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The U.S. Government's Global Hunger & Food Security Initiative

SCOPING MISSION: ASSESSMENT OF AGRICULTURAL ADVISORY SERVICES IN UPPER EGYPT

Sustaining Active and Efficient Associations

August 2011



USAID
FROM THE AMERICAN PEOPLE





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USAID/EGYPT
Office of Productive Sector Development

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SUSTAINING ACTIVE AND EFFICIENT ASSOCIATIONS

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ACRONYMS

ACDI/VOCA	Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance
ACT	Agricultural Technical School
ALEB	Agriculture-Led Export Businesses
AOTR	Agreement Officer Technical Representative
APRP	Agricultural Policy Reform Project
APCP	Agricultural Production and Credit Project
ARC	Agricultural Research Center
ATS	Agricultural Technical School
ATUT	Agricultural Technology Utilization and Transfer Project
AUC	American University of Cairo
BRC	British Retail Consortium
COP	Chief of Party
CGIAR	Consultative Group for International Agricultural Research
CPI	Corruption Perception Index
DAI	Development Alternatives, Inc.
EAGA	Egyptian Agribusiness Association
FtF	Farmer to Farmer
FTF	Feed the Future
HQ	Headquarters
HVfV	High Value Fruit and Vegetables
GDA	Global Development Alliance
GLOBALGAP	Formerly EUREPGAP, GLOBALGAP is a private sector body that sets voluntary standards for the certification of agricultural products around the globe. The aim is to establish a global standard for Good Agricultural Practices (G.A.P.)
GIZ	Gesellschaft für Internationale Zusammenarbeit (German International Cooperation)
GOE	Government of Egypt
GPS	Geographic Positioning System
GTZ	Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)
HMAPS	Herbal, Medicinal, Aromatic Plants and Spices
ICT	Information and Communications Technology
IWRM II	Integrated Water Resources Management Project II
MAARD	Modified Acquisition & Assistance Request Document
M&E	Monitoring and Evaluation
MALR	Ministry of Agriculture and Land Reclamation
ME	Middle East
MEAS	Modernization of Extension and Advisory Services (USAID)
MSU	Michigan State University
MWRI	Ministry of Water Resources and Irrigation
NARP	National Agricultural Research Program
NGO	Non-Governmental Organization
NTAE	Non Traditional Agricultural Exports
PBDAC	Principal Bank for Development and Agricultural Credit
PHC	Post Harvest Centers
PIO	Public International Organization

PRA	Participatory Rural Appraisal
PSD	USAID/Cairo Office of Productive Sector Development
RPT	Refrigerated Perishables Terminal (HEIA)
SIM	Subscriber Identity Module (cell phones)
SOW	Scope of Work
SWOT	Strengths, Weaknesses, Opportunities, Threats
TS	USAID Office of Technical Support in Washington
UCD	University of California-Davis
UF	University of Florida
UIUC	University of Illinois, Urbana-Champaign
UPEHC	Union of Producers of Export Horticultural Crops
USAID	United States Agency for International Development
VCT	Value Chain Training
WLI	Water and Livelihoods Initiative (USAID)
WTO	World Trade Organization
WUA	Water Users Association

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2. Burt Swanson and Andrea Bohn from the Modernization of Extension and Advisory Services (MEAS) at the University of Illinois, Urbana-Champaign authorized use of core funding from their existing Leader with Associates (LWA) award, contributed to the Scope of Work, and organized MEAS staff participation. Paul Hixon was responsible for the section on ICT. Burt Swanson helped frame the conclusions based on in-depth experience from Egypt.

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5. Ahmed Gamal Wahba, Vice President for Extension and Training, Egypt Agriculture research Center is acknowledged for his input to the draft document.

EXECUTIVE SUMMARY

A scoping mission concerning extension and advisory information in Upper Egypt during May 2011 showed that associations are one of the primary conduits of information delivery to farmers. USAID programming under the Agricultural Exports and Rural Incomes (AERI) and other projects, such as AgLink and AgReport, helped to establish many of the associations. At the present time less than half are still active. The active and efficient associations that remain represent the building blocks for a renewed effort to deliver information about on-farm management of crop productivity and natural resource management to farmers in Upper Egypt. A new campaign could deliver organizational and business development skills to a carefully selected subset of the existing associations to diagnose and affirm the key elements contributing to sustainability. Findings suggest that associations that provide a broad suite of rural development services are more sustainable than those that are narrowly focused because more complexity allows for diversification of funding.

USAID/Cairo is understandably cautious and pragmatic concerning assistance to the formal extension services of the Ministry of Agriculture and Land Reform (MALR); however, if ever there was a time to assist in reform of the Egyptian government it is now. Although now already out of office, the former Minister was keen to participate in USAID programming, in part because the new Egypt is a cash-strapped bureaucracy with great need of institutional reform, but also because he feels more associations could have survived if MALR was better implicated in AERI implementation. He described three key USAID projects: (1) the National Agricultural Research Project (NARP) – key to building Egyptian capacity; (2) the Agricultural Technology Utilization and Transfer (ATUT) project – focused on the private sector and impact on export of high value crops but impacting small and poor farmers; and (3) AERI – a project to reach small farmers.

A more exhaustive abstracting of relevant projects is included as an annex in this report with independent assessments for the convenience of the reader. It is recommended that the Mission commission a comprehensive review and critical synthesis of these projects for the benefit of the Mission and its Egyptian counterparts. The economic impacts of the efforts are significant and should be highlighted and quantified for the US taxpayer and Congress.

The scoping mission team makes a case for: (a) organizational and management support to active and efficient associations; (b) a strong follow-up focus on information and communication technology (ICT) to reach active advisory service providers and even farmers with the latest ICT technologies, and (c) a certified advisor program that gives the above information brokers the credentials they need to reliably differentiate their skill set from that of a normal consultant.

One final recommendation is to carefully coordinate the evaluation of proposals and selection of projects under the Economic Growth Annual Program Statement with the programming to be elaborated in the agriculture sector. The potential for tremendous positive synergy is great as many of the associations visited planned to submit one or more proposals.

The mission was authorized through the good offices of USAID/PSD in Cairo with the help from USAID/ME/TS in Washington, using two existing USAID projects – the Water and Livelihoods Initiative (WLI) and the Modernization of Extension and Advisory Services (MEAS) – to carry out the work.

1. INTRODUCTION

On 25 January 2011, the biggest and perhaps one of the most important events to take place in Egypt for decades started in Tahrir Square in Cairo and led to what is now referred to as the Arab Spring. Years from now when this report is read to update the USAID Mission on the progress of agricultural sector, the reader may realize the significance that this job represented as a totally new opportunity to revitalize Egyptian agriculture that could not be considered possible for the past 30 years.

A wind of change is also occurring in the U.S.A. USAID Administrator, Rajiv Shah launched a reform, USAID FORWARD, seeking new and different partners, practicing greater efficiency and speed and using innovation and S&T so that USAID may rebuild its reputation as a preeminent technical agency for global development. Meanwhile, there is a major belt-tightening underway in Congress and an effort to end the US military involvement in Afghanistan and Iraq.

The Arab Spring and the Arab Awakening describe the events occurring in Tunisia, Libya, Egypt, Yemen, Bahrain and Syria. Ten years from now, will the reader be able to decisively conclude that we turned a new page on how to program our development assistance for the Middle East, and particularly for Egypt? USAID has had an evolving agricultural program in Egypt for decades but neither Egypt nor any Middle Eastern countries figure in the Presidential Initiative on Food Security called *Feed the Future* (FTF). Although Egypt was not included as a focus country, guidance from USAID leadership states that non-focus countries should be aligning their agricultural work with the tenants of FTF (www.feedthefuture.gov).

New programming in agriculture must be cognizant of the budget environment in several ways. Egypt has suffered a huge loss of GDP caused by the disruption of government, lumped on top of an already shaky financial situation, especially with regard to unemployment, which was nearly at 10% prior to the revolution¹.

The IMF predicts Gross Domestic Product in the Middle East and North Africa will grow by 4 per cent in 2011, edging up to 4.5 per cent in 2012, but notes substantial variations between countries depending on their political situations. Egypt, the region's most populous nation, is set to see a revolution related dampening effect on economic activity, with the IMF growth forecast of one per cent of real GDP representing a sharp fall from the 5.5 per cent registered in the second half of 2010. Egyptians may take heart, however, from the prediction that disruptions to tourism, capital flows and financial markets are expected to be temporary².

Against the current difficulties it is important to recognize progress in Egypt. According to a speech by US Ambassador to Egypt, Margaret Scoby, on 21 April 2011³, USAID has contributed to Egyptian development needs for more than thirty years, and U.S. taxpayers have over this time financed nearly \$30 billion in assistance programs. This \$30 billion has been an investment in the people of Egypt and has generated far more than its face value in assisting Egyptians to build their own capacity and develop their own resources. To identify but a very few of the many achievements that are of significance to the current evaluation, these programs have:

¹ According to <http://www.tradingeconomics.com/egypt/unemployment-rate> the employment rate before the revolution was about 9-9.5% but then moved up to about 12% since the crisis.

² <http://english.ahram.org.eg/NewsContent/3/12/9798/Business/Economy/IMF-predicts-Egypt-growth-less-than-half-governmen.aspx>

³ <http://egypt.usembassy.gov/pr042111a.html>

- Expanded access to clean drinking water and sanitation to more than 20 million Egyptians where no such service was previously available.
- Since 2005, sent more than 2,200 Egyptians to the United States for university degrees and training programs. Over the past 30 years we have also awarded 3000 Fulbright scholarships along with 2,300 high school and university level scholarships through other programs.
- Helped the poorest Egyptians improve their livelihoods by supporting well over a million Egyptians with the extension of 8.3 million micro-credit loans valued at about \$2.5 billion. The \$1.3 billion USAID spent on developing Egyptian agricultural and the water resource management sector over the past 25 years was a good investment. Export figures alone, having increased from \$86 million in 2000 to more than \$2.5 billion today, are impressive.

In response to the current economic situation, USAID is addressing immediate challenges through the provision of agricultural inputs to farmers, by financing labor-intensive public works (such as irrigation canal rehabilitation) and by bridging smallholders with agribusinesses. USAID is also expanding its work with agricultural technical schools from 54 to 117 (105,000 to 175,000 students) to better meet workforce needs through improved curricula, internships with the private sector and enhanced leadership skills. Future efforts in collaboration with the private sector in the areas of irrigation technologies, plant/animal varieties, post-harvest handling and production/processing practices are also anticipated.

USAID has also helped to establish 1200 Water User Associations and 72 Integrated Water Management Districts covering 40% of Egypt's irrigated land. It should be possible to more fully integrate these associations (and other agricultural associations) with future agricultural development activities by strengthening their linkages to the private sector. The competitiveness of specific value chains such as olives, herbs and spices, and fish farming also need strengthening and it is thought that small holder farmers could be linked to larger farms and exporters to enhance their production, post-harvest services and access to information.

It is against this backdrop that the investigation on how to sustain active and efficient associations in Egypt begins.

2. BACKGROUND

This program evaluation assessed the agricultural achievements in Upper Egypt over the past decade with a particular view to how farmers access information and how better information delivery might remove remaining obstacles to a more efficient production and marketing and lead to improved livelihoods.

Evaluation Team

- Scott Christiansen, Senior Agricultural Development Advisor, USAID/ME/TS, Washington
- Atef Swelam, Soil and Water Scientist, ICARDA-Cairo and Assistant Professor of Water Management at the Agricultural Engineering Department, University of Zagazig, Egypt
- James Hill, Associate Dean for International Programs and Extension Agronomist, University of California-Davis
- Stephen Gasteyer, Assistant Professor of Sociology, Michigan State University
- Burton Swanson, Emeritus Professor of Agricultural Economics and Director of MEAS, University of Illinois, Urbana-Champaign (who backstopped the effort from the USA)

Objectives

The evaluation had the following objectives:

- Evaluate the trajectory of agricultural advances towards achievement of a market led production of staples and high value export crops that will lead to improved food security in Egypt;
- Frame potential directions and actions as options for USAID/Egypt to consider as it plans future interventions for the agricultural sector;
- Identify opportunities for immediate next steps using available mechanisms that will continue the analysis and test new suggestions; and
- Identify critical obstacles impeding implementation and provide recommendations on a way forward.

Approach and Limitations

The approach taken by the evaluation team was limited by the conditions in Egypt leading up to and including the period of evaluation. In order to act quickly the team was fielded from existing USAID projects – several people from the Water and Livelihoods Initiative (WLI), two staff from the Modernization of Extension and Advisory Services (MEAS) and one person from USAID in Washington. Given the unstable situation in the transition period after the change in government, it was difficult to secure permission for travel to Upper Egypt by the Regional Security Office for US government employees. As a result, some of the field visits in Upper Egypt were undertaken only by Atef Swelam, who as an Egyptian, was not covered by the restrictions.

The effort began with an abstracting of relevant USAID agriculture project documentation implemented in Egypt over the past 10-20 years (Annex A). The team's findings, recommendations and conclusions, are found in Sections 4, 5 and 6. Additionally, the report includes a summary of a meeting with stakeholders (Annex B) and then a set of field visits and interviews with the schedule in Annex C. Also included is a list of contacts associated with the evaluation (Annex D) and the Scope of Work agreed upon with USAID/Cairo prior to the Mission (Annex E).

3. ABSTRACTS OF MAJOR PROJECTS FUNDED BY USAID

It is beyond the scope of this assessment to provide a comprehensive literature review of agricultural projects in Egypt that were funded by USAID. It would be useful for the USAID Mission to have an accurate listing of projects including dates of implementation, official project titles, implementing agencies or institutions and funds invested by year and over the total length of project; however, that would constitute a significant stand-alone project. A simple report with a history of projects would be a good start and if this could be done it would provide a measure of the task and an idea of the necessary manpower needed to develop and implement an analysis of impact. It would make a good project for a PhD student or a team of MSc students. Nevertheless, several projects that constitute the largest investments of funds are abstracted and considered in Annex A of this report.

4. FINDINGS

4.1 Methods Used

The review of assessments completed in the past provided a list of issues, which for the most part continued to be relevant. These factors set the stage for discussion with the associations to identify ideas and options to leave with the USAID Mission in Egypt.

The evaluation team balanced its time and resources on pertinent USAID project assessment reports, interviews with key informants and extensive field visits by several members of the team. The experiences, discoveries and repetitions of evidence were used to subjectively develop a list of options that USAID/Cairo might consider for future investments. The investigation was completed on a very small budget with a limited number of people and a short time available to conduct the study so these limitations must be weighed against the evidence used to substantiate the findings in this report. The sample of interviews was broad with respect to categories of stakeholders (Table 1) and the team felt they provided an accurate snapshot of the situation at this time in Upper Egypt.

Part of the team was composed of short-term consultants⁴ that communicated with CARE to identify associations with whom they worked with an emphasis on those that were still active. The team acted upon suggestions in the telephone calls to meet with others that were active now, whether or not they worked in the past with CARE. Interviews were arranged quickly at first to satisfy the first two days in the field at Fayoum and Beni Suef but the backstopping team in Cairo completed the draft schedule and the field team made the final determinations and confirmations of meetings based on whether we were (a) on schedule; (b) had a logical sequencing of visits from north to south within the day and (c) availability of the respondents -- as it was harvest time. The final schedules for the evaluation team and the contacts of the key members of those visited are in Annexes B and C with a summary below in Table 1.

Table 1: The team completed 52 visits in total with 34 to various types of associations.

Category Interviewed	ID Number from Annex D	Total
Ag and Rural Development Associations	1,4,7,13,14,16,19,20,21,24,28,29,31,32,33,34,36,37,38,39,40,41,42,43	24
Organic, HVFV, HMAPS Associations	2,6,9,12,49	5
Livestock Associations	5,11,15,17	4
Water Users Association	1	1
<i>Associations</i>	<i>Subtotal</i>	<i>34</i>
Private Sector: Processing or Trader	8,10,18	3
University	22,25,30	3
International NGO, PIO	23,27,35,46,48,50,51	7
GOE Extension	26,47	2
GOE Research	44,45,52	3
<i>Sum of other types</i>	<i>Subtotal</i>	<i>18</i>
<i>Sum of Visits</i>	<i>Total</i>	<i>52</i>

Between 3-23 May the assessment team visited the Governates of Fayyoun, Beni Sweef, Minia, Assuit, Sohag, Qena, Luxor, Aswan, and Toshka/Abu Simbel. The team conducted 52 interviews/visits,

⁴ Dr Enas Abbas Saleh, Cairo University and Dr. Medhat Ezzat Abdel-Wahab, Cairo University

holding meetings with representatives of 34 Associations, 3 private sector processors, 3 university groups, 7 international organizations and international NGOs, as well as 2 offices of the Ministry of Agriculture Extension, and the Toshka research stations in Abu Simbel for MALR-ARC, MWRI-NWRC and finally, the Minister of Agriculture in Cairo. Our findings can be summarized around Association Advisory Services, University Extension, Research Institutions, Private Sector, Development organizations and international organizations, Formal Extension, and Other issues.

USAID provided a book published by CARE, in Arabic, with all of the associations with whom they had worked, which served as a starting point. The associations in Table 1 were for the most part selected purposely from a list of CARE and ACDI/VOCA supported groups. Nevertheless, the team welcomed chance meetings with other associations and the backstopping team who made the telephone calls captured contacts for visits whenever possible.

4.2 Sustainability of AERI/CARE Small Holder Horticulture Associations.

The Mission was keen to know how many of the associations formed by CARE are still functioning. Because of the urgency of identifying associations to speak with during our field trip, a full survey of all the associations was ruled out; however, the backstop team was asked to record any associations that were no longer active. When asked to describe the reason for deactivation or closure, the most frequent issue was the cessation of support when the project closed. Another reason was mistrust generated between associations and exporters because of failure of both sides to honor contracts. During 2007, exporters did not honor green bean contracts with associations and it was recounted in many of the interviews.

An assessment of AERI (See full report abstracted Annex A.7) reported that the forward contract was a new phenomenon introduced by CARE to associations in Upper Egypt. A disputed number of contracts, 860 according to the implementer, were concluded in the Small Holder Horticulture Association project at that time. It was beyond the scope of this effort to track exactly how many contracts were honored versus not but it remains a relevant issue for future work.

Examples of associations that stopped functioning include: Naser, and Beni-Soliman in Beni-Suef Governorate, Beni-Rafee, Beni-Taleb, Beni-Zeed, and Defno in Assuit Governorate, Tawfekia, Minya, and Qlosana in Minya Governorate, and Farshoot in Qena Governorate.

The AERI assessment report went on to say that most interviewed farmer associations had established excellent working relationships with government officials that caused government agencies to change their minds about how agriculture extension work ought to be done, lauding the practical, up-to-date and useful advice provided by USAID project technicians to the farmers as compared to the antiquated, old crops oriented bulletins used by their own extension staff. Supposedly the relationships led to important changes in policy and government operating procedures. For example, they reported that El Mata'na Farmer Association members in Luxor were able to call on government counterparts to accomplish important tasks, such as getting reduced prices on soil analysis, seeking collaboration to clean irrigation canals, and getting electricity to farmer fields to run pumps. If this was the case in 2010 it did not seem to be the case now. The current assessment would better characterize the claims as temporary, most of which must have ended with the funding.

There was frequent evidence that extension personnel from the government had volunteered to join the associations, several times as the Head of the Association Board of Directors, and in this way were often making a positive impact towards the success of the associations. The formal extension

system has continued to degrade and extension personnel feel marginalized for not having the resources or system that allows them to functionally contribute, even though it is their job to do so. Volunteering service to an association mitigates some of the low self-esteem that was seen in the behavior of the Extension staff.

During the earlier evaluation, associations described the way they operate as somewhere in between an NGO and a private business. They identify with the NGO label since they have all been registered as such with the Ministry of Social Solidarity; however, good financial and operational planning remains a weak point today. Hardly any of the associations are using spreadsheets to track their transactions; however, some had found adequate funds to hire a part-time accountant.

4.3 Association Advisory Services

Field visits indicated that associations play an essential role for small farmers in Upper Egypt. Indeed, they fill a gap in technical assistance for farmers that is essential for achieving positive rural development, water management, and food security. These associations work on a variety of issues, including vegetable production and marketing, livestock production, water management and conflict resolution. In many cases they serve as the conduit linking farmers in rural Egypt to information about markets, technical assistance, and supply chains for export.

The associations interviewed are listed in Annex D. These organizations worked with agricultural communities throughout Egypt to establish community-based associations designed to facilitate agricultural exports and rural development services.

Based on the qualitative assessment of the associations interviewed in this assessment (Annex D), the associations could be categorized as follows:

Cat#	Category	No. of Assoc. in each Cat. out of 45	Location in upper Egypt		
			north	middle	south
1	Narrowly focused on agricultural services, and largely dependent on continuing donor assistance to deliver services;	18 (40%)	4	9	5
2	Narrowly focused on agricultural services, but have developed mechanisms for delivering services outside of donor funding;	10 (22%)	4	3	3
3	More broadly defined organizational design – providing a broad-based set of services; including social, educational, gender-based services; with cross-mingling of financing. Financing is almost always delivered through a combination of local and donated capital assets that are leveraged to finance staff, services and expenses.	11 (24%)	1	5	5
4	More broad-based service delivery, but with a more pure business model where each part of the of the service delivery design must be self-sufficient. This virtuous cycle model allows for capacity development and profit centers to experiment with new income-generating ideas.	6 (14%)	4	2	0

We came away with the impression based on our interviews of a positive relationship between diversification of services and support for the associations. This led the team to conclude that a narrow approach was less desirable. This is a conjecture that it might be worth more rigorously testing through applied research in the future.

While the associations do provide technical assistance for agriculture and rural development, delivery is variable, fragmented and inconsistent. This variation is based on a several factors:

- **Strength and degree of human capital:** We often found that a key component in association success was the leadership of a strong individual. In some cases, this person was an extension agent, a recently retired extension agent, an accountant or a teacher. The association provided a venue for that person to genuinely help farmers and others in the community. The key was that this person had capacity and connections that s/he built upon in delivering services.
- **Linkages with educators, researchers, extension agents, agribusinesses and access to ICT:** The other key component in the success of associations was the extent to which they built networks and linkages to information and markets. Those associations that seemed to be doing well were also heavily networked. For instance, the impressive associations we met that focused on livestock had developed relationships with veterinary services for their clients, and would then leverage fees as a mechanism for financial sustainability of the association (e.g. 50% salary for the vet and 50% contribution to the association). Others that worked on vegetable and fruit production specifically sought out technical assistance for growing and processing recommendations from the national research institutes as well as private sector extension. Some sought out and utilized telecommunications technology such as internet in seeking information both about crop growth recommendations and about markets. In a couple of cases, the association used cell phone technology to gather market information for farmers in their service area.

Associations appeared to fill what might be considered a fairly significant service gap in terms of providing services to farmers and rural communities that has emerged with the decline in resources for the formal extension service. They often said they either paid their own staff to provide key information and services, or they would find volunteers among their ranks that would provide services. For example, many associations involved in livestock production would pay or develop mechanisms for subsidizing veterinary services. In other cases, associations we met used the skills of their membership to provide key technical assistance to farmers about vegetable production and distribution. They provided widely varying degrees of payment, skills, resources and capacity as a result, since the level of service was dependent on the membership.

Generally speaking, those associations that were more broad-based development associations (association types 3 and 4 above) appeared to be most sustainable as service providers. By delivering services such as primary education or special education, health and sanitation, civil society development, youth and workforce development, and gender-related activities, they created broad community level buy-in and support and this led to donations and high levels of participation. They often seemed to build on activities and informal institutional structures that had existed prior to CARE's interventions – but were also able to absorb CARE contributions into their model to provide more broadly distributed services. The mechanisms that they used to raise resources and deliver services sometimes built on Islamic or other more culturally derived forms of organization and finance.

4.4 University Extension

Universities have a critical role to play in providing technology through extension training. The colleges of agriculture are engaged in training students to be extension educators (either in the private or public sector). The universities are critical in linking research to farmer needs as well, as they are well placed to carry out field-based research programs.

Unfortunately, while universities have these potential for creating the next generation of extension personnel, there is reason to be concerned about the ability to meet this potential. Professors and former professors told us that courses are weak, hampered by resource constraints, among other issues. These constraints inhibit both laboratory capabilities and opportunities for field based learning. It was additionally observed that the focus on teaching meant that there was insufficient attention to extension or research activities by professors and lectures – in turn inhibiting the potential for organizing field based course work.

The universities do have facilities for meetings and workshops that they are using to provide a venue for training activities by NGOs and others. Through these activities, university staff can connect to NGOs, farmers and communities. We also observed that university professors were often contracted as project specialists or trainers outside of the university.

4.5 Research Institutions

Egypt's national research institutions, including the Agricultural Research Center (ARC) and the National Water Research Center (NWRC) are viewed as capable, and the villagers that we talked to were clearly interested both in their research and in possibilities for collaboration. Having said this, there was no evidence during the field trip of research institution activities such as village-based field trials.

It is important to note, however, that people did say they telephoned ARC for extension advice, using personal relations to make the necessary contacts. ARC information exists, is distributed to regional centers, but the materials do not reach the farmer through any intermediaries.

At the end of the field trip, the assessment team visited the NARC and NWRC stations in Abu Simbel, which serve the Toshka region. There is an obvious research mandate overlap and duplication of effort. Several times on this study tour we heard, “the revolution took place in Cairo and did not yet reach Upper Egypt,” as much to signal the enormity of the problem – suggesting business as usual – while knowing that if ever there was a time to start significant reform to reconcile and coordinate services under MALR and MWRI – it is now.

USAID is not ready to finance wholesale reform of government ministries and some knowledgeable people consider the policy arena to be the area which is most intractable in Egypt. For example, the APRP (Annex A.4) found the GOE's gradualist implementation strategy led to series of short-run policy successes, but some interpret it as a weak commitment. For long-term benefits, reformers and donors need to be committed for longer time periods. Given the instability in the government transition and the quick turnaround of USAID officers in the Mission the ability to plan ahead for more than three years would be unlikely.

Whether the new government will be able to do much more than stay the course and recover from the shock of the revolution to the economy is unclear so the path forward should heavily weight the risks and probability of success into consideration in selection of future agricultural efforts to be funded by USAID.

4.6 Private Sector Extension

Among all the service providers who extend information to farmers on agriculture from production to processing and handling, the private sector is a better performer because of the resources available to train staff and implement programs. It is important to note that many of the private sector service

providers were trained under the auspices of USAID projects such as ATUT, ALEB, AERI, HEIA and others. It is of course, in the interest of private companies and traders to be sure that the products they sell are used successfully or that the products they purchase meet the standards of their businesses. Additionally, to a far greater degree than in the public sector, companies have financial resources and can invest in human capital to deliver extension information. The shortcoming, however, is that the information delivered by the private sector is often and understandably focused narrowly on their products or purchasing needs. Across the range of information required for successful agricultural systems and the related needs of community and environmental stewardship, the information from the private sector is sometimes lacking. And perhaps even more importantly to the farmer, unbiased third party science-based information is greatly needed to either confirm or refute private sector information. It is also important to note that where private and public sector extension work in partnership, farmers gain even more benefit from local knowledge and how it can best be integrated into the cropping system.

While the government extension system in Egypt has been significantly diminished and is for the most part ineffectual, especially as small farmers have moved in agro-export products, the void has been partially filled by outreach units of private sector companies. Exporters, seed companies, and suppliers have been known to hire extension staff to work with farmers on the introduction of new varieties, cultivation practices, and inputs for particular issues. Evaluation team discussions indicated that many of the agents had received training through past USAID efforts.

While these extension agents are often extremely well qualified, and competent, they are ultimately the eyes and ears of the buyer/trader, wholesaler, exporter or processor, projecting future yield expectations, diseases, pests and adverse conditions; but also providing product-specific advice (or bias). The work undertaken by the AERI BDS component indicates the positive role which can be played by Upper Egyptian input suppliers in providing technical information to farmers. However, for obvious reasons, they are not incentivized to provide impartial advice to farmers about the costs and benefits of particular innovations. While they clearly have a role in the emerging agricultural system in Egypt, they cannot provide the whole solution.

4.7 Development Organizations and International NGOs

International Organizations have an important role in translating *research for development* into results on the ground. Organizations such as the World Bank and International Fund for Agricultural Development (IFAD) have indeed been essential for capitalizing infrastructure development through loans. IFAD also contributed significantly to education, gender development and micro-loan programs throughout Upper Egypt. These kinds of initiatives should be complemented by USAID grant programs. During the USAID courtesy visit to the former Minister of Agriculture, Dr. Ayman Abou Hadid, on 24 May 2011, led by the USAID Mission Director Jim Bever, the Minister explicitly stated that he would like to complement the loans from WB, IFAD and the African Development Bank with funding from USAID. UNDP is undertaking follow-on activities with the three post-harvest centers (PHC) constructed under the first phase of AERI. UNDP is brokering/facilitating partnerships between the small farmers and various private investors (exporters, domestic retailers) to purchase small farmer production via forward contracts, training association staff in post-harvest management, supervising provision of various extension services to members, and co-investing with members in up-grading the post-harvest centers as needed. The UNDP project has recently undertaken improvements of the Qena facility (Dandara Association), including the construction of a wall surrounding the PHC, and installed a water pump and air conditioners in the center. With the assistance of the UNDP project, a new agri-business

company has been created in Qena at the Dandara Association, and has been legally incorporated as “Goodies for Investment & Agriculture Marketing”.

International Sharing of Lessons

The effort of CARE with USAID funding in Egypt on association development was considered excellent by all those to whom we spoke. They provided materials such as equipment grants that helped to launch and sustain many associations. It is remarkable the extent to which people held this opinion of CARE even though farmers held them responsible for an agricultural export scheme gone awry. Apparently CARE was instrumental in convincing farmers to contract with an exporter to export green beans, but the exporter failed to honor the green bean contracts in 2007. Many of the associations we talked to said they did not eat green beans locally, so they were used for animal feed after this market failure.

Extension Services from the Development Organizations and International NGOs

International organizations play an important role as information providers. NGOs have the flexibility and commitment to be on the ground, often in difficult situations. They generally have access to some agricultural information but even with the best of intentions they vary widely in the knowledge and skills required to deliver good extension materials. It was clear from the many farmer associations that we interviewed in Upper Egypt that the USAID funded AERI Smallholder Horticulture project implemented by CARE was an example of a successful effort including extension training that appears to be sustainable through farmer associations that have access to internet information. However, it is unclear how new information will be adapted locally to these farming systems without knowledgeable public research and extension education. This conundrum is the challenge of the international development organizations working in Egypt—how to sustain their efforts once they are gone. This can only occur once a cooperative, pluralistic extension system has evolved with Egyptian ownership which will require collaboration across government institutions (which does not exist now with MALR and MWRI), universities, local farmer associations and the private sector. This is highly idealistic in the Egyptian context but it would result in a much more coherent public advisory service.

4.8 Government or Formal Extension

Public extension and outreach to farmers and their communities in Egypt is in great need of reorganization and reinvigoration. Of all the providers of information, farmers rated the government extension system as the least useful. However, the sustainability of information delivery in Egypt will require all of public, private and volunteer associations working together to maintain continuity as technology changes, the private sector and its products move in and out, and local associations will need more information (on such things as environmental stewardship, farm safety, etc). The team found strong evidence of dedicated government extension advisors were often closely linked to, if not embedded in, farmer and community associations where they were well received (and probably rewarded at least psychologically for their good work). These were few and far between compared to the estimated (perhaps underestimated) 7,000 MALR extension employees. Of these many employees, most are poorly trained, or, if well-trained at some point in their careers, they are now woefully out of date and nearing retirement. The failure in the public extension system has resulted from poor wages, lack of continuing education to remain technologically updated, overlap and competition between research and extension units and among ministerial institutions.

In an ideal world we would recommend to combine the institutional extension systems from MALR and MWRI to eliminate redundancy; maintain fewer extension employees and pay them well; increase their level of education and training by improving university curricula in extension education; and create

a network of certified advisors to tie public, private and volunteer extension systems into a single community of practice. Unfortunately, this is an unlikely solution.

Nevertheless, during our scoping mission we ran into numerous occasions where individual Extension workers were providing important capacity to local institutions. We propose a study that would identify the opportunities for leveraging the existing MALR and MWRI capacities to support community and small farm development. The study would include a policy component to identify opportunities for inter-institutional collaboration, systems for human capital development of Extension agents, and recommendations for improving university curricula in extension education; and create a network of certified advisors to tie public, private and volunteer extension systems into a single community of practice. Similar studies are underway in many other contexts that could be consulted.

4.9 Miscellaneous

Public Awareness

It is often the case that low income rural community organizations are fully donor dependent, with little evidence of raising their own funding and other resources. In Upper Egypt, however, the assessment team was very impressed with the extent to which individual and group civic responsibility was demonstrated – which has important lessons for developed countries where communities often take services for granted. The lack of any services has forced communities in Upper Egypt to develop self-help mechanisms. The associations were often underwritten by donations from others in the community. In some associations, they used Islamic philanthropic mechanisms to raise money for ongoing projects. In others, they leveraged donated items such as tractors and trucks as mechanisms to sustain associations, by leasing them and rolling over the fees into the association.

On the other hand, we found that community members were often reticent to demand expertise, competency and responsiveness from extension or other service and information providers. A massive public awareness campaign is needed to build the demand for qualified and competent support.

ICT

A new opportunity for delivery of information to small farmers is in the form telecommunications technology. As such it is worth considering the experience in Upper Egypt. There was consensus that in modern Egypt there is more than 100+% penetration and use of cell phones for farmers, i.e. taking into consideration that some farmers have more than one phone and that some additional family members also have their own phones. Some associations were using this fact to get marketing information to members, but more could be done to exploit this reality.

On the other hand, the use and availability of computers was highly variable. Few of the associations we met within Minya, Sohag, Qena, Luxor and Abu Simbel said that they used the internet to access information. On the other hand, relatively speaking, there was a much higher incidence of internet as an information platform in Aswan and Fayoum.

5. RECOMMENDATIONS

5.1 Directly support active and efficient associations

It was not possible to survey the entirety of associations that were established under USAID assistance. Nevertheless, it would be a useful step to decide on the population of associations that can be addressed in a new project. It would be essential to decide whether to also reach out to the Water

Users Associations that basically need the same level of attention. Organizational difficulties abound, however, as the AERI producer associations work with MALR and Ministry of Social Solidarity, and the Water Users' Associations were established through the Ministry of Water Resources and Irrigation. This discussion could take place with Mission staff after submission and finalization of the report.

Some initial effort will be needed for diagnostic characterizations of the associations and their farming systems and communities as well as an effort to establish a new baseline prior to any new work. Efforts would build on previous assessments and frame their findings in the context of social, economic, environmental changes of the last several years.

Organizational or business development services:

- Survey of associations to determine the degree of activity
- Membership records
- Bank balance sheets for membership fees
- Service transaction tracking
- Product traceability systems
- Potential for expansion of services
- How to start new service (menu and source materials)
- Federating Associations
- Public awareness and "Lobbying" for resources
- Standardized reporting
 - Review of reports to the Ministry of Public Affairs
 - Review of accounts to the Social Fund

The scoping team immediately saw that associations were constrained by law from hiring professional staff to run the associations and pay them a decent salary. While it was not possible to obtain a copy of the legislation governing associations it appears likely that reform would be needed to allow for payment to professional staff. Labor and low level staff were hired by all of the upper level managers reported that they were volunteering their time.

One thing we wrote at the beginning of the literature review which needs to loop back into the recommendations is to do a systematic review of the excellent and long-standing USAID efforts in agriculture – so that there is one agreed upon anthology of what took place. This could stand alone – perhaps the Mission would consider supporting students to carry out these research efforts with backstopping from MEAS universities and ICARDA. This is important given the new social, economic, and (possibly environmental) circumstances of Egypt and potential trading partners including the US and the EU.

5.2 Delivery of technical and market information to all stakeholders with ICT

Consider the following common scenario: Extension workers have computers, but no internet connectivity in field offices. When a supervisor at the District level wants to send something to the extension staff electronically, the supervisor sends it via Hotmail, Gmail or Yahoo; then the secretary calls the recipient on their cell phone and tells them they were sent an email with important information in it. The extension worker gets on their motorcycle or bike (if they had one) and goes to the nearest town with an internet café, downloads the message, puts it on a flash drive or prints it and delivers the information. This all takes about half a day.

What a difference it would make if Egyptian advisors (a) had all current publications and resources pre-loaded and with them at all times; (b) had the ability to communicate with subject matter specialists and others in the organization (even from a farmer's field); and (c) had the ability to record success stories from innovative farmers to build a library of relevant information. This would require some investments, time, and expertise in directing the project, but just imagine what having direct access to information could make for active and efficient associations. While there would still be a need for training staff in how to use such a device, mastering it is well within the capabilities of the typical extension field worker.

With these tools in one easy-to-use device, it becomes easy to take a picture in a farmer's field of a diseased plant and in two clicks have the picture inside an email that's addressed to the subject matter specialist. Switch to video if the farmer adopted a new practice and is willing to provide a 2-3 minute video explaining how the new practice helped. When the association advisor gets back to the office, s/he can use the video editing software to cut out any awkward parts, and then post the video to YouTube or some other platform. This clip then adds to the library of farmer-to-farmer communications.

Therefore, the team recommends new ICT technology to overcome the ineffective nature of the formal extension system in Egypt and give assistance to associations that have the interest and wherewithal to take advantage of this new technology. We follow the sequence of events in the following sections.

5.2.1 Connectivity Issues

Do a quick in-country assessment of the ICT capacity at the ground-level where the association advisory staff are located. That assessment should determine both what sort of wired internet connectivity staff have at their offices (because wired will be both the fastest and the cheapest connectivity) – and also what sort of wireless cellular data service they have in the rural areas where they work. Find out what sort of wired and cellular data services are currently available -- and if not available, how soon are they planned to be deployed? This action will determine if connectivity is an asset or a constraint.

5.2.2 A Source for Credible Content

Just as important is a source of reliable content i.e., the type of extension information that farmers want and need to become economically successful. In Egypt, the best source of this information would be from MARL-ARC and MWRI-NRWC institutions. This could be the starting point to collect research findings and popularize them so that the content is expressed at an action-level that farmers can easily understand and use. Also, this would allow for some reconciliation between MALR and MWRI, helping to de-conflict the overlap and division of labor between the two ministries. They could also be an aggregator, gathering relevant findings from other web-enabled sources, providing an Egyptian portal of relevant resources for Egyptian farmers.

Such a group and its portal can function in 3 ways –

- First as a source of information for the public sector extension workers. This literally becomes the electronic reference library for the field extension workers whether or not the GOE decides to undertake any reform of its extension system.
- The second use of the information is for all the other para-extension workers (the NGOs and private sector staff that we felt were delivering most of the information and doing extension-like work).

- Thirdly, the more basic of this same information can be customized in a different way to be accessible to the farmers themselves via SMS phones. There are some very new developments from a group called ForgetMeNot Africa that have enabled information providers to allow poor people with voice and SMS-only mobile phones to participate in the text portion of services that previously were only accessible via computers and smartphones or smart devices (like iPads or Androids). Now, with ForgetMeNot Africa, farmers in Kenya can use a SMS cell phone to send emails or join social networks, which is likely to be of interest to the youth in the community who will be helping the older members of the association to use new ICT tools.

5.2.3 MarketMaker

Farmers want up-to-date, accurate market information so they aren't always being taken advantage of by the middlemen. If farmers are going to diversify their production, they need to find a market for their products. This opens up a role for MarketMaker, but not MarketMaker as it has been done in the US for farmers who have a home computer, but a Middle Easternized version of MarketMaker that will work on an SMS cell phone. Work underway in Rwanda outlines how market research being done as part of a MEAS component2 "Learn" project could be helpful in Egypt with this in mind.

5.2.4 Equip Field Advisory Workers with Cutting Edge Mobile Devices

Assuming that connectivity in step 1 reveals (a) some basic cellular data services in the rural areas and (b) wired internet connectivity either exists currently in the local extension offices (or even if it isn't there yet, is planned), then it makes sense to take advantage of the capabilities of new tools just coming to the market. A brand new iPad2 worked great in Rwanda because the MEAS team discovered there is cellular data coverage in 95% of the land mass of the country. It is very likely to be at least as good in the Nile Valley from Aswan to Alexandria. In Rwanda, the MEAS team member bought a SIM card for the iPad2 and was able to use that device in every farmer's field visited during 5 days of traveling in very remote areas. With connectivity, he was able to use every internet enabled application on the iPad2 – e.g. a browser, an email client, Google maps (complete with GPS waypoints), Skype, etc. Also, since the iPad2 has on-board storage space, it would be possible to put ALL the content that's on a MALR/ARC-WRMI/NRWC portal on the extension worker or association advisor's iPad2, so that they could access all the research and extension bulletins without having to download anything. It is now possible to have a library in your backpack -- that's also a computer -- that's also a camera -- that's also a video camera -- that's also a GPS device.

These ingredients could transform how agricultural extension information is delivered to farmers. The information brokers from all stakeholder groups are empowered in ways that they never have been before. They have valuable information that they can share with farmers, and they, in essence are transformed into being knowledge brokers. If they don't know the answer to a question, they can pass it on to someone who does know. The flow of information is much quicker and responsive to end user needs. And, then by beefing up the portal at ARC and/or NWRC, you provide the content for everyone who is engaged in pluralistic extension work. And, finally, by introducing tools that free farmers from less than useful intermediaries by using their own SMS phones, you've really given power to the people.

5.3 Develop a Network of Certified Advisors for agriculture and rural development

One of the major issues for all extension advisory services in Egypt is the limited training and/or experience of new hires coupled to a system with little continuing education to keep service providers

technically current. The continuum between research, development and implementation, particularly through government and non-government extension service providers is very weak. The linkage is stronger in the private sector but limited to specific products and services. A mechanism is needed to improve the training for those who enter the service as well as for a program for continuing education and life-long learning. We propose that a *Network of Certified Advisors* be established in Egypt. Such a program would link advisory services from all sources in a community of practice and provide shared knowledge through regularly sanctioned training programs for credit to maintain certification. While it is recommended that such a program be voluntary, the value of the program is that it would select for highly motivated advisors and eventually become a standard for which extension advisors, regardless of the source (public or private), would be measured and preferentially sought by farmers and communities needing services. It would allow for knowledge sharing among all users who would participate in extending their knowledge through approved training venues. It would keep extension providers current as technology changes thus updating the level of knowledge of extension providers five to ten years post baccalaureate. With all providers sharing knowledge through a mechanism that provides continuing education, the diffusion of knowledge should increase rapidly.

We know that there is a need for technical expertise in Upper Egypt to build the capacity for small farmers, the communities they live in, and an emerging private sector to participate in and compete in a changing social order, and economy. The Bill and Melinda Gates foundation and USAID in India and elsewhere have developed a certification system to improve this technical assistance capacity. This system involves coordination with the national research and extension institutions, along with the universities and private sector. This pilot would deliver empirical data that could be evaluated, adapted and expanded as appropriate.

The program should be initiated under the auspices of the MALR-ARC and MWRI-NWRC in collaboration with Egyptian agricultural universities with participation from the private sector and international organizations familiar with certification programs. A Certification Board would be appointed to develop minimum education and experience requirements, priority areas for certification (i.e. crop production, pest management, marketing and economics, etc.), study manuals and guidelines and infrastructure to monitor continuing education programs required to maintain individual standing as a certified advisor. Such certification programs currently exist in the USA and Canada where they have become self-supporting. Programs now being introduced in India, supported initially by USAID, World Bank and the Bill and Melinda Gates Foundation, could be used as models and make an important link to the Indian FTF effort.

A certification system could include individuals from all extension service providers volunteering to be certified. Initial certification would require passing a test (or a series of tests) on priority areas for Egyptian agriculture as determined by the Board. Minimum standards to enter the system should also be established by the Board which typically would include a combination of education level and experience. The system would require an independent monitoring/audit program as well as an approval mechanism for continuing education credit to maintain certification status. Typically, 30-40 hours of credit every two years would be required. It is conceivable that at least some courses and credit could be achieved through ICT delivery as well as from classroom or technical field programs. Any of the service providers could provide continuing credit hours through a system that approves the training program and monitors attendance of those seeking credit (through a sign up and honor system). The creation of a Network of Certified Advisors could greatly benefit Egyptian Agriculture.

The Board would be served by a Secretariat. At first this could be a hybrid of MEAS universities giving support to a mélange of Egyptian university staff; however, after several years the intention

would be to complete the contracting of this service to Egyptian universities or other bidders who feel they could compete. With this type of roll out it is expected from the start that Egypt will take over and run the system, using fees recovered from the certification program to fund the Secretariat which reports to the Board and is responsible for making the system work.

Assuming funds were available for such an endeavor, it would be possible to build upon the valuable lessons and experience of the BDS component of AERI to include critical components in the certification program. Its methodology was to develop the capacity of small-scale Upper Egyptian input suppliers to raise awareness concerning available high quality inputs and technology, allowing the input suppliers to provide technical information to horticultural and livestock smallholders.

6. CONCLUSIONS

The report has abstracted many of the relevant string of USAID projects that led to the current generation of effort. It would be a great service to formally review and synthesize the work funded in the agriculture sector by USAID along with an appropriate impact assessment. It is certain that American taxpayers would be impressed by the achievements.

It is easy to lose track of the real events as they happened and how they interacted in reality. While assessments like ours are by nature often fairly linear, some of the agriculture sector work we were assessing, particularly under AERI, was designed as a suite of projects. For this reason, an appropriate closing is to summarize the AERI generation of projects in Egypt and how they led to the recommendations submitted by the team.

The following were the major components of AERI (2003-2007): (1) Smallholder Horticulture (CARE); (2) Smallholder Dairy and Livestock (ACDI/VOCA); (3) Biotechnology development; University and EU Market Linkages (MUCIA); and (4) Business Development Services (QED). The Chemonics contract, which was terminated in early 2006 due to alleged improprieties involving infrastructure grants, was originally designed to provide a coordination function among the AERI components and provide associations (both horticultural and dairy and livestock) with small grants for market infrastructure. CARE assumed the grant-making functions following the cancellation of the Chemonics contract. The MALR and Dr. Hussein Soliman assumed the coordination duties for the AERI components.

MUCIA: the Institutional Linkage Project. This initiative had three primary responsibilities before the Agricultural Technical School (ATS) component was added in Year 4. MUCIA worked with five universities in Upper Egypt and three academic departments: horticulture, livestock and agricultural economics. Obviously, one objective was to teach active learning. In service to this, 18-week-long workshops were held to up-date the faculty on 18 different academic courses (e.g. agricultural marketing, vegetable crops, etc.). About 20 faculty members and graduate students who taught these courses went through the workshop to up-date their curriculum. MUCIA selected the strongest faculty from the different US universities to lead these workshops and from those beginnings the ATS-VCT program eventually evolved and has enjoyed a good public awareness record and reputation for good delivery of results. MUCIA also ran the biotechnology subcomponent (\$1 million). Biotech research projects were funded (a total of \$ 1million) but not much came out of this component, since biotech horticulture products were never approved, especially for export to the EU.

The second component was in getting the producer groups being organized by CARE in the Smallholder Horticulture Activity linked up to the EU markets. MUCIA handled this component of the AERI project. Heads of strong producer groups and exporters from Upper Egypt were sent together to

meet with importers from different EU countries (i.e. Netherlands, Germany, Italy, etc.) to learn when the demand was best during the winter months. The basic problem was that due to the lack of refrigeration capacity in shipping these products most had to be shipped by air and the air carrier learned how to take advantage of this problem. HEIA, one of the successes emerging from USAID funding, has helped to address the export cold chain, (to a great extent still lacking in Upper Egypt), and shipping issues for high value fruits and vegetable export to Europe but there is much more work that needs to be accomplished for Egypt to be competitive and for farmers to use collective bargaining power to improve their situation. Alas, it poor farmers are still “price takers” in much of Upper Egypt. Failure to fund and establish working market infrastructure, particularly cold chain activities, is one of the disappointments of AERI. Studies, notably the “Assessment of Egypt’s Agricultural Sector Competitiveness⁵ (Fisher *et al.*2002), whose recommendations highly influenced the design of AERI I, note that in spite of the potential of Upper Egypt to market selected horticultural commodities in export markets at times when there were few competitors, the lack of market infrastructure prevented from realizing its potential.

During the AERI project air carriers were charging exporters exorbitant rates to ship products to Amsterdam. The cheaper method, reported to be taking place now, is to put these products on a ship to Italy and then trans-ship by truck to the appropriate market in the EU. As a result of market competition, the disorganized performing small-scale farmers and exporters in Egypt failed to compete during the limited duration project funding of USAID to sustainably set up competitive shipping channels. When AERI started sending the farmers, exporters and association members together to the EU, this began building a working relationship for the benefit of the value chain. Before, the exporters wanted to buy as cheaply as possible and not tell the producers what they might get. However, when they started communicating and building camaraderie through the group visits, there was an improvement in cooperation to the benefit of the value chain. This is ultimately a challenge that must be overcome by the private sector; however, the recommended certified advisor program would reinforce the networking and teamwork seen as indispensable to the success of Egyptian exports. So too would the ICT efforts to introduce more market information that farmers could access directly or through advisory services.

AERI did not work effectively to link the producer groups linked to the EU markets and this may not have come out in the assessments but some members of the present team with first hand knowledge of the project at that time judged that closer working relationships should have been established. For example, the groups would learn the standards and preferences of the different EU markets, but the CARE project did not regularly or systematically evaluate and act on the recommendations.

The work done by the CARE Smallholder Horticulture activity eventually evolved into the Heinz GDA project in the second generation of AERI projects but it wasn’t exactly alike because the Heinz GDA was a public-private partnership that did not involve the association development activities undertaken by CARE. This project has faced numerous difficulties in its lifetime but sets a good example of how to get private sector interests to contribute meaningfully to a win-win relationship with small farmers to aggregate necessary production to feed into a value added market chain for processed tomatoes. One of the lessons is to diversify and shoot for the highest possible quality, regardless of target market.

⁵ William Fisher, Team Leader, A.I. Allam, Mohamed Zaki Gomaa, John E. Lamb, Jerry Martin, John Mellor, Asmaa Osman, Joseph Pietrus, Wallace Tyner and Mohamed M. Zakaria. Assessment of Egypt’s Agricultural Sector Competitiveness Volume I: Synthesis of Principal Findings and Recommendations. Prepared for USAID/Egypt under the Rural and Agricultural Incomes with a Sustainable Environment (RAISE) IQC, Contract No. PCE-I-814-99-00002-00, TO 814. June 2002, in association with Abt Associates Inc.

The AERI Dairy and Livestock project managed by ACIDI-VOCA was a third component of AERI. They worked with 42 associations, whose members were approximately comprised overwhelmingly of women (90 percent), who traditionally manage household livestock in Upper Egypt. A major constraint was the unexpected effort and resources required to respond to the livestock diseases - a pandemic imported by the GOE when they sought to force down the cost of protein down before Ramadan in 2005 by importing livestock from sub-Saharan Africa.

The third AERI I activity was the Business Development Services component undertaken by QED during the period 2005-2007. BDS worked with input suppliers throughout Upper Egypt to improve the quality of their inputs and services to smallholder associations. In addition, BDS provided short-term credit to horticultural and dairy smallholders via the Assiut Businessmen's Association, a local lender whose capacity to extend agricultural credit was developed by the project.

Major accomplishments of the BDS component included:

- More than 533 transactions of high quality seeds, pesticides, fertilizers, tools, equipment, feed and medicines were facilitated between Upper Egyptian agri-businesses and national suppliers for a total value of LE 30,207,517;
- 572 horticultural production loans were disbursed to CARE small farmers over the life-of-project totaling 2,820,550 LE in value.
- In addition, 413 animal fattening loans were disbursed to ACIDI/VOCA smallholders for a total value of 3,821,000 LE.
- Approximately 18 percent of the loans (535,500 LE) was loaned women borrowers (73 out of a total of 413).
- The Assiut Businessmen's Association (ASBA) obtained significant loan guarantees from the Cooperative Insurance Society and the Suez Canal Insurance Company for their agricultural lending program - i.e., the new horticultural and animal fattening lending programs ASBA launched with BDS
- Project training and technical assistance.
- 94 local service providers (LSPs) received training and technical assistance from the BDS Project. Product Awareness and Information Exchange activities conducted pro bono by Egyptian and international private companies were implemented in the multiple subject areas, including:
 - artificial insemination (CBC Company); standards used in selection and use of therapeutics and vaccines,
 - diseases such as Rift Valley Fever, Lumpy Skin and Bovine Ephemeral Fever (Pfizer Company);
 - soil and water analysis (Syngenta, TWT and UAD companies);
 - and correct use of pesticides (Syngenta).

All of the above components, except BDS a contract), were grant assistance arrangements. Until cancelled in early 2006, there was a contract with Chemonics. The RFP, eventually won by Chemonics, was re-designed at the last moment per request of a high-level State Department official, who insisted on the removal of the coordination and policy components. As a result of the redesign, the Chemonics component finally commenced in April 2004.

The public extension workers who were directly involved with the producer groups being organized by CARE were very helpful and useful but the public extension workers get paid very little and never have any resources to work with, nor do they get trained. As shown globally, when external support

permits, some of the extension staff played key roles in producer groups and associations as was confirmed during this assessment in Upper Egypt. If selected extension personnel are trained, it is nearly certain that many would contribute and be very helpful.

Market information also needs resolution so that farmer groups and associations know when to produce specific crops. Most of the production under AERI was during late October through the end of December or early January. After that, most of the horticultural crops had to be produced under low tunnels. Prices for the high value crops go up in the colder part of the season but the tunnels require more investment. Farmers need to know more about when to take calculated risks and make investments with a high probability of returns. The ICT tools suggested in recommendation number two could help farmers to do more of this decision-making on their own with the help of some advice provided through a new group of empowered advisors.

ANNEX A ABSTRACTS OF MAJOR PROJECTS FUNDED BY USAID

A.1 National Agricultural Research Program (NARP)

Lowell N. Lewis (http://www.cal-cat.com/SummaryEgyptsFuture_04.htm)

From 1985 to 1993, NARP was implemented by the Consortium for International Development, to increase Egyptian food production and economic competitiveness through improved agricultural research and extension. Improvement was accomplished through the renovation of facilities, technical and academic training, equipping laboratories and conducting research.

NARP, which operated from the mid-1980s until the mid-1990s, received \$205 m in support to improve Egypt's adaptation and use of modern technology to strengthen agricultural production. More than 6,000 Ph.D., M.Sc. and B.Sc. holders participated in research under NARP. In addition, 90 students obtained their Ph.D. degrees from US universities, 20 obtained their M.Sc. degrees, and 2,150 traveled to US universities for post-doctoral training and exchange visits. Many of these agricultural scientists are now in leadership positions in public and private sector Egyptian institutions.

The NARP project also had an Agricultural Policy Analysis Component. Its principal objective was to provide technical assistance to strengthen the planning, policy analysis and monitoring capabilities of several Egyptian ministries and served as a predecessor of later programs such as the Agricultural Policy Reform Program (APRP). NARP served as the launching pad for several significant USAID programs in agriculture and did much to increase capacity in research that resulted in higher yields of crops, and the narrowing the food gap, despite the continuous increases in Egypt's population.

A.2 Agricultural Technology Utilization and Transfer Project (ATUT)

SOURCE: EVALUATION OF ATUT ACTIVITY IN EGYPT. Prepared for USAID/Egypt by Donald M. Taylor, Melvin Schnapper, Zebuel C. Jones, Jesse J. McCorry, Mohamed Salem, Manal Karim Checchi/Louis Berger Joint Venture. Contract No. AEP-I-811-00-00022-00, Final Report. August 2002.

With the conclusion of NARP, it was recognized that more effort was needed in the areas of horticulture and field crops. Extension and technology transfer capability was still immature and needed improvement. New varieties were needed with tolerance or resistance to biotic and abiotic stresses such as pests, diseases, salt and drought tolerance. Further it was clear that improved and expanded research in the basic sciences of genetics and biotechnology would be essential to obtain these objectives. ATUT was developed to address these issues from 1995 to 2002. ATUT aimed to improve agricultural technologies in Egypt by identifying and transferring to the private sector improved horticultural production, post harvest handling and marketing technologies, by developing a carefully focused, improved collaborative strategic research program aimed at resolving the major constraints to increased productivity of selected staple crops such as rice, corn, wheat and faba bean, and by supporting the expansion of research and use of biotechnology.

ATUT was successful in improving yields in the field crops and horticultural crops. The ATUT approach was to focus the project on upgrading production and on export sales, rather than marketing. It later became clear that this approach was short-sighted and did not adequately address the development of systems for gathering and disseminating market intelligence and for strategic market analysis and planning.

A.3 Agriculture-Led Export Business (ALEB)

SOURCE: ALEB FINAL EVALUATION. Prepared by Lehman B. Fletcher, Michael L. Colegrove, Gregory M. Sullivan, Gamal Mohamed Siam, Nabih Abdel Hamid Ibrahim, and Iman El Toukhy to USAID/Egypt, Strategic Objective 16, Environment for Trade and Investment Strengthened, Under MOBIS Contract No. GS-10F-0185K; Task Order No. 263-M-00-03-0006-00; Submitted by DAI, June 20, 2005

ALEB was designed to provide technical assistance and support to Egyptian food processing companies, ancillary service firms, and trade associations. ALEB attempted to capitalize on unexploited export marketing, particularly in the European Union and the Gulf and Middle East, and helped to develop processed food for exports and for producers who sell domestically. This development resulted in the establishment of the Food Export Council.

ALEB's mission was to improve global competitiveness of the Egyptian food processing industry, related service industries and associations to achieve sustainable export growth. The expected overall result of the revised ALEB Project in the second project period (2002-2004) was to increase market-led Egyptian private sector exports of targeted processed food products while supporting the sustainable development of private sector firms and associations providing services to food processors. This overall result was to be achieved by accomplishing three objectives:

- 1) Improve the industry's capacity to anticipate and respond to changes in global markets and technology,
- 2) Expand and improve linkages and industry support services, and
- 3) Increase stakeholders' capacity to participate in policy dialogue.

The project's key milestone was measured in terms of the increase of exports by firms within the targeted product clusters. ALEB more than met its targets for increasing processed food exports.

ALEB's longer-term impacts were based on increased productivity and competitiveness of its client companies and effectiveness of its client trade associations. The project was most effective in directly delivering technical processing services that enhanced plant processing efficiency, instituted quality control standards, improved product quality and introduced new products. The industry is now much more aware of international food quality systems and their requirements. Therefore, the Egyptian food processing companies are more competitive in export markets as a result. Companies' marketing skills were also significantly improved by the provision of market studies and timely market information, participation in study tours and trade fairs, development of databases, and training on international marketing practices.

ALEB's training and consultative assistance on internal company organization and management exposed many of the participating companies to international standards of modern management for the first time. This led to improved internal management and decision-making processes, budgetary and accounting practices, financial management, and employee supervision and compensation policies.

ALEB fell short of its goals in regard to ensuring the sustainability of services to food processors by associations and creating sustainable capacity in associations for policy analysis and policy advocacy. In the case of supporting services, the project's first strategy during the second period was to strengthen the work of seven associations, with a focus on preparing a selected association, the Egyptian Agribusiness Association (EAGA), to continue to offer most of the direct services provided by ALEB. When the strategic focus on EAGA did not succeed, ALEB then increased its level of effort with the

remaining associations, with the intention of spreading out service responsibilities among several associations.

As a part of this alternative strategy, ALEB also conducted training of trainers for other Egyptian specialists, such as consultants and individuals associated with local universities, and produced a large number of qualified consultants and trade association staff members but the team concluded that the focus on having associations take on ALEB's functions was misdirected as the private sector is more likely to succeed in these areas.

ALEB helped a wide variety of associations improve their internal structures and services offered to members, as well as carry out policy analysis and advocacy. It did not identify key associations and assist them in emerging as sustainable industry leaders to give voice to industry concerns before the GOE and the public.

Trade associations are non-profit and are formed by similar private entities coming together for their mutual benefit. Their main role is to undertake educational and promotional activities and organize events that provide access to suppliers of technical and market services for the membership. They can neither replace nor compete successfully with private-sector suppliers of such services. Associations may play a limited role of initially offering a service not readily available in the private sector but should transfer its provision to private suppliers as soon as possible.

A.4 Agricultural Policy Reform Program (APRP)

SOURCE: Impact Assessment Report No. 20. The Impact of APRP on the Roles of the Public and Private Sectors in Egyptian Agriculture. Prepared by Derick Brinkerhoff, John S. Holtzman, Adel Mostafa and Nabil Habashi. MONITORING, VERIFICATION AND EVALUATION UNIT, APRP. *Sponsored by the Government of Egypt, Ministry of Agriculture and Land Reclamation, United States Agency for International Development/Egypt, Office of Economic Growth, Competitiveness and Agricultural Development Division. Submitted by Prime Contractor Abt Associates Inc. and Subcontractors Environmental Quality International and Management Systems International; USAID Contract No. 263-0219-C-00-7003-00. June, 2002.*

Since the mid-1980s, the Egyptian government has been moving gradually toward trade liberalization and a market economy. USAID has supported the GOE in agricultural policy reform beginning in 1986 with the Agricultural Production and Credit Project (APCP), followed by the APRP, started in 1996. The APRP helped the GOE maintain progress on liberalizing agricultural markets and removing policy barriers to private sector participation in agriculture. The APRP has nudged the GOE from being the major actor in all realms of economic activity to a role of providing the legal and regulatory framework necessary for the private sector and to the support of market driven trade and investment.

Policy benchmarks were selected on the basis of their direct links to changed roles, which aimed to document success stories and impacts achieved. From among APRP's benchmarks, those related to the following policy areas were selected as illustrative of the shifts toward both better and less government and toward increased private-sector involvement in the agricultural sector:

- Government withdrawal from cotton pest management
- Promotion of, and cooperation with, trade associations
- Provision of horticulture export support services
- Expanded role for agricultural cooperatives
- Increased government capacity in information provision and dissemination
- Private-sector participation in policy dialogue and decision-making

APRP assisted with changes in GOE roles such as: government delegation of functions to the private sector and establishment of public private partnerships; capacity-building of both the public and private sectors to take on new roles; government's shift to regulatory and information-provision functions; and private sector participation in policy formulation.

APRP had positive and significant impacts: The Government took steps to allow the private sector to play a larger role in pest management and extension services for horticultural exports. Through pilot efforts, public and private-sector actors built new capacities to work together and to take on new functions in pest management, and research and extension for horticulture. A cold storage facility was built by HEIA under private sector management at the Cairo airport. The ministries of agriculture and of foreign trade are provided more and better information to the private sector and started to engage trade associations in policy discussions and decisions. MALR and MWRI started cooperating in a new real-time irrigation information system designed to improve the efficiency and effectiveness of Nile water use by Egyptian farmers, which is still in use. The private sector share of cotton marketing is increasing. Trade associations and cooperatives have also become more adept at mobilizing their interests, expressing their needs, and influencing agency behaviors.

APRP contributions:

- APRP provided technical expertise in analysis, international best practices, data collection methodologies, and training course design. Particularly important was assistance to the process side of reform in workshop design and facilitation, implementation planning/monitoring, awareness and dissemination.
- APRP served as a neutral broker between the Government and the private sector, and between government agencies. The various sets of actors remained confident that APRP was not taking sides, and thus were willing to listen to and follow APRP experts' recommendations.
- As a policy interlocutor with the Government throughout the elaboration of the benchmarks for the program's tranches, APRP helped to design implementation roadmaps, and facilitated legitimization of the benchmarks as targets.
- APRP's implementation reform support strategy, by working simultaneously at multiple levels (central to local) with many partners (public and private) and by building in some early successes, maneuvered around implementation roadblocks, showed stakeholders that change was possible.
- APRP successfully leveraged its resources and impacts. This contribution is exemplified by the collaboration with GTZ's Cotton Sector Promotion Program.

APRP lessons:

- The public and private sectors need to work together as partners to take advantage of each one's distinctive competencies/capacities.
- Policy projects can serve as an important impetus for initiating change, and their budget support is a motivator for pursuing reform.
- The Government of Egypt's gradualist implementation strategy led to series of short-run successes, but some interpret it as a weak commitment. For long-term benefits, reformers and donors need to be committed for longer time periods.
- The demand side of policy reform is critical. Government commitment and ability to supply reform is enhanced by pressure from the private sector and civil society. Private sector demand-making capacity is not always used in support of intended agendas of reforms, but this is not a reason to abandon reform.

- When using pilots as an implementation strategy, scaling up is critical to generating intended program impacts.

Implications for USAID:

- Pay attention to the interest group dynamics that shape policies and institutions
- Assistance with “process” is very important for reform implementation
- Policy reform is a long-term effort, which requires long-term investment and commitment
- Targeted interventions can help to make long-term investment effective. Suggested targets included: Business associations, cooperatives; and customs agency administrative reform
- Strengthen indigenous capacity to analyze policy issues
- Serious concerns exist about local capacity to do applied policy research and extension, which has been dependent upon expatriate-led technical assistance.

A.5 Agribusiness Linkages for Egypt (AgLink)

SOURCES: AgLink Website: <http://www.acdivoca.org/site/ID/egyptAgLink>

AgLink Final Report *Submitted by* ACDI/VOCA, July, 2004, A Project funded by: The U.S. Agency for International Development, Contract No. 263-0264-G-00-7020-00

Started in 1997, the Agribusiness Linkages for Egypt (AgLink) effort was a seven-year program designed to build stronger commercial ties between the U.S. and Egypt. USAID’s mission in Egypt funded the \$11 million ACDI/VOCA project. AgLink provided technical expertise to Egyptian agribusinesses and promoted trade and investment through consulting and outreach activities. Specific methods for creating linkages included targeted technology transfer between Egyptian farmers and U.S. experts and a very high degree of exchange visits.

AgLink was a client demand-driven operation with a distinctive market orientation. Market-led production was promoted through improved coordination between primary producers and processors, an emphasis on quality, identification and exploitation of clients’ competitive advantages, and the linking of potential trading partners.

AgLink worked with clients primarily from Egypt’s livestock sector, and activities focus on three subsectors: dairy, meat and meat processing, and feed and farm supply. AgLink actively promoted beneficial linkages between farmers and agribusiness firms within Egypt as well as among a broad network of agribusiness contacts in the United States. A primary goal of AgLink was to bring Egyptian companies up to a level where they were prepared to receive foreign private investment. To this end, AgLink provided both technical assistance to improve agricultural methods, and networking opportunities for business-to-business ventures—necessary elements for long-term economic growth.

AgLink clients were impressed by the responsiveness of AgLink’s staff to client needs. In addition, clients expressed that the project had played a significant role in the growth and expansion of their businesses, generated a significant sector-level impact and fostered a collective spirit among Egyptian farmers.

In September of 2001, AgLink received a two-year extension. The new phase of AgLink continued to develop associations, expanded trade linkages and provided technical assistance, but also expanded the initial program area to include Upper Egypt. Based in Minya, AgLink instated a new strategy of targeting smallholder farmers (farmers with six or fewer head of livestock) through implementation of

Participatory Rural Appraisal (PRA) to assess smallholder needs, followed by extensive training. In addition to the establishment of sustainable livestock associations, the project trained MALR extension agents in order to institutionalize project services, helping ensure the sustainability of the project.

AgLink contributed to transforming and strengthening the Egyptian livestock sector. It increased the quality and availability of milk and meat for local consumption, created a substantial rural employment base and stimulated trade linkages with the US. AgLink increased the productivity, efficiency and sustainability of large commercial, medium and smallholder clients by providing technical assistance and training in basic technologies such as animal nutrition, health and farm management, trade development, association development and facilitating access to credit.

Deficiencies in the system of collecting and disseminating market information to farmers, producer associations, cooperatives, and industry associations remain and there is a continued need for assistance in the basics of association management. A lack of credit is a major limitation for all aspects of the animal industry.

A.6 AERI Dairy and Livestock Program (AERI D&L)

SOURCE: AERI, Dairy and Livestock Program, USAID Agreement No. 263-G-00-03-00045-00. FINAL REPORT. October 1, 2003 – September 30, 2007. Submitted to USAID/Egypt by ACDI/VOCA, December 31, 2007

ACDI/VOCA's Dairy and Livestock Activity was a critical component of the Agricultural Exports and Rural Income (AERI) project. The purpose of the Dairy and Livestock Activity was to "directly address identified constraints within the dairy and livestock sub-sector, primarily in Upper Egypt, including improving production for domestic and international markets." The total amount of this four-year grant, implemented from October 1, 2003 to September 30, 2007, was \$8,399,440 and LE 1,233,099 (approximately \$8.6 million total).

The AERI Dairy and Livestock Activity, hereinafter referred to as AERI, was composed of the following components:

Component 1: Improving Smallholder Product Quality and Volume

Component 2: Increasing the Profitability of Processors and Traders

Component 3: Strengthening Input Supply and Other Agricultural Support Services

Component 4: Increasing Efficiency in the Market Chain

Through these four components, AERI offered a combination of training, technical assistance and study tours to beneficiaries, who included 7,438 livestock smallholders and their associations (327 Small Farmer Groups which later coalesced into 46 Smallholder Marketing Associations), 331 village business promoters (VBPs), 309 livestock extension agents (LEAs), 309 veterinarians (Vets), and 109 dairy processors.

More than 1650 training events took place during the four years, as well as 35 veterinarian campaigns, 10 overseas study tours, and innumerable technical assistance interventions. Training and technical assistance was provided by ACDI/VOCA staff, local consultants, volunteers from the US, and VBPs, LEAs and Vets who received extensive training from the project.

Project Overview

Inefficient marketing channels, a lack of reliable market information, weak agribusiness management skills and an absence of economies of scale have historically kept the Egyptian livestock sector from reaching its full potential. Smallholder farmers rely too heavily on outdated knowledge, inefficient practices and expensive inputs, making it nearly impossible for dairy and livestock businesses to break even. Marketing channels for smallholder products are clogged with middlemen and lack transparency. Government livestock extension and veterinary services have generally ignored smallholder needs, and private services for smallholders are virtually nonexistent.

The AERI D&L project made considerable headway into reversing these trends by applying a market-driven, business-oriented approach that employed a range of technical and business improvement strategies to ramp up small producers, value-adding processors and private and public sector service providers. AERI's vision for the Egyptian livestock industry was a mutually reinforcing network of processing and production businesses and supporting service organizations that increase the quality, variety and volume of animal products in local markets. Within this network, AERI created a system of interlocked farmer-based entities linking smallholder producers to the domestic market chain.

These organizations, the Smallholder Marketing Associations, served to control and enhance product quantity, quality and value-adding opportunities. AERI's approach transformed the traditional, individualistic attitude toward production and marketing and helped farmers achieve the scale necessary to strengthen their bargaining power. As smallholders' income began to rise, ACDI/VOCA and its partners trained smallholders to collectively reduce production costs and improve the quality and volume of their dairy and livestock products. By organizing themselves into larger input purchasing and output marketing units, smallholders achieved economies of scale to penetrate markets and link with critical technical and business support services to their mutual profit.

ACDI also advised small-scale dairy and livestock processors and traders on techniques to help them manage their businesses, supply raw products more efficiently and expand their overall product range, raising profits for processors and traders and increasing demand for the raw products that smallholders grow. Additionally, ACDI delivered technical assistance and business training to stakeholder firms and institutions engaged in critical business support services for the industry, including livestock extension, feed and veterinary supplies, food processors, veterinary services and rural financial services.

During the final year of the project, ACDI/VOCA targeted several systemic weaknesses in the marketing chains for dairy and livestock products, including poor animal handling and transportation, weak market infrastructure, and insufficient or ineffectual business linkages. For example, the project assisted several SMAs to obtain AERI grants to purchase mobile veterinarian units and vehicles for transporting live animals. Additionally, through the Fattening Business Innovation and Market Transparency Package ACDI facilitated linkages between smallholders and the Assuit Businessmen's Association, which provides credit facilities.

The final quarter of the AERI D & L project was devoted to ensuring a smooth exit strategy and implementing a set of specific activities designed to maximize the sustainability of the project's four years of intervention. These activities included 3 regional workshops for SMAs; a national capstone conference on the livestock value chain; a set of "leave behind" training and technical assistance materials and handouts; and intensive assistance to strengthen the Fattening Business Innovation and Market Transparency Package. These activities are described in detail in Section 6 of this report.

The impact of AERI project activities was far-reaching and can be measured both quantitatively (e.g., increased productivity and income) and qualitatively (e.g., improved livelihood, female empowerment, etc.). In order to ascertain impact, ACIDI/VOCA undertook a socio-economic impact assessment and a qualitative livelihood assessment during the final project quarter. The first assessment consisted of a survey that was administered to 1,101 smallholders (1033 direct and 68 indirect beneficiaries), while the second comprised a series of twenty-one focus groups with beneficiaries to obtain more in-depth information and opinions on the project's impact. The assessments' findings substantiate the following report on the project's strategic objectives and indicators.

A.7 Agricultural Exports and Rural Income (AERI)

SOURCE: ASSESSMENT OF PROGRAMS (2006-2010) FUNDED UNDER THE AGRICULTURE EXPORTS AND RURAL INCOMES (AERI) BILATERAL AGREEMENT NO. 263-0285, USAID/EGYPT. PURCHASE ORDER NUMBER: 263-O-00-10-00037-00; Prepared by Kenneth Wiegand and Progress 2; Submitted to USAID/Egypt by the Mitchell Group, Inc. August 27, 2010.

This program worked to provide flexible and appropriate technical assistance and grants to support agriculture trade associations that are of critical importance for expanding volumes of high quality agriculture products (dairy and fresh or processed horticulture) for export and the domestic market.

The AERI assessment of work conducted during the period of March 2006 through January 2010 provided USAID/Egypt with lessons learned, recommendations for changes in ongoing programs, and suggestions for new programs.

AERI's goal was to increase rural incomes and employment in southern Egypt. This was to be done by strengthening the competitiveness of the horticulture and livestock sectors through an expansion of access to essential technologies, skills, and markets. The dairy and livestock program focused on increasing the productivity of small scale dairy and livestock producers, while the horticulture program was to increase the competitiveness of Egyptian produce in the global and local modern markets.

The original AERI design highlighted the potential of small farm-holder production for export markets by intensively producing and harvesting high-value crops during growing seasons when there are few competitors. The primary impediment in southern Egypt to seizing the "off-season" markets was identified as the lack of essential market infrastructure.

Survey instruments use in the evaluation revealed differences of opinion and perception among project participants regarding the program's impact upon expanding the base of small and large private sector agribusiness firms that can compete globally in the high value export market. They referenced the increasing worldwide trend towards large-scale, well-financed and wholly coordinated commercial export value chains, as contrasted to a shrinking of smallholder production of high value exports worldwide. Given the low survival rate of so many of the project's small farm associations following the termination of assistance, observers have questioned AERI's basic design premise. Project beneficiaries felt abandoned and exposed following the termination of project assistance.

To strengthen and/or sustain AERI's impact upon the first objective, a demand driven, induced innovation development model, with a private sector-led effort leveraging essential upstream investments far in excess of available donor funding is recommended by agribusiness partners, in contrast to the continuation of a supply driven model at the grass-roots level similar to the design promoted through AERI.

A second objective of AERI was to improve linkages between the base of small and large private sector agribusiness firms and suppliers. Improved linkages can be and have been increased, but it may be too soon to determine whether in fact the most robust linkages can be sustained. The AERI means for coalescing smallholder interests through farmer associations have proven non-resilient in the short run.

A major expansion in the gross value of fresh and processed exports of horticultural products was the third AERI objective. This impact has most certainly been achieved to lesser or greater extent with sub-regional differences, and the perceived strengths, weaknesses, opportunities and threats have been characterized.

A fourth objective of AERI was a major expansion of production and productivity in livestock and dairy products destined for domestic markets. Some achievements have most certainly been demonstrated among a select level of participants, but the sustainability issue remains vague. The outcome may depend on new government investments in a dairy modernization scheme that may eventually eliminate the small dairy herds found in Upper Egypt's villages.

AERI's outcome was postulated to expand exports and thereby provide Egypt with increased foreign exchange earnings, adding to the country's reserves. Regardless of the achievements reported by AERI, the future of high value horticultural export production probably will probably be more modest and take longer to achieve than hypothesized in the AERI project documentation. Much depends on the market and the organizational capability of the Egyptians themselves. There are nevertheless gaps in the horticultural export value chain that may be effectively and more quickly filled with USAID assistance. The value chain training with MUCIA is a good example of an effective, efficient intervention.

More than 75 percent of Upper Egypt population lives in rural areas and small towns or depends upon agriculture for their livelihood. It appears that the USAID Mission has already agreed to portions of next steps listed in the AERI evaluation by expanding the current Heinz GDA process tomato program; by increasing the number of technically skilled youngsters in middle and southern Egypt through the value chain training program. The other two recommendations were to support farm-level management practices and the adoption of appropriate technology among small dairy and livestock holders.

A long-term commitment is most certainly required in the transformation of the rural agrarian space in Egypt, probably up to two decades of support, structured so that the commitment is pyramided with multi-donor assistance so that the pulling out of one donor will not jeopardize the entire program.

Major Findings

1. The multi-partner strategy that was used to implement AERI's many activities was perceived by participants as wasteful and detrimental to the timely accomplishment of the project's purpose. The poorly coordinated and late delivery of project goods and services and non-delivery of required technical assistance (due to the project's conclusion) left the region's very risk-averse small scale farmers, dairy/livestock holders and agribusiness firms confused regarding Mission intentions.
2. The strategy of delivering technical, financial, material and organizational assistance to small holders through newly established smallholder farm and dairy/livestock associations, under the assumption the associations can become viable agribusiness economic units (poised to capture assumed economies of scale, size and/or some other competitive advantage) has not been validated. According to knowledgeable sources, only 20 of the project's reported 125 farmer associations are functioning as intended, following the conclusion of USAID-financed assistance.

This outcome lends credence to the 2007 final evaluation of the smallholder horticultural activity wherein only 36 associations were expected to become truly effective rural agribusiness enterprises on their own.

3. The personalized approach and dedication of the implementing partners' field personnel (a conscious strategy developed by the implementing entities) is viewed as very effective and desirable among project beneficiaries. Smallholder participants have in turn demonstrated inspired assumptions of risk and a larger sense of communal solidarity (grassroots democracy) by volunteering their time and local standing (status) among fellow villagers and by voicing support to sustain the program's objectives.
4. Unmet requirements in the horticultural export value chain might be more quickly and effectively satisfied with joint USAID-private sector assistance, such as education and training to address the skilled labor shortages of the modernizing export sector.
5. The achievement of most of the expected results during the life of project, while worthy of merit, belies the fact that transformation of Upper Egyptian smallholders' agricultural and livestock practices is a long term undertaking.
6. The behavioral change (i.e. the adoption of improved practices) resulting in achievement of the quantitative targets appears to be sustainable among early adopters. However, there is evidence of substantial backsliding since the completion of many AERI activities; reportedly only 20 of the project's 125 farmer associations are functional at their intended purpose.
7. Nearly all small-scale farmers in Upper Egypt are price takers. AERI attempted to endow them with vertical linkages to transform their market power but for the most part the linkages are tenuous, especially if subsidized with technical assistance and capital investments.
8. Regardless of some farmers' capabilities or willingness to assume greater risk, the changes in production requirements will be driven by the market. The high value horticultural exporters involved in the AERI project are wary of abandonment because of the demand driven world where the export market for high quality horticultural products has consolidated into more sustainable, larger, better financed, more flexible and less risk-averse producers.
9. Significant (but perhaps not sufficient) expenditures have been required to begin modernizing and transforming traditional producers newly engaged in the processed tomato industry. This transition may be within the reach of Upper Egypt's risk tolerant small-scale producers. A successful transition will probably reflect the experiences of small scale producers elsewhere, recently modernized and increasingly capitalized, which have begun supplying local and national processed food markets that are less demanding than fresh export ventures.
10. Just as the increased adoption of improved technology at the small farm level takes time, so too will the implementation of a planned governmental national program to consolidate and upgrade the dairy sector.

Conclusions

1. The future of high value horticultural export production may not and probably will not involve Upper Egyptian small scale farmers in the numbers or locations contemplated in the AERI project.
2. Where no market advantage exists upon which to organize small farm producers as commercial agribusiness ventures through farmer associations there may exist little reason to assume that farmer associations will economically benefit a majority of illiterate, socio-economically deprived, traditional, asset-scarce and cash-strapped farmers. Evidence from neighboring countries, with few exceptions, reveals a trend towards medium and larger scale production.
3. Three trade associations were facilitated to varying degrees. The business development services activity improved the quantity and quality of linkages between firms and suppliers in the

targeted region, far exceeding expectations and the project's targets, thus, increasing on-farm and agribusiness jobs and rural incomes. Numerous transactions of high quality farm inputs were facilitated and horticulture loans disbursed.

4. AERI's increase in volume of small-farmer produced horticultural products was excellent, reflecting a national trend. Sales exceeded targeted results by 30 percent with half for export and half sold in local market and food processors.
5. There are unfulfilled gaps in the horticultural export value chain that are being addressed with USAID value chain training.

Recommendations

- A demand driven, horticultural export support activity could be initiated among exporters established in the region to remove impediments and smooth processes which will enable regional exporters to influence the quality and quantity of products and services in their respective value chains, including regulatory/policy concerns, mechanization, credit guarantees, etc.,
- Improve farm-level management practices and the adoption of appropriate technology, thus enabling small dairy and livestock holders to increase their incomes, while sustaining small, efficiently managed units;
- Expand the current Heinz GDA process tomato program, with emphasis upon incorporating more medium and large scale farms, to provide a scalable technology and experience;
- Increase the number of technically skilled youngsters in middle and southern Egypt through the value chain training program, thus scaling up its coverage and its continuity, and ensuring the capture of its technical, economic and financial economies;
- Focus efforts to improve coordination and streamlining of project implementation. Each needs to choose one or two things it can really do well.
- Social marketing could become a much larger part of the Mission's approach to wean Egyptians from well-trained expatriate services providers to a more indigenous supply of expertise.
- The planned design and implementation of the AERI follow-on activity should be widely and transparently disseminated among former AERI participants, and the process itself should begin as soon as possible to build on AERI knowledge and experience. A long term commitment is required and it would best be funded by several donors who have the commitment to help for the necessary transformation to take place.

A.8 Horticultural Exports Improvement Association (HEIA)

SOURCE: HORTICULTURAL EXPORT IMPROVEMENT ASSOCIATION (HEIA) FINAL EVALUATION, Prepared by James Fitch, William Thomas, Mohamed Zaki Gomaa, Mostafa Hamada, and Iman El Toukhy and submitted by DAI to to USAID/Egypt, Strategic Objective 16, Environment for Trade and Investment Strengthened, Under: MOBIS Contract No. GS-10F-0185K, Task Order No. 263-M-00-03-00006-00, January 31, 2005

HEIA is a trade association, originally spawned by ATUT. It became a direct beneficiary of USAID funding. HEIA was formed at approximately the same time as the ATUT project got underway. This fortunate juxtaposition was an important element in the success of both ATUT and HEIA. Some 90 percent of ATUT clients were HEIA members. Without the technical assistance provided to its members as well as to HEIA as an organization, the Association could not have progressed nearly as rapidly as it has. In the absence the ready-made client base provided by HEIA members, ATUT goals would have been much more difficult to accomplish.

USAID's global agricultural strategy of linking producers to markets was the force behind the competitiveness and agricultural development program in Egypt. The HEIA grant of \$4.6 million was part of the larger "Growth Through Globalization" program that began in 1996 by investing \$123 million in agriculture related projects. This program has operated for the past eight years in developing partnerships among the growers, researchers, exporters, and business associations. USAID's Egyptian strategy shifted its focus to Upper Egypt in an effort to include smaller farmer associations within the overall benefits of exporting higher value horticultural products. The role of private grower associations that are supported by the export promotion policies of the government is central in USAID's strategy.

An evaluation assessed the overall sustainability of HEIA as a not for profit private industry institution from an organizational, programmatic and financial perspective. HEIA was assessed and analyzed concerning all of HEIA's previous, current, and future activities and services, effectiveness, business strategy, performance, viability of the activities and services provided with recommendations for any alignment required and/or any new proposed initiatives. The evaluation permitted HEIA to fine-tune its strategy, sustainability, and appetite for new activities. USAID was interested in evaluating possible options and mechanisms that could support HEIA in its effort to achieve sustainable industry leadership, including an expansion of its policy dialogue.

Since its start in 1996 HEIA has grown to a membership of about 500 members at this time.

Objectives:

- Develop, and market horticultural crops;
- Study and penetrate new markets for exporting horticultural products through working to achieve an integrated system for production, quality control, marketing, exporting and processing horticultural crops;
- Provide the horticultural sector with the needed technical, technological, marketing and exporting information and production inputs to comply with the international standards;
- Cooperate with local and international bodies to bring forth sustainable development to the horticultural industry;
- Develop horticultural community services;
- Lobby with government and top officials to effectively share in decision-making;
- Help protect environment and encourage the use of environment-friendly practices;

HEIA advisors and teams can be contracted for:

- Inspection and staff training on export quality and international food safety standards of harvested and packed fresh products;
- Skills training of "pickers and packers;"
- Design and management of the operational organization of quality control teams at farms and packing/cooling stations;
- Management design and training for packing lines and packing station;
- Waste management;
- Assistance and advice on export logistics from "packing to shipping."

HEIA information and services:

- Offers periodic information 3 times a week by emailing the latest updated information to its members with the latest market prices reports, demands, etc.
- Provides professional training services, and courses can be tailor-made even on the spot to specific customer needs.

- Supplies experts in the main horticultural export crops according to a quarterly schedule. They can make visits provided that they are requested and scheduled in advance.
- Offers sampling and analysis of water, soil and leaf tissue samples.
- A large number of seminars and workshops provided training on technical production and post-harvest handling practices. Training to attain compliance with international standards have been an important part of the training program, particularly GLOBALGAP (prior to 2007 called Euro-Retailer Produce Working Group Good Agricultural Practices – EUREPGAP) and standards set by the British Retail Consortium (BRC).
- HEIA's system of arranging technical assistance visits by international horticultural specialists is widely credited for enabling members to implement the production and post harvest practices that are required for export.
- Members report that participation in observational study tours organized through HEIA was a very valuable source of learning and technology transfer. HEIA played an important role in expanding the export of crops. A significant number of members indicated that they would not have been able to venture into horticulture for export without HEIA. Some said they would not be able to continue without the services provided by the association.

HEIA's Refrigerated Perishables Terminal (RPT) at the Cairo Airport and at Luxor:

- The emergence and expansion of refrigerated storage has contributed to the significant expansion of Egypt's horticultural exports.
- HEIA RPT, since its establishment in July 2003, has grown steadily in both size and reputation.
- The RPT handles the majority of perishable cargo at Cairo International Airport, including flowers and foliage, also reducing air freight costs by serving as a transit facility.
- All internal transactions are computerized to ensure the provision of accurate and prompt services, including inspection and agriculture quarantine.
- There are no minimum/maximum size/weight restrictions. The size/weights allowed for shipments are only limited by the type of aircraft flown.
- Shipment tracking system is available for exporters upon request.
- The RPT has calibrated scales on the premises along with partial and full X-ray capability; therefore, handling services are faster and more reliable.
- The RPT has proven to be a valuable link in exporting perishables by air. Furthermore, the terminal appears to have the potential of generating surplus revenues that might help cover deficits in other HEIA activities. However, the near term financial viability of the terminal is subject to certain doubts.

Financial Sustainability of HEIA and its Services:

HEIA did not have a well developed cost accounting system in 2005, and its financial accounts did not permit an analysis of all of the individual services. Nevertheless, revenues of most services fell far short of covering full direct costs and that overall, HEIA's service revenues provided only 25 – 30 percent of the direct costs for the service.

When members were asked what would be their reaction if HEIA was obliged to increase the current prices of its services by 100 percent, they felt disappointed and said that the demand for most services would decrease, particularly those demanded by smaller growers. Others indicated that without services they could afford, they would be inclined to drop their membership.

Recommendations:

- HEIA should regularly monitor each service that it offers to analyze existing and potential user demand, the prices that users would be able to pay, and HEIA's cost of providing the service. Also consider how costs might be reduced by re-structuring the way that services are offered.
- In its analysis of alternatives, HEIA must give broader attention to membership expansion, especially among smallholders. This should include an evaluation of restructuring membership fees, perhaps through use of a sliding scale.
- A full range of cost reduction alternatives should be considered, including restructured services so that they may be offered at a lower cost and eliminating services that cannot be re-organized to cover their costs.

Activities in Middle and Upper Egypt:

HEIA aims to expand its membership and services to Middle and Upper Egypt, and the association has already opened an office in Luxor. Experience with this office has demonstrated that it will be expensive for the association to expand and operate in the area. Some form of grant support for the further development of the Luxor office, including staff training, service development planning, and of services for smallholders in that area would seem to be necessary if HEIA is to operate effectively in the area.

To effectively meet the needs of smallholders in the area, HEIA's services have to be restructured to deal more with groups, and to overcome the logistic problems posed by farmers who may be illiterate or have limited access to transportation. Even in a restructured form, it is unlikely that many smallholders would be able to bear the full cost of HEIA's current services.

Recommendations:

- As a means of giving smallholders access to HEIA services, consider donor vouchers which could be redeemed for participation in HEIA training or from other providers that may provide suitable training. The clients should be required to pay a part of the cost of the voucher, and this would increase with time.

A.9 Egyptian Agricultural Competitiveness Assessment

SOURCE: Assessment of Egypt's Agricultural Sector Competitiveness, Volume I: Synthesis of Principal Findings and Recommendations. Prepared by William Fisher, A.I. Allam, Mohamed Zaki Gomaa, John E. Lamb, Jerry Martin, John Mellor, Asmaa Osman, Joseph Pietrus, Wallace Tyner and Mohamed M. Zakaria for the U.S. Agency for International Development/Egypt under the Rural and Agricultural Incomes with a Sustainable Environment (RAISE) IQC. Contract No. PCE-I-814-99-00002-00 with DAI in association with Abt Associates, Inc. June, 2002.

This assessment was based on an economic model that showed the greatest employment gains in the Egyptian economy were related to high multiplier effects from increased agricultural incomes. To achieve these increases in rural agricultural incomes requires paying special attention to the constraints affecting smallholders. Furthermore, since some commodity sectors offer greater comparative advantage (such as cotton), market potential (such as horticulture), and opportunity for productivity increases (such as livestock) than others, the Assessment Team placed greater emphasis on those commodity systems than on others such as sugar or cereals.

The second major assumption was that USAID/Egypt will have fewer resources, perhaps significantly fewer, to devote to achieving its development goals over the near to mid term. The major consequence of this assumption was the prioritization and ensuing limitations on our recommendations

for future interventions in the agricultural sector. This has been a useful parameter for the assessment because it focused attention on those actions and activities that would have the greatest impact.

Agriculture represents a significant (17 percent of GDP) but non-dominant sector of the Egyptian economy. Yet development research across a broad array of countries suggests that rapid agricultural growth results in the quickest employment growth, so it is the best entry point for ensuring that economic growth is broadly participatory and hence equitable.

The difference between rapid (4.8 percent per year) and slow (2.8 percent per year) growth in Egyptian agriculture represents 300,000 more jobs per year. About 15 percent of those additional jobs are in agricultural production, about one-fourth in the agribusiness input and output marketing activities and about 60 percent in the rural non-farm consumer goods and services sector.

The rural non-farm sector is almost entirely a producer of non-tradable goods and services and occupies 44 percent of the labor force. Agriculture is the dominant source of increased demand for the rural non-farm sector.

The five key elements are:

1. Increasing agricultural incomes to stimulate increased rural non-farm employment.
2. Improving the productivity and competitiveness of smallholders to achieve increased incomes.
3. Broadening the horticultural development strategy to diversify crops and markets, enhance the role of small growers as suppliers to exporters, integrate the fresh and processed segments of the industry, and expand the use of good agricultural practices in domestic horticulture.
4. Improving the smallholder livestock sector as a means to increase agricultural incomes, especially for women who dominate this sector.
5. Targeting policy reform and implementation linked to the achievements of points 1-4.

A.9.1 Policy Reform and Implementation

Egyptian agriculture is now more responsive to domestic and international market forces, less constrained by government involvement in production and marketing decisions, and more open to competition than ever before. However, policy constraints continue to prevent Egypt from fully realizing the comparative advantage it has in most commodity systems.

- As Egypt becomes more integrated into the global economy, its policies must conform to the requirements of WTO and other trade agreements.
- Global competition places a premium on policies that could reduce production and marketing costs through more efficient customs services, efficient use of natural resources such as water, and access to low-cost production inputs.
- The growing role of the private sector is the most dramatic change affecting how policies are formulated and implemented. Business and trade associations, with significant assistance from USAID, are becoming a major force in the policy process. However, these associations are not yet capable of fulfilling this policy advocacy role entirely on their own.
- Lack of a policy focus on the productivity and competitiveness of smallholders is a serious shortcoming.

The team identified a set of priority policy issues for USAID action:

1. Policies that Seriously Constrain the Productivity and Competitiveness of Agriculture as well as Other Sectors of the Egyptian Economy: WTO readiness, exchange rate policy, reform of the Customs Service, and reduction of State involvement in trading.

2. Policies that Have Impacts on Agriculture as a Whole or Multiple Commodity Systems: Water policy, including megaprojects such as Toshka, is the most significant;
3. Policies that Affect the Productivity and Competitiveness of Specific Commodity Systems: sanitary standards in livestock that are not science-based and those that impede the importation and registration of cultivars in horticulture.

Recommendations

- USAID should orient policy reform, implementation, and monitoring to focus on policy priorities based on the strategy of stimulating fast-growth agriculture to increase smallholder income and rural non-farm employment.
- USAID should target policy activities on a select number of commodity systems (horticulture, smallholder livestock, and cotton) and a manageable number of macro and cross-cutting issues (exchange rates, water policy, WTO, and trade agreements).
- Policy reforms in macro-economic areas, such as exchange rates, and cross-cutting issues, such as water, should be coordinated with other USAID offices to reinforce USAID influence.
- Building on USAID's efforts to monitor and verify policy implementation, additional efforts should be made to ensure that implementation occurs at operational levels in commodity systems. Continued support to trade associations in their policy role is one promising way to focus attention on the execution of policy reforms.
- USAID should make a concerted effort to transfer policy analysis capabilities to Egyptian institutions, public and private, over the next five years. The progress of trade associations holds promise as one element of this strategy. However, by their nature these groups are not disinterested, objective sources of policy advice. Neither is the Ministry of Agriculture and Land Reclamation (MALR). Other institutional options should be examined.

A.9.2 Horticulture

USAID's programs promoting high value non-traditional agricultural exports (NTAE) have initiated a new era in Egyptian horticulture. Although exports of the major traditional products—potato, orange, and dried onion—have declined, NTAE products introduced by USAID are being successfully commercialized. They are projected to account for more than one-third of the increase in total horticultural export volume in the current decade (more in terms of value) and to increase in importance as production increases, new products are introduced, and additional markets are entered. A USAID-supported program has established a product/market development system that provides a strong foundation for this growth by delivering an appropriate mix of production, post-harvest, and marketing support to the growers and shippers who have committed risk capital to establish an NTAE subsector.

HEIA, an association of growers, exporters, and service organizations, is providing marketing information and support, technical services, and policy analysis and advocacy for continued improvements in the enabling environment. Another USAID-supported program has successfully upgraded plant and food safety systems, raised processing efficiency, improved products and export marketing strategies, and ultimately raised the competitiveness of client enterprises.

However, the capabilities established through these programs and the numbers of enterprises assisted have not yet reached the critical mass required to be self-sustaining. The ongoing establishment of a vibrant NTAE sub-sector has important implications for Egypt's more traditional, domestically oriented horticultural sector. Agricultural innovations, cold chain facilities, and transport improvements basic to NTAE success can have spillover effects in the national-level supply chain. Yet the creation of an

integrated, sustainable total horticulture sector that is globally competitive and benefits Egyptians equitably requires that direct attention be given to the special needs of the more traditional sub-sector. The sheer size of the traditional sub-sector provides an opportunity to reach hundreds of thousands of small and medium-sized holders. Large exporters need additional sources of supply from different production areas. Small producers need additional outlets capable of absorbing volume increases and peak supply, thereby buffering price volatility. It follows that the best long-term growth strategy for the horticultural subsector is to work to expand the domestic and export markets for both fresh and processed products (especially through value-added innovation), while upgrading the quality, safety, and consistency of supply of small, medium-sized, and large operators.

Recommendations

- The evaluation said USAID should continue but broaden its support to Egypt's horticultural sector.
- Interventions should encompass both domestic and export, and traditional, nontraditional, and new product and market opportunities simultaneously. In the NTAE subsector, USAID's assistance should focus on solidifying the success of products already in the system, adding value through innovation, introducing and commercializing new products, incorporating small- and medium-sized holder participation where feasible.
- In the traditional sub-sector, USAID's assistance should focus on developing and delivering appropriate technologies for production and post-harvest handling, using innovative private and public-sector delivery mechanisms, and also on improvements in the domestic distribution and marketing systems.
- For processed horticultural products, emphasis should be given to introducing cultivars and good agricultural practices that are tailored to the needs of process reinforcing supply relationships between contract growers and the processing companies and fostering greater integration between the fresh and processed segments of the industry.

3.9.3 Livestock and Fisheries

Livestock and fisheries together make up 24 percent of value added in the agricultural sector. Production is predominantly on small farms, although there is a modest sized large-scale subsector. Livestock represent about two-thirds of that total and, within livestock, milk and associated meat account for over half of the livestock sub-sector. Women dominate livestock production, and marketing and dairy animals are distributed far more equitably than land.

There is a powerful interaction of livestock and crop production, with substantial area devoted to the principal high-quality roughage, berseem. Rapid growth in livestock will increase the demand for maize as feed. Maize is already an important import. Although a domestic resource cost of one or less indicates a comparative advantage in livestock, particularly on livestock production based on berseem, the levels of efficiency and productivity in the sub-sector are low. There is immense scope to reduce costs of production and increase competitiveness. The private sector marketing and feed distribution channels and facilities are poorly developed, as are the support systems for improving technology development and application.

Livestock and dairy in particular are the number one opportunities in the whole Egyptian economy to have an impact on women's incomes and to develop their entrepreneurial capabilities. There are probably 2 million rural women playing a major role in livestock production. Particularly smallholder dairy production is highly labor intensive.

Recommendations

The team recommends a substantial technical assistance program in smallholder livestock.

The program should cover the full supply chain, with its first priority to the smallholder milk production sector and its associated meat production. Special emphasis should be placed on private sector growth and development in marketing, including chilling plants, and production services from mixed feeds to veterinary services. Given the already dominant role of women in this sub-sector, special effort must be made to enable them to expand their livestock enterprises through access to credit, advisory services, and other mechanisms.

The USAID processed food project has found export potential for specialty dairy products, particularly to the Persian Gulf states. There should be an interaction of that project with this recommended program.

A.10 Four Thousand Tons per Day

SOURCE: Global Development Alliance, Developing Egypt's Agribusiness Industry, Year 3, Period 2 Semi-Annual Report, October 1, 2010 – March 31, 2011. Cooperative Agreement No. 263-A-00-08-00013-00. Submitted to USAID/Egypt by Douglas A. Anderson, Egypt Country Representative, ACDI/VOCA . May 3, 2011

SOURCE: Four Thousand Tons per Day: Developing the Processing Tomato Sector in Egypt. Proposal and Program Description submitted to USAID/Egypt by Carl H. Leonard, President and CEO, ACDI/VOCA in cooperation with the H.J. Heinz Company. Third Revision, October 24, 2007

SOURCE: ACDI/VOCA WHITE PAPER, Expanding Agribusiness Opportunities in Egypt. Integrating Upper Egypt into the Value Chain to Increase Supply and Grow Capacity. Marriott Zamalek, Cairo. May 18th, 2010.

ACDI/VOCA has joined with the H.J. Heinz Company and USAID to form the Alliance for Progress in Egyptian Horticulture, a public-private partnership designed to catalyze the potential for process tomato production and value-added horticulture in Egypt. This \$7 million program, in effect from March 1, 2008, until September 30, 2012, applies a market-driven value chain approach. It invests in the vast but largely unrealized potential of thousands of Upper Egypt's small farmers to meet modern-day market demands for product quality and quantity.

ACDI/VOCA is strengthening horizontal and vertical linkages in the horticultural chain to achieve higher levels of productivity and quality by transferring appropriate technologies and best practices to smallholders; encouraging information flows and partnerships to increase coordination along the horticulture value chain and facilitating development of commercial business service providers in production, post-harvest processing and marketing.

During the 5-year timeframe, the program will build the capacity of 8,000 smallholder farmers to profitably serve as reliable suppliers. This will be accomplished by increasing farmer organization; improving product quality and quantity through extensive training in good agricultural practices and targeted on-farm support; and developing sustainable linkages to the market and support services. Production planning, post-harvest and marketing services will be expanded to include high-value horticulture crops for export, grown in rotation with tomatoes.

The program is funded as a Global Development Alliance, a USAID instrument that brings together public sector, private sector and nongovernmental organizations in support of shared objectives.

Funded by USAID and implemented by ACIDI/VOCA, the project depends on the H.J. Heinz Company and its affiliates to provide technical expertise, training and seasonal purchase contracts for the process tomatoes.

Targeted areas for intervention are Luxor and the governorates of Sohag, Qena and Aswan in Southern Upper Egypt; El Minya and Asyut in Middle Upper Egypt; Beni Suef, Giza and Faiyum governorates in Northern Upper Egypt; and the farms along the Cairo-Alexandria desert road and the Delta in Lower Egypt.

The Four Thousand Tons per Day program is a public-private sector partnership among the H. J. Heinz Company, USA, its 51% owned Egyptian subsidiary Cairo Food Industries (CFI)⁶, USAID and ACIDI/VOCA. The goal of the five-year program is to contribute to sustainable rural development throughout Egypt by enhancing the capacity of smallholder farmers to profitably serve as reliable suppliers of high-value horticulture to processors and other buyers. As the program capitalizes on Heinz's agricultural technologies, priority will be given to developing the cultivation of tomatoes for processing, and to establishing sustainable supplier relationships between Heinz and smallholder growers. That notwithstanding, Heinz's good agricultural practices (GAP) also encourage the cultivation of complementary high-value crops to be marketed to other processors or into high-value domestic or export markets. This will allow for the development of a dynamic value chain, anchored by a strong international conglomerate.

The Four Thousand Tons per Day program will increase the production of processing varieties of tomatoes to 2,000 tons per day by Year 3 and 4,000 tons per day by Year 5, triggering a series of investments by Heinz' local joint venture partner, Americana, in processing facilities and facility upgrades in Egypt. These investments are valued at approximately \$12 million in a span of three years and perhaps three times that amount two years thereafter.

At the level of smallholders, the increased production and sale of tomatoes and high-value rotation crops will increase their income at an average annual rate of \$921 (LE 5,231). The number of smallholder benefiting directly from the project will rise from 4,800 by the third year of the project to over 8,000 at its end two years later.

These results will be achieved through a program of targeted, mutually reinforcing interventions that build production and management capacity of smallholders, the sales/marketing capacity of their buyers, and better service capacity among their suppliers. Most of the project resources will focus on overcoming limitations to crop production, notably poor nursery operations, over-application of agrochemical inputs, inappropriate spacing of plants, insufficient irrigation or poor harvest management. Attention will also be paid to production planning, market intelligence and grower access to credit.

Progress Report

The semi-annual progress report, covering the period October 1, 2010 until March 31, 2011, covers the second half of Year 3 of the Global Development Alliance project. During this time period, which corresponds to the agricultural winter season, project beneficiaries in south Egypt harvested tomatoes and those in the north harvested alternate crops.

The winter 2010/11 season was a particularly challenging one for farmers growing tomatoes in south Egypt, as they grappled with extreme weather, pestilence and revolution. Extreme weather,

⁶ The remaining 49% of Cairo Food Industries is owned by Heinz' local joint venture partner, Americana.

increased proliferation of crop pests, and the introduction of new crop pests are all suggested to be symptomatic of global warming, and the report includes a special section on global warming and how we can expect it to affect agriculture in the future.

Flooding in December inflicted substantial damage to GDA farms in Qena and Luxor. 100 feddans of tomato seedlings were destroyed and the remaining 450 feddans were weakened, rendering them more susceptible to disease. GDA experts gave considerable training and support to farmers in integrated pest management, and particularly with regard to the *Tuta absoluta* pest, commonly known as the South American pin worm, which in the past year has infested all countries of the Mediterranean Basin.

During the eighteen days of the January 25th revolution farmers were unable to obtain necessary pesticides and spray equipment, and they stopped spraying to control *T. absoluta* and other plant diseases. In addition, most farmers were unable to irrigate their farms because they lacked fuel and/or could not travel to their farms. By the time the revolution ended on February 11, average crop yields in Qena and Luxor had fallen to 10 tons per feddan. A total of 59% of the GDA farmers had substantial or complete crop failure due to the combination of bad weather, *T. absoluta* and the revolution, producing from 0.5 to ten tons per feddan. The remaining 41% had an average yield of 16.8 tons. The good news: these farmers earned an average of 11,000 LE per feddan net profit thanks to wholesale market prices that reached 6000LE per ton by the end of April.

Significant achievements during the Year 3 reporting period include:

- Notwithstanding the current political uncertainty in Egypt, the two investors who have been working with the GDA since last year are continuing to push forward. One of them has completed his bridge loan with a local bank and expects to start construction on a tomato and IQF plant in Assiut by the end of May; however, this is contingent upon the local governorate signing the necessary documents. The second investor intends to build a tomato plant in Luxor.
- Nineteen processors have participated in the GDA to date, including twelve tomato processors and seven processors of alternate crops. Tomato processors: CFI-Heinz, P&J, El Ain, Tmaget, El Kenana (sun dried tomatoes), Wadi Foods (sun dried tomatoes), Wadi Factory (Qeft), Nile Fruit Pulp, Special Foods (sun dried tomatoes), VSM (sun dried tomatoes), Hasad Misr (sun dried tomatoes) and Delta. Alternate Crops: ICAPP (cauliflower and okra), Nubaria Factory for Sugar Processing (sugar beet), Royal for Herbs (mint), Galina (Cauliflower), Agrofood (onion), Agrocorp (artichoke) and El Rashidy El Mizan (sesame).
- During the winter 2010/11 season, seventy farmers in Qena and Luxor governorates received loans to cover production costs from the Assiut Businessmen's Association; total value of loans disbursed was 1,299,000LE.
- Despite devastating crop losses caused by *Tuta absoluta* and exacerbated by the January 25th revolution, GDA farmers in Beni Suef earned as much as 6300 LE net income per feddan of tomatoes during the winter 2010/11 season.
- 2135 farmers have participated in the GDA to date, receiving classroom and field training, technical assistance from GDA master trainers and Farmer-to-Farmer consultants, and assistance to expand market opportunities. Another 2300 farmers are counted as indirect beneficiaries: they learned new or improved practices and technologies by attending training and/or field visits, but they were not enrolled in the project.
- The GDA is set to meet if not exceed the targets for Year 3, summer 2011 with 3000 feddans of tomatoes under production in north Egypt, 2300 to 2500 feddans of sesame, 200 feddans of okra and at least 1260 farmers participating.

A.11 Value Chain Training (VCT)

SOURCE: COP Mohamed Samy: MUCIA VCT Project Documentation and Success Stories

The initial project was funded by USAID and implemented by the Midwest Universities Consortium for International Activities (MUCIA) from 2003 to 2007.

The Egyptian higher system is not serving the country's current needs well, and without far-reaching reform it will hold back Egypt's economic and social progress. To build and modernize the nation, the Government of Egypt has driven major reforms in macro-economic policy to attract foreign direct investment, monetary policy including floating the Egyptian pound, taxation reform, trade liberalization including tariff reductions and international trade agreements, and public sector reform including privatization of state-owned enterprises.

The higher education system remains unreconstructed in this context. It continues to produce largely for the economy of the past, and community expectations of it reflect outdated understandings of its role.

There is an imperative for fundamental reform of the Egyptian higher education system. This imperative arises from the combination of emerging pressures and accumulated dysfunctions.

The USAID MUCIA value-chain training (VCT) project is a four-year (2008-2012) transformative educational program that creates a highly skilled workforce to improve Egypt's agricultural competitive advantage and enhance the quality of hundreds of thousands of lives. The VCT includes three major activities: 1) improving classroom instruction through the implementation of active learning, problem solving and communication skills; 2) establishing a Supervised Value Chain Experience (internship/ownership) for ATS students to gain hands-on, practical skills and work experience by working for private sector farms and agri-businesses, and 3) emphasizing agricultural career and occupational development to prepare students for career success, leadership and personal growth.

The VCT project, which began in April 2008, has brought dynamic changes to educational programs in 54 Agricultural Technical Schools (ATSs), serving more than 100,000 students in Upper Egypt and Sinai. During the past 3 years, the VCT Project achieved the following:

1. Ninety administrators and headmasters of ATSs have been introduced to new approaches of managing technical schools, providing more effective teaching-learning environment and identifying skills needed by the private sector firms through observation study tours in the Netherlands, Greece and the US; and in-country training.
2. Over 4,750 ATS teachers and supervisors have been trained in the use of active teaching-learning methods and they have been using these new methods in their classrooms.
3. Classrooms and laboratories have been equipped with 386 computers, 910 overhead projectors (OHPs), 54 LCD projectors and screens at each of the 54 ATSs. Overhead transparencies for 51 technical agriculture courses (120 transparencies/course) are developed and utilized.
4. School farms at selected ATSs are being transformed to provide more practical and hands-on training for these students especially related to export crops, such as grapes, colored peppers and herbs and medicinal plants.
5. Established 28 partnerships with commercial export farms and food factories; and trained 11,700 students in technical and managerial skills through the Supervised Student Internship Programs.

6. Career Development activities provided communication, leadership and personal growth skills to 10,500 students to prepare them for successful career in agriculture.

A.12. Lessons from Selected Previous Projects

SOURCE: EVALUATION OF ATUT ACTIVITY IN EGYPT. Prepared for USAID/Egypt by Donald M. Taylor, Melvin Schnapper, Zebuel C. Jones, Jesse J. McCorry, Mohamed Salem, Manal Karim Checchi/Louis Berger Joint Venture. Contract No. AEP-I-811-00-00022-00, Final Report. August 2002.

A.12.1 Export Markets for Egyptian Horticultural Products

The growth in industry cohesiveness and sophistication and an evolving awareness on the part of government toward the importance of the private sector in decision-making are important developments. Despite significant growth in exports, there remains significant potential for further increases in sales to current markets as well as for entry into new markets.

Another major opportunity for increasing horticultural exports is for organically and naturally grown foods and processed products. Egypt can exploit these markets, especially in new areas that have no history of agricultural chemical application. There is also a growing demand for higher quality foodstuffs in the domestic market, led by five-star hotels, restaurants, fast food chains and supermarkets.

For horticulture, exports of new or non-traditional crops makes up only 5-10 percent of production. Although exports are targeted to grow rapidly, much of the production is unsuitable for export markets so much attention must be devoted to improving quality products delivered to domestic markets.

To develop the horticultural industry to its potential for the export of non-traditional crops and to meet the demands of a growing population in the traditional domestic market, it will require an exceptional level of planning, cooperation and technology.

A.12.1.1 SWOT — EGYPT'S ADVANTAGES

- Egypt has a significant comparative advantage in the production and export of high value horticultural products, based on location, agro-climatic conditions, availability of land, water and market access due to counter-seasonal production.
- The horticultural sector assisted by USAID projects started to translate Egypt's comparative advantage into competitive advantage at farm and the agribusiness level.
- The larger grower-exporters have become relatively sophisticated in production and marketing, and in order to increase their output, they are increasingly willing to help extend knowledge to smaller-scale growers.
- The industry is increasingly cohesive, through the growth of trade associations such as HEIA.
- Horticulture crops are more valuable than other crops and use less water per volume and value of production; this is important given projections of potential shortfalls in water availability during the coming decade.
- There are opportunities to expand horticultural production.

A.12.1.2 SWOT – EGYPT'S CHALLENGES

- Education, research and extension systems fail to meet the needs of the horticultural industries.
- Lack of essential skills at all levels within agribusinesses due to the weak education system.
- Lack of knowledge leads to failure to apply harvest, post-harvest and marketing practices.
- Older lands are subject to high level of infestation from soil borne pests and diseases.

- Insufficient linkages between researchers and producers; lack of practical experience and lack of understanding of producer problems on the part of most researchers and ineffective extension and advisory services.
- Inability to date to sustainably supply advisory services through expatriates, NGOs or associations as an alternative to government extension services.

Governmental Processes must be More Positive

- Onerous customs procedures.
- Slow devolution of commercial decision-making from the government to the private sector.
- Problems in sourcing imported planting materials and other agricultural inputs, including government restrictions on testing of seed and pesticides.
- Lack of strong cooperation between the government and the private sector in Egypt makes it difficult to forge a fruitful partnership in which the capabilities of the two sectors can be exploited for the benefit of both the industry and the nation.
- The lack of cooperation among different government agencies.
- Land tenure problems associated with slow registration leading to inability to use land for collateral.

Lack of Adequate Market Intelligence

- Inadequate post-harvest and marketing facilities.
- Absence of efficient market intelligence/market information systems.

Agricultural Leaders Must Take Responsibility for Major Issues

- Many instances of failure to meet foreign buyers' quality standards.
- Insufficient volume of export quality horticultural commodities available to significantly influence most markets.
- Not enough investment in food processing.
- Lack of organization among small farmers.
- Imbalance in the relative influence between small farmers and traders over costs, price and marketing decisions.

Labor Problems

- Low productivity of Egyptian labor compared with that of competitors.
- Cultural bias against women working after marriage (exists primarily at rural lower socio-economic levels).

Options to Increase Horticulture

- Involve the larger horticulture industry, including fresh exports, food processing, the domestic market and the various support and service industries.
- Incorporate comprehensive measures for productivity improvement and integration of smallholders into the commercial horticultural sector including the export sub-sector.
- Expand provision of technology transfer and technical services.
- Improve production and harvest practices to increase productivity and improve quality by emphasizing post-harvest and marketing techniques and technology.
- Emphasize all phases of marketing and make sure industry is efficiently using information technology.
- Address policy issues involving genetic engineering to improve existing varieties and develop new varieties that will better meet market needs.

- Reduce the delivered cost of Egyptian products to remain competitive. This will have to be accomplished through the adoption of new technologies for production; post-harvest handling; improved transportation; large enough economies of scale; reduced taxes; meeting the market's changing quality needs; and increasing the number of industry participants.

A.12.2 Factors affected by GOE Policies, Regulations, and Actions

Inadequate Post Harvest Facilities

Quality constraints include the lack of adequate post-harvest facilities, including cooling and packing sheds, refrigerated transport, and cold storage. Improvements have been made, as described above for HEIA. Large growers and exporters are establishing their own facilities and acquiring refrigerated trucks. The availability of refrigerated containers has increased significantly in recent years, and regulations have been changed to facilitate their use and movement at Alexandria port. Increased production and export volumes will require more investment in cooling facilities. There is a need to extend these facilities to small and medium-sized holders.

Costly Transportation

The costly transportation issue goes beyond acquisition of additional refrigerated trucks. Roads are often rough, slowing down the speed or reducing the quality of shipments. Expansion of cold storage facilities beyond Cairo and Luxor will be needed to hold perishable cargo awaiting shipment.

Approval of Varieties and Pesticides

Other quality factors include the approval of varieties and use of pesticides. GOE time requirements for the registration of imported varieties, although recently improved, still prevent rapid adoption of improved varieties by growers. More emphasis on plant selection and breeding should take place instead of using foreign varieties, particularly for indigenous herbs, spices and aromatic crops.

Tariffs and Sales Taxes

The principal GOE-imposed cost factors, other than income tax, relate to high tariffs and sales taxes on imported equipment such as refrigerated trucks and cold chain equipment.

Inadequate Technical and Management Skills

Export product growers and exporters need to improve their technical and management skills. They need to learn more about production, handling, shipping, and marketing quality products. All levels of management need to learn and implement effective general management techniques.

Ability for Small and Medium Sized Farmers to Contribute to the Export Market

Previous efforts for export markets have focused mainly on large-sized farmers, but future efforts should offer export markets to small and medium-sized holder farmers. Small and medium-sized holders, especially those who own their own land, spend a much greater portion of their increased income from horticultural export products in their villages than do corporate farms and absentee landlords, who purchase inputs in major cities or directly from foreign suppliers and do not leave the profit from their operations in rural villages. The risk to exporters in using small and medium-sized holders is that emerging quality assurance requirements, such as GLOBALGAP, will prove too costly or risky to justify working with smallholders.

The principal constraints to continued development of Egypt's emerging export sector in non-traditional crops relate to delivered product cost and quality. With total supply from Egypt and other countries increasing and Egypt increasing its market shares, delivered costs, insurance and freight are becoming a significant issue. Increased supply and importer quality requirements also increase the need to produce and deliver product that meets buyer specifications.

Opportunities for Growth in the Domestic Market

Traditional fresh horticultural crops are grown primarily for the domestic market, normally sold in bulk, and have a low export-pricing structure. A strategy to maximize rural income, and hence rural employment generation and poverty alleviation, must focus on products grown by a large numbers of farmers, preferably beyond the subsistence farmer level. Desirable products should have high domestic demand and preferably some export demand to secure higher volume and prices, promote increased quality, and provide outlets for increased production. The crops should be grown primarily by small and medium-sized holders who know how to grow them and sell the product through existing marketing chains; quality is not a major current issue. Target crops should respond to low-tech agronomic improvements; and the technology interventions to be learned and transferred by extension agents must be relatively simple.

The most important traditional crops are tomato, which has the largest harvested area and greatest tonnage production; and potato and orange (including navel, Mandarin, Clementine, and nectarine), which have large cultivated area and production, and established export markets. They are grown in every governorate. Yields are relatively low but can be improved through known low-technology, low-cost changes in cultural practices.

Well Trained Extension Specialists

The farming practices employed for Egypt's principal horticultural crops, grown by hundreds of thousands of small and medium-sized holders principally for domestic demand, can be improved to increase rural income. Costs can be reduced, yields increased, and quality improved through the introduction of low-technology, low-cost techniques. This has not been accomplished for three principal reasons:

- MALR does not have a sufficient number of well-trained horticulture extension advisers;
- MALR does not have horticulture technology packages for extension advisers to deliver to the farmer; and
- NGO efforts to provide horticulture extension are so far under-developed.

Role of the Private Sector in Extension

The success of any extension activity is absolutely dependent on its relation with the private sector and key government agencies to ensure that the technology being transferred effectively meets industry (private sector) needs and at the same time is sustainable on a continuing, long-term basis. The ultimate project goal should be to strengthen HEIA and other industry associations to the point where they can be empowered to substitute for government in playing the pivotal industry development role in addition to meeting their own organizational responsibilities.

In addition to the involvement of the Ministry of Agriculture and Land Reclamation (MALR) extension should develop a broad base of cooperation with all government entities involved in the export sector, such as the various components of the Ministry of Foreign Trade, the Ministry of Transportation and other relevant government agencies.

Most smallholders have not adopted advances in agricultural practices that will lower cost of production and increase yields. Part of the reason for this is lack of financing for capital investments, such as drip irrigation and tunnels, and adequate or improved inputs, such as proper chemicals and certified potato seed. Even low-cost improvements (for example, proper watering, crop rotation, pruning of fruit trees, and reduction in pesticide applications) have not been adopted because the

farmer either does not know about them because of the deficiencies in horticulture extension or cannot afford them.

High Commercial Financing Costs

Commercial financing costs are high—commercial interest rates are 15 percent minimum. Small and medium-sized holders are also constrained by limitations on financing by the Principal Bank for Development and Agricultural Credit (PBDAC) and high rates of interest charged by other suppliers of credit.

Limits on Credit Availability for Smallholders

Credit availability and cost are major constraints faced by smallholders. Farmers who do not have registered title to their farmland cannot obtain the low-cost (7 percent) loans available from PBDAC. Those who do have registered title may be restricted to loan amounts that are insufficient to finance inputs needed for optimal production. Whatever credit cannot be raised from PBDAC or family resources comes from brokers, wholesaler agents, and input suppliers. These sources charge high rates of interest monthly. In addition to the low limits on PBDAC crop loans, there is a limit on the total amount of borrowings a farmer can obtain from PBDAC for farm improvements such as irrigation. For those who have registered title to their land, the maximum allowable is 50 percent of the total expenditure and the interest rate is higher—13-14 percent—than for crop loans. These limitations may make it difficult for qualifying smallholders to purchase new technology that greatly increases yields—for example, drip irrigation, trellising, and row tunnels. Those without registered title to their farmland usually have no source of credit to make such improvements.

Lack of Market Information

Smallholders are also constrained by their lack of market information. Reliable price information about historical and current prices and market conditions is not widely available. Lack of information about last year's crop prevents good planting decisions and choice of trader/wholesaler agent for the following year. Lack of information on current prices weakens the bargaining position of smallholders for farm-gate sales.

ANNEX B STAKEHOLDER MEETING

May 2011, 11:00 – 13:30 hrs, USAID Mission Office in Maadi El Gadida, Egypt

Rationale: According to the Terms of Reference for Egypt Scoping Mission, a meeting was held with the leaders of the producer groups and associations in Upper Egypt.

Objective: To find suitable solutions contributing to keep small-scale farmers in Upper Egypt linked to markets that will increase farm household incomes and improve livelihoods.

Approach: Examine extension and advisory services in Upper Egypt: organizational structure, relationships, services, constraints (i.e., producer groups, associations, NGOs and private sector firms).

Areas of Concern: Crop/Livestock Systems; Agricultural Education & Extension Training; Extension Information & Communication Technology

The most important problems (not prioritized)

ORGANIZATION

- Fragmentation of agricultural land.
- The absence of clear job description for government extension workers at the field level, who are also managing other duties that may conflict with the provision of agricultural advice, such as reporting of illegal construction on agricultural land.
- Unsustainability of NGOs because of lack of ownership of land, livestock, equipment or other assets that could be used as collateral. Associations were allowed to form without such assets because they depended on temporary external funds.

INFORMATION

- Lack of market information for farmers.

TRUST

- A lack of farm confidence in the formal extension caused by a decline in the credibility of the government extension service.

COORDINATION

- Lack of coordination between research organizations and extension and advisory service providers.
- Need to expand support to water user associations in Egypt and to get them to work more closely with MALR extension workers or advisory services from associations.

TRAINING

- Weakness of associations, and especially agricultural cooperatives, in their ability to fulfill their mandate.
- On-site training is an important need expressed by farmers.

FUNDING

- Lack of NGOs in the new lands and a very low ratio of extension workers per farmer -- the figure at the field level is declining because of the government policy not to hire new people due to lack of budget.

- Lack of extension activities at the village level.
- Shortage of sustainable technical support. For example, organic producers who are interested in growing herbs, spices or medicinal plants face a big problem related to plant drying as well as provision of good quality seed varieties.
- Inappropriate selection of an association for financial and technical support is the main problem facing associations. Key prioritized criteria should be elaborated as a prerequisite for selection of associations who merit assistance.

Recommendations (not prioritized)

1. In the past, farmers were told what to grow by the agricultural cooperatives and had to sell their product to the government. Now farmers need a new system. They must produce what sells with input from a functional public and private source of advice, including a market information system that directs them to the best markets or dealers who will buy their products.
2. Develop a system of communication and networking among advisory service providers and village farmers so that they can access high quality inputs and use good agricultural practices to produce a desired high value crop for delivery to a well-identified market or dealer. This would also present the possibility for farmers to consolidate fragmented plots and to aggregate harvested yield so that an adequate supply can be delivered.
3. Rather than starting new institutions or organizations begin with functional existing entities – such as the associations. Another more radical and ambitious example would be to reform agricultural cooperatives. Egyptian agricultural cooperatives are located in every village; possess offices and have an existing legal authority in Egypt. If reformed with appropriate representation the cooperatives could articulate the needs of the farmer/landholders, allowing them to organize and lobby the government to meet its needs.
4. Re-build and strengthen the trust between the farmer and (a) extension service providers, (b) advisory services from associations; (c) input sellers and (d) middlemen; private dealers, and exporters. The government, especially extension workers, should play a regulatory role to help build this renewed trust.
5. Adopt clear and unambiguous job descriptions for extension personnel so that provision of helpful advice is not confounded by conflicting regulatory responsibilities.

ANNEX C DAILY SCHEDULE

Assessment of Agricultural Advisory Services in Upper Egypt, May 3-23, 2011

Date	Purpose	Location	Attendees
Tue, 3 May	USAID guidance	Maadi	J.Irons, S.Christiansen
	ICARDA guidance	Cairo, Giza	F.Karajeh, S.Christiansen
	Livestock issues	Cairo, Giza	V.Alary, A.Swelam, S.Christiansen
Wed, 4 May	Establish Upper Egypt schedule and budget	Cairo, Giza	A.Swelam, S.Christiansen, M.Abaza
Thu, 5 May	Meet Egyptian Consultants Discuss stakeholder meeting	Cairo, Giza	A.Swelam, S.Christiansen M.Abo El Wafa, S.Christiansen
	Interview Director, Technology Management and Commercialization Office		F.Karajeh, S.Christiansen, Eid M.A.Mageed
Fri, 6 May	Update for incoming team members; set up report template and presentation for stakeholder meeting	Cairo, Zamalek	S.Christiansen
Sat, 7 May	Prepare for stakeholder meeting; continue template	Cairo, Giza	S.Christiansen, A.Swelam
Sun, 8 May	Stakeholder meeting	Maadi	Attendees, USAID, ICARDA
Mon, 9 May	One-to-one interviews	Doki, 6 Oct City, Maadi, Maadi Gadida	S.Christiansen with MUCIA, HEIA, CARE and USAID
Tue, 10 May	Preparation for field visit, confirmation of visits	ICARDA, Giza	S.Christiansen, A.Swelam
Wed, 11 May	Field visit interviews	Fayoum	A.Swelam, S.Christiansen
Thu, 12 May	Field visit interviews	Beni Suef	A.Swelam
Fri, 13 May	Field visit interviews	Minya	A.Swelam S.Christiansen
	Writing	Cairo	
Sat, 14 May	Field visit interviews	Minya	A.Swelam S.Christiansen
	Writing	Cairo	
Sun, 15 May	Field visit interviews	Sohag	A.Swelam
	Visit to ACDI/VOCA	Maadi	S.Christiansen
	Visit with Dr Gindy	Cairo	J.Hill

Date	Purpose	Location	Attendees
Mon, 16 May	Fly to Sohag to join field trip visits in progress	Sohag	A.Swelam, S.Christiansen, J.Hill, S.Gasteyer
Tue, 17 May	Field trip visits	Luxor	A.Swelam, S.Christiansen, J.Hill, S.Gasteyer
Wed, 18 May	Field trip visits	Aswan	A.Swelam, S.Christiansen, J.Hill, S.Gasteyer
Thu, 19 May	Field trip visits	Abu Simbel	A.Swelam, S.Christiansen, J.Hill, S.Gasteyer
Fri, 20 May	Field trip visits and return to Cairo	Cairo	A.Swelam, S.Christiansen, J.Hill, S.Gasteyer
Sat, 21 May	Preparation for presentation	Cairo	A.Swelam, S.Christiansen, J.Hill, S.Gasteyer
Sun, 22 May	Presentation at USAID	Maadi	A.Swelam, S.Christiansen, J.Hill, S.Gasteyer, T.Oweis, F.Karajeh
Mon, 23 May	Visit of USAID to Minister of Agriculture, MALR Departure of S.Gasteyer, J.Hill	Cairo	J.Bever, J.Irons, M.Abo El-Wafa, and S.Christiansen
Tue, 24 May	Departure of S.Christiansen	Cairo	

ANNEX D LIST OF CONTACTS

Final schedule of the field visits to Upper Egypt

No.	Category	District	Village	Association	Field of interest	Focal point	Cell/tell	E-mail
Fayoum May 11								
1.	Cat# 2	Fayoum	Kassr Biad	Farmers Development Association (Kassr Biad)	Horticultural production, providing advisory services during the cropping period and making contracts with small farmers, providing seeds with the contracts.	Mr. Gamal Biad	0103433887	
2.	Cat# 2	Fayoum	Manshiat Sakran	Future Youth Association for Organic Farm Development (Manshiat Sakran)	Providing advisory services, information transfer, export of organic products.	Eng. Ahmad Elesh	0148889112	A_h_m1962@yahoo.com
3.	Cat# 1	Sanoures	Khamees	Union of Water Users Associations	Participatory approach in water management, playing various roles in villages, including on-farm and off-farm activities.	Haj. Nawal Khamees	0123288543	
4.	Cat# 1	Sanoures	Khamees	Agricultural Cooperative Association	Slightly active.	Eng. Mosaied Mohamad	0123288543	
5.	Cat# 2	Fayoum	El Mandara	El Mandara Association for Livestock Development	Mixing food stuffs and introducing vet services.	Mr. Ramzy Mohammed Al Sayed	0106646540	0846345175

6.	Cat# 3,4	Fayoum	Fayoum	Fayoum Agro Organic Development Association (FAODA)	HMAPs, organic farming. selling farmer's production to factories (marketing) or exporting farmer's production, financing, providing services i.e. composting field residues.	Eng. Mohamad Medany	0106996244	0846330776 medany@faoda.org www.faoda.org
Beni Suef May 12								
7.	Cat# 1	Beni Suef	Taha El-Besha	Farmer Development Association (Taha El Beisha)	Marketing farmer's production to factories, compost, community services, gender.	Eng. Mustafa Ahmed Abd El Galeel	0102689784	0829225471
8.	Cat# 4	Beni Suef Shark	Biad El-Arab, Industrial Zone	Di-hydro Foods	Food processing, potatoes, onions, HMAPS.	Eng. Sayed Khalil	0106247079	
9.	Cat# 2	Beni Suef Shark	Biad El-Arab, Industrial Zone	Wanis Association for producing and drying HMAPS	Producing and drying HMAPS.	Eng. Wanis Biabawi	0107957889	
10.	Cat# 4	Biba	Kobosh El-Hamra	El-Dalia Import & Export Company	Producing and exporting HMAPS. Providing advisory services, contracting small farmers, production information, marketing information.	Eng. Sami El-Wahsh	0173759977	samy@aldahlia.com
11.	Cat# 1	Beni Suef	Al Hallabia	Al Nour Association for Society and Livestock Development (Al Hallabia)	Mixing feeds and providing vet services; dairy unit.	Haj. Gamal Ragab Hassan	0108528797	

12.	Cat# 4	Beni Suef	Beni Suef	Ridic Association for Aromatic and Medicinal Plants (City)	Loans, conducting its own research, providing advisory services and marketing information.	Dr. Adel Abdel-Aziz	0125445855	0822324520 Hany.fhammad@gmail.com
Minya, May 13								
13.	Cat# 2	Matai	Ezbet Shaker	Farmer Development Association	Producing grapes, marketing, and exporting.	Mr. Hassan El-Foly	0107662524	
14.	Cat# 1	Matai	Ezbet Shaker	Agricultural Cooperatives Association	Agricultural services, (an inactive association).	Eng. Khalaf Mohamad	0124275592	
15.	Cat# 2	Matai	Nazlet Thabet	Al Takwa Association for Society and Livestock Development (Nazlet Thabet)	Animal marketing and providing vet services.	Eng. Rady Aly Abd El Mageed	0120126560	
16.	Cat# 1	Matai	Menbal	Farmer Development Association (Menbal)	Marketing and agricultural services.	Eng. Moez Hassan	0124275592	
17.	Cat# 1	Matai	Abu Haseba	Egyptian Society for Development of Egyptian Villages and Livestock (Abu Haseba)	Marketing and providing vet guidance.	Eng. Rady Aly Abd El Mageed	0120126560	
18.	Cat# 4	Matai	Abu Haseba	Local Trader	Cooling system for potatoes, storage refrigerators.	Eng. Khalaf Mohamad	0124275592	

19.	Cat# 2	Samalout	Baiho	Development Association for Agricultural Society	Selling farmer's production to factories (marketing) or exporting farmer's production, providing advisory services, i.e. reducing crops losses.	Haj. Mohammed Sayed	0100170075	0862322808
Assuit, 14 May								
20.	Cat# 1	Abanob,	El-Hamam	Farmer Development Association	Producing HMAPS. Providing advisory services, contracting small farmers, production information, marketing information.	Mr. Wafiq Samy Gad	0122329678	0882503004
21.	Cat# 1	Sahel-Salem	EL-Afadra	Farmer Development Association	Producing, marketing and exporting pomegranate.	Haj. Esmael Mohamed	0124083448	
22.	Cat# 3	Assuit	Assuit	Assuit University	Meeting with vice-president for community services and environmental affairs.	Prof. Ahmed Geasa	0171000020	0882355253
23.	Cat# 3	Assuit	Assuit	Upper Egypt Rural Development Project (IFAD)	Establishment of marketing associations.	Mr. Mohamad Magdy	0107171945	sfatmaelzhras@yahoo.com
24.	Cat# 2	Manfalout	Naza Karar	Farmer Development Association	Marketing or exporting farmer's production.	Eng. Ahmed Sayed Abd Al Naser	0108772825	0884730977
Assuit, 15 May								
25.	Cat# 3	Assuit	Assuit	Assuit University	Meeting with faculty members at the College of Agriculture.	Prof. Mohamad abdel-Ghani	0103718860	

26.	Cat# 3	Assuit	Assuit	Central Directorate for agricultural extension in Assuit	Meeting with the Director General and extension staff.	Eng. Hassanien Sayed Ahmad	0163757018	0882324559 Hassanien_sayed@yahoo.com
27.	Cat# 3	El-Fath	El-Fath	Food Security Project (ICARDA)	Improving wheat water productivity, raised bed planting methodology.	Eng. Mostafa El-Arief	0108772825	
Sohag, 16 May								
28.	Cat# 1	Tahta	El-Gobirat	Farmer Development Association (El-Gobirat)	Marketing and exporting.	Haj. Aly Omar Soliman	0143807447	0934752225
29.	Cat# 1	Tahta	El-Shiekh Zain Eldin	Farmer Development Association	Community development.	Eng. Mohamed El-Saiyd	0105623297	0934781937
30.	Cat# 3	El-Kawthar	El-Kawthar	College of Agriculture	Meeting with the Dean, Livestock Department and Extension Department.	Prof. Galal El-Sherbini	0144970266 0124933060	Galall2@yahoo.com
31.	Cat# 1	Gerga	El-Berba	Farmer Development Association (Bet-Khallaf)	Marketing, exporting.	Goma Riyad	0109488377	0934200210
32.	Cat# 1	Dar El Salam	Mazata	Farmer Development Association (Mazata)	Selling farmer's production to factories (marketing) or exporting farmer's production, financing, providing social activities, i.e. Haj & Omra.	Haj. Shams Al Deen Ibrahim	0109712704	0934465252

Qena, 17 May								
33.	Cat# 2	Qena	Al-Marashda	Upper Egypt's Future for the Development of Agricultural Society (Al Marashda)	Agricultural services and marketing.	Eng. Arafat Taha	0105194559	
34.	Cat# 1	Qena	El-Mahrosa	Association for farmer Development (El-Mahrosa)	Agricultural services and marketing.	Haj. Ahmad Hamdy Rady	0103874383	0965894174
35.	Cat# 3	Qena	Qena	Upper Egypt Rural Development Project (IFAD)	Establishment of marketing associations.	Eng. Khalid Abdel-Rady	0105792016	
36.	Cat# 1	Keft	El-Kalaa	Association for farmer Development (El-zaferia)	Marketing and exporting.	Haj. Fahem Abd El Rahman	0121150097 0105059728	0966911928; 0966915482
Luxor, 18 May								
37.	Cat# 3,4	Armant	Armant El-Heet	Mostafa Mahmoud Association	Community Development (crop and livestock production, fishery, childhood education, helping poor, etc.).	Mr. Khaled El-Azab	0107574052	0952624825
38.	Cat# 2	Armant	El-Mahameed Bahary	Future Pioneers (El-Mahameed Bahary)	Marketing services, i.e. a machine that is used for cutting hibiscus flowers, providing social activities i.e. mushroom production, family kitchen skills.	Eng. Mustafa Abd El Raheem	0102076902	0952680009

39.	Cat# 2	Esna	El-Neigo Bahary	Farmers Development Association (El-neigo Bahary)	Crop production, and exporting and selling farmer's production to factories (marketing) or exporting farmer's production, services, e.g. composting.	Mr. Aly Fadl-Alla	0102358970	0952560093
Aswan, May 19								
40.	Cat# 1	Edfo	Wadi-Abbady #1	Visit Green Valley Association (Wadi-Abbady #1)	Selling farmer's production to factories (marketing) or exporting farmer's production.	Eng. Ahmad Abbas	0143529350 0143097549	
41	Cat# 1	Kom Ombo	El-Raghama-Sharq	Community Development Association (El-Raghama-Sharq)	Selling farmer's production to factories (marketing) or exporting farmer's production.	Eng. Saad Ahmed Al-Dawi	0104920640 01529104300	0973504750; 0973506036
42	Cat# 3	Kom Ombo	Egleet	Agricultural Development and services Association (Egleet)	Selling farmer's production to factories (marketing) or exporting farmer's production.	Eng. Ahmed Aly Abd-Allah	0105581773	0973593507
43	Cat# 1	Nasr El Nouba	Abou Simbl	Small-scale Farmer and Family Development Association (Abou Simbel)	Selling farmer's production to factories (marketing) or exporting farmer's production.	Eng. Saber Hassan	0126619592	0974610038
Toushka, Abu Simbl, May 20								
44.	Cat# 3	Abu Simbl	Abu Simbl	Research Station, ARC, MALR	Farmers training, technical support, soil & water analysis.	Dr. Yasser Mohamad	0144838462	
45.	Cat# 3	Abu Simbl	Abu Simbl	Extension and advisory Unit, NWRC, MWRI	Farmers training, technical support, soil & water analysis.	Dr. Alaa Sakr	0106252012	a_sakr65@yahoo.com

Summary by Category

Cat#	Category	No. of Assoc. in each Cat. out of 45	Location in upper Egypt		
			north	middle	south
1	Narrowly focused on agricultural services, and largely dependent on continuing donor assistance to deliver services;	18 (40%)	4	9	5
2	Narrowly focused on agricultural services, but have developed mechanisms for delivering services outside of donors;	10 (22%)	4	3	3
3	More broadly defined organizational design – providing a broad-based set of services; including social, educational, gender-based services; with cross-mingling of financing. Financing is almost always delivered through a combination of local and donated capital assets that are leveraged to finance staff, services and expenses.	11 (24%)	1	5	5
4	More broad-based service delivery, but with a more pure business model where each part of the of the service delivery design must be self-sufficient. This virtuous cycle model allows for capacity development and profit centers to experiment with new income-generating ideas.	6 (14%)	4	2	0

List of Contacts from Cairo Interviews

Date	Person Interviewed	Contacts	Tel/email
Tue, 3 May	Veronique.Alary, Socio-Economist, ICARDA-Cairo	15 G, Radwan Ibn Tabib St, Giza, Egypt	v.alary@cgiar.org Tel: 35728099
Thu, 5 May	Eid M.A.Mageed Director, Technology Management and Commercialization Office	ARC, 9 Gamaa St, 12619, Giza, Egypt	meid@idsc.net.eg Cell: 0105854306
Mon, 9 May	Mohamed Samy, Director, MUCIA ATS-VCT	MUCIA ATS-VCT Doki, Cairo, Egypt	Email: samy@muciainc.org Cell: 0101229801
Mon, 9 May	Ahmed El Ariny, HEIA, Title	HEIA, 6 October City	Email: <ariny@mail.heia.org.eg Cell: 0101777411
Mon, 9 May	Samir Sebky, CARE, Director Agriculture and Natural Resources Program	34 St 106, Hadayek El Maadi, P.O.Box 2019, Maadi 11431 Cairo, Egypt	ssedky@egypt.care.org Cell: 0102584841
Sun, 15 May	Doug Anderson, ACIDI/VOCA, Regional Director, and Alexandra Harrison, Managing Director, Alliance for Horticultural Progress	25 Road 10, 1 st Floor, El Mahata Sq, P.O.Box 28, Maadi 11728, Egypt	e.anderson@acdimenta.com a.harrison@acdimenta.com
Mon, 23 May	Aymen Abou Hadid, Minister of Agriculture	MALR, Doki, Cairo, Egypt	ruafah@rusys.eg.net; abouhadid@arc.sci.eg

ANNEX E SCOPE OF WORK

USAID Funded Modernizing Extension and Advisory Services (MEAS) & USAID Funded Water and Livelihood Initiative (WLI) - Egypt Scoping Mission - Revised 5 May 2011 -

Terms of Reference

The primary objective of the proposed scoping mission will be to develop an institutional and programmatic overview of Egypt's advisory services in Upper Egypt. The team will assess the organizational structure, relationships, major activities and services, as well as the primary constraints of the key extension, advisory and technology transfer service providers (i.e., primarily the major producer groups, associations, NGOs and private sector firms that are currently providing advisory services to farmers covered under USAID programs). The expected focus during Phase 1 will be in Upper Egypt where USAID has been active (AERI⁷, Heinz GDA⁸, MUCIA⁹, etc.) in the past decade. If this Mission is successful the USAID Mission has the option of continuing the assessment in key areas of the Delta or to implement recommendations from the work in Upper Egypt.

The overarching goal will be to find ways of keeping small-scale farmers in Upper Egypt linked to markets to increase farm household incomes and livelihoods. The mission is expected to carry out the following activities:

- Meet with the leaders of the producer groups and associations in Upper Egypt. The goal will be to determine how the advisory services can help expand the production and export of high-value crops and livestock products to both domestic and international markets. In particular, the team will assess the current capacity, expertise and resources of the advisory services (e.g. number, gender, educational qualifications), as well as the Subject Matter Specialists (SMSs) in Upper Egypt that are responsible for carrying out extension and advisory service activities. In addition, this scoping mission will determine what these service providers perceive as their primary achievements, as well as their human and financial resource constraints, which may be limiting their institutional capacity to provide improved advisory services to small-scale farm households. In addition, the team will also encourage producer group leaders, and evaluate the potential role for GOE extension staff to propose possible solutions contributing to the resolution of extension problems in Egypt. Also, study the different possible marketing channels options; such as wholesale markets, links to processors and exports.
- Determine the primary focus of each extension service provider. Are the extension providers focusing on increasing the productivity of basic staple food crops, and/or are they also helping men and/or women farmers to diversify/intensify their farming systems by producing high-value horticultural and livestock products to help increase farm income and to improve household nutrition? In short, do local representative farmers play a role in helping set extension priorities (e.g. serving on region or district steering or advisory committees), or just they just receivers of information?
- In addition, the team will focus on e-extension activities: Is there potential of using information and communication technologies (ICTs) to increase the capacity of getting technical and marketing

⁷ Agricultural Exports and Rural Income (AERI)

⁸ Heinz Global Development Alliance (GDA)

⁹ Midwest University Consortium for International Agriculture (MUCIA) agricultural –vocational/technical training

information to farmers, as well as to solicit farmer input and feedback into the system? The mission will determine who is organizing and supporting producer groups and associations for high-value crops, livestock and other products and the extent to which they are accessing information on-line. This is one way of mapping farmers onto new innovations they may want to pursue (i.e. for new high-value crop or livestock systems) and then work together in linking these new “producer groups” to available domestic and international markets?

- Examine role of extension organizations in providing and sharing technical materials Check to see whether the field extension workers, regardless of institutional affiliation, (and farmers) can access the information they need to provide technical assistance to small and marginal farmers. For example, to what extent are the field extension staff trained to organize new producer groups; are the needed technical materials available on-line, so that the field extension workers (and farmers) can use ICT tools (e.g. SMS market information systems, smart phone or other ICT technologies) to access technical, market and other information?

In summary, this assessment will focus on 1) identifying the major gaps within the different extension/advisory service providers, including institutional capacity, human competency and policy limitations and 2) to identify some near- and long-term measures that could increase the effectiveness and sustainability of the different extension service providers. A draft scoping report will be shared with the USAID Mission before the team departs for review and comment. Based on this feedback, a final draft will be completed and submitted to the USAID Mission within 2-3 weeks after completing this scoping mission.

USAID Collaboration

Given the urgent need to supply services to the agricultural sector after the changes in government that took place in Egypt, Burt Swanson, University of Illinois, Urbana-Champaign (UIUC-MEAS Project Director), Gary Alex (USAID-MEAS-AOTR¹⁰) and Scott Christiansen (USAID-WLI-Activity Manager) suggest a joint activity, in service to USAID/Cairo’s agricultural strategy development, to assess agricultural advisory capacity in Egypt, focusing first in Upper Egypt and if all goes well, continuing in the Nile Delta. The collaboration in Phase I (Upper Egypt) would bring together USAID resources already invested in the WLI and MEAS to provide a scoping Mission that will demonstrate the ability of the team to assist.

The Team

Team personnel include the USAID Management Team; team members for the assessment that would be funded under the USAID Public International Organization (PIO) Grant to ICARDA for the WLI; and US University participants that will be funded under the core grant of the USAID Leader with Associates Award (LWA) to MEAS. If the Mission finds the results of the assessment useful they may then interact with MEAS and WLI to provide funding for additional follow-up, i.e. an expansion of the scoping mission to the Delta and/or implementation. The Mission is under no obligation whatsoever to fund any follow-on activities. If they do elect to fund a follow-on activity it would be through the non-competitive PIO grant for WLI and/or the pre-competed LWA mechanism for MEAS:

- *For WLI:* a field support mechanism for CGIAR¹¹ Centers with Eric Witte, BFS;
- *For MEAS:* an Associate Award under the LWA arranged with MEAS AOTR Gary Alex, EGAT

¹⁰ Agreement Officer Technical Representative (AOTR)

¹¹ Consultative Group for International Agricultural Research Centers (CGIAR)

Implementation

Availability of staff: Once the approval to proceed is obtained from USAID/Cairo, the team will confirm availability of staff. It is suggested to start on 1 May with interaction between ICARDA and MEAS to set up the schedule of interviews. MEAS and WLI funded participants would arrive in Egypt for the core portion (11-25 May 2011) of the scoping mission. Prior to arrival, the team will collect and review as much background information as possible, identify specific institutions and individuals to contact, and have appointments set. Fawzi Karajeh (ICARDA-Cairo) and Atef Swelam (ICARDA-Cairo) will compile a list of key contacts and draft the schedule in coordination with Scott Christiansen (USAID/ME/TS-Washington DC) and Mohamed Abo El Wafa (USAID/PSD-Cairo).

Briefing/ in-country validation workshop on Initial Observations and Findings: At the on-set of the scoping mission and prior to their departure, the team will brief USAID/Cairo Mission and others as needed, on the intended plan, observations and findings.

Preliminary Report: A first draft report will be completed before departure. No more than a week following the scoping mission, each team member will forward their revised findings and recommendation to Burt Swanson and Andrea Bohn, who will then prepare and deliver a summary report. Based on the assessment carried out by the team, they will determine which extension and service providers are best suited to serve the needs of target clients, such as limited-resource farmers in specific geographic and technical domains, and will craft a set of recommendations to strengthen the appropriate areas of the system (e.g., managerial, human resources, technical, etc.). These recommendations will be prepared and budgeted in the form of a comprehensive implementation plan, along with the identification of potential pilot activities to test key ideas.

Final Report: Contributions will be received from the entire team but the submission will be the responsibility of Drs. Burt Swanson and Andrea Bohn. The report may be revised based on the outcomes of the validation workshop, if USAID/Cairo agrees to continue the work.

Transition from Phase I to Phase II with a buy in from USAID/Cairo: At this juncture, USAID/Cairo would make a decision on (a) how to move forward with implementation of Phase I recommendations for Upper Egypt and/or (b) continue the scoping exercise in the Delta. Initial sessions will be held with USAID/Cairo to fine tune and implement the recommendations from the Phase I Scoping Mission in Upper Egypt. The findings of the scoping mission along with the draft MEAS investment plan will then be presented in a validation workshop involving all major stakeholders; including the agricultural team at USAID/Cairo, key government officials and other extension service providers who might be engaged in future project implementation. It is critical that key stakeholders, often including national, provincial and local levels of government, be engaged in the review and vetting of recommendations, and stand fully behind them. Identified partner organizations will be asked to make feasible investments and take ownership in helping implement the proposed plan. Ownership will enhance the likelihood that the new extension practices can be scaled-up to the national level in subsequent years, and then be sustained through additional government and donor support.

Roles and Responsibilities in the Scoping Mission

- Assess extension and advisory service provider linkages with research, universities, private sector firms, farmer organizations, NGOs, etc. to determine how these linkages could be strengthened.

Crop/Livestock Systems:

- Explore potential for certification of lands for good agricultural practices and organic agriculture and interest to grow herbs, spices or medicinal plants by crop user groups;
- Analyze key agricultural production factors, such as the changing demand for agricultural products within the country (and for export);
- Determine the degree to which farmers need assistance with staple crops compared to high value crops and livestock products;
- Assess the number/type of producer groups and their linkage with different value-chains and extension providers to assess gaps or potential for expansion;
- Explore how income generated through high value products, including crops and livestock may increase quality through sanitary and phyto-sanitary practices and provide cash for inputs, storage facilities, equipment, veterinary supplies, cold chains, etc.
- Analyze opportunities in the food processing industry.

Agricultural Education & Extension Training:

- Assess the current skills and knowledge of the advisory staff (both technical and process skills), the management skills of extension officials (i.e., top-down or participatory).
- Visit the key universities and/or vocational training schools of agriculture to assess both their capacity to provide needed in-service training for staff that provide advisory services, as well as how students are currently being trained and/or should be trained for positions in the extension and advisory system (public, private, NGO);
- Examine the Institutional Linkage Project experience and its relevance at the current time;
- Analyze specifically the linkages between extension, agricultural education and research in light of the potential commitment by USAID/Cairo to invest in capacity development of Egypt's agriculture education, research and extension system.

Extension Info & Communication Technology:

- Assess the current ICT capacity within the country and among service providers;
- Assess the current knowledge creation and sharing practices;
- Identify how new ICT technologies could help facilitate the extension reform process;
- Consider the potential of making market information more readily available;
- Assess the MISD¹² standardized methodology for possible improvements in accuracy and automation by remote sensing and GIS technology.

Planning and Backstopping Support:

Prior to the team's arrival, they will contribute as full members of the team but in addition will:

- Help collect background information on extension and advisory services in Egypt, including studies on extension in Egypt conducted USAID/Cairo funding;
- Identifying and map institutions, organizations or individuals with whom to meet;
- During the team's stay in Egypt, they will:
 - Confirm visits, accommodations, transportation, meal reservations and adjust as needed
 - Assist with communication (phone, cell phone, internet access)
 - Assist if emergencies arise, e.g., medical or family issues]

¹² Matching of Irrigation Supply and Demand (MISD)

Costs:

Staff costs of involved staff will be covered by USAID, WLI and MEAS. Individuals will cover their own hotel and meal costs and travel to and from Egypt. Within Egypt, ICARDA will provide drivers and vehicles but will charge costs back to participants based on a pro-rated cost recovery formula where everyone will pay their share against a voucher from ICARDA outlining actual charges for drivers, fuel and vehicle use. Printing, photocopies, meeting space and any hospitality costs will be borne by ICARDA-WLI.