 6,000 dirhams (up to $700) for each hectare of capers. The harvesters also make about the same amount of money for harvesting capers from a hectare of land. The authorities reported that the average yield of capers is 3 MT from hectare a year and each harvester can harvest from 15 to 20 kg a day. There are attempts to grow capers in other areas of Morocco. For example, the USAID MEC program indicated that there is planting of capers in the region south of Casablanca.

The IAA project did a study on capers and estimated its production in Morocco was at about 14,000 MT in 2003 with about 11,000 MT exported. A report provided to the team by EACCE indicates that the value of caper exports declined sharply after a peak in 2002, but the quantity of canned caper exports from 2004 – 2008 was fairly constant at roughly 12,000 MT. As international prices strengthened, the value increased to 286 million dirhams in 2008 (about $40 million) nearly reaching the peak value of exports in 2002 (296 million dirhams). The quantity exported in 2008 was about 12,100 MT, 5 percent less quantity than the previous year but with a higher value. Since the capers exports are not broken out in the Moroccan export statistics or in FAO data, the evaluation team could not obtain reliable information on the recent changes in the exports of capers.

A recent news report indicates that intermediaries visit farms and buy capers at 5 dirhams per kg and sell them to the packaging and exporting companies at 20 dirhams per kg.[5] Those figures imply a farm gate value of about $6 million and a factory gate value of $23 million prior to packaging and export. The report also indicates that a single company, Devico Aica Conserves de Meknes, controls about 50 percent of the capers market.[6] Another Moroccan company Urcimar has 20 percent of the export market. About 70 percent of Moroccan exports go to Europe and 30 percent to the Americas. Recently the competition increased on the world market because of the capers exported from Turkey and Uzbekistan. Reportedly there have been attempts to form an industry association and to find an aggregator in Morocco. The team visited two of the four caper cooperatives assisted by IAA. The most successful of the cooperatives visited offers an example of the structure and production cycle in a cooperative that produces capers. The cooperative members jointly market products, building up their credibility. The cooperative also helps 250 non-members with processing and sales. Main expenses in caper production are related to the labor of harvesters, and paid in two installments: 50 percent when they deliver the capers to the cooperative, and the rest after the accounts are closed. At the annual meeting of the board of directors for the cooperative, fees are deducted as provided by the cooperative law. The cooperative sells capers either to Moroccan brokers or directly exports the product. The direct export contract for the cooperative was arranged by the Office of Marketing and Exports (OCE). OCE is a government export group that arranged the sale and charges 4 percent for its services.

[5] An article by Amina Lofti in Agripeche.com on June 1, 2012.

[6] Apparently the author of the article means Maroccapres. The evaluation team met the owner of Aica Conserves. He informed the team that the company handles the olive oil, berries, jams etc., but does not handle capers though Marocapres is a member of the same group.

The farmers can receive better profit if they can store capers until there is a seasonal increase in prices. The farmers have to store capers in a plastic barrel full of salt water. At present, the cooperative has capacity to store 200 barrels of capers. About 30% of the barrels were provided by IAA as the technical assistance to the cooperative. Another 60 barrels were provided to the cooperative by the DPA agricultural office. The cooperative relies on the government and international support to develop its capacity in storing capers. For example, the cooperative expects that the National Initiative for Human Development (INDH) will soon give another 500 barrels, more than tripling their storage capacity.

IAA provided the cooperative with a machine that calibrates the capers, separating them by size. The capacity was sufficient for the cooperative members but not enough to provide this service to other users. The Ministry of Agriculture is giving the cooperative a bigger calibrator. However, the president of the cooperative informed the evaluators that even though the IAA machine is now too small for the needs of the cooperative, it helped get them started and got others interested. The cooperative is also developing its own brand, and has gotten permission from the government to label its product as Zeroing Câpre. They hope this branding will increase their competitiveness

The local market for capers is nearly monopolized by the large exporters. The cooperative is trying to work with the other cooperatives to establish joint calibration facilities in order to produce export quality capers independently and to break the monopoly of the big industrial exporter located in Fez. However, these attempts were not successful because other cooperatives did not express interest. The farmers assisted by the project indicated that the assistance provided by the IAA project to the caper cooperatives was valuable. Some cooperatives estimated that the IAA activities allowed them to increase income by about 10 percent.

There are several issues that are important to the further development of the caper sector. The first is related to the short season for capers production. Since the capers harvest lasts only three months plus an additional month of marketing, the cooperatives are looking for possible other activities. The opportunities for such additional activities include producing cactus oil. Cactus oil is produced in a different season and has separate processing equipment.

The second issue relates to the profitability of calibrating the capers. The study conducted by IAA determined that if there were fewer than 40 percent small capers (often the case); it was more profitable to sell mixed-size capers rather than separating them.

The third issue relates to the life cycle of the capers. The caper is a flower bud that will turn into a flower if not preserved. The large capers or capers turned into flower are worth only 4 dirhams per kg, which is significantly smaller than about 50 dirhams per kg for paid for the small capers. If cooperative members could sell only fresh capers, they had to take whatever price was offered by the intermediaries who visited the farms at the day the capers were harvested. Preserved capers can be sold within longer period of time and allow the cooperative members to wait for a better price. The IAA project addressed this issue by providing cooperatives training in preservation techniques and plastic barrels for the storage of capers. According to the key informants, this technical assistance made a tremendous difference and increased the marketing power of the cooperatives.

Conclusions

The project's technical assistance for the cooperatives of caper growers was successful only for one out of four cooperatives assisted. The success of this work can be measured in the ability of the cooperative to preserve capers, increase their quality, and increase revenue by marketing capers for export. It seems that the main problem of the cooperatives where the project activities were not fully successful was a lack of

cooperation between the farmers. Those farmers who were not already marketing jointly before the project interventions are still not marketing jointly, and they had only marginal improvement due to the new capacities to preserve capers that were introduced by the project.

It seems that international and government assistance may have resulted in reduced incentives for taking action by cooperatives. The caper cooperatives did not seem interested in buying their own barrels, which cost 300 dirhams ($35 each), because they expected get the barrels free from donors or government programs.

Finding a willing aggregator in capers production in Morocco may have been a difficult task because the monopoly buyer in the area was not open to cooperation. Nonetheless, the June 2012 news article cited earlier indicated that the national industry association is seeking an aggregator to organize the sector and pointed out that intermediaries are getting a lot of the value that farmers could get through better marketing and preservation of the capers in salt water.

It appears that a better IAA strategy for introducing change in the capers value chain would have been to pay more attention to the marketing system, working either with OCE or preferably with the industry association if they were amenable to seeking win-win solutions with the harvesters and suppliers.

Recommendations

In order to help smallest and poorest farmers, international projects need to work with the cooperatives. In the capers value chain this work should concentrate not only on provision of direct technical assistance on production issues, but also on educating farmers on the advantages of joint actions taken by the cooperative members. This approach should allow overcoming some of the failures observed in the implementation of IAA project.

USAID should explore the large opportunities to raise farmers' incomes by introducing preservation techniques instead of selling fresh capers. Provision of the calibration machines that are important to sales of the fresh capers seems to be useful only in cases where the farmers can produce over 40 percent of small capers from the total harvest.

The technical assistance should also move upstream in the capers value chain to find good wholesale outlets for marketing capers. Having such activities in the project design could provide significant additional support to the farmers and provide the opportunities that were not explored by the IAA project.

AROMATIC AND MEDICINAL PLANTS

The IAA project supported the aromatic and medicinal plant (AMP) sector. Project work started with a study of the world market and the numerous alternative products available in Morocco. The project prepared a joint strategy document with the Ministry of Agriculture in Rabat.

Ultimately, IAA focused on the following:

1. Rosemary – identified as the best of the 30 or so top AMPs to promote because of strong international market demand.
2. Working with cooperatives in Orientale that were harvesting from public lands.
3. Contracts with Water and Forests Department that aimed to provide replanting and sustainable harvesting.
4. Improved processing – through improved distillation equipment for rosemary essential oil.

Findings

The team visited one of the cooperatives located in Jerada. The cooperative produces and markets leaves and essential oils (rosemary and artemisia oil). The cooperative has received assistance from USAID since 2006. Initially the assistance came from the AP 3 program, predecessor to IAA, and then from IAA, which helped to repair the distiller that was provided by AP project. During the IAA project, the cooperative received well over 2 million dirhams from several different technical assistance programs. The largest part was supplied by the IAA project (1.6 million dirhams). INDH helped with 620,000 dirhams plus 200,000 for the drying racks for leaves. Currently, the cooperative is about to get a new machine, donated primarily by INDH, that will clean the leaves, a process previously done by hand. The machine is 80 percent subsidized and the cooperative will pay the remainder of the cost.

The cooperative and its members collect the wild leaves, clean them and either dry them or distill them. The President of the cooperative is not paid but the cooperative pays an accountant and also some of the members to work in the distillery. They have a contract with Water and Forests Department for 20 ha of land, a third of which is harvested, another third is under planting, and the rest is fallow. In 2010 the cooperative produced 300 MT of dried leaves and 200 kg of essential oil. In 2011 they produced only 125 MT of dried rosemary leaves, 150 kg of rosemary oil and 10 kg of artemisia oil. Production fell because the harvest season was during the Muslim daytime fasting month of Ramadan.

According to the contract, the cooperative members are supposed to harvest no more than 50 percent of a plant so that it will regenerate. The informants in the Extension Service in Rabat expressed doubt that the poor farmers would reliably harvest only part of a plant. Similarly the research service (INRA) in Rabat expressed an opinion that having the poor collectors replant was very difficult to implement. The research service said that Water and Forests Department should have asked the government to do the replanting. However, the evaluation team observed seedlings from the previous year at the cooperative that were reportedly surplus. So it is quite possible that the cooperative is replanting as required.

The government researchers expressed an opinion that the IAA project spent too much effort on marketing and did not spend enough on production, possibly reflecting their special interests more than real needs. The cooperative indicated to the evaluation team that most of the product is sold in bulk. According to the cooperative's management, the market is better for the dried leaves than for the oil. Therefore, the cooperative now produces the essential oil only on demand. The price for the leaves is set by the members of the cooperative based on the prices being offered by intermediaries. The cooperative does not distribute profits but can use them to make payments to the members performing work for the cooperative, while delaying marketing to wait for the price to go up. . Most of the product is sold to intermediaries and goes for export. The current USAID MEC program is trying to work with several cooperatives including this cooperative to market rosemary leaves for export.

The exporter visited in Fez explained to the evaluation team that the main market demand for the aromatic plants is for the molecules, not the distilled oil. Similarly the head of the MEC program said that the international demand is based on the anti-oxidant properties of the plants that are not properly preserved in the distilled oils. The way to preserve these properties is through solvent extraction. The extraction can be done by industries in commercial centers of Morocco but it will make the product technically no longer "organic". Another technology is enzyme extraction, which preserves the organic quality. Neither of these processes is available to the cooperative.

Conclusions

The evaluation team was not able to verify the extent to which contract rules were being closely followed by the cooperatives with respect to harvesting only part of a plant and replanting. Given that the harvesters benefit from the conservation measures, it is possible that the cooperatives may have respected the commitments and/or that co-harvesters could pressure them to preserve the resource. Ideally, the Water and Forests Department, which has an office in Jerada, should not have to wait for a foreign aid project in order to do spot checks to verify whether harvesting and replanting commitments are being respected, with the threat of possible contract cancellation if rules are not being followed.

IAA project work with the cooperatives of poor people was appropriate and was in line with USAID's goals and the Green Morocco Plan Pillar II.

The rosemary product seems to have good market potential, at least for the leaves. There is a market for the rosemary oil but it does not seem to be strong. The project's focus on rosemary oil instead of rosemary leaves may have not been the best choice in retrospect but this was hard to determine in advance.

It appears that more work on marketing is needed. Help is needed to combine the production of several cooperatives and finding buyers who will give them a good deal.

Recommendations

USAID may consider future programs to work with the Water and Forest Department and farmers to ensure that proper techniques are applied to the management of lands used for the harvesting of aromatic plants.

Future projects should also provide technical assistance to the cooperatives in the marketing issues. The assistance may include education on modern marketing techniques. It also may work to improve farmers' access to information about international markets for the aromatic and medical plants, and different quality standards and certifications that exist on the markets.

BERRIES

The berry sector was the biggest success among the value chain work conducted by the IAA project. The IAA helped to introduce new varieties of berries, and to explore and resolve problems with berry exports.

Findings:

Morocco has good climatic conditions for growing strawberries plus proximity and seasonal customs duty preferences into the European market. The berry industry has a good market in Europe during the winter when customs duties are low for strawberries. The Moroccan companies also sell frozen strawberries under duty preferences later in the season. The price for fresh products varies tremendously: in July in Europe the price for Moroccan fresh berries can be a quarter of the price available in February. In 2009 Morocco exported $5 million of blueberries, $6 million raspberries and $31 million of strawberries.

The exporters association indicated that there is concern that Morocco's competitive position in strawberries may be softening in spite of continued duty preferences in Europe. Yields seem to be plateauing and foreign companies may be developing better varieties of the berry. Raspberries and blueberries grow at a different time of the year from strawberries which is a big advantage for farmers in Morocco. Although foreign companies are now dominating the market, they bring into the country some of the protected raspberry and blueberry varieties, let local farmers grow these varieties under contract, and then take the products from the farmers for export. The industry wants to expand grower programs with small farmers and said they would like help to develop new varieties of berries in Morocco that would be available to all Moroccan farmers.

The IAA project brought in new raspberry, blueberry and blackberry varieties and demonstrated that they could be grown in Morocco. The varieties brought in by IAA were later replaced by proprietary varieties owned by foreign private companies. IAA also did a study of shipping problems in Tangier that were causing substantial delays and the industry used the report to convince the government to adopt special expedited procedures for berry exports planning for a one-hour delay instead of seven hours to three days. Later the port facilities were expanded reducing the potential problem. The key informants of the industry also indicated that IAA's taking people to the US to see opportunities and meet key industry players; studying and promoting the sector; and bringing varieties to test in Morocco were the key activities that accelerated the development of trade in the two new berries for Morocco.

The key informants in the berry exporting business explained to the evaluation team that big exporters cannot buy or rent as much land in Larache as they need to meet export demand. For this reason the big exporters are working with local farmers and cooperatives. The exporters provide farmers with planting material of protected varieties and take the production for export. The fact that the products are competitive and that small farmers participate through out-grower programs makes the sector attractive for USAID programs. Almost all the harvesters are women and the development of the berry industry supported by the IAA project has had a big impact on employment of women in the region.

The berry industry in Morocco would like to have Morocco develop its own varieties to compete with international varieties and to provide farmers with more market power, rather than having one company control each major variety. Industry sources said that one big company has a monopoly on raspberry supplies to British supermarkets, which will not source alternative varieties from smaller suppliers.

The exporters association expressed interest receiving USAID assistance to help the industry and the farmers work together to develop new berry varieties within the Larache area. They cautioned against letting the Ministry of Agriculture or the Government researchers run the program in some distant place such as Tangier, where the Government research center is located. The association said that if the system it proposes is adopted to improve varieties, it will invite the government to participate on the board of directors and the government research group could be invited to cooperate in normal production areas of Larache where trials of new plants are tested.

The exporters association said that most of the successful varieties of raspberries and blueberries are protected by patents and that some key US universities are working closely with Moroccan competitors in Spain and Chile to develop new varieties. These competitors are providing substantial funding to the universities. They advised that if a US university led the development of new berry varieties in Morocco, it would have to be a university that does not already have large scale funding programs from competitor countries.

The head of the berry exporters association, while deeply appreciative of the IAA work, said that IAA didn't invent a completely new effort but "got on a moving train." There were small raspberry exports to Europe prior to the program, but unanimously contacts told the team that the IAA program accelerated development of exports of raspberries and blueberries. Blackberries were not successful as an export crop.

Conclusions

The major associations and other key informants were unanimous that the IAA program accelerated introduction of the new berries (raspberries and blueberries) into Morocco as export crops.

If farmers are using protected varieties, (such as a variety of blueberries owned by an Australian company and licensed for use by a big company in Larache), the industry may have the incentives to provide full support to farmers in their value chain and further USAID work may not be necessary.

New varieties of berries will have to be approved by the National Office of Food Security (ONSSA) for commercial use. This process takes at least three years. A USAID program of five years would not be confident of success within that time frame. Also, most varieties are protected and breeder rights can be complex and confrontational. It may be best for Morocco to concentrate on working with companies that already have good varieties and good marketing contacts rather than trying to develop something independently.

The areas where USAID could intervene include helping farmers to establish linkages to the big companies or helping in the research area. Though these interventions show promise there are potential program risks. Linkages might be established without such help. And, it might be difficult to produce substantial results from research efforts within the five-year timeframe of a USAID program. There is no guarantee that competitive varieties will be found.

Recommendations

The evaluation team recommends supporting a modest effort by a US university and/or by Professor Gascall (linked to University of California/Davis, who has worked extensively on the issue in Morocco) to explore the issue of new varieties and provide some training. At this time a major investment by USAID does not seem justified, unless attractive new areas of intervention can be identified where USAID could make an important difference, and help Morocco take advantage of changing international market conditions.

GENDER

The evaluation team approached gender issues from two angles. First, the team looked at how the IAA project incorporated gender issues in its activities. Second, the team looked more broadly at the gender issues in the agriculture sector of Morocco in order to provide USAID context and ideas for the implementation of gender-specific programs.

Since the IAA project ended two years before the beginning of the evaluation work, it was hard to determine if the project properly considered gender equality implications of its activities and took proper actions to mitigate negative possible increases in the inequality due to the project actions. There are formal indications, such as gender-disaggregated data in the project reports, that the project considered gender issues during the implementation of its activities. However, there are no data to determine if this information represented only formal compliance with USAID requirements or if gender was given deeper consideration during the activities design. Key informants were not able to recall any information on this matter. There were few activities of the project directly targeting gender questions. The IAA reports indicated activities with respect to gender in cooperation with the Agriculture Ministry's education and extension service (DERD), with the berry association, and with other project beneficiaries. Team questions on this issue to a number of key informants did not elicit any knowledge of specific activities, though some contacts seemed aware of USAID's desires to have initiatives in this area. The evaluation team did not have contacts or time to visit the Centre de Travail offices that IAA said it had contacted in the Orientale region to try to integrate activities of a women's carpet weaving cooperative with the lamb meat value chain.

Key informants provided more information about the broader issue of the gender issues in the agriculture sector of Morocco. The national sheep and goat association (ANOC) mentioned that while women play an active role in raising sheep, they generally do not go to the public markets, which are dirty and where they

might be harassed. With respect to customers, they said that going to the Marjane supermarket to buy live sheep for Aid El Kabir would be easier for women seeking to purchase sheep for the holiday.

ANOC informants said that gender programs giving women preference if they were not fully qualified were not appropriate, in their view. They mentioned a case where a man and woman had similar jobs, but the woman was required to travel less because of her family. They said there are a few small women's livestock cooperatives but they seemed skeptical about how effective they were. ANOC and a number of other public and private sector key informants made skeptical comments about the marketing ability of cooperatives in general. These informants also said women generally have equal rights in Morocco and are represented in most high positions. According to one government official, women were less than 10 percent of the students studying agronomy at Hassan II University, a key agricultural university, a couple of decades ago, but that they will soon be the majority of the students. Informants said that the main problem for women in the country is the lack of education and that if they become educated they have rights. According to the World Bank male literacy in Morocco is 69 percent and female literacy of women over 15 years old is only 44 percent.

The head of the berry export association said that the berry harvesting business had opened up jobs and that every woman in Larache over 16 years old could have a job picking berries. The association had to transport in women from other areas due to lack of people for harvesting. In spite of a high unemployment rate, men are reluctant to harvest berries because it is socially unacceptable, although about ten percent of the harvesters are now men. In olives, men generally do the gaulage (striking branches with a rod to make the olives fall) and women have the task of picking up the olives from the ground. Women harvesting from the ground are paid less than the men who do the gaulage function, which is thought to be more strenuous.

The evaluation team observed that women do occupy some senior positions in Morocco, such as the head of Triffa private sector olives exporter in Oujda, the head of Lesieur Vegetable oil company in Casablanca, the head of the Statistics and Strategy Directorate in the Ministry of Agriculture, and the female veterinarian who manages the municipal slaughterhouse in Oujda. FAO has recently published manuals on how to address gender issues in projects in various value chains such as crops and livestock. New projects can consult those manuals for guidance and also be sure to have adequate representation of women in training programs and other activities.

Conclusion:

It was not feasible to fully assess project compliance with USAID requirements with respect to incorporating gender issues since the project ended well before the evaluation took place. However, from the limited evidence available, it seems reasonable to assume that the project incorporated gender issues into its programming at least in terms of complying with the formal USAID requirements.

Expanding on the gender issues in the agriculture sector in general, it seems likely that any programs focusing on gender, other than educational programs targeting girls, may face resistance from many stakeholders in the industry.

Recommendation

Projects should consult the FAO gender manuals and other resources for guidance on how to make gender efforts effective, given the possible resistance. Also, from an operational perspective, projects should make special efforts to include adequate numbers of women in training programs and other activities.

PROJECT ACHIEVEMENTS: INDICATORS AND RESULTS FRAMEWORK

Among the achievements reported by the project against indicators were figures on training, sales and investments shown in more detail in Appendix C. The evaluation team was not able to verify the numbers (except for sheep supermarket sales and berry exports) but in general most of the numbers on sales, investment and training seem to be consistent with oral reports of partners and beneficiaries and other reports on the success of project activities. The evaluation team doubted the claim that $45 million of sheep feed sales resulted from the early weaning feeding trials and related activities. The team learned that substantial commercial sheep feed was sold for many years prior to the project and thus concluded that attributing all the sheep feed sales to the early weaning trials may not have been justified. But the other numbers on sales, investment and training seemed consistent with project activities. Exports of raspberries and blueberries, which resulted in large part from the project, were substantially higher than estimated by the project, reaching $11 million dollars per year in 2009. Thus, if the reports overstated the annual sheep feed sales resulting from the project, they also understated the berry exports by a larger amount. So it is quite possible that the total annual sales reported as resulting from the project may have been at least roughly accurate.

The following tables summarize the evaluation team findings regarding the achievement of the results stated in the project's results framework. The tables below lists the main achievements reported by the project under the four results modules of the results framework shown in Appendix B along with a notation on whether information received by the team tended to confirm the benefits and the durability of the benefits, over two years after the end of the project. Except for sheep sales via supermarkets and berry exports the evaluation team was not able to identify the precise amount of additional sales resulting from project activities. The evaluation team was not able to meet all the beneficiaries and most of those met were not willing and/or able to share detailed financial data on their individual operations. But the team was able to verify with partners and beneficiaries whether benefits were real and lasting. The project results framework included four module results as intermediate steps in achieving higher level objectives such as developing competitive agriculture, jobs, and improved farm income. Results, with some editing by the evaluation team, are grouped under these four modules, shown as A, B, C and D. They cover nine major activities, so there are nuances in some cases – handled more completely in the full discussion by activity in the body of this report. Achievement of these results was intended to result in high level indicators including increased jobs, increased incomes, and increased resilience of the rural sector.

Table 2. Results Module A: Improve public policies and institutions in support of more competitive agriculture and agribusiness

Project accomplishments reported:	Confirmed?	Sustainable?
Web site in Ministry of Agriculture	Yes	Yes
Web site in EACCE improved (with information of use to Ministry and the private sector)	Yes	Yes
Outreach to industry on information needs	Yes	Yes
Training on cost-benefit analysis	Yes	Yes
Training on value chain analysis	Yes	Yes
Model Farm training	Yes	No
Ministry unit to centralize model farm analysis	Yes	No
Mapping of Ministry of Agriculture functions	Yes	No
Advice on irrigation	Yes	Yes
Study on rural credit	Yes	Good study, little impact

Project accomplishments reported:	Confirmed?	Sustainable?
Creation of new Agriculture/agribusiness credit facility	Yes	Little impact
AMP strategy – jointly developed by IAA and Government	Yes	Yes
GIS work in Meknes	Yes	No
Land tenure (AMP public lands contracts may be pertinent)		Not much activity
UPOV Plant Protection membership	Yes	Yes*
*(Approval was well underway. Project urged Government to sign quickly.)		
Cooperative law reforms on registration, etc.		Nearing finalization
Proposal to reduce customs duties on blueberry seedlings	No	No
Proposal to APHIS/USDA to approve berry imports		Not yet completed
Quality label law passed	Yes	Yes
Value chain approach adopted in Green Morocco Plan	Yes	Yes

Table 3. Results Module B. Increase productivity and variety in agriculture and livestock production.

Project accomplishments reported:	Confirmed?	Sustainable?
Introduction of new berry varieties	Yes	Yes*
*(changed to protected international varieties under contract)		
Training and tools for preservation of capers	Yes	Yes
Management training	Yes	Yes
Marketing assistance	Yes	Yes
Processing machines for farm organizations	Yes	Generally yes
Slaughterhouse improvements	Yes	Yes
Environmental programs (olive waste, AMP harvesting)	Yes	Yes

Table 4. Results Module B. Increase productivity and variety in agriculture and livestock production.

Project accomplishments reported:	Confirmed?	Sustainable?
HACCP assistance	Yes	Yes
New varieties of berries (exported fresh and frozen)	Yes	Yes*
Help to exporters of processed products	Yes	Somewhat

Table 5. Results Module D: Enhance the capacity of agribusinesses, firms, and institutions to support competitive value chains

Project accomplishments reported:	Confirmed?	Sustainable?
Training	Yes	Yes
Cooperation from Officials	Yes	Yes
Helping to negotiate contracts (rosemary harvest with government, sheep sales with supermarket, lamb feed with feed millers).	Yes	Yes
IT equipment	Yes	Yes
Processing equipment	Yes	Yes (most cases)
Help with certifications	Yes	Yes

OVERALL CONCLUSIONS

The IAA program performed activities that were generally useful for and appreciated by the beneficiaries. Some activities were highly effective, such as the work on websites, training on value chains and cost/benefit analysis, feeding trials for early weaned sheep, and introduction of new berry varieties. The indicators – training, sales and investment - seemed appropriate measures of activities and impact. The numbers on feed sales linked to the program seem to have been exaggerated but other indicator numbers were plausible and consistent with the findings of the evaluation team.

Because there was no operating project, it was more difficult for the evaluation team to check out every claim of investments and sales resulting from the program. The IAA contractor, when queried, did provide background on the reports of sheep feed sales resulting from the project and also provided a number of useful background documents. There were some gaps, including lack of contact information for a number of the beneficiaries and lack of a breakdown of budgetary spending for the seven major activities.

The team found it difficult to assess a couple of policy areas where the reported activities seemed to be quite modest, including the IAA role in Morocco joining the international plant protection organization (UPOV). The final PMP report explained that UPOV approval was already in near completion, but that the project encouraged the Government of Morocco to sign quickly. An IAA quarterly report explained that UPOV membership was crucial to permit access to protected berry varieties owned by foreign companies. Similarly, the work reported on land tenure (an important but difficult and long-term issue) seems to have been modest. A 2006 quarterly report said that this had been assigned as a priority by the Ministry of Agriculture, but the evaluation team did not see any significant activities in subsequent reports. The project facilitated environmentally-sensitive contracts for harvesting aromatic and medicinal plants on public lands, which is an aspect of land tenure, but otherwise there did not seem to be substantial land tenure activities. While the activities under these two policy areas seem to have been modest, there were other policy areas (e.g. the berry shipping study and the value chain training) where IAA policy assistance seemed to have major impacts.

One issue for the project reporting is that often implementing contractors indicate successes of their programs without recognizing the prior or subsequent contributions of others. USAID has had programs to help the Moroccan agricultural sector since 1957. In many cases, USAID efforts have fit within a framework that represents important incremental steps and that will be continued or expanded by efforts of other projects. Ideally, at the start of a project there should be full recognition of related efforts that have been launched by others, particularly if they are still operating (e.g. programs of other donors). Baseline studies at project outset would make this comparison possible. As the berry exporter association said about the IAA project's successful efforts in the berry export program – the IAA program "got on a moving train" – that is, the project did not start everything or finish everything with respect to introduction of new berry varieties, but they accelerated the process with very useful programs. A weakness of foreign aid programs is that they are sometimes not well coordinated with efforts of others donors and national efforts. For instance the IAA lamb weaning/feeding program was useful but could have had an even greater impact if it had involved the national sheep and goat association. Of course not every local organization will agree to cooperate with a USAID program at a reasonable cost.

Some efforts mentioned in the table above did not have the expected impacts. The credit study was worthwhile as a major question to raise but did not seem to have major results, even though a new financing facility was set up. Attempts to define and change Ministry of Agriculture functions were not well received and there were complaints that some key Ministry experts could have been consulted to a greater degree with

respect to programs on drought through the satellite GIS system introduced in Meknes. On value chain work, in spite of the great success on berry exports, attempts to convince the government to lower customs duties on berry seedlings were not successful.

Some successful work missed opportunities to have a greater impact. Work on capers, aromatic plants and olive oil was appreciated by the small group of recipients and had some valuable and lasting results, but could have been more effective if the project activities were linked to a marketing groups that had the expertise to improve the system, were willing to adopt win-win changes with producers and could continue and expand activities after the end of the program. Livestock program changes seem to have continued after the end of the program with the cooperatives targeted for subsidized feeding trials, but could have been even more effective if it had been possible to involve the national sheep and goat association, which reportedly works closely with a large number of producers. Some of the machines provided by IAA to cooperatives were of quite small capacity – e.g. the olive press or the caper calibrator that were replaced by larger machines. Working further up in the value chain may have been an option to access bigger machines in larger scale marketing units. The issues of speed, size and quality are crucial and may have a variety of solutions that could be explored further up the value chain. Some of the programs such as supermarket sales of live sheep, exports of table olives, and exports of berries were very much in tune with value chain concepts. Other activities such as those with small cooperatives for AMP's, capers and olive oil seem to have been useful but perhaps paid insufficient attention to marketing issues, exacerbated by focusing on very small entities without pursuing all opportunities for marketing linkages .

Most of the IAA activities had lasting impacts. USAID programs in Morocco have been going on for decades and tend to be iterative – building on past experience. In the design of new projects, USAID should encourage contractors to take full advantage of and give full recognition to the experience of past activities of USAID programs and other Government and donor programs in related fields. USAID is well placed to provide national vision on development programs, even if individual interventions are at the regional or local level. Moroccan agricultural and agribusiness officials have been eager to build on world-wide experience to introduce new programs that will make their system more competitive and to improve the returns to small farmers. USAID programs have helped them to accomplish these objectives during the first part of their 2008-2020 Green Morocco Plan.

LESSONS LEARNED

Below we outline the main lessons learned by the evaluation team from the implementation of the IAA project. The lessons were identified based on the suggestions of the key informants, and the analysis of the project activities and achievement by the evaluation team members.

1. **Timing and linkage to the national objectives are important determinants of project success**. The project should integrate into its design the objectives of key government counterparts. It has to be implemented at the time when the government is ready to implement these activities, and it should be flexible to modify objectives if the government agenda is revised. The IAA project was launched at a time when the Moroccan government was ripe for change and for re-evaluation of its services. Good timing was the reason that concepts like the value chain model and cost-benefit analysis were so well received. Some Moroccan government proposals (e.g., mapping of the Ministry functions) resulted in activities that turned out not to be exactly what they wanted. But programs that addressed and expanded on key Government of Morocco objectives (such as Pillar II desires to help poor farmers) had much stronger possibilities of success and durability than policies that the Government did not perceive as high priorities.

2. **Government and industry buy-in are needed for the success of the projects aimed at the policy change.** Regulatory changes can face much resistance or apathy even when the changes are sensible. This resistance is much easier to overcome when government has an internal interest to pursue the reform agenda, and the industry is willing to push for change. Industry initiatives can pursue multi-year efforts for regulatory changes even if the USAID project duration is insufficient to see the process to a successful conclusion. The IAA project's activities were consistent with Pillars I and II of the Green Morocco plan of the government. This allowed the IAA training and technical support to successfully influence the development of Green Morocco objectives. At the same time, working with the berry value chains, the project chose to provide help to the existing industry efforts to change shipping procedures. The project developed IAA logistics report that allowed the industry to successfully push for the changes in shipping procedures through Tangier.

3. **One of the most important opportunities for USAID programs is to make government - business interaction more effective.** The IAA improved this interaction by conducting studies such as a useful berry sector study, and assisted the agriculture industry to advocate reforms with the government by citing that study. In advising a government export control agency, EACCE, on how to make its website more useful to the private sector, the project first canvassed private sector producer and export associations to find out their views. This work by the project resulted in sustainable changes in the agribusiness sector.

4. **Resolving marketing problems with larger market players rather than concentrating on cooperatives only could lead to more sustainable results.** IAA project work with big traders, processing industries or industry associations (done well with berries - done not so well with capers, olive oil, or rosemary) could help address key marketing issues with lasting innovations. Similarly, the IAA work with sheep feeding trials was limited to a small segment of the market, and could have benefitted from cooperation with the national sheep and goat association, which involves bigger market players.

For example, working on improving sales of live sheep, the project found a strong partner in a marketing chain that was able to create a market for sheep farmers in target cooperatives (Marjane supermarket). This success can be contrasted with the only limited success of project efforts to get small cooperative in capers, olive oil, and rosemary value chains to jump over market intermediaries to market their products. Most of the cooperatives did not market products for their members, except for those who were already doing joint marketing prior to the IAA project. Ideally, and where feasible, an aggregator (a strong market player with technical expertise, marketing ability and financial strength) should be sought to help provide reliable marketing for farmers and small cooperatives.

5. **Programs are usually much more effective and lasting if there is substantial contribution from local partners.** In an ideal project, USAID should aim in covering a portion of the total cost of the development activities, and seek local stakeholders to cover other parts of the project. This approach would aim to have the local partners take over and continue the activities after the end of the USAID funding. Often, this outcome can be achieved if the project activities complement the activities that are already underway, perhaps extending programs to populations that are poor and under-served and linking them to other value chain members. The most successful IAA value chain activities were based on activities already launched. For instance, modest exports of raspberries preceded the IAA berry export activities. Similarly, Marjane supermarket was already arranging for sales of sheep, modifying its procedures through work with IAA and several sheep cooperatives. A couple of the cooperatives IAA helped were already jointly marketing products for their members. Industrial enterprises assisted were already exporting to Europe. It is easier to expand and improve an existing activity than to create an entirely new one and try to convince locals to support and continue it after project funding ends.

RECOMMENDATIONS

This section summarizes recommendations provided in previous sections that discussed each activity of the IAA project in detail. Additional recommendations in this section are based on the overall performance of the project and lessons learned during the evaluation.

MINISTRY OF AGRICULTURE ACTIVITIES

1. **Substantial efforts should be made in future projects involving national issues and national centers of expertise to keep central government authorities informed and to seek their advice.** In light of the importance of local buy-in, it is important for the technical assistance projects in Morocco to keep central authorities engaged, even when implementation is focused on the regional level.

2. **In future work with government institutions, the value chain focus will remain relevant and important.** Future projects can seek to promote more private sector activity and should try to discourage excessive government controls.

3. **USAID future work should aim at helping the Government to develop a positive relationship with the private sector**. The projects could reach out to the private sector to aid government in efforts to assess the value of key activities and develop competitive agriculture. USAID could play a valuable role in helping the government understand and address concerns of the private sector, particularly with respect to making trade more efficient and competitive.

EACCE

1. **Future programs should continue to work with EACCE in improving its effectiveness in its programs – both in its market information and outreach programs and in getting input from the private sector to find out if testing exports to ensure conformity adds excessively to costs.** If export control procedures are excessive, future projects could suggest modifications to make them more business friendly.

2. **Technical assistance should be provided to improve export-import information available to the public**. Easy access to the detailed export and import statistics for all major commodities should be encouraged.

3. **Useful information such as local and foreign regulations and market conditions should continue to be a focus of the efforts to improve EACCE outreach and support for exporters**. Implementing this recommendation will likely require additional training by US experts.

VALUE CHAIN ACTIVITIES

Sheep

1. **Working with the sheep team production could be appropriate for future programs aiming at assistance to poor farmers.** Sheep graze on marginal land and represent a major opportunity for poor farmers to increase their incomes.

2. **Future project design should recognize that working with cooperatives and poor farmers is consistent with Pillar II of the Green Morocco Plan and of USAID's general orientation, but coordination with the national sheep and goat association might have an even bigger impact**.

3. **Consideration could be given in future programs to changing the legal environment and status of cooperatives and associations with respect to financial transactions, rules on meat trade etc.** In taking on this task, programs should recognize the challenges. For example, changes in meat shipment rules may be difficult to implement if powerful local interests resist.

4. With respect to specific programs, the following recommendations should be taken into consideration:

    a. Early weaning trials and related sheep production activities: Working with industrial feed millers was appropriate. Future projects with cooperatives should consider working with other major organizations with wider reach and more longevity such as the national sheep and goat association.

    b. Sheep slaughterhouse program: As private slaughterhouses come into being either through new investment or privatization, a private slaughterhouse might be an excellent future partner, particularly if they provide services for small farmers or their cooperatives.

    c. Future projects should do follow-up to double check on problems with equipment installed by contractors soon after installation.

    d. Supermarket sheep sales: Probably no further assistance is needed – the private sector can continue what IAA started.

Olives and Olive Oil

1. **Future projects may wish to focus on small groups of the poorer segments of farmers**, but more care should be exercised in planning marketing activities that work, probably through finding a capable aggregator in the value chain willing to seek higher quality, value added, and win-win relationships with suppliers.

2. **Short-term direct or indirect support to the aggregator from the USAID project and/or Moroccan government programs should be considered in project designs.** Training and other production and post-harvest help to making the supplying farmers more reliable would be one type of such support.

Capers

1. **Working with cooperatives is probably the only way to reach the smallest and poorest farmers**.

2. **Concentrating assistance on preservation and processing of capers could provide better results for the industry.** There seem to be large opportunities to raise farm incomes by preservation rather than selling fresh capers (as at Nour Cooperative). The calibration machines seem to be useful as well, but only in cases where the small capers are over 40 percent of the total.

3. **Moving upstream to find good wholesale outlets for marketing could be a useful addition to a future project**.

Aromatic and Medicinal Plants

If further action is taken, focus should include not only working with poor farmers on production issues, but stronger focus on marketing issues.

Berries

A modest effort by a US university could be supported to explore the new varieties of barriers and provide training to local agronomists. Success in development of new varieties may be problematic. Continuing to use foreign varieties under license may be more certain of success. At this time a major investment by USAID does not seem justified, unless attractive new areas of intervention can be identified where USAID could make an important difference, and help Morocco take advantage of changing international market conditions.

GENDER

Projects should:

a. **Consult the FAO gender manuals for guidance**.

b. **Seek to include adequate numbers of women in training programs and other activities**.

GENERAL RECOMMENDATIONS FOR FUTURE PROJECTS:

1. **Identify a value chain and partner contributions**: USAID programs should seek a discrete area or target population where a program with a small amount of funds and a short (five-year) time frame can make a lasting difference in value chain work. In value chain work, the best way to achieve success, even when focusing mainly on one segment of the value chain (poor producers, export marketing etc.), is to find what the Green Morocco Plan calls an aggregator – a processor or trader willing and able to add value and share the value added by working with producers to improve quality, timeliness, quantity or other important conditions of production and delivery. The project's advance study of worldwide marketing for all value chains was appropriate. Exploration of possibilities with industry associations should be a standard procedure when setting up value chain activities. Ideally, efforts to find the willing aggregator with a strong interest in continuing activities after the end of the project should be launched prior to making a firm commitment to work in a specific sector.

2. **Livestock programs with sheep, goats, cattle, dairy products or possibly poultry broiler out-grower programs could be viable areas to increase the incomes of poor farmers.**

3. **Marketing issues for a number of crops (olive oil, AMP, etc.) are also a key area that needs attention.** Marketing programs often include production issues that need attention as well.

4. **Find where government policies and programs are open to change:** For broader policy and planning work with Ministries or other government authorities, it may be difficult to ascertain the areas where Ministries and other authorities are ready to accept change. A modest advance initiative to ascertain what is already being done and to attempt to assess government and private sector receptiveness to change should be launched prior to launching a major program. An area of public concern, such as drought, could be a good focus.

5. **Find areas where USAID can help Morocco improve the public-private interaction by helping the private sector interaction and initiatives.** Morocco is struggling to establish the right mix of government control and the power of free enterprise, especially given the mistrust of some private sector industries, traders that have not always given a fully fair deal to suppliers, and the eagerness of the Government of Morocco to move quickly to alleviate farm level poverty. USAID needs to find areas where it can help Morocco improve the public-private interaction not only by training in textbook ideas, but also by helping the private sector interaction and initiatives that will cover Pillars I and II – improving competitiveness and helping some poor farmers to produce and benefit from a higher value of products. Reaching out to the private sector for information on realistic opportunities and working with the government to adopt business friendly programs would be important ways to help Moroccan competitiveness and also to improve incomes for segments of poor farmers.

APPENDICES

APPENDIX A. STATEMENT OF WORK

Evaluation of the Integrated Agriculture and Agribusiness (IAA) Project and Assessment of Trade and Competitiveness in/the Agriculture Sector in Morocco

BACKGROUND

The Moroccan agriculture sector accounts for 12% to 24% of GDP depending on annual climate change, and 80% of employment in rural areas. Agricultural products also account for 18% of Morocco's export earnings. Annual exports of fresh, frozen, and processed fruits, vegetables and nuts total slightly less than US $1 billion. More importantly, the agricultural sector has strong linkages to the rest of the economy and has an important influence on overall economic performance.

Moroccan experts understand that the country must shift to higher value-added crops in order to increase agricultural productivity and incomes. However, protective tariffs, insufficient market development, and the inefficient use of scarce inputs, especially water, contribute to low competitiveness in world markets. Morocco clearly aims to integrate itself into the global economy, and has already achieved greater openness under the Association Agreement with the European Union, Turkey Free Trade Agreement (FTA) and Agadir Agreement. Despite Morocco's commitment to even more liberalization under the US-Morocco FTA, the Moroccan private sector remains remarkably focused on serving domestic consumers and traditional export markets in Western Europe. Moroccan farmers and agribusinesses do not look beyond traditional Western European markets, and have not effectively progressed up the value-added chain through domestic processing of exportable agricultural products. In addition, short supply periods and volatility in deliveries to agricultural packing and processing plants undermine the return to agribusinesses.

To improve the ability of Moroccan agriculture, agribusiness, and related support industries to compete in local and foreign markets, the EG office at USAID/Rabat launched the Agriculture and Agribusiness Development (IAA) project. This five-year project started in February 2005 and ended in September 2009. The objective of the IAA project was to foster value chain integration and improve the competitiveness of Moroccan agriculture and agribusiness with the objective of increasing sales and responding to opportunities in a more open trade environment.

The project was designed to achieve the following results:

A. Improve public policies and institutions in support of more competitive agriculture and agribusiness.

B. Increase productivity and variety in agriculture and livestock production.

C. Increase competitiveness of agro-processing industries.

D. Enhance the capacity of agribusinesses, firms, and institutions to support competitive value chains.

PURPOSE AND USE OF THE REVIEW

The objective of this SOW is to procure the services of a firm under the Evaluation Services IQCs to perform two evaluation tasks related to the Agriculture sector in Morocco. First, the contractor will evaluate the effectiveness, impact and sustainability of the Integrated Agriculture & Agribusiness Project (IAA) which was implemented from February 2005 to September 2009 in Morocco. Second, the Evaluation Team will conduct an assessment of trade and competitiveness in the agriculture sector in Morocco.

Two separate reports should be provided under this task order; one for each of the two components mentioned above. The findings and conclusions of this evaluation effort will inform the design of USAID long-term assistance in Morocco. More details are available in the body of this SOW.

REVIEW QUESTIONS

IAA Evaluation

The following key questions are illustrative of the contents to be covered by the IAA evaluation:

1. Impact: To what extent was the IAA project effective in achieving the stated objectives? What was the intended/unintended impact of the IAA project?
2. Challenges: What were the main challenges faced by the IAA project? How did the project face them?
3. Sustainability: To what extent were the IAA project activities sustainable? What are the key tools or methodologies that were essential for continued implementation or scale up of successful IAA initiatives? Which players played pivotal roles during the life of the project and how has their continued engagement been important to post closeout sustainability?
4. Lessons learned: What were the key lessons learned from the project that should inform future EG programming in Morocco?

Assessment of trade & competitiveness in the Agricultural sector in Morocco:

The following key questions are illustrative of the contents to be covered by the assessment of trade and competitiveness in the Morocco agricultural sector:

(Note: The Evaluation Team should collect valid and reliable data to respond to the following evaluation questions):

1. Context and background: What is the status of trade and competitiveness in Morocco? How does this translate to the agricultural sector? What are the sector specific issues, challenges and trends?
2. Assistance framing: What arc the recommended policy changes and technical assistance needed to improve agricultural trade: and competitiveness in Morocco? At which stage of implementation are these corrective measures? Is there a correlation between the real needs of the sector and current or planned development assistance USG or otherwise? In studying trade and competitiveness in Morocco, the Evaluation Team should investigate both the revealed performance (ex post) as well as the potential performance (ex ante). Competitiveness should also be studies at both the national level and sector or sub-sector level. At the national level, competitiveness generally refers to the ability or a country to produce goods and services that meet the test of foreign competition while simultaneously maintaining and expanding domestic real income. At the sector or sub-sector level, competitiveness is often defined as the ability of a country to profitably gain and maintain market share in domestic and/or export market.

   On the other hand. as competitiveness of agriculture cannot be seen in separation from competitiveness of the processing industry, the Evaluation Team should address not only cost competitiveness, which relates mainly to generic products, but also competitiveness that relates to the ability to innovate, which applies to trade in differentiated products. The following are a few identified factors for the analysis of competitiveness in the agricultural sector in Morocco.

      1. Macroeconomic conditions such as interest and exchange rates, etc.

2. Government policies including Agricultural policy and trade policy and agreements.
3. Production factor availability and quality as well as state of technology in comparison with major competitors which is decisive for what products a country may be expected to have comparative advantage in.
4. Upstream and downstream sectors and conditions in the domestic markets.

EXISTING PERFORMANCE EVALUATION SOURCES:

There are a number or available relevant background documents and performance information sources that the contractor can draw upon. One of these sources is attached to this SOW, while others will be made available once 'the task order is signed. These sources include, but are not limited to, the following:

I. The Assistance Objective (AO) of the Economic Growth office of USAID/Rabat
II. PMP for the Economic Growth Office of USAID/Rabat
III. Program Description/Scope or Work for the IAA project
IV. PMP for the IAA project.
V. Quarterly and annual reports of the IAA project
VI. Final report of the IAA project

EVALUATION METHODOLOGY

The contractor should propose the most rigorous and reasonable evaluation design and methodology to fulfill the requirements of the Scope of Work and collect valid and reliable data. The proposed design should include a balance between quantitative and qualitative methods, and employ a triangulation approach to data collection as appropriate.

While the contractor shall design the overall approach, the contractor should consider employing a variety of data collection methods, including:

A. A desktop review of relevant documentation: cooperative agreement/contract, work plans, baseline studies, quarterly reports, annual reports, and other related documents as necessary.
B. Field visits in order to meet with beneficiaries and conduct direct observation.
C. Interviews/focus groups with key informants such as USAID/Rabat staff, project beneficiaries, Government officials, businesses, and other donors as appropriate.
D. Surveys/mini-surveys as appropriate.

CONTENT OF THE EVALUATION REPORT

The contractor is expected to produce two separate reports for the two tasks delineated in this SOW. The final evaluation reports will include, at a minimum, the following components: executive summary, introduction, findings, conclusions, recommendations, lessons learned, and annexes (as appropriate). The reports are subject to approval by the USAID/Morocco designated officer. The contractor will also deliver an oral presentation of findings, conclusions, recommendations, and lessons learned to stakeholders in coordination with the USAID/COR. It is recommended that the contractor review USAID Evaluation TIPS 17: Constructing an Evaluation Report for more information on report components and format.

DELIVERABLES

The contractor shall submit the following deliverables:

Deliverable	Due Date
1. Detailed plan for implementing the scope of work, including any evaluation tools.	15 days after project start date
2. Draft report for the IAA Evaluation for review.	60 days after project start date
3. Draft report assessing trade & competitiveness in the Agricultural sector in Morocco for review.	60 days after project start date
4. Initial presentation of analytical findings and preliminary recommendations.	After completion of field work before Team Leader leaves the country.
5. Final reports which address comments provided by USAID staff.	5 business days of receipt of comments from USAID.

ADMINISTRATIVE AND LOGISTICAL SUPPORT

The contractor shall be responsible for all administrative support and logistics required to fulfill the requirements of this task order. The contractor shall be responsible for all travel arrangements, appointment scheduling, secretarial services, report preparations services, printing, duplicating, etc.

CH. BRANDING IMPLEMENTATION AND MARKING PLAN

Branding Implementation Plan

As required in ADS 320.3.2.1. Development and Training Services, Inc. (dTS) has detailed a plan below that highlights the appropriate marking for each communication tool/deliverable that will be used to communicate the source of funds for the program. Our team of experts in procurement and contract management will establish the systems to work closely with USAID and through all communications channels deliver a consistent message to stakeholders. Strict adherence to USAID's Graphic Standards Manual and marking policies will be followed at all times. As noted, in situations of great risk or threat, the appropriate Regional Assistant Administrator and Mission Director will be consulted to determine if any waivers from marking instructions arc necessary.

In implementing the Branding Implementation Plan, we will remain sensitive to the political realities in Morocco, without compromising the project's ability to achieve its desired results and visibility. We will consult with USAID continuously on communications and branding-related issues. Taking into consideration project activities we have developed a plan that identifies the audiences, communications tools, and appropriate marking for each communication product. Distinct communication plans will be developed for American audiences and for public audiences in Morocco. Accordingly, the communications plan will make provisions to distribute materials in English. Markings for project material developed for Moroccan audiences will be determined in close consultation with USAID/Morocco and its implementing partners.

1) Incorporating the message "This assistance is from the American People.": We will underscore that the USAID/Morocco evaluation of the IAA project has been made possible with the assistance provided "from the American people:" on printed materials, through public events tailored to meet the project's technical requirements, and introducing the team to USAID/Morocco partners and stakeholders. The project will develop a communications plan that targets each audience with the right communications tools, delivered in the right format, in the right language, at the right time. The support of the American people will consistently be woven through these communications in accordance with USAID guidance, via the USAID Graphics Standards Manual and ADS 320.

2) Publicizing the project and description of tools to be used: To publicize the program, we will develop specific communications tools and approaches to meet the needs of the following audiences:

1. Key informants
2. Implementing partner project beneficiaries, communities and local organizations
3. USAID-funded implementing partners
4. Local counterpart community based organizations and government agencies
5. The public at large

The project will use and produce a variety of written reports and publications and events to meet and discuss the USAID/Morocco Evaluation of the IAA project with key stakeholders. In coordination with the USAID Mission, the project may publicize the USAID/Morocco evaluation of the IAA project using a range of communications and outreach tools including:

1. Program briefs: one-pagers introducing the dTS Team, the purpose of the evaluation, and arrange meetings.
2. Meetings: face-to-face meetings provide for instant information sharing and sharing of ideas. Invitations to all meetings, unless sponsored by counterpart institutions, will be branded consistently with the USAID identity.
3. Technical reports and presentations: to help key stakeholders understand the purpose of the project, the dTS team will conduct presentations.

Additional communications tools will be deployed based on strategic communications plans developed for the project. Public outreach campaigns, with messages targeted to specific audiences, will be developed as required.

3) Key milestones/opportunities anticipated to generate awareness. Informational meetings can be held to generate awareness that "'This assistance is from the American people". Examples may include:

A. Collaborative work plan development: At the project outset and before the start of each project year, the team will hold a meeting with USAID/Morocco and implementing partners to ensure that annual work plans are developed in a transparent and collaborative way.

B. Meetings and focus groups: To generate dialogue, gather project information, and develop consensus around project activities the team hosts a number of project information sessions. Such sessions will offer a means to publicize the project goals and highlight "assistance from the American people". Invitations to such sessions will be branded consistently with the USAID identity to ensure an easily recognizable "look and feel" for project-related invitations and proceedings.

C. Technical Reports and Presentations: Technical reports generated by the project will be made available to USAID/Morocco, implementing partners and other audiences as determined in consultation with the Mission.

D. Final Evaluation and Assessment Reports: The final reports will be distributed to key stakeholders at the end of the project.

Marking Plan

The purpose of the following Marking Plan is to describe the public communications, commodities, program materials and other items that will visibly bear or will be marked with the USAID identity. Based on ADS 320.3.2.5, dTS describes below all items that will be marked exclusively with the USAID Identity, We will follow the design guidance for color, type, and layout in the Graphic Standards Manual. The dTS corporate identity or logo will not appear on any USAID-funded program materials. All studies, reports, publications, websites and all informational and promotions products not authored, reviewed, or edited by USAID will contain the provision indicated in ADS 320.3.2.4e. dTS will be pleased to provide copies of any program materials for review at any point during contract implementation. Any communications materials produced to introduce dTS Evaluation Team to key informants and others with whom the team will meet to discuss the project including: target beneficiaries; partner CBOs, and local counterpart government agencies. All print materials (invitations, meeting agendas, etc.) will clearly state the program name and that the funds were donated through the generous support of the American People through the United States Agency for International Development (USAID). It will include appropriate display of USAID logo (with the consent of USAID representatives and pending no security risks), according to branding procedures as defined in the USAID Graphic, Standards Manual.

APPENDIX B. RESULTS FRAMEWORK

Strategic Objective 11: Moroccan Economy Successfully Responding To New Opportunities And Challenges Of Free Trade

Intermediate Result 11.1:
Increased Productivity In Agriculture And Agribusiness

Morocco Agriculture And Agribusiness Program Objectives:
Strengthened Ability Of Agriculture And Agribusiness To Compete In The Global Marketplace

Sub-Objectives:

- Jobs created in agricultural sector
- Incomes increased for farmers, workers, and entrepreneurs
- Increased rural economic resilience

Results Module 1	Results Module 2	Results Module 3	Results Module 4
Improved public policies and institutions in support of more competitive agriculture and agribusiness	Increased productivity and variety in agriculture and livestock production	Improved competitiveness of agro-processing industries	Enhanced capacity of agribusinesses, firms and institutions to support competitive value chains

Coordination With Related USAID, U.S. Government, And Other Donor Activities

the objective of the morocco integrated agriculture and agribusiness Program is to foster value chain integration and improve the competitiveness of Moroccan agriculture and agribusiness with the objective of increasing sales and responding to opportunities in a more open trade environment.

APPENDIX C. INDICATORS AND RESULTS

Chemonics report on Morocco IAA Program
Economic Growth and Contract Indicators
Through September 30, 2009

The IAA Program tracks three different levels of performance indicators as part of its performance monitoring plan: 1) contract-level indicators, 2) economic growth indicators, and 3) operational plan indicators for USAID/Washington.

CONTRACT-LEVEL INDICATORS

The IAA Program tracks sixteen different contract-level indicators across four results modules. Below is a summary of the indicators and IAA's progress. These figures are derived from performance monitoring data which is collected quarterly by IAA Program for the five target value chains and compiled semi-annually in October and April. This memo represents the final memo on economic growth and contract indicators for the IAA Program. The bulk of the data collection ended August 31st, 2009. There are a few indicators where data for September was available. This information can be found in the regional data collection reports (Oriental, Saiss, and Gharb-Loukkos) for the different quarters.

Results Module (RM) 1. Improved public policies and institutions in support of more competitive agriculture and agribusiness

Indicator 1.1. Policies that encourage farmers to produce products in which Morocco has a competitive advantage.

E. Rural finance policy (CAM & DPAE)

F. Transportation policy

G. Water management policy

H. Support for Green Morocco Plan

I. Value-chain analysis training with partners

The IAA program is supporting policy analysis and reform on rural finance, transportation, and water management policy in order to encourage farmers to produce products in which Morocco has a competitive advantage.

Indicator 1.2. Policies and information systems for domestic agricultural markets that improve the quantity and the quality of information for both consumers and producers.

J. Market information systems (MIS) with DPAE

K. Data harmonization efforts

Indicator 1.3. Laws, regulations, policies, and procedures for agricultural lands that encourage private ownership and investment.

L. Land tenure policy

M. Support for Green Morocco Plan

Indicator 1.4. Enhanced capacity for impact and policy analysis.

N. Cost/benefit analysis training with DPAE

O. Representative farm modeling training with DPAE

P. Value-chain analysis training with partners

Q. Market information analysis training with EACCE/DPAE

R. Support for Green Morocco Plan

Under **Results Module 2**, the IAA Program measures increased productivity and variety in agriculture and livestock production through four indicators.

Indicator 2.1. Value of domestic and export sales of program assisted products.

2005-Mar 09	Apr–Sept 09	Cumulative
$5,054,824	$862,500	$5,917,324

Indicator 2.2. Number of farmers/producers who have increased sales of program-assisted commodities.

2005-Mar 09	Apr–Sept 09	Cumulative
4,177	1659	5,863

Indicator 2.3. Number of farmer/producers who have increased productivity and income through the production of new, higher-value products, and/or the use of improved production practices, inputs, or technologies.

2005-Mar 09	Apr–Sept 09	Cumulative
4,105	1,659	5,764

Indicator 2.4. Value of new investments by farmers/producers in products/product development, marketing efforts, skills upgrading, improved irrigation and/or other equipment, inputs, and/or transport.

2005-Mar 09	Apr–Sept 09	Cumulative
$17,706,836	$1,320,076	$19,026,912

Under results module 3, the IAA Program measures improved competitiveness of agro-processing through four indicators.

Indicator 3.1. Value of domestic and export sales of program assisted products.

2005-Mar 09	Apr–Sept 09	Cumulative
$2,310,048	$508,916	$2,818,965

Indicator 3.2. Number of agro-processors with increased sales of program-assisted commodities.

2005-Mar 09	Apr–Sept 09	Cumulative
89	46	135

Indicator 3.3. Number of agro-processors engaged in program-assisted value chains with reduced production costs.

2005-Mar 09	Apr–Sept 09	Cumulative
86	46	132

Indicator 3.4. Value of new investments by assisted value chain participants.

2005-Mar 09	Apr–Sept 09	Cumulative
$6,550,783	$401,648	$6,952,431

Under **results module 4**, the IAA Program measures enhanced capacity of agribusinesses, firms, and institutions to support competitive value chains through four indicators.

Indicator 4.1. Commercially provided business services, technical services, and/or after-sales services resulting from program activities.

2005-Mar 09	Apr–Sept 09	Cumulative
$863,359	$103,929	$967,228

Indicator 4.2. Expanded sales of improved irrigation systems (by equipment supply firms) to program-assisted value chain participants.

2005-Mar 09	Apr–Sept 09	Cumulative
$26,543$0	$26,543	

Indicator 4.3. Improved agricultural input sales resulting from program-assisted activities.

2005-Mar 09	Apr–Sept 09	Cumulative
$922,103	$45,578,805	$46,500,907

Indicator 4.4. Capital provided to value chain participants as a result of program activities, measured in terms of value and number of recipients.

2005-Mar 09	Apr–Sept 09	Cumulative
$1,532,072	$103,929	$1,657,072

ECONOMIC GROWTH INDICATORS

There are four sub-indicators under USAID's IR Indicator 11.1, increased productivity in agriculture and agro-processing and agribusiness. Below is a table illustrating IAA's progress to date on these four sub-indicators.

IAA Progress to Date on USAID's Economic Growth Indicators

SO# IR#	SO	Unit Measure	Base-line Year	Base-line Value	2006 Target	2006 Actual*	2007 Target	2007 Actual*	2008 Target	2008 Actual*	2009 Actual*
SO11	Moroccan Economy Successfully Responding to New Opportunities and Challenges of Free Trade										
IR 11.1	Increased Productivity in Agriculture, Agro-processing, and Agribusinesses										
11.1.1	Value-added in program assisted firms	$				$433,141	**	$14,714,230	**	$33,248,020	$48,026,660
11.1.2	Sales value of program-assisted products in agriculture, agro-processing, and agribusiness	$	2005	0	$200k	$488,631	$1m	$15,705,308	$5m	$7,694,422.86	$ 56,126,658 **

SO# IR#	SO	Unit Measure	Base-line Year	Base-line Value	2006 Target	2006 Actual*	2007 Target	2007 Actual*	2008 Target	2008 Actual*	2009 Actual*
11.1.3	Value of investments made in program-assisted farms and agribusinesses	$	2005	0	$430k	$125k	$2m	$1,879,181	$10m	$17,297,824	$27,681,235
11.1.4	Number of program-assisted farmers and agribusinesses with increased sales/investments	#	2005	0	750	300	1,000	962	2,000	4,285	6,271
11.1.5	Policy reforms implemented	#	2005	0	0	0	2	2	5	6	6

*Figures are cumulative/no targets set for 2009.

**USAID added this indicator at the end of 2007. IAA began tracking the indicator for 2008. No targets have been set. Figures included for 2006 and 2007 reflect animal feed sales.

***DOES NOT INCLUDE PROJECTED 2009 AID EL KEBIR SALES OF $1,311,801. THE TOTAL FOR 11.1.2 INCLUDING PROJECTIONS FOR 2009 AID EL KEBIR IS: $57,438,459.

11.1.1 Value-added in program assisted firms: **$48,026,660**

Olives:	$101,679
Lamb:	$46,644,400
AMP:	$169,846
Capers:	$497,807
Berries:	$612,928*
2005- Sept 09	**$48,026,660**

*Berry sales of alternative varieties introduced under the IAA Program (blueberry, raspberry, blackberry) falling outside of the period of performance are not included in the value-added calculations. However the sale of these varieties is fully attributable to IAA Program efforts and will represent significant export sales over the next 30 years.

11.1.2 Sales value of program-assisted products in agriculture, agro-processing, and agribusiness: **$56,126,658***

Olives:	$1,541,030
Lamb:	$50,569,609**
AMP:	$423,473
Capers:	$2,663,020
Berries:	$929,526
2005-Sept 09	$56,126,658

*Note that this figure does not include projected sales for the 2009 Aid El Kebir which falls outside of the IAA Program's period of performance. If these projected sales were included ($1,311,801 the total for 11.1.2 would be $57,438,459). Berry sales falling outside of the IAA Program's period of performance are also not included in these figures. The majority of the blueberry plants started under the IAA Program will begin fruiting this winter and next winter. The plants will produce fruit for approximately 30 years and will represent significant export sales thanks to USAID's efforts to introduce these alternative berry varieties.

**Lamb meat was extremely high this reporting period (Apr 09- Sept 09) due to the completion of conservative back calculations for animal feed sales in the Oriental region. These figures have been distributed through years 2006, 2007, 2008, and 2009 as appropriate. The calculation for these sales is included in the quarter 2/quarter 3 PMP report for the Oriental region.

11.1.3 Value of investments made in program-assisted farms and agribusinesses: **$27,681,235**

Olives:	$4,791,574
Lamb:	$6,109,860
AMP:	$1,604,141
Capers:	$3,288,472
Berries:	$11,887,188
2005-Sept 09	$27,681,235

11.1.4 Number of program-assisted farmers and agribusinesses with increased sales/investments: **6,271**

Olives:	682
Lamb:	4,350
AMP:	795
Capers:	64
Berries:	96
2005/06	300*
2005-Sept 09	6,271

**Not assigned to individual value chains.*

11.1.5 Policy reforms implemented: **6**

1) UPOV
2) ODECO-Cooperative law
3) Value chain approach adopted by Ministry of Agriculture and Maritime Fishery in the Green Morocco Plan
4) Quality label law passed
5) SFDA Creation
6) USDA berry application submitted

NARRATIVE FOR USAID 2009 OP INDICATORS MOROCCO IAA PROGRAM

4.5.1 Agricultural Enabling Environment

1. Number of policy reforms analyzed with USG assistance

The total number of policy reforms analyzed with USG assistance is **13**.

1. Land tenure
2. Rural Finance – CAM
3. Rural Finance – DPAE
4. Water Use (integrated management)
5. Institutional reform of the Ministry of Agriculture – Manual of Procedures
6. Preparation of a National Strategy for the development of the AMP value chain
7. Reform of Professional Organizations (coops)
8. Qualité labels/ Produits des Terroirs
9. Drought Observatory
10. Slaughterhouse Management & Wholesale markets
11. Addition of Berries to USDA list -
12. Recommendation to reduce tariffs on blueberry plants
13. Road map for Agricultural Chambers-NEW

2. Number of policy reforms presented for legislation/decree as a result of USG assistance

The total number of policy reforms implemented by the IAA program is **2.** The IAA program has assisted in getting the UPOV signed and has facilitated the submission of an application to USDA to add Moroccan-produced berries to the USDA approved list for export

3. Number of institutions/organizations undergoing capacity/competency assessments as a result of USG assistance

The number of institutions/organizations undergoing capacity/competency assessments as a result of USG assistance is **15.**

1. Ministry of Agriculture
2. EACCE
3. Eaux et Forets (Waters and Forests)
4. MCI
5. ORMVAL
6. ORMVAG
7. DPA Oujda
8. DPA Figuig
9. DPA Meknes
10. DPA Fes
11. CRI Meknes
12. Chambre D'Agriculture Meknes
13. Drought Observatory
14. Association de production for plant certifies
15. OCE

4. Number of individuals who have received USG supported short-term agricultural enabling environment training.

The total number of individuals who have received USG supported short-term agricultural enabling environment training is **1274** (**273** women/**1001** men) cumulatively for 2007, 2008, and 2009. Those individuals who were trained in 2007 and 2008 are still benefiting from the training and applying the skills they learned in their jobs. The IAA program carefully tracks each of our training events and disaggregates the data by men and women. These numbers are pulled directly from our training records. In addition, training has been provided, in coordination with the ALEF project, at the horticultural institute in Meknes and the agricultural school in Zraib. These trainings are not calculated under the IAA Program training data as they are reported to USAID through the ALEF project.

4.5.2 Agricultural Sector Productivity

5. Number of new technologies or management practices made available for transfer as a result of USG assistance.

The total number of new technologies or management practices made available for transfer as a result of USG assistance is **36** as disaggregated below by value chain.

> **Lamb Meat**: (9) animal feed composition, livestock management, altering reproductive cycles, sanitary control, traceability, early weaning, collective fattening, animal feed production (Ain Beni Mathar), slaughterhouse cold chain equipment (Oujda).

AMP: (5) distillation, harvesting techniques, biomass estimation, traceability, pricing tools for export

Olive Oil: (6) best production practices (pruning, harvesting), best processing practices, traceability, HACCP certification, ISO certification, and marketing support for US export

Table Olives: (3) best processing practices, HACCP certification, export certification

Capers: (5) best harvesting practices, best processing practices, traceability, export certification, sorting equipment and method

Berries: (8) new varieties: blueberry, blackberry, raspberry, exposure to US management practices, EurepGAP certification, Multiplication techniques for blueberries, multiplication techniques for raspberries, multiplication techniques for blackberries.

6. Number of additional hectares under improved technologies or management practices as a result of USG assistance

   The total number of additional hectares under improved technologies or management practices as a result of USG assistance is **2,630,777** hectares as disaggregated below.

   Lamb meat: 2,585,000 ha. This represents 80% of the rangeland in the Oriental region plus a conservative estimate of 25,000ha in the Rhmana region. **AMP**: 45,000 ha (20,000ha for Beni Yaala Zkara/3) + 25,000ha for Cooperative Ofoq. Each cooperative has benefited from collection rights through the Eaux et Forets Ministry. The cooperatives harvest approximately 1/3 of the land each year.

   Olives: 100 ha (conservative estimate)

   Capers: 546 Ha (Total caper production in T by the four cooperatives: Chabab Zerhoun, Nour, Azzahra, Ben Malek was 644 T divided by the production yield of 1.18 T per ha yields 546 hectares under new management practices—improved harvesting and processing (reasonable estimate).

   Berries: 131 ha Very conservative estimate. 120 ha from Africa Blue/Agrogailes, 3ha Aicha, 6 ha cooperative Drader, 2 ha IAA trials

   The total number of hectares is a very conservative figure given that the olive value chain and berry chain are under-represented.

7. Number of additional surveillance and/or control systems in place for agricultural threats (biological and environmental) as a result of USG assistance

   The total number of additional surveillance and/or control systems in place for agricultural threats (biological and environmental) as a result of USG assistance is **three**. In 2008, The IAA program purchased an RT-PCR machine to fight fire blight. The IAA program also purchased (2) olive oil processing units that are two-phased and do not produce environmentally damaging byproducts from olive oil production.

8. Number of rural households benefiting directly from USG assistance

   The total number of vulnerable households benefiting directly from USG assistance is **6,080** derived from the following numbers. These numbers represent the number of people in the cooperatives and associations that IAA is working with.

Lamb meat: 4,443

AMP: 795

Olives: 682

Capers: 64

Berries: 96

9. Number of vulnerable households benefiting directly from USG interventions

The total number of rural households benefiting directly from USG interventions is **1181** derived as percentages from the total number of vulnerable households above:

Lamb meat: 444 (10% of 4443)

AMP: 477 (60% of 795)

Olives: 228 (30% of 682) + 23 Haddouch employees who are vulnerable & urban

Capers: 32 (50% of 64)

IAA TRAINING: 2005 – 2009 (FROM FINAL IAA REPORT)

Cross cutting -	953
Lamb meat	549
Olives	1,386
Berries	1,044
AMP	176
Capers	128
Total people trained	4,236

ADDITIONAL INFORMATION ON SHEEP FEED RAISED BY THE EVALUATION TEAM – RESPONSE FROM FORMER IAA DCOP AND COP:

"Dr. Mounsif, though his interviews with the private sector and cooperative presidents, estimated for each of the three areas (Tendrara, Ain Beni Mathar, and Bouarfa) approximately 500 tons of feed per week were purchased for a period of 35 weeks (from July – end of January) during a drought year and 250 tons of feed per week were purchased during a year with good rainfall. Given the alternating droughts, Dr. Mounsif calculated that roughly 375 tons of animal feed were purchased in each of the three areas for a period of 35 weeks bringing the total tons per area to 13,125 tons per year with a cumulative total of 39,375 tons.

These calculations did not include any feed sales in Rahmna region nor the feed sales in the Meknes area where CGEM/ANOC began replicating IAA's approach with the Beni Guil sheep using the Timhadit race of sheep.

As Mario mentioned in his earlier email, lamb feed was not in existence before the IAA program."

(Evaluator note – Mario Kerby later confirmed that sheep feed was in existence previously and it was the early weaning formulation that was new).

"…Dr. Mounsif designed the feed formula and the IAA program piloted its use with farmer cooperatives. IAA freely gave the formula to a number of poultry feed companies who quickly adopted and began selling lamb feed to herders. The bigger feed companies were operating out of Casablanca, not the Oriental region. .. (Alf Sahel and others)."

ANIMAL FEED SALES IN ORIENTAL REGION

	2006	**2007**	**2008***	**2009**	**TOTALS 2006-2009**
Animal Feed (tons)	1648	39375	39375	39375	119773
Price per ton	2100	2800	3400	2700	
	MAD	MAD	MAD	MAD	**MAD**
Subtotal (dhs)	3,460,800	110,250,000	133,875,000	106,312,500	**353,898,300**
Subtotal ($)	**$ 433,141**	**$ 14,281,088**	**$ 17,341,321**	**$ 13,322,368**	**$ 45,377,919**

*Price of animal feed was higher than average due to rising import costs

APPENDIX D. TABLE OF TOPICS COVERED IN EVALUATION TEAM MEETINGS

Interviews and meeting conducted by the evaluation team

Meetings (sometimes one contact covers more than one product)	Red meat	Olives	Berries	Aromatic & Med Plants	Capers	TOTAL
Producers	11	5	4	2	4	26
Processors	1	5	2	1	3	12
Traders	4	7	5	3	3	22
Public services	10	12	10	12	9	53
International organizations	4	5	2	3	2	16
TOTAL	**30**	**34**	**23**	**21**	**21**	**129**

Respondents who reported receiving assistance from project

	Reported type of assistance received						
Type of product	Travel	Training	Marketing	Policy	Equipment	TOTAL	TOTAL responded
Capers	12%	29%	6%	6%	18%	71%	17
Berries	29%	29%	24%	6%	12%	100%	17
Olives/oil	9%	18%	18%	5%	14%	64%	22
aromatic and medicinal plants	29%	36%	21%	7%	21%	114%	14
Sheep	16%	37%	26%	5%	5%	89%	19

Respondents' reports of activities they found to be effective

	Types of assistance					
Effect on the following aspects of business	**Travel**	**Training**	**Marketing**	**Policy**	**Equipment**	**TOTAL number of respondents who reported effect**
Capers	2	5	1	1	3	12
Berries	5	5	4	1	2	17
Olives/oil	2	4	4	1	3	14
aromatic and medical plants	4	5	3	1	3	16
Sheep	3	7	5	1	1	17
Irrigation	2	2	1	1	1	7
Drought	1	1	1	0	1	4

APPENDIX E. PRODUCTION, IMPORT, EXPORT DATA

Morocco Production: Source FAOstat.

		2010		2009		2008	
	Products	Production (1000$ Int)	Production (T)	Production (1000$ Int)	Production (T)	Production (1000$ Int)	Production (T)
1	Olives	1187851	1483510	680598	850000	612842	765380
2	Poultry meat	792630	556463	692934	486472	621353	436219
3	Wheat	700694	4876140	936624	6371430	524103	3769450
4	Beef	511708	189425	506467	187485	480934	178033
5	Tomatoes	472210	1277750	454737	1230470	484983	1312310
6	Whole fresh milk	444673	1900000	421268	1800000	397867	1700000
7	Sheep meat	378458	138996	364831	133991	329415	120984
8	Almonds – in shell	301501	102170	338476	114700	256445	86902
9	Potatoes	249526	1604620	187052	1234470	248454	1536560
10	Barley	245447	2566450	388588	3769500		
11	Dry onions	237615	1131320	168362	801600	139071	662140
12	Apples	213843	505641	178712	422572	170988	404310
13	Strawberries	190833	140600	481861	355020	176446	130000
14	Chicken eggs in shell	190759	230000	165878	200000	159574	192400
15	Raisins	180842	316370	193281	338130	166223	290794
16	Oranges	164114	849197	138179	715000	141542	732400
17	Green beans	152567	160000			143031	150000
18	Aniseed, badiane, fennel, coriander, seed	127126	23000	127126	23000	127126	23000
19	Tangerines, mandarines and clémentines	116800	472834				
20	Wool	105795	55300	105277	55029		
21	Melons, cantaloupes			163290	887005	135638	736800

		2010		2009		2008	
22	Beet sugar			118433	2753370	125846	2925700
23	Spicy and sweet peppers					109319	232220

Moroccan Exports (FAOstat) (Quantity: MT; Value: $ thousand)

	2007		2008		2009	
Product	Quantity	Value	quantity	value	quantity	value
Apricots	555	711	158	109	513	299
Dried Apricots	68	82	0	0	0	0
Citrus nes	336	641	3101	2079	452	144
Garlic	655	641	308	313	82	60
Almonds in shell	0	0	0	0	214	145
aniseed, star anis, fennel, coriander	3664	4047	10466	6887	7918	4379
Berries not elsewhere specified - nes	0	0	0	0	0	0
Bananas	0	0	0	0	18	41
Wheat	40	26	17	18	177	220
Coffee, ground	1	2	23	2	548	139
Caroubes	10043	28745	23600	9143	21112	8422
Cereals, nes	15	6	0	0	0	0
Cherries	2	7	6	1	1	0
Canned mushrooms	94	1156	771	76	1794	225
Mushrooms and truffles	1084	5355	4065	479	7299	1776
Lemons and limes	2551	1565	8370	12827	3607	5799
Spices, new	1342	2646	4405	1532	9138	1735
wheat flour	105080	43824	34736	66518	24387	67885
Grain flour	913	390	484	843	280	731
maize flour	1171	1228	2060	1570	3583	2390

	2007		2008		2009	
Figs	5	7	19	25	2	1
Dried figs	1877	2002	593	428	1552	1438
Strawberries	18066	23327	29838	21946	30653	21602
Raspberries	718	1554	5004	1118	5996	1318
Fresh fruits, nes	529	519	797	967	1515	1386
Prepared fruit nes	83105	99094	104739	78123	71296	59965
Dried fruit , new	8	23	70	24	118	124
Sunflower seed	66	39	39	135	26	154
Oilseeds, new	64	187	234	26	611	141
Olive pressing byproducts	2	3	150	396	66	14
Fresh beans	299	466	966	917	636	539
Dried beans	288	284	52	73	296	333
Green beans	102008	107700	120095	113892	127595	112328
Oil from olive pressing byproducts	768	944	5030	2981	3450	1420
sunflower oil	4374	4497	9934	4816	611	445
Virgin Olive oil	3380	11904	10063	2573	9945	3080
Essential oil, new	809	26594	34747	819	23831	624
Vegetable oil, nes	273	5704	9942	507	11654	481
Concentrated citrus juice	26	16	0	0	112	45
citrus juice, nes	0	0	0	0	34	18
lemon juice	7	6	29	29	55	66
fruit juice, nes	66	45	57	56	669	138
grapefruit juice	0	0	0	0	0	0
concentrated grapefruit juice	2	1	0	0	0	0
apple juice	0	0	0	0	0	0
grape juice	3	2	0	0	13	9

	2007		2008		2009	
concentrated tomato juice	0	0	0	0	3	3
orange juice	424	479	746	691	979	1031
concentrated orange juice	427	255	1282	1126	931	900
dried whole milk	2	9	0	0	14	10
canned frozen vegetables	304	736	691	306	537	400
dried vegetables	376	623	606	334	1677	2557
canned vegetables, nes	4062	8310	9172	3632	8274	2847
vegetables in vinegar	3753	9739	13075	4848	11806	3372
fresh vegetables, nes	9575	11695	18480	14410	14380	13824
Frozen vegetables	1266	2040	709	543	929	875
forage crops	29	7	6	13	0	0
Lentils	0	0	0	0	7	2
Maize	336	83	218	763	239	873
melons, cantaloupes	43277	50889	61444	56490	65634	55925
natural honey	1	6	38	2	45	5
Blueberries	0	0	1535	137	4954	636
dry onions	909	286	27	117	11	46
Olives	0	0	25	46	0	0
canned olives	49687	102237	154534	69525	131644	64758
Oranges	253201	104546	195712	294572	114786	181962
Barley	19	5	9	15	0	0
grapefruits and pomelos	1387	939	751	1336	564	980
Watermelons	5386	2796	3644	7131	5048	9211
peaches and nectarines	3104	5214	4638	2651	7983	4692
Pears	267	179	1530	1185	0	0
Apples	1	1	0	0	7	3

	2007		2008		2009	
Plums	190	189	10	3	5	2
dried plums	334	968	476	157	166	54
Grapes	9696	16519	18515	10539	18143	12212
Raisins	8	27	0	0	44	46
raw centrifugal sugar	0	0	0	0	1	1
refined sugar	37	44	87	67	51	51
sugars, nes	1	1	0	0	4	4
tangerines, mandarins, clementines	243983	159209	209341	296097	193166	264416
Tomatoes	297593	203799	263593	346222	303672	410118
peeled tomatoes	470	2716	4194	660	3457	663
Wine	7794	11579	11031	5987	9145	5175

Table 6. Morocco Imports – FAOstat (Quantity in Tons, Value $ thousand)

	2007		2008		2009	
product	**Quantity**	**Value**	**Quantity MT**	**Value**	**Quantity**	**Value**
Apricots	3	1	34	38	9	6
Dried apricots	365	550	536	848	811	1236
Garlic	7294	4576	5861	4190	6793	6358
Almonds, unshelled	0	0	4	21	23	29
Aniseed, fennel, coriander, star anis	4027	7769	3968	9351	6194	12288
Banana	17239	7498	18714	8969	26542	11904
Wheat	3683480	1125690	4083580	1609100	2390340	681829
Coffee (ground)	500	4602	522	5549	642	6762
Caroubs	418	1781	300	1179	517	1376
Cereals, nes	7	81	3	48	0	0

	2007		2008		2009	
product	Quantity	Value	Quantity MT	Value	Quantity	Value
Cherries	9	5	14	8	19	25
Canned Mushrooms	1802	1510	3553	3095	1886	1625
Mushrooms and truffles	75	49	92	69	134	186
Lemons and Limes	1	1	0	0	18	10
Spices nes	2820	1941	3076	2286	2208	1896
Wheat flour	4369	2359	1637	1741	2590	2029
Flour of cereals	8	10	18	31	21	32
Flour of maize	2905	1287	4046	2251	4683	2401
dried beans	619	493	1685	1240	16084	5119
Dried figs	173	381	56	137	156	377
Strawberries	0	0	1	3	5	6
Raspberries	5	11	0	0	0	0
Fresh Fruits, nes	257	116	311	149	352	236
prepared fruits nes	4329	5692	5275	8153	4554	6410
Dry Fruits	26	53	64	124	33	38
sunflower seed	12664	2759	20331	9924	71782	17220
oilseeds, nes	571	10704	172	15092	212	15063
Olive by products	220	115	280	146	408	353
fresh beans	0	0	0	0	147	123
dried beans	7726	6876	2819	4981	15473	16067
green beans	24	22	0	0	0	0
Oil of olive pressing waste	0	0	510	900	60	106
sunflower oil	32732	27232	25314	38696	20421	18896
olive by products	6242	19300	6127	22730	16856	47777

	2007		2008		2009	
product	Quantity	Value	Quantity MT	Value	Quantity	Value
Essential oils	214	2834	107	2293	77	2775
Vegetable oil nes	36	198	40	229	57	274
Concentrated citrus juice	338	448	297	557	301	1192
Citrus juice nes	53	87	79	121	5	19
Lemon juice	58	55	45	131	140	281
Fruit juices nes	3733	4573	4075	6606	2788	3437
Grapefruit juice concentrated	46	43	38	37	48	42
apple juice	60	49	49	73	78	71
grape juice	142	152	74	66	178	132
tomato juice, concentrated	87	72	107	98	78	69
Orange juice	951	2313	527	1184	825	1185
Concentrated orange juice	795	1005	922	1158	384	579
Powdered skim milk	18206	73569	10436	37419	11561	26966
Dry whole milk	37	140	45	230	63	222
Frozen canned vegetables	752	901	795	1136	407	764
Dried vegetables	130	520	153	634	175	812
canned vegetables nes	2216	4173	2827	4803	2399	4732
vegetables in vinegar	1078	852	376	493	257	340
Fresh vegetables, nes	18	13	33	36	22	45
Frozen vegetables	252	201	147	199	143	155
Lentils	31911	16589	24702	21215	19385	18099
Maize	1896160	445490	1695600	528791	1703700	357385
Melons, cantaloupes	113	50	121	57	99	57
natural honey	1803	1980	2259	2799	1893	2505

	2007		2008		2009	
product	Quantity	Value	Quantity MT	Value	Quantity	Value
dry onions	0	0	0	0	149	34
Olives	0	0	29	46	0	0
canned olives	231	221	286	415	94	156
Oranges	0	0	6	3	0	0
Barley	549788	146748	325220	104232	271910	49010
Grapefruit	22	27	2	5	3	3
Watermelon	22	9	41	20	51	30
Peaches and nectarines	99	43	345	161	354	213
Pears	921	417	1433	696	3031	1737
Apples	5953	3665	6490	4708	14188	11303
Plums and prunes	72	31	87	41	201	112
Dried prunes	2	6	68	79	313	328
Grapes	390	175	547	278	896	628
Raisins	5842	3545	4988	3220	10902	6893
Raw centrifugal sugar	720448	227888	746363	285375	973611	422421
Refined sugar	25323	12696	4902	2794	2205	1523
Sugar nes	860	896	774	1149	1069	1591
Peeled tomatoes	1143	522	413	226	520	327
Wine	2154	11384	2614	16957	2945	19509

APPENDIX F. ORIGINALLY PROPOSED DATA COLLECTION METHODOLOGY

The following is the type of questions that were asked during interviews. In most cases it was not possible to structure the interviews as a formal survey because of negative sentiments toward study teams and a certain degree of suspicion on questions about business results. Generally, we undertook a wide ranging discussion about the organization, its challenges and operations and the role IAA played in the process. The questions below were the types of information we sought to get but the responses while very enlightening about the project were difficult to summarize quantitatively, other than the fact that virtually everyone who received training was complimentary about it.

KEY INFORMANT INTERVIEWS

The key informant interview is the most widely used data collection method for this evaluation. They will be used to deepen our understanding of the IAA project and its expected influence; to obtain expert opinion on the success, impact and sustainability of the IAA program. Those aspects that were particularly successful or unsuccessful may provide some lessons learned for future program consideration. The interviews will serve some of the following purposes:

A. Corroborate influence and claimed outcomes

B. Assess where some groups may not have benefitted from the IAA activities and why that was the case. (Counterfactual interviews will be considered, though the tight time frame for the evaluation will limit the time for this during the field trip, covering three cities and five value chains in a week. But there will likely be opportunities for counterfactual information on the programs in various segments of the value chain – particularly in trader comments and Ministry comments on the program (e.g. comments from the Veterinary service in Rabat on the value of the work on the slaughterhouse and related activities.

C. Ascertain alternate assistance models by other donors and their effects in a host government and business community

D. Secure some understanding of the sustainability of the IAA efforts, particularly since the project ended three years ago, so interviewees can accurately assess sustainability.

The initial list of key informants includes official and donor contacts in Rabat, and commercial contacts in Casablanca. Key informant interviews will commence during the first week of the project field work. The Team Leader, assisted by the Agriculture Specialist will conduct single or joint interviews. In certain cases of overlap in subject matter interest, the interview may be conduct by both these team members. The team will seek to schedule five interviews per day in Rabat and Casablanca and as many as possible per day during the field visits, thus about 30 the first week and about 20 the second week (at least three per value chain would be targeted – a farmer, cooperative, processor for each of the five value chains).

Key informants will be contacted in advance to schedule interviews. Interviews will be conducted in French in most cases.

A semi-structured questionnaire with open-ended questions is developed to conduct key informant interviews. The questionnaire is provided in the annex, varying somewhat by type of respondent, but geared to getting answers that can be summarized and assessed as a whole. Interviews may cover a wider range of topics (e.g. on competitiveness etc.) for some contacts such as expatriate donors, or major exporters. The formal questions that will be tabulated will be addressed principally to the evaluation – knowledge of the IAA

program, impact, impact quantitative or otherwise, and sustainability. Some of the questionnaires responses will be prepared initially in French – translated into English later if necessary.

A brief statement about the purpose of the study and voluntary participation in the survey will be translated into French to be used for the survey. Interviewers will be instructed to present this statement and answer respondents' questions before proceeding with the interview.

Generally the survey questions will be integrated into the interview and filled out by the interviewers. With respect to surveys at a distance, the questionnaire will be distributed in advance of the interview by email and the telephone interview will elicit the responses to be written down by the interviewer. Meetings with non-beneficiaries – (large traders and donors) could be disadvantaged by characterizing the meeting as a formal survey, though interviewers will mention the comments on the IAA program (only a part of the interview) will be used as part of a survey. The wider issues on donor programs, competitiveness questions on the international market, policy questions and wide ranging aspects of the value chain should not be presented as part of a formal survey and will not be easily combined with other responses, though the team leader will take extensive notes on these discussions and use them in the final evaluation and assessment reports.

Key informant interview responses will be submitted (in French when written by interviewers not fully fluent in English) within the week after the interviews are conducted, with subsequent translation into English if required. The experts will identify most typical responses to the questions raised during the key informant interviews, and will tabulate the typical responses from all respondents.

SURVEY OF TRADERS

The evaluation team plans to conduct a small-scale face-to-face survey of large traders in as many of the five value chains as possible in order to get a clear picture of the alternatives for improving the value chain deliveries and the incomes of the small scale suppliers and their cooperatives that were the focus of much of the IAA activities. We will attempt to reach at least one major supermarket buyer and at least one large exporter for each of the five value chains targeted in order to get a clearer picture of the value chain. In cases where the respondents can provide details and opinions of the likelihood of achieving government goals of changing from bulk to branded products or from unprocessed to processed products, this will be used in the discussion of each value chain in the report but not in weekly the survey reports, particularly if some information is critical of government policy and sensitive. The type of information and knowledge of the final markets in foreign countries may be quite variable among the five value chains. The respondents will be asked if they know of IAA projects – as will all respondents and that information will be reported as survey results. In addition, the team leader will provide some summaries of other information in weekly reports to dTS and will use it in analysis of the value chains for the final reports. Generally, the large traders must be contacted through face to face interviews by the team leader rather than by attempts to contact them by telephone by the research assistant. The questions will include:

1. We are interested in the five value chains: sheep meat, berries, capers, olives and olive oil, and medicinal and aromatic plants.
2. Do you trade in any of these products? Which ones?
3. Has there been changing market demand for your company or for the sector as a whole in recent years? Why?
4. What are the challenges and opportunities in your business with respect to these value chains? (Global gap, organic certification, identity preservation, international competition, etc.)

5. What are the opportunities or experience of the farmers and their groups or for your company to improve quality, process these products or do other activities to increase the returns in major markets in Europe, America or elsewhere?

6. Are you familiar with IAA programs in these sectors?

7. Please comment on their effectiveness.

8. What additional programs would be useful in the future to improve Morocco's competitiveness and/or returns in this sector?

9. Who are some of the other major players (exporters etc.) in this sector?

10. Who are the certification bodies and where do they have offices?

11. Do you have any thoughts on the government's strategy for the agricultural sector (all areas not just the target value chains)?

12. Any thoughts on where donors should concentrate their efforts to help the agricultural sector?

SURVEY OF FIRMS THAT RECEIVED TECHNICAL ASSISTANCE FROM THE IAA PROJECT

The evaluation team will conduct a face to face and e-mail- and telephone-based small-scale survey of firms that participated in the IAA with respect to helping production, marketing or processing. The purpose of the survey will be to collect primary data, which the evaluation team will use to assess the extent to which the IAA project improved the trade performance of farmers, cooperatives and processors.

Beneficiaries number in the thousands, and incomplete information received so far indicates that about 50 cooperatives were helped and some processing facilities linked to them were helped. The evaluation will expand on the face to face surveys to telephone a few more of the key beneficiaries of the program. They will be asked to answer a few questions concerning the form of technical assistance they received from the IAA project and its impact on their trade performance, sustainability and alternative groups that have done or are doing similar activities in their area. The questions will include the following:

1. What form of technical assistance has your received from the IAA project (help in producing more animals or plants, quality improvement, marketing help, organizational training, other help (specify)?

2. Has the assistance received you to:

    a. Increase production;

    b. Increase sales;

    c. Reduce your costs; or,

    d. improve your profits?

3. By how much? (Give base period/date, and later sales/dates for points a to d)

4. Did the benefits continue – how much per year?

5. Did others who didn't receive direct assistance change their methods and benefit also? – describe.

6. If there were a future program what would you recommend as priority areas?

During the field trip, the interviewer will ask if it is feasible to have one or more farmers in the meeting with the cooperative. This focus group can comment on the questionnaires.

APPENDIX G. CONTACTS

Name	Title	Affiliation	City
Matthew Burton	Dir Econ Growth	USAID	Souissi, Rabat
Jude Aidoo	Private Enterprise Officer, USAID	USAID	Souissi, Rabat
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Bouchaib	Animateur Oriental	Délégation de l'Association Nationale Ovine et caprin à l'Oriental – ANOC	Oujda
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Monsieur Bachir Labiad	Président	Union des Cooperatives, Beni Guil	Tendrara
Monsieur Mordoché Devico	Directeur	Conserves de Meknès (Aicha)	Meknès
Monsieur M'Hammed El Ouardi	Président	Coopérative Oued Eddahab	Meknès
Monsieur El Moustapha El Marzouki	Président	Coopérative Wydad	Meknès
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MELLAHI ABDELOUAHED	Chef du Service vulgarisation (extension)	Direction Provinciale d'Agriculture de Meknès	Meknès
Monsieur Christophe Gribelin	Administrateur	Vininvest	Meknès
MAHMOUD MOKRANE	Directeur Commercial	Triffa Conserves	Oujda
Khlafa ELAMRANI	Directeur Général	Conserverie Walili	Meknès
M. HADDOU	Directeur Production	Conserverie Walili	Meknès
Monsieur Christophe Gribelin	Administrateur	Vininvest	Meknès
Madame Mounia Benkirane	Directeur	Star Olive	Rabat

Name	Title	Affiliation	City
Monsieur Nciri Kaddour	Vice-Président	Coopérative Noor	Meknès
Monsieur Mohammed Boujir	Directeur	Direction Provinciale d'Agriculture de Meknès	Meknès
Monsieur El Yazami Abdelaili	Président	Coopérative Azzahra	Fès
Monsieur Mabrouki Abdelhak	Président	Coopérative Ben Malek	Fès
Monsieur Abdellatif Bennani	Directeur General	AGRO GAILES & Berry exporters association	Larache
Monsieur Mohamed Al Amouri	Président	Association Nationale des Conditionneurs et exportateurs de la Fraise	Larache
Mardochée DEVICO	Président Directeur Général	Les Conserves de Meknes	Meknès
Ahlam HAMIM	Checheur	INRA tanger	Tanger
El Ouazzani Al Ankoud	Président	Cooperative Drader	Larache
Monsieur Mohammed Ghallab	Directeur	LARAGEL	Larache
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Name	Title	Affiliation	City
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Monsieur Najib Mikou	Directeur Général	Office de Commercialisation et d'Exportation (OCE)	Casablanca
CTIA	Centre technique des industries agro alimentaires	Créée par FENAGRI	Casablanca
M. Mohamed BENDIDI	Marjane	Super marché	Casablanca
Monsieur Abdelhak Bennani	Directeur	Fédération des Industries de la Conserve des Produits Agricoles du Maroc – FICOPAM	Casablanca

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