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# USAID-*Inma* Agribusiness Program Quarterly Report July-September, 2011

October, 2011

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It was prepared by USAID-*Inma* Agribusiness team for a consortium led by The Louis Berger Group, Inc.

# USAID-*Inma* Agribusiness Program Quarterly Report July-September, 2011

## **DISCLAIMER**

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

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# GENERAL INFORMATION

***This report covers the 16<sup>th</sup> Quarter (Apr - Jun 2011) of the USAID-funded USAID-Inma Agribusiness Program in Iraq. The report provides an update on the planned activities in the Annual Work Plan and on the outputs in the Performance Monitoring Plan (PMP).***

**Program Objective:** The purpose of this contract is to provide agricultural and business development services to USAID beneficiaries in strategic locations in Iraq to promote economic diversification and job generation, with an emphasis on the growth of the agriculture and agribusiness (“agro-food”) sectors in the provincial, regional and sub-regional economies.

**Contract No:** 267-C-00-07-00500-00

**Contract Start Date:** May 14, 2007

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# ACRONYMS

BLF	Beef and Lamb Feedlot
COP	Chief of Party
COTR	USAID Contracting Officer's Technical Representative
DEC	USAID Development Experience Clearinghouse
EFF	Euphrates Fish Farm
FAO	Food and Agriculture Office (of the United Nations)
FAR	Federal Acquisition Regulations
FFS	Farmer Field School
GOI	Government of Iraq
GFA	Geographic Focus Area
IPM	Integrated Pest Management
LOP	Life of Project
LTTA	Long-Term Technical Assistance
M&E	Monitoring and Evaluation
MEFF	Middle East Fish Farm
MFI	Microfinance Institution
MNF-I	Multi-National Force - Iraq
MoA	Memorandum of Agreement
MOA	Ministry of Agriculture
MOE	Ministry of Electricity
MOP	Ministry of Planning
MOU	Memorandum of Understanding
MoWR	Ministry of Water Resources
NGO	Non-Governmental Organization
PDS	Public Distribution System
PMP	Performance Monitoring Plan
PO	Purchase Order
PRT	Provincial Reconstruction Team
RFA	Request for Applications
RFP	Request for Proposals
SME	Small and Medium Enterprises
TA	Technical Assistance
TTA	Targeted Technical Assistance
UK	United Kingdom
US	United States
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government

# EXECUTIVE SUMMARY

The USAID-*Inma* Agribusiness Program focuses on increasing the competitiveness of Iraqi agriculture by demonstrating the potential for profitable, commercial agribusiness enterprises. USAID-*Inma*'s emphasis is on those commodities with the greatest potential to increase employment and gross revenue of farmers and businesses involved in production and marketing. Since the program began, USAID-*Inma* recorded nearly \$120 million in direct sales representing all of USAID-*Inma* programs, and generated nearly 15,000 new jobs for Iraqis. Despite the Ramadan holidays and the extreme summer heat in the country, USAID-*Inma* Program activities generated \$12.12 million in sales and created 17 jobs during the third quarter.

USAID-*Inma* supports two crucial agriculture value chains in Iraq, Livestock-Protein and Horticulture. Through technical assistance with cross-cutting business development assistance, the program goal is to increase productivity, lower production and marketing costs, increase the profitability of agricultural enterprises, and generate rural employment. In each of the value chains, USAID-*Inma* seeks to assist Iraqi enterprises in attaining a critical mass of producers and market channels to convincingly demonstrate high-value private sector business models. Specific USAID-*Inma* activities include field training days, farmer field schools, demonstrations, seminars, roundtables, forums and institutional support to catalyze the adoption of improved production, post-harvest and marketing practices.

Throughout the implementation years, USAID-*Inma*'s value chain approach focused its activities toward Iraq's agricultural industry as a whole. Projects have been designed to address the larger issues related to agribusiness, food security and production, as well as sustainability of those projects to create a viable economic sector for the country. As the program begins its final year and with the maturity of several value chains, a particular emphasis has been placed on engaging Iraqi's marginalized groups to address critical gaps in the agriculture industry. Each of the USAID-*Inma* value chains have developed projects to provide education, employment and entrepreneurial opportunities for Iraqi women, youth and internally displaced populations.

Enhancing the established cooperation with Iraq's Ministry of Agriculture is a priority to institutionalizing USAID-*Inma* training and extension methodologies. Since the beginning of the program, USAID-*Inma* staff have been building strong relationships with ministry officials and working to address government policies to allow the country's agribusiness community to flourish. During the third quarter of this year we continued to address challenges with the ministry as the agriculture industry continues to endorse and implement new technology, varieties and practices introduced through the various USAID-*Inma* programs.

The Livestock-Protein team initiated a sheep breeding project in Ninawa province with widows and orphans which will provide healthy input animals for feedlots and benefit the Iraqi consumer. **In August, USAID-*Inma* provided 200 sheep to the Zanabeq Al-Hakel Women's Association in Qarqosh. In addition, 125 sheep were provided to the Ninawa Monastery Orphanage in July. Field staff members provide technical assistance to both the widows and the orphans regarding breeding, feeding, construction of proper corrals, and management of the animals, as well as selling the sheep to generate revenue for both of the organizations. (Page 6)** USAID-*Inma* began the project to meet a United States congressional mandate to assist religious minorities in the country.



A widow teaches her son about the new lamb born a week earlier at the Al-Hakel Women's Association

The third quarter also brought a number of other successes to the Livestock-Protein team. Early July saw the re-opening of the Iraq Grandparents Feed Mill in Diyala province to meet the huge demand for quality feed in Iraq. USAID-*Inma* provided assistance in the construction and installation of critical equipment to upgrade the feed mill to international standards. The assistance included installation of a new steam separator, the purchasing of raw materials and training the feed mill staff to operate the new equipment safely and efficiently. The team also began new forage trials in southern Iraq to help meet shortages in the region from the previous years due to drought and salinity issues prevalent in the region. USAID-*Inma* field staff selected growers in several southern provinces to participate in the trials. The farmers were provided forage seed in exchange for allowing field staff members to gauge animal production at the end over time. Although the evaluations from the trials are still being calculated, **the Livestock-Protein team reported a 15 percent rise in milk production with a five percent increase in fat content of Gaimer “milk cream” from the water buffalo trials in Muthanna at the end of the quarter. (Page 6)** The Livestock team also initiated a new training program with the Ministry of Agriculture designed to improve extension services to farmers throughout the country.

The Horticulture team also initiated projects involving marginalized groups during the third quarter this year. With a large population of internally displaced persons in Diyala province, the USAID-*Inma* Horticulture team designed a program to help IDPs gain skills for field preparation and tunnel building for Diyala open fields. Delays in starting the training program have come from damaged equipment during shipping to the region. However, those repairs have been made, and the field staff anticipates beginning the program at the start of the fourth quarter. In 2010, USAID-*Inma* also began a number of horticulture and greenhouse trainings specifically for women in Najaf province. During the third quarter, field staff members trained 23 women on the basics of greenhouse management, soil preparation, irrigation and water management, as well as selling their products at local markets. The purpose of this program is to provide a long-term economic skill for the women to help earn an income to provide for their families.

At the end of September, 2011 the Ministry of Agriculture and the USAID-*Inma* Horticulture team initiated a pilot program to register new hybrid corn varieties into the country. The new varieties are being supplied by a U.S. private sector seed company through an agreement with the Mesopotamia Seed Company in Iraq. The new varieties were planted on 10 selected sites measuring four donums each throughout the country, including the southeastern governorates. Data collected from the sites will be evaluated by the Ministry of Agriculture to determine the appropriateness of the varieties, and whether these new varieties will be registered in the county to allow importation of the seeds for future plantings. **USAID-*Inma*'s facilitation of commercial relationships is helping the Mesopotamia Seed Company move from a state-owned enterprise to a private sector enterprise. (Page 18)**

In addition to these new programs, the USAID-*Inma* Horticulture team achieved a number of accomplishments over the past three months. In response to an urgent request from the Ministry of Agriculture, the Horticulture team conducted a nationwide training campaign to help farmers manage the *Tuta Absoluta* insect, which can devastate thousands of acres in a short amount of time. More than 300 pheromone traps were distributed to farmers and greenhouse owners, along with technical materials on the proper pest management information on the pest. **Farmers are also replicating USAID-*Inma*'s strawberry growing program that brought 121,500 new variety strawberry plants to the country in 2010. Orders for new plants grew to 500,000 at the end of the third quarter from new farmers adopting the USAID-*Inma* growing techniques and practices. (Page 14)**

Other accomplishments included the expansion of the Rabee Transplant Nursery, which received technical assistance from USAID-*Inma* for improving production and operations using new growing techniques such as automated seeders and bench systems, which elevate the transplant trays off the floor of the greenhouse and prevent possible soil contamination of the plants. The program also expanded the nursery's market by finding new sales opportunities outside of Baghdad. **New drip irrigation systems were also installed at the Field-Based Learning Centers in Baghdad, Basrah, Diyala, and Babil provinces. (Page 23)**

The new systems are being used as demonstrations for farmers in those provinces to understand the importance of water management and the benefits of the new systems for their crops.

During the previous quarter, the Business Development team began a marketing strategy to assist the Al-Rawassi Widows and Orphans Association in Baghdad, which packages Amber Rice to benefit the organization's job skills program. **Over the past three months, the USAID-Inma marketing team helped open four duty-free shops at Iraq's airports, as well as three diplomatic shops throughout the country's major cities. (Page 26)** Proceeds from the increased sales of the Amber Rice and other products have generated increased revenue for the organization to expand their programs and provide for living expenses for the association members.

USAID-Inma's Business Development program continued to show success in a number of areas. At the start of August, the program's marketing team developed a plan to help boost sales for the Al-Basrah Date Company through the various duty-free shops in the country's airports. With the theme of "Ramadan Kareem", shop employees handed out samples of the date company's product, which in turn helped increase sales to the point where the shops were running out of inventory.

The team also created a marketing campaign with the newly formed Greenhouse Development Association to boost produce sales for the association's 1,500 members for wholesale and retail shops around the country. The campaign features newly designed packaging to keep the produce fresh and help will enhance the overall marketing of the association.



An Iraqi family takes samples of dates from the Al-Basrah Date Company during Ramadan

In an effort to address government policies in a number of industries and practices, the Business Development team has created a number of associations within those industries to consolidate the overall issues of concern to farmers and businesses. For example, one of the major challenges for the aquaculture industry is downstream water management in the Tigris and Euphrates rivers to the central and southern provinces. **On the advice of USAID-Inma, aquaculture representatives from each of the industry's value chain, including hatcheries, farmers, companies and markets agreed to form an umbrella association to discuss issues, such as licensing fish farms and private sector development with the Iraqi government. (Page 26)**

Challenges in the agricultural sector still remain to be addressed as USAID-Inma enters the final year. Introduction of new seed and plant varieties through the Ministry of Agriculture is a constant bureaucratic dilemma. It is still difficult to locate Iraqi-owned businesses specializing in agricultural inputs to purchase reliable farm equipment without importing the products from other countries. The lack of communication between the central government, the provincial government and the individual farmer is an ongoing problem. To address these issues, USAID-Inma serves the role of field-based extension, bridging communication between individual farmers and Ministry of Agriculture extension staff to solve practical problems.

The program is establishing rural service centers, conducting surveys, holding workshops and assessing the essential needs of the farming communities to provide farmers with the equipment and materials they need. This program is as critical as it is challenging to implement for a number of reasons, including the lack of manufacturing of equipment, the shortage of supplies within the country and the past history for Iraq being a centralized economy as compared to a free economy approach. However, as the agriculture industry continues to grow, the availability of these supplies is increasing and USAID-Inma is facilitating new market channels.

On the administrative side, USAID-*Inma* management is expanding the program's information management system to include financial documentation and monitoring and evaluation reports since the beginning of the program. The USAID-*Inma*'s communications strategy is also being expanded to better capture the program's achievements and share lessons learned.

Looking ahead to the fourth quarter, USAID-*Inma* has set a number of goals to address the on-going issues with the program, and reinforce the sustainability of the projects and programs during the final year. To meet these goals, USAID-*Inma* is undertaking a national food balance and food shed assessment. The food shed assessment will cover current production in Iraq and the production potential to meet future consumer demand to achieve food security. The focus will be on commercial food production which contributes to national food security. Moreover the activity will provide baseline information for policy decisions and potential agricultural investment decisions for the Government of Iraq.

# I. LIVESTOCK/PROTEIN VALUE CHAIN

USAID-*Inma*'s Livestock-Protein program met a number of milestones and saw significant successes in all four functional production areas, feedlots, forage, fish and feed during the quarter. The Ramadan holidays during August helped in feedlot marketing with the demand for red meat to meet religious requirements. In addition, alfalfa sales also saw an increase during the past three months with livestock producers. The aquaculture industry completed its hatching season in August, feed labs received new feed grinders and the six USAID-*Inma*-supported feed mills reported an increase in production during the quarter.

## I.1 FEEDLOT PRODUCTION

With the arrival of summer, the Livestock-Protein Team focused on several projects to help increase the sustainability of feedlot production. During the Ramadan holidays, demand for lamb in the country increased significantly, however the intense heat caused a reduction in the daily weight gain of livestock in the feedlots. Feedlot producers needed assistance from USAID-*Inma* technical staff reformulated the rations to improve the weight gain of the animals, which translated to higher production and higher revenue for the feedlot owners.

During the previous quarter, a number of feedlots diversified or transformed their feedlot operations to increase revenues and production. The Blann feedlot in Dahuk and the Alqush and Bartillah feedlots in Ninawa successfully diversified their operations to include sheep feeding. USAID-*Inma*-supported feedlots (Taji and Babil) adopted cattle breeding operations into the overall production program and continued to receive technical assistance in feed formulation, animal procurement and animal husbandry.

While the Ninawa and Dahuk feedlots saw success with their diversifications, the Al-Juboori feedlot in Kirkuk did not see the results when transforming its operations to a micro-dairy. During the second quarter, the Al-Juboori feedlot changed its operations from confined cattle feeding to dairy operations. The transformation did not show the anticipated profit for the financial quarter. In general the Al-Juboori owner did not secure a license for the dairy company, and did not have the necessary equipment required for dairy product manufacturing. Thus, the feedlot owner decided to return to the feeding of cattle in which the facility was originally designed.

One of the program objectives is to continue to provide technical assistance to the confined feeding operations. During the quarter USAID-*Inma* technical advisors conducted an assessment of feedlots to inspect normal wear and tear from daily use. Using this assessment, USAID-*Inma* will provide information to the feedlots on proper maintenance and upgrades to the facilities, such as reconstruction and the addition of new equipment that will be beneficial to production.

### Feedlots Help Increase Supply of Red Meat in Iraq

There is a growing demand for red meat in Iraq.

Cattle and sheep populations declined since the 1990s due to violence, feed shortages and other factors. Subsequently, market prices for red meat in Iraq are more than three times that of poultry.

Moreover, there is an economic advantage in red meat production with the use of forage based feeding systems. To address the red meat issue USAID-*Inma* initiated the establishment of 10 confined feeding facilities for sheep and cattle in several regions of Iraq. The purpose of establishing the new feedlots is to create economic sustainability in the red meat industry to meet the demands of the country for years to come.

The USAID-*Inma* feedlot activity has had a positive impact on the general population through increasing the quantity of meat available to the Iraq market place. By June 2011, production of all feedlots totaled more than 800,000 kilograms, with actual sales of more than \$5 million.

The success of the USAID-*Inma* has spurred other individuals and organizations to develop an independent feeding operation based on the current USAID-*Inma* feedlot model. The replication of USAID-*Inma* feedlots has started in the Hussayniah area of Baghdad.



Construction of the Al-Hussainiya feedlot in Diyala province was completed during the quarter. The company is the first private sector feedlot operation to develop an independent feeding operation based on the USAID-*Inma* program model. The USAID-*Inma* provided technical assistance in facility design, construction monitoring of feeder animals and feed ingredients, health and bio-security protocols, feed formulation, business plan development, record keeping, and operation management training.

**Center for Excellence**

In an effort to establish a more solidified relationship between private sector and the Iraqi government, USAID-*Inma* played a critical role in securing an agreement between the Bartillah Feedlot in Ninawa province and Mosul University during the third quarter. The partnership allows the university to utilize the feedlot as a demonstration operation for university agricultural researchers studying livestock. USAID-*Inma* is working with both the university and the feedlot to help design a masters and doctoral curriculum for graduate students as a practicum requirement.

To ensure the sustainability of the feedlots the livestock-protein team is working in rural communities with widows, youth and internally displaced people to provide a source of feeder lambs and cattle. This rural development strategy is designed to provide an income to the selected beneficiaries, link the groups with the feeding operations in a systems approach for value chain integration. To accomplish the objective women groups, internally displaced populations and youth organizations are targeted. In August, USAID-*Inma* provided 200 sheep to the Zanabeq Al-Hakel Women’s Association and 125 sheep to the Order of Saint Hormizd Monestary orphanage in Ninawa

province. In addition to the livestock, the USAID-*Inma* Livestock-Protein team assisted with the construction of a suitable livestock holding facility and provided technical assistance in basic livestock husbandry and veterinary services. The purpose is to expand the economic base of the sheep breeding industry while providing a sustainable income generating program for the rural communities. Additional benefits include livestock skill development and life skills for the youth which will contribute to future employment and economic benefit.

A major constraint for the livestock industry in Iraq is the lack of forage. More specifically, in the southeastern region of the country, forage can be difficult to grow because of the heavy salinity levels in the soil. Late in July, USAID-*Inma* began a project to find alternative forage for the region. The forage was selected to grow in high saline soils and be highly productive. The forage that met the criteria is new to the region and the producers were uncertain of the benefits to the livestock. To overcome producer concerns a demonstration program was designed. The purpose of the program was to grow the forage and then have local producers feed it directly to cattle, sheep and buffalo. Although the demonstration is still in progress early results have shown the water buffalo consuming the forage had a fifteen percent increase in milk production combined with a five percent increase in milk fat or “Gaimer” concentration.

## 1.1.1 Contribution to Strategic Objectives

Table 1.1: Beef and Lamb Value Chain PMP Indicators and Impact to Date						
Activity I	Beef and Lamb Feedlots					
SO #	SO	This Quarter <sup>1</sup>	Cumulative As of Sept 2010	For 2011 (Oct10-Sept11)	To Date	Goal
8.2.3.1 (BLF)	Sales of local red meat from program-assisted feedlots	\$2,077,464	\$2,228,595	\$5,033,727	\$7,262,322	\$9,300,000
8.2.3.2 (BLF)	Production of red meat by program-assisted commercial feedlots by kilograms per year	293,108	726,606	697,613	1,135,999	1,500,000 kg

## 1.1.2 Activities Implemented July - September 2011

1. The field staff members continue to conduct monthly performance reviews to provide on-going technical assistance and ensure future sustainability. In addition, individual feedlot performance data is collected and analyzed.
2. Market information such as prices for livestock and feed are collected, stores and analyzed.
3. To ensure that each feedlot has adequate feed supplied for the month the technical staff works with the feedlot owners to review the monthly feed requirements.
4. During the quarter the feedlot owners had difficulties with the health of the animals. The cattle yards faced a problem with Foot and Mouth Disease. It was discovered that the vaccine was not the correct serotype. The sheep yards had difficulties with worms and the first medicine used to control the infection was of poor quality. In both instances USAID-*Inma* livestock staff worked with the veterinarians to correct the problem.
5. The livestock team designed and implemented a sheep breeding program with the Ninawa Monetary Orphanage, which included providing 125 sheep, construction of a corral, supplying vaccines, medicines and other veterinary services for the sheep, training on basic livestock management and animal identification tags for record keeping and data collection.
6. The livestock team implemented a sheep breeding program with the Zanabeq Al-Hakel Women's Association, which included providing 200 sheep, construction of a corral, supplying vaccines, medicines and other veterinary services for the sheep, training on basic livestock management and animal identification tags for record keeping and data collection.

## 1.1.3 Challenges Faced

**Challenge:** A continuing challenge for the confined feeding operations is the ability to have a source of healthy feeder animals. Currently there are limited supplies in Iraq and there are no markets which are specialized in providing certified feeder livestock.

**Solution:** Alternatives to purchasing certified livestock in Iraq are being explored, including importing animals from regional sources. However, delivery time could be a factor as the program completes its final year.

**Challenge:** The quality of vaccines and medicines available in Iraq is poor.

<sup>1</sup> All values are actual values and have not been adjusted with any correction factor.

**Solution:** USAID-*Inma* is working with the MOA and with the feedlots to find trusted veterinary pharmaceutical dealers in the region for higher quality vaccines and medicine.

**Challenge:** Dijlat Al-Khair Company in Wasit and Al-Naeem Association in Ninawa both confined feeding facilities were closed and are nonoperational.

**Solution:** The livestock team is evaluating potential paths forward for both facilities. The feedlot in Wasit is not operational due to personal differences between the various partners and work continues to find local partners that could purchase the assets. The problems in Al-Neem are more complex. The feedlot was closed due to security reasons and until the various terrorist groups in that region are brought under control it will be difficult to safely operate a facility that was supported by the US government.

**Challenge:** Livestock in Iraq are normally sold on a per head basis and seldom are the animals weighed. Accurate performance and medication requires the operators to accurately know the actual weight.

**Solution:** The livestock team is working with all feedlot operators to install a scale for accurate measurement. Recently USAID-*Inma* has worked with a Fallujah manufacturer, to design an electronic digital scale for the recently built Al-Hussainiyah feedlot that gives accurate weight measurements, records the measurements and has the capacity to store the weight of the animal in a computerized database.

### 1.1.4 Activities Planned October - December, 2011

1. Ongoing technical assistance in animal nutrition and animal husbandry will continue.
2. The program will continue to target widows, youth and IDPs in livestock programs linked to the feedlots.
3. Ongoing performance monitoring of the feedlots and analysis of the data to plan the future activities will continue.
4. Forage production and storage are two vital components for the operations of forage producers and feedlot owners. USAID-*Inma* will continue to work with the forage producers and feedlot owners to re-assess strategies to increase production and storage to meet operational goals.
5. Continue to monitor feed, forage and livestock prices.
6. The livestock team will continue to demonstrate the importance of forage programs for sustainable livestock production.
7. USDA Extension Service Specialist Justen Smith from Utah State University will arrive in November. Mr. Smith will work train MOA officials, extension staff, USAID-*Inma* beneficiaries and staff in livestock, forage and production techniques.

## 1.2 FORAGE PRODUCTION

As expected the summer months proved to be a season of high production and marketing of alfalfa hay. The large quantity of hay allowed feedlot operators to provide high forage rations to livestock for inexpensive weight gain which resulted in greater quantities of meat for consumers during the Ramadan holidays. In addition, the surpluses are available for winter forage needs of the livestock.

At the beginning of the second quarter, the USAID-*Inma* Livestock-Protein team worked with farmers to plant millet-based forage seed in the central and southeastern regions of the country. The forage was able to withstand the high salinity levels found in the soils and production was excellent. The USAID-*Inma* team selected a number of livestock producers in the regions for feed trials before the harvest to demonstrate the benefit of the new forage crop on livestock productivity. Field staff members are currently conducting evaluations on the forage to check the effects on the water buffalo, dairy cows and sheep for milk production and overall health. Those evaluations will be available during the next quarter.

## 1.2.1 Contribution to Strategic Objectives

Table 1.2: Beef and Lamb Value Chain PMP Indicators and Impact to date						
Activity 2	Forage Industry					
SO #	SO	This Quarter <sup>2</sup>	Cumulative As Of Sept 2010	For 2011 (Oct10-Sept11)	To Date	Goal
8.2.3.4 (FI)	Amount of feed produced per-year by program-assisted feed mills in tons				5,139	
8.2.3.5 (FI)	Sales of program-assisted feed mills	\$60,388	\$1,554,952	\$255,540	\$1,810,492	\$2,125,000

### 1.2.2 Activities Implemented July - September, 2011

1. Weed management in the forage programs continues to be an issue for farmers. USAID-*Inma* continued trainings with forage producers on this subject throughout the country.
2. The livestock team continued to monitor and record forage price and availability. This information is available to the beneficiaries.
3. The forage demonstration program in the southeast included a livestock feeding demonstration to allow producers to understand the nutritional value of the forage as a livestock feed.
4. The USAID-*Inma* Livestock provided technical assistance, including soil preparation, soil testing, irrigation schedules, fertilizer and harvest training to forage producers in southeastern Iraq.

### 1.2.3 Challenges Faced

**Challenge:** The livestock-protein team during the growing cycle discovered that the forage was prone to fungal, bacterial and insect problems.

**Solution:** The producers were trained by the USAID-*Inma* staff on various methods such as irrigation scheduling and the introduction of crop protection products which could be implemented to reduce the spread of the naturally occurring organisms.

**Challenge:** Similar to agricultural producers in other countries and regions the livestock producers expressed concern about the use of different forage in the day to day feeding of livestock.

**Solution:** The livestock team works closely with the rural communities to find early adopters and innovators to accept the feeding of the forage to sheep, water buffalo and cattle. One of the main concerns expressed was due to the potential financial risk associated with the introduction of a new method or feed which would result in either the death of an animal or the reduction in production. A common path forward in this situation is to reduce the risk associated with the adoption of the technology. Thus, USAID-*Inma* provided the feed and labor to the producers to demonstrate the safety and potential of the forage. Since the forage has been used extensively throughout the world there was limited risk associated with mortality and the main risk was due to feed costs. The feeding demonstrations were positive and resulted in improved production. The information is being assimilated and will be available next quarter.

**Challenge:** Although the production of forage during the quarter was excellent there remains a shortage of forage overall for livestock producers.

<sup>2</sup> All values are actual values and have not been adjusted with any correction factor.

**Solution:** The livestock team is addressing the shortage of forage by working directly with existing producers to increase the number of hectares planted and by working with additional producers in other sites to include alfalfa and other forages as a rotation crop with good cash value.

## Activities Planned October - December, 2011

1. To demonstrate the importance of market information and develop a sense of market supply and demand the USAID-*Inma* staff will continue to collect market information to analyze and share with the various associations and producers.
2. USAID-*Inma* Livestock staff members are continuing to locate a proper site for a silage demonstration program. Once the site is selected, the Livestock team hopes to establish the demonstration and implement the program.
3. To meet the needs of the Iraqi consumer demand for red meat, feedlots are requiring more forage. USAID-*Inma* plans to facilitate that the farmers understand the growing demand for forage and expand its cultivation and production. With this objective USAID-*Inma* plans to assist in the establishment of demonstration sites in additional governorates.

## I.3 FISH PRODUCTION

In 2009 the USAID-*Inma* Livestock-Protein team implemented a cross breeding project to produce healthy fingerlings for the Iraqi fish industry. The program imported broodstock from Hungary to produce a productive fingerling which would meet the demands of the Iraqi aquaculture industry plus withstand the harsh environmental conditions of Iraq. Thirty two hatcheries received broodstock and are now producing fingerlings for the market place. However, the MEFF and the EFF hatcheries produced the majority of the fingerlings available to Iraq and monitoring reports indicate that more than 180 million fingerlings were produced by these two hatcheries during the 2011 hatching season. The field staffs are in the process of collecting the number of fingerlings remaining by the other thirty hatcheries. USAID-*Inma* continues to provide hatcheries with technical assistance feed formulation, obtaining government licenses, and training extension agents.

### I.3.1. Contributions to Strategic Objectives

Table I.3: Aquaculture and Feed Value Chain PMP Indicators and Impact to Date						
Activity 3	Fish Production					
SO #	SO	This Quarter <sup>3</sup>	Cumulative As of Sept 2010	From 2011 (Oct10 – Sept11)	To Date	Goal
8.2.3.3 (FP)	Sales of local fish by program-assisted fish farms	\$3,221,381	\$54,584,053	\$12,467,746	\$67,051,799	\$80,000,000

### I.3.2 Activities Implemented July - September, 2011

1. Continued to monitor the sale of imported Hungarian broodstock, crossbred fingerlings, palm fish and market fish produced during the quarter.
2. Provided technical assistance and mentoring of the producers to develop an industry aquaculture association.

<sup>3</sup> All values are actual values and have not been adjusted with any correction factor.

3. Provided technical advice on fish marketing schedules to help increase the amount of fish available to consumers throughout the year, including the slower winter months.
4. Selected four fish producers to participate in a study on mortality rates of fingerlings from hatchings to sales.

### 1.3.3. Challenges Faced

**Challenge:** Lack of reliable aquaculture extension services to provide technical assistance to fish farmers.

**Solution:** USAID-*Inma* is working closely with the Ministry of Agriculture extension field staff to improve aquaculture knowledge that can be transferred to fish producers.

**Challenge:** The demand for fish in Iraq continues to increase

**Solution:** The livestock team continues to seek alternative solutions to production such as the use of fish cages in the river to increase total production.

**Challenge:** The current feed milling equipment in Iraq does not produce a floating pelleting which is preferred in aquaculture production. The pellet floats on the water surface and does not sink to the bottom of the pond which is wasteful in production.

**Solution:** USAID-*Inma* is working with the feed mills to find a solution to produce floating pellets.

### 1.3.4. Activities Planned October – December, 2011

1. The creation of Aquaculture Farm Service Centers has been a priority for the USAID-*Inma* Livestock staff for several quarters. Staff members are continuing to develop an implementation plan for the centers, and hope to begin establish a model center during the fourth quarter this year.
2. The Livestock team is also continuing to work on a contract farming program for large and small aquaculture producers. The contracts will be created between markets and producers for a specific number of fish, which will be grown by the producers to meet the market requirements and then sold for an agreed upon price.
3. Technical assistance to aquaculture producers will continue during the fourth quarter as part of the overall progress of the program. This includes feeding techniques, aeration methods, and water and health quality control. Technical assistance will also include developing marketing strategies to help stabilize prices, as well as increase availability of fish throughout the year.
4. Monitoring monthly market prices is another on-going activity for the program. Fluctuations in price can indicate market trends and give producers more opportunities to sell their product during peak seasons.
5. The USAID-*Inma* Livestock team will continue assistance in the development of a fish producer association.

### Iraq's Fish Industry Revitalized under USAID-*Inma* Program

In 2008, USAID-*Inma* began a partnership with Iraq's largest and best designed hatcheries to help improve carp fingerling production in Iraq. The hatcheries had been operating at less than 20 percent of capacity due to conflict, sanctions and the shortage of water. During the 2007 hatchery season, the hatcheries produced less than 2 million carp fingerlings.

USAID and the Ministry of Agriculture, as well as other organizations, brought improved carp fingerlings from Hungary to Iraq for cross breeding with the native carp species. One of the main benefits was that cross-breeding helped the overall health of the fingerlings. Future production of the carp species will be dependent on the cross breeding program with Hungarian brood stock, which are adapting to the Iraqi waters.

With USAID-*Inma's* support, the farm produced more than 12 million fingerlings over the past several years. Results of the project produced approximately 180 million fingerlings in 2011 compared to the 12 million in 2008 from the local non-cross bred variety.



## I.4 FEED PRODUCTION

The success of the USAID-*Inma* Livestock-Protein program activities is dependent on feed production. Improving the quality of beef, lamb and fish relies on the consumption forage and feed that consists of high levels of protein and vitamins. However, production of high-quality feed is just one aspect of the success of the industry and is essential to the future of the industry. To address the feed challenge the USAID-*Inma* agribusiness program worked with six feed mills to increase the amount of feed in Iraq. All six mills are operating and collectively have produced 34,175 tons of feed in 2011.

Over the past three months, USAID-*Inma* Livestock-Protein staff members worked extensively on providing not only technical assistance for the country's existing feed mills, but also provided new equipment for a number of feed laboratories to monitor the quality of the raw materials used in feed. For example, new feed grinders have been provided to help accurately analyze the nutrient content of raw ingredients to more accurately formulate feed products focused at improving efficiency and production. Prior to the provision of the grinders, feed and forage was prepared using household blenders prior to analysis. This method resulted in poor preparation of the feed sample and feed formulations that were inadequate for efficient production.

### Expanding the Production of High-Quality Feed

In July, the Iraq Grandparents Feed Mill restarted operations after a two-year renovation, thanks to the USAID-*Inma* Livestock-Protein Team. The feed mill, which is located in Diyala Province, will provide a valuable service to the surrounding farming community. The renovated mill is producing high-quality livestock feed, including poultry, cattle and sheep. With the re-opening of the feed mill, it became the fifth feed mill company USAID-*Inma*'s Livestock-Protein team has upgraded to international feed mill standards.

### I.4.1. Contribution to Strategic Objectives

**Table I.4: Feed Value Chain PMP Indicators and Impact to Date**

Table I.4: Feed Value Chain PMP Indicators and Impact to Date						
Activity 4		Protein Feed Mills				
SO #	SO	This Quarter <sup>4</sup>	Cumulative As of Sept 2010	For 2011 (Oct10-Sept11)	To Date	Goal
8.2.3.4 (FM)	Amount of feed produced per year by program-assisted feed mills in tons	10,595	20,509	34,175	54,684	60,000
8.2.3.5 (FM)	Sales of program-assisted enterprises	\$5,488,860	\$9,662,527	\$16,986,477	\$26,649,004	\$30,000,000

### I.4.2. Activities Implemented July - September, 2011

- Protein is an important nutrient for animal production. For ruminant livestock protein levels can be increased using urea. Urea is a nitrogenous compound that is widely used in agronomy. Demonstrations were undertaken to demonstrate the feasibility of using urea in ruminant feed formulations.

<sup>4</sup> All values are actual values and have not been adjusted with any correction factor.

2. USAID-*Inma* staff continued to monitor production and sales of the feed mills as one of the on-going activities for the program. Feed market prices are also continually monitored for specific market trends by the Livestock staff.
3. The Livestock staff worked with feed mill operators to provide assistance in purchasing raw materials for feed to match the various seasonal needs of livestock producers.
4. Feed grinders were provided to the feed analysis laboratories during the quarter.

### 1.4.3. Challenges Faced

**Challenge:** Feed mill operators have high production costs when dependent on electricity produced by generators.

**Solution:** Feed mill operations can implement activities based around electricity availability from the grid.

**Challenge:** The high prices of imported raw materials results in higher feed costs

**Solution:** To reduce feed costs the mill operators need to utilize alternative feeds in ration formulation. In addition, the mill operators with the assistance of the livestock team need to train livestock producers in basic nutrition and how to properly evaluate feeds.

**Challenge:** Existing recipient record keeping and financial recording are sometimes incomplete, making it difficult to evaluate sales and costs.

**Solution:** USAID-*Inma* staff will continue to work with the livestock projects management teams to ensure simplified, effective financial and book-keeping methods are being followed. In addition, simple ledgers are being developed for beneficiaries.

### 1.4.4. Activities Planned October - December, 2011

1. After a number of delays over the past two quarters, the USAID-*Inma* Livestock team will begin feed demonstrations with water buffalo. The delays ranged from problems with feed formulation to both field staff and potential beneficiaries not understanding the purpose of the feed demonstrations. In addition, there was no baseline information concerning milk production available. The baseline production information will be recorded and production will begin in November.
2. The team will continue to provide technical assistance to improve the in feed formulations.
3. Feedmill operators will be linked with the feed analysis laboratories to analyze raw ingredients to more accurately formulate feeds for the various classes of livestock.
4. With the use of a consultant the team will help the feedmill owners develop and implement a feed tag system which will provide useful analytical information concerning the feed to the livestock producers.
5. The Livestock team will also continue to monitor monthly production and market prices of feed from the program assisted feed mills.
6. The Livestock team will continue to provide the feedmill management with trainings, including record keeping, financial analysis, inventory planning and personnel management as part of the on-going program.

## 2. HORTICULTURE VALUE CHAIN

A number of horticulture projects produced great results during the quarter. USAID-*Inma* Horticulture staff members worked diligently to meet the overall goals of the program. New trainings for farmers were established to help understand a variety of issues, including water and pest management, new equipment was acquired for plantings and harvesting open fields, new techniques were introduced for greenhouses and nurseries to improve the quality of production and new markets were opened to help farmers boost annual revenues. For example, USAID-*Inma* Horticulture staff is working with potato farmers to develop cold storage units that will allow them to take advantages of higher product prices at later times during the year.

A major accomplishments during the quarter involved management of the *Tuta Absoluta* pest and the cooperation between the MOA and USAID-*Inma* to address the problem. The MOA officials approached USAID-*Inma* to help farmers manage the growing threat of the pest. USAID-*Inma* Horticulture staff members responded to the request by conducting seminars and demonstrations throughout the country at the USAID-*Inma* Field-Based Learning Centers and Farmer Field Schools to educate farmers.. In addition as part of the educational process, the Horticulture team distributed hundreds of pheromone traps to greenhouses and open field farms over the past three months in an effort to help farmers control the pest, which can devastate entire crops in a short amount of time. The use of pheromone traps is only a portion of a more aggressive integrated pest management system that is environmentally friendly and simple to implement.

The Horticulture team continued to work with the MOA to introduce new varieties of corn to Iraq. Introducing new seed varieties is a complicated process in Iraq and is time limiting since the normal approval process can take a minimum of two years. . The MOA would only allow Government of Iraq certified seeds to be used. Many of the current varieties available to Iraqi producers are older varieties that are genetically inferior to newer varieties. However, during the quarter, the MOA agreed to allow four non GMO certified corn varieties to be planted as a pilot project with USAID-*Inma*. If the introduced varieties are superior to existing varieties found in Iraq, the MOA will allow the seed to be certified after one year. Normally the MOA requires that varieties be tested for two years before certification and registration. The introduction of new varieties will enhance crop production in Iraq and assist in the country to become more food secure.

Success also came through the greenhouse and nursery program. In Baghdad, Mr. Subhi Omran, owner of the Rabee Transplant Nursery, grew a successful transplant business for Baghdad farmers over a number of years. In 2009, Mr. Omran partnered with USAID-*Inma* to help expand his business nationwide. The Horticulture team provided assistance to the business by constructing a new, larger greenhouse, for the nursery, trained nursery employees in record keeping and using automated seeders and other technology while assisting in the establishment of a bank account. In September, Rabee Nursery made their first delivery outside of Baghdad transporting 200 flats of cabbage and cauliflower to the USAID-*Inma* Field-Based Learning Center in Basrah. Deliveries to other provinces followed over the next several weeks.

### **Replicating Success with Strawberries**

During the third quarter, the USAID-*Inma* Horticulture team discovered that replication of a 2010 strawberry project had grown significantly. During 2009, USAID-*Inma* began a program introducing high technology California production techniques and varieties to Iraq, which imported 121,500 new strawberry plants to the country. Nine farmers were selected for the initial growing trials, but only two followed all of the USAID-*Inma* recommendations, and saw success. From those two farmers an estimated 30 additional farmers replicated the USAID-*Inma* model. During September this year, farmers order 500,000 additional strawberry plants.

## 2.1 FARMER FIELD SCHOOLS

The USAID-*Inma* lead Farmer Field Schools combines methods from agroecology, community/rural development and experiential education. There are five aspects used throughout Farmer Field Schools, including adult education, facilitation, plant/animal life cycles, group study and farmer group development. The schools address research, education/extension, marketing and advocacy.

Farmer Field Schools enhance the abilities of farmers to fully understand the issues they may face in agricultural production and methods for overcoming them. By providing farmers experiential learning (hands-on) opportunities in the field, farmers gain a greater understanding of alternative solutions. These activities involve simple experiments, regular field observations and group analysis. The knowledge gained from these activities enables participants to make their own locally-specific decisions about crop and livestock management practices. It is important to mention that all Ministry of Agriculture extension and other local agricultural personnel attend and participate in the various Farmer Field Schools around the country.

During this past quarter, the USAID-*Inma* field staff conducted 43 Farmer Field Schools on a variety of topics, including greenhouse management, irrigation, ventilation, weeding, and pest management, identification of disease, infections and symptoms, as well as prevention. Participation at the trainings averaged approximately 25 attendees per site. Complete attendance for the third quarter totaled 658 farmers (624 male 34 female). Training and technical assistance focused on a newly arrived insect pest (*Tuta Absoluta*) –tomato stem borer, which has had devastating effects on solanaceous crops throughout the country.

During the past year, USAID-*Inma* established eight Field Based Learning Centers. All of the Field-Based Learning Centers (FBLC) are operational, and demonstrated a number of new plantings. For example, the spring potato crop was completed during the quarter at one Field-Based Learning Center and soils were prepared for fall planting. Two passive potato storage units, 25-ton capacity each, have been designed and are being built in the Ninawa area. The storage unit will demonstrate a low cost method of storing potatoes to allow farmers to capture a higher price for the product by selling when the supply is lower in the market as compared to harvest time. In addition, associations responsible for six FBLCs have received 50 horsepower tractors and soil preparation equipment. Each FBLC is managed by an association of producers and the development objective is to provide the necessary tools to ensure rural income sustainability.

One Field-Based Learning Center was planted with winter crops, such as cabbage and cauliflower, using transplants from newly established greenhouse transplant nurseries. Six Field-Based Learning Centers have been planted with corn (under an agreement with the Ministry of Agriculture to trial new hybrid corn varieties for potential registration) and have been prepared for planting with transplants at the appropriate planting times during the fourth quarter this year. Legumaceous crop rotation occurred at an additional Field-Based Learning Center following summer crops.

## 2.2 GREENHOUSE CROPS

Greenhouse production of vegetables can be an important contributor to rural development. The USAID-*Inma* team identified out-of-season production in tunnels and hoop houses as an opportunity for farmers to improve incomes in the short-medium term. The greenhouse technical assistance program that was initiated early in 2010 has continued in selected demonstration sites and expanded into the southeast provinces. The activities are closely linked to the FFS and FBLCs discussed above.

### 2.2.1. Contribution to Strategic Objectives

Table 2.2: Fruit and Vegetable Value Chain PMP Indicators and Impact to Date						
Activity I	Greenhouse Crops					
SO #	SO	This Quarter <sup>5</sup>	Cumulative As of Sept 2010	For 2011 (Oct10-Sept11)	To Date	Goal
8.2.2.1(GH)	Sales of targeted annual vegetables and fruit in program assisted areas	0	\$23,442	\$87,631	\$111,073	\$150,000

### 2.2.2. Activities Implemented July –September 2011

1. USAID-*Inma* field staff installed three multi-span transplant greenhouses in the Rabee district of Baghdad and in the Suwera district in Wassit. The nurseries were planted with cabbage and cauliflower so that seedling would be ready for the fall season starting in September. Approximately 800,000 plants of each species were planted.
2. Solarization was completed in 300 greenhouses in preparation for planting. As part of the technical assistance and demonstration program the USAID-*Inma* staff delivered rolls of plastic sheeting to greenhouse managers to demonstrate the use of the solar heat to kill fungi, insects and reduce the microbiological soil challenges.
3. Production data gathered under the Greenhouse targeted technical assistance program was analyzed and indicated that the production of over 600 trained farmers who operate more than 4,500 greenhouses reached a total of 6,500 tons of vegetables (cucumbers, tomatoes, eggplants, peppers).
4. Across the country, growers received two days of intensive training focused on improving major crops such as tomatoes, cucumbers, eggplant, and peppers. In addition, these same growers received biweekly targeted technical assistance from private extension staff throughout the production season on improving management techniques, diagnosing problems, and devising solutions. USAID-*Inma* staff conducted post-training surveys with the farmers and the results indicate a high level of customer satisfaction with the trainings.
5. Greenhouse targeted technical assistance was completed for more 175 farmers in the southeastern provinces of Dhi Qar, Maysan, Muthanna, and Basrah. There are more than 225 greenhouses located in the region which collectively produce approximately 300 tons of vegetables monthly during the cropping season. Growers received two days of intensive training focused on improving major crops such as tomatoes, cucumbers, eggplant, and peppers. Topics included effective control of *Tuta absoluta*, solarization, pre-planting, and weed and disease control.
6. In Najaf, USAID-*Inma* implemented a program in 2010 targeting women farmers for specific greenhouse training. The training is designed to show the women farmers the basic skills in

<sup>5</sup> All values are actual values and have not been adjusted with any correction factor.

greenhouse management such as soil preparation, irrigation, fertilization and planting. Since the beginning of the program more than 147 women have been trained. During the quarter, 23 women were trained on greenhouse management techniques. The trainings are designed such that women learn the skill sets necessary for managing greenhouses, marketing produce and establishing a sustainable income.

### 2.2.3. Challenges Faced

**Challenge:** *Tuta absoluta* continues to have a devastating effect on greenhouses and open field solanaceous crops.

**Solution:** The USAID-*Inma* staff participated in an international symposium aimed at addressing the increasing spread of *Tuta absoluta* throughout the Middle East and North Africa and impacting Iraq crops. USAID-*Inma* staff trained 23 Ministry of Agriculture technical staff (including 7 female staff) on the pest's control and discussed possible policy changes that were deemed effective in other effected regions that could slow the spread of the pest and minimized its economic impact in Iraq. USAID-*Inma* is continuing a series of seminars to bring this information to farmers. USAID-*Inma* distributed more than 300 *Tuta absoluta* pheromone traps trained greenhouse and open field growers and Ministry of Agriculture extension staff in addition to the fact sheets on effective methods of pest control. Additional *Tuta absoluta* pheromone traps have been procured and will be distributed in time to minimize the insects' effect on crops this fall on the demonstrations and adjacent farms.

### 2.2.4. Activities Planned October-December, 2011

1. The USAID-*Inma* Horticulture team will be providing pre-planting targeted technical assistance to more than 600 greenhouse owners with total of 4,500 greenhouses to ensure that the optimal pre-planting techniques are performed in a timely and correct manner.
2. Targeted technical assistance will continue for additional greenhouse operators throughout Iraq. The goal is to reach an additional 5000 greenhouses.
3. In conjunction with USAID-*Inma* communication department, the Horticulture team will develop training videos on a number of critical crop management, pest management and marketing techniques. The videos will be distributed to the MOA and private sector agriculture extension staff, as well as farmer associations. The training videos will reflect USAID-*Inma* produced fact sheets and crop production manuals.
4. In addition, USAID-*Inma* field staff will continue assisting the greenhouse owners to minimize the impact of the devastating pest by demonstrating the efficiency of the use of the pheromone-trapping materials in the greenhouses.
5. In cooperation with the USAID-*Inma* Business Development team, *Inma* horticulture staff will provide technical support to 156 members of the Bazian Greenhouse Association, operating more than 300 greenhouses in northern Iraq.
6. The Horticulture staff will also provide training and support for grafted vegetable transplant production for the three newly established transplant nurseries.
7. A transplant nursery in Sulaymania is being planned.

## 2.3 OPEN FIELD CROPS

The Open Field Crop activity provides technical assistance in the production of strawberries, melon, tomatoes, and a variety of vegetables including potato, okra, cauliflower, onions, peppers, eggplant, cucumber, and corn. Beneficiaries receive advanced practical (hands-on) training in irrigation, planting and equipment maintenance. In addition, assistance is provided with harvesting, post-harvest packaging, and sales of the open field crops.

A program between USAID-*Inma* and the MOA was implemented during the quarter to register four nongenetically modified organism hybrid corn varieties in the country. To meet the registration requirements, eight, four-donum sites were planted with the varieties provided by a private sector company (Pioneer, a DuPont company) based in the United States, throughout Iraq, including the south east provinces. Six of the selected sites including the FBLC facilities are located in Basrah, Babil, Diwaniyah, Diyala, Muthanna, and Ninewah. Two additional 4-donum sites as required by the MOA, were selected in Kirkuk and Salah ad Din provinces. The Crop data to be collected from these demonstration sites will allow the MOA and the Mesopotamia Seed Company to evaluate the appropriateness of these varieties for planting in Iraq. If these varieties are deemed appropriate for Iraq conditions, the resulting data will be used to expedite the registration process of these new varieties with the MOA allowing further importation and sale of these corn varieties in Iraq. Currently there are business discussions between the Mesopotamia Seed Company and Pioneer on the importation and sales of these varieties

### 2.3.1. Contributions to Strategic Objectives

<b>Table 2.3: Fruit and Vegetable Value Chain PMP Indicators and Impact to Date</b>						
<b>Activity 2</b>		<b>Open Field Crops</b>				
<b>SO #</b>	<b>SO</b>	<b>This Quarter<sup>6</sup></b>	<b>Cumulative As of Sept 2010</b>	<b>For 2011 (Oct10-Sept11)</b>	<b>To Date</b>	<b>Goal</b>
<b>8.2.2.1(OF)</b>	<b>Sales of targeted annual vegetables and fruit in program assisted areas</b>	<b>\$203,027</b>	<b>\$14,684,748</b>	<b>\$471,196</b>	<b>\$15,155,944</b>	<b>\$13,925,000</b>

### 2.3.2. Activities implemented July –September, 2011

1. The team focused on irrigation management and post-harvest technology training to local farmers at each of the FBLCs participating in the MOA/USAID-*Inma* corn trials.
2. To demonstrate viable crop rotation systems beans and alfalfa was grown in the USAID-*Inma* FBLCs.
3. To demonstrate modern ground preparation methods, six 50-horsepower four wheel drive tractors were delivered to six FBLCs along with the basic soil preparation equipment including subsoilers, spring tooth harrows, culti-packers and fertilizer spreading equipment. This advanced suite of soil preparation equipment was used to prepare the field sites for corn trials.
4. As part of the technology transfer program twenty-four two-wheeled tractors were received and delivered to the FBLCs and demonstration greenhouse sites. Farmers were trained on safety and maintenance of the two-wheel tractors. The two-wheel tractors are used for finish soil preparation for corn and other crops at the FBLCs and to prepare soil for solarization in the greenhouse demonstration sites.

<sup>6</sup> All values are actual values and have not been adjusted with any correction factor.

### 2.3.3. Challenges Faced

**Challenge:** The storage of locally produced and properly matured potato seed is difficult and expensive. Potato seed with some variation in variety has its greatest vigor and productivity about 80 to 120 days after it is harvested. Seed currently produced in Iraq in the spring is well past its prime when planted again in the late fall or early winter.

**Solution:** Short term passive (underground) storage of potato seed produced during the fall in the northern regions could be effective approach keeping the seed healthy for spring planting in the southern and central regions of the country. USAID-*Inma* has supported developing passive (underground) potato storage facilities in the north, as soil temperatures in the central and southern provinces are too high to properly store potatoes in Iraq's short mild winters.

**Challenge:** Management of the water supply at the Abu Ghraib Field-Based Learning Center has been unpredictable and unreliable for a constant water supply.

**Solution:** In cooperation with the Horticulture Department at Baghdad University, USAID-*Inma* irrigation staff designed a water holding pond to be installed during the fourth quarter.

### 2.3.4. Activities Planned October –December 2011

1. During the fourth quarter, the USAID-*Inma* Horticulture Team will be expanding last quarter's extension training program, which began in Sulaymaniyah province training Ministry of Agriculture Extension staff. USAID-*Inma* will include Ministry of Agriculture extension agents in Erbil during the final quarter of the year.
2. Working with the USAID-*Inma* communications department, the Horticulture team will be producing training videos on a number of critical crop management, integrated pest management and marketing techniques. The final videos will be distributed to the Ministry of Agriculture, private sector agribusinesses, agricultural extension agents, farmer associations and others. The training videos will reflect the USAID-*Inma* produced fact sheets and crop production manuals.
3. USAID-*Inma* staff, as well as Ministry of Agriculture officials will be attending the international *Tuta Absoluta* conference in Morocco in November.
4. USAID-*Inma* staff will organize additional seminars and field days at the Field-Based Learning Centers, in conjunction with the Ministry of Agriculture and private sector agricultural supply dealers, to train farmers and farm store operators on best practices to control the *Tuta Absoluta* pest infestation. Branded *Tuta Absoluta* fact sheets will be distributed to 2,000 farmers through USAID-*Inma*'s Farmer Field Schools, the Field-Based Learning Centers, and through greenhouse technical assistance subcontractors. Additional Pheromone-trapping materials will be provided to greenhouses and the Field-Based Learning Centers to minimize the impact of the devastating pest.
5. Quarterly field demonstration days will be held for orchards and vineyards planted in 2009 through 2010 to disseminate lessons learned to a majority of orchard and vineyard recipients and Ministry of Agriculture extension staff.
6. Finalize passive potato storage facilities in Ninawah province, training operators in preparation of potato for proper winter storage.
7. In meeting the focus of USAID-*Inma* with marginalized groups in the country, the Horticulture team plans to continue the training of internally Displaced Persons in Diyala province in use of PRT provided plastic mulch and low tunnel machinery and provide technical assistance on proper irrigation, transplanting and crop management techniques.

## 2.4 ORCHARDS, VINES AND OLIVES

### Orchards

Early in 2010, the USAID-*Inma* Agribusiness Program distributed more than 126,000 stone fruit trees (apricot, plum, peach and nectarine). The trees were planted in 113 sites over approximately 700 donums in twelve provinces. As part of the on-going technical assistance program seventeen demonstration sites were selected for the installation of drip irrigation systems. In addition, two FFS trainings were held in Diyala and Salah ad Din provinces for 17 orchard farmers. The original plan was to fence the orchards to limit access by roaming livestock. As designed the program would furnish the material for the fencing and the farmer would install the fence. Although the fencing material was purchased the farmers failed to install and construct the fences.

Next quarter, the USAID-*Inma* team plans to conduct quarterly field demonstration days for orchards and vineyard farmers to discuss lessons learned with MOA extension staff in the selected provinces.

USAID-*Inma* is ensuring the future support to the beneficiaries by training the MOA extension staff and mentor farmers on a quarterly basis on orchard management through the field days.

### Vineyards

In early 2010, the USAID-*Inma* program imported nearly 28,000 grapevines from the United States and added an additional 5,600 Iraqi-produced grapevines for a new vineyard project. USAID-*Inma* then gave 2,400 imported vines to the Ministry of Agriculture and distributed the remaining grapevines to 14 farmers in four different provinces around the country. The provinces included farmers in Salah ad Din who planted 40 donums, another 40 donums in Najaf, nine donums in the Taji district of Baghdad, an additional three donum at Abu Graib, and three more donums in Diyala province. USAID-*Inma* field staff worked with the farmers to provide technical assistance with soil preparation, planting techniques, pest management and pruning.

Throughout the year, the grapevine survival rates of USAID-*Inma* supervised plantings exceeded expectations despite recent reports cited that the loss of Iraqi-produced grapevines totaled 25 percent.

During the fourth quarter, USAID-*Inma* staff will be conducting field demonstration days with the vineyard recipients and Ministry of Agriculture extension staff in those areas. Discussion will focus on second year pruning and pest management.

It will still be another year or two before the grapevines begin producing at commercial quantities. USAID-*Inma* is ensuring the future support to the beneficiaries by training the MOA extension staff and lead farmers on a quarterly basis on vineyards and orchards management through the field days.

In addition, efforts continue to provide a trellising demonstration program on selected vineyard sites. The original technical assistant program called for the installation of trellises and fencing of the vineyards. The program was modified and the farmers were provided the material, however, the trellises and fences were not built. To overcome the negative view by the producers it was planned to have the program install the trellises and fences, however, the cost was excessive and it was decided to revise program again. Currently a proposal is under consideration to provide trellises and fences in small number of selected sites.

### Olives

Olive groves in northern Iraq are concentrated in the Bashiqa area of the Ninawa Plain where the trees have been grown for over 500 years. Currently, 450,000 trees of various ages are producing roughly 25-42 kilograms of olives per tree per year. Most of the production in Bashiqa is used for table olives, which are currently processed individually by members of the Al-Zaytoon olive association. The association, with more than 200 members, approached USAID-*Inma* with the objective of establishing an olive oil industry. USAID-

*Inma* has supported the association with funding and TA to improve the pressing operation and quality of olives produced in the region.

Although the third quarter this year is the off season for olives and olive oil production on going technical assistance has been provided to the association on irrigation, general tree management. Plans were initiated for technical assistance from a short term olive specialist. Efforts continued to link the association with various markets for olive oil within the country. The association continues to receive technical assistance in association development and management. Production will begin during the fourth quarter.

### 2.4.1. Contribution to Strategic Objectives

Table 2.4: Fruit and Vegetable Value Chain PMP Indicators and Impact to Date						
Activity I	Fruit Orchards					
SO #	SO	This Quarter <sup>7</sup>	Cumulative As of Sept 2010	For 2011 (Oct10-Sept11)	To Date	Goal
8.2.1.1(OV)	Sales of perennial products including forage in program assisted areas	\$67,503	\$1,865,793	\$272,038	\$2,137,831	\$2,500,000

### 2.4.2. Activities Implemented July –September, 2011

1. Drip irrigations system installation was completed during the quarter for fourteen orchard and vineyard demonstration sites around the country.
2. In general, activities for orchards and vineyards are limited during the summer months. However, USAID-*Inma* staff provided trainings and technical assistance on pest management to farmers during the quarter.

### 2.4.3. Challenges Faced

**Challenge:** Hygiene and cleanliness at processing facilities, such as the Al-Zaytoon Olive Association, is an important issue for improving the quality of the products they are producing. Often times, workers have left remnants of olives in the equipment overnight or longer and did not clean the equipment after each processing.

**Solution:** USAID-*Inma* has made arrangements for olive oil expert Paul Vossen, of Paul Vossen Ag Consulting and current University of California Cooperative Extension - Farm Advisor, to return to Iraq during the fourth quarter to assist the Al-Zaytoon Association develop a plan to improve the cleanliness of the operations, and therefore improve the quality of the products.

**Challenge:** Farmers are hesitating to adopt the production technologies being promoted by the USAID-*Inma* program.

**Solution:** The programs were designed to identify producers that would be classified as innovators which would enhance to rate of adoption. However, the reluctance of the farmers to adopt certain technologies may indicate that the identification process may not have been implemented properly. The program has to continue to demonstrate the economic and productive benefit to the various technologies improvements. In addition, efforts need to continue to provide technical training to the MOA staff understand new technologies.

<sup>7</sup> All values are actual values and have not been adjusted with any correction factor.

**Challenge:** The installation and implementation of the vineyard trellising demonstration.  
**Solution:** The program was designed to include a trellising demonstration for the vineyard operators. The new trellis technology was to demonstrate how to trellis vines so that production could be mechanized. The producers were aware of an older method of trellising that result in a canopy environment that is not conducive to mechanization. The program issued a request for quotations to have the vineyards trellised. Due to the excessive costs of the quotations it was first decided not to proceed. It was then decided to find a less expensive alternative for the trellises. With the assistance of the engineering team a set of specifications were develop and material purchased. The installation started however, the subcontractor did not follow the recommended instructions and the trellises collapsed. The USAID-*Inma* staff then discussed another alternative which was to reissue the request for quotations. The quotes were received during the summer months and again the amount was excessive. It was then decided to only trellis one donum per vineyard site. The quotation for the installation of the one donum trellis site is in progress and the award is expected to be issued during the next quarter.

#### 2.4.4. Activities Planned July-September, 2011

1. USAID-*Inma* Horticulture staff will be conducting a series of fall field days for farmers emphasizing trainings in pruning, pest management, irrigation and other activities related to the fall season for the management of the grapevines and orchards.
2. USAID-*Inma* staff will continue to provide technical assistance in production, maintenance and operations for the Al-Zaytoon Olive Association in Ninawa province.

## 2.5 POST PRODUCTION, PACKING HOUSE AND SPECIALTY CROPS

In 2009, the USAID-*Inma* Agribusiness Program under the direction of various PRT individuals designed a program to establish packing houses. Efforts in the last year have been undertaken to link with producers near the packing houses to stimulate rural development and provide an on-going source of product to the packing houses. Packing houses in Fallujah, Karbala, Radhwaniyah, and Taji are operational, and Rabeea packing house has been closed since mid-year. There are a number of reasons for the lack of activity in Rabeea, first the owner is not dedicated to the program and second the location of the facility is not well suited for the industry. Currently the owner is in the process of converting the building into a furniture factory. The owner has been linked with potential buyers for the packing equipment. Currently the final audits are being implemented to close out the project. All packing houses have been completed and grant money disbursed. USAID-*Inma* is still in the process of closing out the packing shed project and the final engineering reports are being prepared for submission.

### 2.5.1. Contribution to Strategic Objectives

Table 2.5: Fruit and Vegetable Value Chain PMP Indicators and Impact to Date						
Activity 4	Packing Houses					
SO #	SO	This Quarter <sup>8</sup>	Cumulative as of Sept 2010	For 2011 (Oct10-Sept11)	To Date	Goal
8.2.2.1(PH)	Sales of targeted annual vegetables and fruit in program assisted areas	\$1,058,663	\$7,915,307	\$5,175,482	\$13,090,789	\$13,925,000

<sup>8</sup> All values are actual values and have not been adjusted with any correction factor.

## 2.5.2 Activities Implemented April - June, 2011

1. USAID-*Inma* continues to develop export opportunities to open new markets in the region for producers. Discussions with U.A.E. and several Balkan countries have been initiated and USAID-*Inma* staff members are working to finalize agreements.
2. USAID-*Inma* is continuing support for pomegranate growers in the Halabdjia region of Sulaymaniyah. It is expected that the first fruits will be exported in the final quarter of 2011.
3. The USAID-*Inma* staff and packing shed internal staff training continued in Good Agricultural Practices.
4. USAID-*Inma* staff has continued to monitor production output and collect monthly sales and volume information.
5. USAID-*Inma* has continued to provide on-going technical assistance and training to the operators.

## 2.5.3. Challenges Faced

**Challenge:** Maintaining a year-round supply of fresh vegetables and other source materials is an issue that hampers the ability of the packing houses to continue to stay open throughout each growing season.

**Solution:** As the horticulture programs continue to progress, more and more greenhouse operators and others are producing materials year round. USAID-*Inma* is working with those greenhouses to link them to the packing houses to continue the packing operations

**Challenge:** Post-harvest care of the materials produced between the growers and the packing houses is also a problem. Much of the produced materials are damaged due to inadequate packing for transportation.

**Solution:** The USAID-*Inma* marketing department, working with the program's horticulture program, is developing new boxes for producers that will ensure that their products arrive at the packing houses without damage.

## 2.5.4. Activities Planned October - December, 2011

1. The USAID-*Inma* staff will continue to collect market prices and product volumes and provide the information to associations and various technical groups.
2. The technical staff will continue to provide on-going technical assistance to the operators and packing house personnel in personnel hygiene, supply chain sanitation and transport.
3. The technical staff will continue to provide technical assistance in packaging and transport of product from the field to the consumer.
4. The USAID-*Inma* staff will continue to plan and implement a simple rural development center strategy to ensure the delivery of inputs to farmers and the potential for consolidation of farmer products.
5. The USAID-*Inma* staff will provide training and technical assistance to associations and farmer groups in budgeting and various association issues.
6. The technical staff will continue to provide targeted technical assistance in marketing and development of linkages with various retail markets within Iraq.

## 2.6 IRRIGATION

USAID-*Inma*'s Irrigation Team provides technical assistance to farmers involved within the horticulture value chain program, including orchards and vineyards, row crops, vegetables and greenhouses aimed at improving their current water management conditions, as well as training *Inma*'s staff, public sector officials and farmers. These activities in the field promote irrigation practices, such as saving water or using water more efficiently at the on-farm level.

## 2.6.1 Activities Implemented July - September, 2011

1. During the third quarter, drip irrigation systems were installed in the eight orchard demonstration areas, including two systems in Babil, one system in Wasit, one system in Yousfiyah district of Baghdad, one system in Erbil, two systems in Dohuk and one system in Sulaymaniyah. The irrigation team provided a technical training following the installation that covered how to properly monitor and operate the systems.
2. Two irrigation FFSS were conducted one in the Diyalah FBLC related to corn irrigation and the other in the Abu Ghraib FBLC related to the cabbage irrigation. In addition, the irrigation team worked with the orchard and vineyard demonstration sites on a continuous basis and provided technical assistance to the beneficiary farmers.
3. The technical program in Diyalah resulted in recommendations about furrow lengths, furrows discharges and irrigation times. Irrigation charts showing the irrigation frequencies and timings were distributed to farmers and the provided information was adjusted using watermark sensors installed at 20 cm and 40 cm depth.
4. As part of the ongoing technical assistance to producers, drip irrigation systems along with plastic mulch and soil moisture content monitoring devices were installed for cabbage transplants in the FBLCs in Diyala, Basrah governates and Abu Ghraib district in Baghdad. The remaining FBLCs will be equipped during the next quarter. The new irrigation systems are part of the USAID-*Inma* horticulture program to demonstrate to open field farmers the benefits of advanced irrigation technology. The demonstrations include a comparison to traditional irrigation methods to fully demonstrate the advantages to technology adoption.
5. Immediately after the drip systems were installed and tested, farmers gathered at the Baghdad, Diyala and Basrah FBLCs to learn and understand how to operate the new system. Simple drip irrigation time charts were also provided to farmers to help explain the importance of irrigation scheduling and the different methods used for irrigation scheduling.
6. In addition, new drip irrigation systems were installed at FBLCs in Muthanna, Babil and Ninawa.

The updated activities carried out by the irrigation team in the Field-Based Learning Centers are shown in the following table:

FBLC location	Activities				
	Basic information: (topography, soil and water sampling, infiltration test)	Furrows advance test	Irrigation systems design	Crop development	Irrigation Systems Procurement
Samawa	Finalized	Finalized	Finalized	Cucumber	In process
				Corn	In process
				Alfalfa	In process
Basra	Finalized	Finalized	Finalized	Cabbage	Installed
				Corn	In process
				Alfalfa	In process
Babil <sup>9</sup>	Finalized	Finalized	Finalized	Cabbage	In process
				Corn	In process
				Alfalfa	In process
Diwaniyah	Finalized	Finalized	Finalized	Corn	In process
				Alfalfa	In process

<sup>9</sup> Field base Learning Centers in Babil and Diyalah replaces the ones in Anbar and Wasit

Diyalah	Finalized	Finalized	Finalized	Cabbage	Installed
				Corn	In process
				Alfalfa	In process
Abu Ghraib	Finalized	Finalized	Finalized	Cabbage	Installed
				Corn	In process
				Alfalfa	In process
Ninewa	Finalized	Finalized	Finalized	Cabbage	In process
				Corn	In process
				Alfalfa	In process
Suleymaniyah <sup>10</sup>	Finalized	Finalized	Finalized		

7. In Samawah, cucumbers were planted on four donums using a temporary drip irrigation system. Furthermore water mark devices along with a drip irrigation time chart were delivered by USAID-*Inma*. Daily irrigations were adjusted as a result of conducted water mark lectures. For the next season, green beans will be planted in the FBLC and a new drip system will be installed.
8. The irrigation team is implementing the Water Management Pilot Area (60 donums) located in the Shehamiyah Water User Association (WUA) area, targeted at providing technical assistance to farmers and members of the WUA to improve current water management conditions (1,500 farmers). Siphons and flumes have already been delivered into the area and the basic information as topography, soil and water has already been prepared. During the next quarter the area will be leveled and an automatic weather station will be installed. A Rapid Intervention Program for analyzing the distribution network and on-farm irrigation needs and developing management strategies will also be part of the activities in the Al Shehamiyah Water Users Association area.
9. The drip irrigation systems for the two five-donum olive demonstration areas in Baashiqa district in Ninawa are in the procurement process.

## 2.6.2 Challenges Faced

**Challenge:** High salinity levels in the soil and water in the central, southern and southeastern provinces.

**Solution:** Provide technical assistance and training to farmers and MOA on the use of more efficient irrigation systems and methodologies. Furthermore, implement programs that allow producers and MOA staff to witness the benefits of the technologies and methodologies. More specifically, will implement irrigation demonstration programs planned for the various FFS and FBLCs and other locations in the central and southern provinces.

**Challenge:** Farmers are not consistently attending FFFs.

**Solution:** There may be two approaches to addressing the problem. First there appears to be a mindset with rural communities that if you attend a US Government function then you are entitled to a payment and second the training may not be properly targeted for the audience. The first challenge is being addressed by developing programs and targeting beneficiaries that requires a commitment from the individual. The second challenge is being addressed by taking a more participatory approach by understanding the farmer needs prior to the implementation of the program.

**Challenge:** The appearance of low adoption rates by farmers.

**Solution:** The goal is to understand what the adoption process is and how to adopt training and technical assistant programs to achieve high and rapid adoption rates. In general, adoption rates by agricultural societies are slow at best and often time development programs forget that time is a critical component of adoption rates. Adoption of new technology in agriculture is slow in general. Producers are generally risk adverse and the

<sup>10</sup> This Field base Learning Center is in evaluation.

adoption of a new technology could be a financial risk to the producer. Thus, demonstrations have to continue over multiple years and be innovative in methodologies for adoption. Since agriculture is subject to multiple factors producers want to minimize the risk of crop or harvest failure. New technologies and genetic material must be proven before a producer will take the risk of accepting the technology. Often times there may only be one production cycle per year. One innovative method that has been undertaken with the USAID-*Inma* program is to have small demonstration areas in which the proposed technologies are compared to conventional methods.

### 2.6.3 Activities Planned October - December, 2011

1. To demonstrate more efficient irrigation techniques for alfalfa and wheat, lay-flat pipe and sprinkler systems will be installed in the FBLCs followed by technical training of the farmers and MOA staff.
2. The technical staff will provide association and technical training to the Al Shehamiyah Water Users Association.
3. The USAID-*Inma* technical staff will implement the Rapid Intervention Program in the Water Management Pilot Area within the Al Shehamiyah Water Users Association area.
4. The technical staff will demonstrate new drip irrigation systems in the olive demonstration areas in Ninawa.

## 3. BUSINESS DEVELOPMENT AND CROSS-CUTTING SERVICES

The last quarter of 2011 brought about a number of accomplishments for USAID-*Inma*'s Business Development/Cross-Cutting Services team. With the goal of creating business and marketing opportunities for Iraqi enterprises and agribusinesses, the business development team found success in opening new markets for USAID-*Inma*-supported agricultural products. Part of the success involved developing new associations for related agricultural businesses to work together in address issues regarding their industries. Another success came with a new promotional strategy for Basrah Dates, a USAID-*Inma*-supported product that increased sales for the company to new levels.

### 3.1 BUSINESS ASSISTANCE

USAID-*Inma* management assistance is provided in the areas of financial management, operational management and business planning. This focused assistance gives companies competence to manage financial resources, develop procedures, policies and systems to effectively conduct business on a day-to-day basis while controlling costs and understanding how to make market decisions based on available market information. These tools allow agribusinesses to respond to competitive conditions and prepare for future growth.

#### 3.1.1. Activities Implemented July - September, 2011

1. USAID-*Inma* staff conducted two seminars during this quarter targeting growers and agronomists not supported by USAID-*Inma*. The seminars included a Forage Feed Use seminar in Kirkuk with individual sheep growers to improve feed practices and support development of a forage market in Kirkuk province.
2. The other seminar focused on business management with a group of agronomists from Erbil that provided the participants with basic management tools to plan new agribusinesses in the region.
3. USAID-*Inma* supported the Qaraqush poultry growers through an Industry Roundtable to demonstrate growers the advantages of working together, solve problems confronting them and consolidate markets.
4. As a follow-up to the Fifth Aquaculture Value Chain Roundtable, which was held in Babil province on June 27, key actors in the aquaculture value chain met a second time in Babil on September 20, to analyze the establishment of an umbrella or industry association. USAID-*Inma* representatives at the meeting reaffirmed the program's commitment and support to the fish industry, and its pledge to establish a national association.
5. Following the success of the first opening in Baghdad early March 2011, USAID-*Inma* secured a business market with

#### Basrah Dates Sees Rise in Sales During the Third Quarter

The Al Basrah Dates Company is starting to realize that success is as sweet as the dates they produce.

As a result of the high quality date products, trendy packaging and an extensive market penetration through the assistance of the USAID-*Inma* marketing team, sales for Al Basrah Dates Company have risen more than 265 percent since January 2011.

Al Basrah Dates Company was founded in the 1970s by Haj Ayob Yaakoob with a workforce of more than 60 employees and the use of traditional packaging production methods.

Following decades of wars in the country, the production slowed to nearly at a standstill and most of the employees were unfortunately let go.

In January 2011, USAID-*Inma* invited Al Basrah Date Management to take part in an intensive revamp by helping them to create a branding campaign for the products and to propel and differentiate their products from local and imported dates suppliers. New packaging art work was created, specific varieties of dates were selected to optimize customer taste and address specific new retail markets demands.



the second largest operator of Duty Free Shops in Iraq, based in the Kurdistan Regional Government. Four new outlets were added to the portfolio, including two diplomatic shops in Erbil, and one on the Iraqi/Turkish border at Zakhos. An initial stock purchase of \$7,500 was made by the Duty Free Shop management for the USAID-*Inma* assisted date packers, the widows association for rice and the Al-Zaytoon olive oil association.

6. The Kurdish Ministry of Health granted a license for solid food items, excluding liquids (olive oil, honey). USAID-*Inma* is currently working closely with the Duty Free Shops management and the Ministry of Health to have the ban lifted in order to promote sales of regional olive oil and honey.
7. Through the holy month of Ramadan, USAID-*Inma* launched a sales promotion giving away date samples throughout the duty free outlets in a number of the country's international airports, including Baghdad and Zakhos. The date samples given to travellers were donated by Basra Dates. USAID-*Inma* supported the date company through the packing design and promotional banners stressing the spirit of the holiday season.
8. The Al- Rawasi Widows and Orphan association packed honey jars in four, six and nine ounce jars, which had a high demand through Ramadan and got substantial returns. In addition, Al Basra Dates increased their overall sales through the inclusion of the product at the Majidi Mall in Erbil. Orders through the Ramadan holiday totaled more than \$10,000. Better packaging, achieved with *Inma*'s support, has attracted an impressive rise in sales and interest from other retailers such as Carrefour, which is scheduled to open in Erbil in late 2011, as well as wholesale grocers from Mosul.
9. The Business Development staff also developed a number of new market opportunities for the products supported by the USAID-*Inma* program. Those include:

i. **Nahreem Souk**

Alyasra Food Company, a Kuwaiti-based multinational company contacted USAID-*Inma* requested assistance in identifying quality fruit and vegetable suppliers for their chain of "Nahreem Souk" convenience stores in Baghdad are now getting supplies of dates from Basrah Dates and are in the final negotiation to work with two of USAID-*Inma* sponsored packing houses Karbala & Radwanyia.

ii. **New Majidi Mall (CCM) – at Turkish border, Zakhos**

The business development staff is working closely with the management of Majidi Mall in Zakhos to link agribusinesses supported by USAID-*Inma* to supply fruits, vegetables and protein products.

iii. **Niche Export Opportunities**

An early objective for the USAID-*Inma* Agribusiness program was to increase the sales of dates. As the program progressed it was discovered that the date industry was highly controlled by government policy of Iraq and that progress with the date industry was going to be limited. However, attempts were made to link individuals from the date industry with potential export markets. The Al Bogari Group in Dubai was provided a sample of dates from the business development staff earlier this year. After receiving the sample the group expressed an interest in potentially working with Al Basra Dates Company. During the quarter, Al Bogari's logistical manager traveled to Basra to visit the packing house facilities and discussed business terms with the Basra Dates owners. The company is now waiting for an export license from the Ministry of Trade.

iv. **New Packaging Concept**

USAID-*Inma* is assisting the nascent Greenhouse Development Association based in Sulaymanya province with new packing design and grading of their cucumber production for its 136 members to use for their premium production to reach selected customers.

### 3.1.2. Challenges Faced

**Challenge:** Staff turnover has been an issue for the Business Development team. Entering the last year of the program, a number of staff has finished their work, which has created a loss of momentum for the remaining year

**Solution:** USAID-*Inma* administration officials have hired a long-term business development specialist and are in the process of hiring two other specialists to complete the project

**Challenge:** The adoption rate for Iraqi agribusinesses to embrace accepted and proven models of modern business practices remains an issue for the business development team.

**Solution:** USAID-*Inma* continues to work with the businesses through demonstration, seminars and other activities to help change the business climate and culture in the country.

### 3.1.3 Activities Planned October - December, 2011

1. During the fourth quarter, the USAID-*Inma* Business Development team will be assisting firms in analysis of actual results versus planning and development of appropriate strategic responses to issues, which is a shift in priority for the team. Specific direct assistance during this quarter will include greenhouse management, producer groups, rural service centers, forage production enterprises, confined feeding operations and water buffalo production enterprises. Activities with these groups will include roundtables, workshops, on-site technical assistance and management seminars.
2. The Business Development team will also continue supporting the pledge from the various fish industry-related organizations to consolidate a national association representing all actors in the aquaculture value chain.
3. Staff members will also follow up with producer groups that emerge from technical assistance, roundtables and seminars to assist them in branding their product with quality product and linking them to new market opportunities.
4. As part of the on-going activities, the team will continue working with packing houses to bridge two critical gaps: contract growing and market linkages.
5. Demonstration days with farmers, pack house owners & wholesalers to promote long-term commercial benefit for all parties are also being planned for the fourth quarter.
6. The “Market Map” of retailers throughout Iraq, which will coordinate further sales and overcome logistics constraints will also be completed during the winter months.
7. The Business Development team also plans on introducing three new products and packing to Duty Free Shops, including Kucharatt Tea from Diwaniya, pomegranate syrup from Kurdistan and date syrup from Karbala.
8. Another activity will be organizing a demonstration packing of 15 metric tons of fresh cucumber specially graded and packed in fancy carton boxes for trial market diversification through selected wholesalers and retailers around Iraq.
9. Finally, USAID-*Inma* has secured a booth at the Agrofood Fair in Erbil from November 21 to 24. The booth will promote USAID-*Inma*'s beneficiaries and the accomplishments of the program. It will also allow all assisted growers, associations and firms to showcase their products and services to potential new customers.

## 3.2 ASSOCIATION DEVELOPMENT

Aside from production, Iraqi vegetable farmers are in a very weak position in the horticulture value chain with wholesalers controlling both downstream and upstream activities. Farmers tend to negotiate the sale of their produce individually and their offer is limited in terms quantity, variety and quality and therefore cannot compete on price.

To improve producer's position on the supply side of the horticultural value chain, USAID-*Inma* has supported the establishment of ten producers' associations in Iraq. It is expected that by participating in sustainable associations, farmers could utilize their collective power in the market to become price setters instead of price takers, establishing a business model for other producers groups to follow.

### 5.2.1. Activities Implemented July - September, 2011

1. Twice during the third quarter, the USAID-*Inma* Business Development team visited the Central Euphrates Farmers Market (CEFM) installations and conducted meetings with officials to create potential interventions to strengthen and empower the four associations participating at CEFM.
2. The nascent Greenhouse Development Association (GDA), based in Sulaymaniyah province, claims 135 members in the Bazian area where – according to Ministry of Agriculture – there are 1,575 greenhouses, 1,424 of which produce cucumbers exclusively. Yields per annum average 10 metric tons with an estimated farm-gate price of 300ID per kilogram. After two visits during July and August, an agreement was reached with the GDA to start a support program during the fourth quarter.
3. The Sardam Association, based in Dashty Hawler district, adjacent to Erbil, claims fewer members than the GDA. Its importance for USAID-*Inma* lies in the fact that the district has more than 500 greenhouses which have been set-up by USAID-*Inma* under three greenhouse clusters to receive greenhouse management support. Working with the Sardam Association enhances USAID-*Inma*'s chances to influence almost 500 greenhouses.
4. USAID-*Inma*'s Business Development team also contacted the head of the Council of Pomegranate Growers in Halabja district in Sulaymaniyah province to analyze USAID-*Inma*'s support for the establishment of a pomegranate marketing association.

### 3.2.2 Challenges Faced

**Challenges:** Many Iraqi agricultural associations were created under a top-down approach as benefit organizations to receive grants or donations. Many are also organized along family or tribal lines. In the process, very few of them were empowered or have members who have a stake at their ownership.

**Solution:** USAID-*Inma* clearly stated it would not work with associations or producers' groups willing to help themselves. Using the Participatory Rural Assessment (PRA) methodology and techniques, it has helped the associations analyze the problems and constraints facing them and to come up with solutions to those problems.

**Challenge:** As a consequence of the preceding challenge – associations being created as benefit organizations to receive grants or donations – many associations expect donors or development partners to identify their problems, come up with solutions and the financial and technical resources needed to implement the solutions to their problems.

**Solution:** USAID-*Inma* has managed to break this circle by negotiating with each association to support a conditional clause for its support. Under the clause, associations have to pay for 60 percent of the value they receive from USAID-*Inma*, be it financial or technical, and use those resources to capitalize themselves. Those resources will only be used in activities that further the association aims in agreement with USAID-*Inma*.

### 3.2.3. Activities Planned October – December, 2011

1. The USAID-*Inma* Business Development team is planning an Association Assessment Survey, which will include 146 associations from nine provinces to be assessed to analyze adoption

and implementation of new management tools. The assessment will also include a survey of USAID-*Inma* support to associations since its inception in Iraq in 2007.

2. Trainings by the Business Development team will also continue during the fourth quarter. The training schedule includes the Greenhouse Development Association in Sulaymaniyah and the Sardam Association in Erbil. The program involves training association members in packing shed management, a demonstration in packing, and set-up of a provisional packing shed. The team will also include trainings for Ministry of Agriculture Extension Agents in service delivery.
3. Other trainings are also scheduled for the Central Euphrates Farmers Market, the Ard Al-Baraqa Association, the Noor Al-Hyat Association, the Al-Reef Association, and the Al-Waha Association in Babil province.

## 4. ADMINISTRATION AND OPERATIONS

Managing the activities and administration of the USAID-*Inma* program and the value chain methodology requires efficient planning and implementation. During the third quarter, the USAID-*Inma* Administrative Team addressed a number of issues to improve efficiency and performance through a variety of new and revised processes to meet all federal and corporate regulations.

During the quarter, several activities and changes were implemented to assist the value chain teams in accomplishing their activities while meeting the contractual obligations to USAID.

### 4.1 Activities Implemented July – September 2011

1. The USAID-*Inma* administration began regular quarterly meetings with the field staff to discuss call reports, travel plans and expense issues.
2. Internal trainings have been created and are being implemented to provide all of the Baghdad and field staff members with new techniques, equipment and guidance on the latest technology to improve their overall performance.
3. One of the main priorities for the administration was the hiring of a new communications specialist for the program who can capture the accomplishments of the projects, and build a solid media foundation for disseminating information internally and externally. In addition, a new senior business development specialist was also hired to fill the gaps created from the departure of a number of senior specialists who left the program earlier this quarter.
4. USAID-*Inma* human resources rewrote job descriptions and job titles for each of the program's employees and new contracts were signed to ensure the program is staffed for the final year.
5. Administrative officials are continuing to refine the program's methodology by tracking the path of the work and documenting the outcomes and the impact of the USAID-*Inma* projects.

### 4.2 Challenges Faced

**Challenge:** The inability to access the embassy and other US held facilities.

**Solution:** Continuing to work with the DOS and DOD and GOI to find acceptable solutions.

**Challenge:** The uncertain of the security situation remains unpredictable.

**Solution:** We continue to review security situation reports and revise plans on a weekly basis.

### 4.3 Activities Implemented October - December 2011

1. Introduce programming techniques to allow for scheduling program due dates and cost information.
2. Continue to develop and streamline effective administrative processes.
3. Continue to integrate security measures in order to ensure staff safety.

## 5. GENDER/MARGINALIZED GROUPS MAINSTREAMING ACTIVITIES

The USAID-*Inma* Agribusiness Program understands the importance that women play in production agriculture. In Iraq and throughout the world, women are the lifeblood of the labor force tending crops and livestock in rural areas. Therefore, the USAID-*Inma* Program strives to include women in all aspects of development and also designs and implements activities exclusively for women. Over the last quarter the USAID-*Inma* program has provided opportunities for women in both the horticulture and livestock-protein sector and cross-cutting activities with the business development group. Over the last quarter 70 women have participated in agricultural production programs. Moreover, the USAID-*Inma* program has fostered a working relationship with the Iraqi 4-H program to create small livestock agribusinesses with marginalized families throughout country.

Data collection and storage tools now allow disaggregation on the basis of gender for all program activities.

### 5.1 Activities Implemented July – September, 2011

1. Created a 200 head sheep production program with the Zanabeg Al-Hakel Women's Association in Ninawa province, which benefited 40 families.
2. Provided 11 trainings for women in Sulaymaniyah, Erbil, Baghdad, Najaf, Diwaniyah and Ninawa provinces.
3. Provided 25 orphaned boys in Ninawa Province a 125 head sheep enterprise as a means to generate their income while providing a meat protein source for their diets.
4. Continued to provide guidance to the Al-Rawasi Widows and Orphans' Association in Baghdad.

### 5.2 Challenges Faced

**Challenge:** Identifying women and marginalized groups is difficult, but finding these groups of people who have the capacity (land or financial) is a greater challenge.

**Solution:** Work more closely with provincial level Ministry staff, village officials and district agriculture offices to obtain lists of all registered women-owned businesses.

**Challenge:** Women account for 74 percent of the physical agriculture work in Iraq<sup>11</sup>(planting, tending and harvesting crops by hand and animal husbandry), however male family members attend trainings.

**Solution:** Design trainings and projects to meet the needs of female producers.

**Challenge:** Culture dictates that women should not travel long distances by themselves, they should be accompanied by a male family members.

**Solution:** Hold trainings closer to recipient's physical locations. Provide training to localized groups of women in their own neighborhoods where they can walk to the trainings unaccompanied.

**Challenge:** Security is a major issue, recipients of *Inma* assistance can be targets for insurgents or those who work outside the rule of law.

**Solution:** The USAID-*Inma* agribusiness program has generated a working relationship with the Iraqi 4-H program to implement activities in hard to reach places. The 4-H program implements *Inma* funded activities and provides some technical assistance to those families (beneficiaries). Thus allowing USAID-*Inma* to reach farther into the rural communities and work more closely with underserved populations.

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<sup>11</sup> Iraqi household Social Economic Survey, World Bank, 2007

## Activities Planned October – December, 2011

1. Continue to develop livestock production enterprises with 13 identified marginalized groups of youth and women producers.
2. Develop a Field-Based Learning Center (FBLC) with the Zanabeq Al-Hakel Women's Association in Ninawa.
3. Continue to monitor and provide targeted technical assistance to the 25 female-headed households whose children are members of the "Salam" 4-H dairy club.
4. Provide targeted technical assistance and Farmer Field School programs to women greenhouse owners in Najaf.
5. Design a marketing strategy for women honey producers in Najaf.
6. Implement a vegetable grafting program for women in the Baghdad/Rabee area.
7. Cooperate with MoA in designing agricultural programs for marginalized groups of people.
8. Provide business management tools (record books, etc.) to marginalized women agricultural entrepreneurs.

# 6. LOOKING FORWARD - IRAQ FOOD SHED ASSESSMENT: ESTABLISHING THE BASIS TO DEVELOP A NATIONAL FOOD SECURITY POLICY

Iraq is completely dependent on food imports to meet the nutritional needs of its people. The impact of the Food for Oil Program in the 1980s and the ensuing wars have de-capitalized and fractured all of Iraq's agricultural systems. The food delivered through the Public Distribution System has been decreasing over the past years and cannot meet the nutritional needs of a family.

In order to determine the public policy interventions which will allow Iraq to become food secure and re-establish a sustainable agricultural sector, USAID-*Inma* is proposing an Iraq Food Shed Assessment. We plan to work closely with the Ministry of Agriculture at the central and provincial levels and engage them in the data collection, assessment and policy analysis to set the stage for further dialogue and future programs.

This assessment will cover three areas:

## 1. Establish a Food Balance for Iraq Present and Future

The development of food balance sheets will provide information to determine the current and future domestic nutritional needs in Iraq and provide the basis of consumer food demand.

Using secondary sources (such as the Iraq Household Socio-Economic Survey in 2007 and data from the Central Organization for Statistics and Information Technology (COSIT)), USAID-*Inma* will develop a food balance sheet (Food Balance Status) for the population of Iraq. USAID-*Inma* will also use the collected data to develop a rapid and simple survey to estimate the average diet currently consumed in Iraq. In addition, the team will prepare a food balance sheet based off the population profile broken out by key demographics such as rural vs. urban, age, etc. Finally, the team will use this data to create scenarios for future food requirements.

## 2. Food Shed Assessment

A food shed is the geographic extent of food production that is needed to feed a population. The food shed assessment will cover current production in Iraq and the production potential to meet future consumer demand to achieve food security. The focus will be on commercial food production which contributes to national food security.

Using current available information concerning land use in Iraq, such as GIS maps, COSIT data, surveys of producers, markets and provincial Ministry of Agriculture directors general, the USAID-*Inma* staff will prepare a fact report on current agricultural production in the domestic food shed. Staff members will then determine the current state of the food system and related infrastructure and movement of goods.

Using current available data, the staff will extrapolate the amount and value of food imports coming into Iraq from the global food shed. Through economic and planning extrapolation, the team will then determine the potential and most effective scenarios for future food production within Iraq to meet consumer needs, including the types of infrastructure and policies to encourage the growth of the agricultural sector. In addition, the team will determine the value of the different scenarios to the Iraqi economy through economic and planning extrapolation. Scenarios will include population growth, potential climate change impacts, pests, etc.

### 3. Policy Implications

Based on the information from the food balance and food shed analysis, a series of papers will be prepared addressing the policy implications for a food secure Iraq, such as:

What type of investment will it take for Iraq to be food secure, and where are these investments needed (infrastructure, electrical, transport, cold storage, food safety, research)?

What is the actual cost to Iraq for food imports? What percentage of the current GDP goes into food imports?

Where would public funds best be spent for the advancement of agriculture? What are the ten priorities for agricultural development in Iraq?

Using this information, the team will develop a series of strategies to reduce the dependency on imported food to meet national nutritional requirements.

## 7. APPENDICES

### APPENDIX A: COMPLETED ACTIVITIES

No	Event	Type	Dept.	GFA	Province	Start Date	End Date	Total Part.	M	F
1	Greenhouse FFS	FFS	HC	C	Baghdad	3-Jan-11	3-Jan-11	12	12	0
2	Greenhouse FFS	FFS	HC	S	Najaf	5-Jan-11	5-Jan-11	11	11	0
3	Greenhouse FFS	FFS	HC	S	Najaf	12-Jan-11	12-Jan-11	9	9	0
4	Vineyard FFS	FFS	HC	N	Salah Ad Din	13-Jan-11	13-Jan-11	14	14	0
5	Greenhouse FFS	FFS	HC	C	Baghdad	18-Jan-11	18-Jan-11	12	12	0
6	Vineyard FFS	FFS	HC	S	Najaf	29-Jan-11	29-Jan-11	5	5	0
7	Orchard FFS	FFS	HC	S	Najaf	12-Feb-11	12-Feb-11	8	8	0
8	Orchard FFS	FFS	HC	C	Baghdad	7-Mar-11	7-Mar-11	12	12	0
9	Greenhouse FFS	FFS	HC	S	Najaf	12-Mar-11	12-Mar-11	11	11	0
10	Training PSC for MOA agriculture extension employees in Sulaimaniya	Training	HC	N	Sulaymaniah	17-Mar-11	17-Mar-11	18	10	8
11	Greenhouse FFS	FFS	HC	C	Baghdad	19-Mar-11	19-Mar-11	10	10	0
12	Vineyard FFS	FFS	HC	C	Baghdad	2-Apr-11	2-Apr-11	14	14	0
13	Record Keeping TA	TA	BD	S	Wasit	11-Apr-11	11-Apr-11	3	3	0
14	Training PSC for MOA agriculture extension employees in Sulaimaniya	Training	HC	N	Sulaymaniah	13-Apr-11	13-Apr-11	17	4	13
15	Training PSC for MOA agriculture extension employees in Sulaimaniya	Training	HC	N	Sulaymaniah	04-May-11	04-May-11	12	5	7
16	Orchard FFS	FFS	HC	C	Diyala	18-May-11	18-May-11	9	9	0
17	Horticulture Roundtable	Roundtable	BD	N	Erbil	30-May-11	30-May-11	21	20	1

18	Vineyards FFS	FFS	HC	C	Baghdad	1-Jun-11	1-Jun-11	5	5	0
19	Orchard FFS	FFS	HC	N	Erbil	9-Jun-11	9-Jun-11	20	20	0
20	Orchard FFS	FFS	HC	N	Erbil	12-Jun-11	12-Jun-11	19	19	0
21	Greenhouse FFS	FFS	HC	S	Najaf	12-Jun-11	12-Jun-11	11	0	11
22	Orchard FFS	FFS	HC	C	Diyala	13-Jun-11	13-Jun-11	7	7	0
23	Greenhouse TTA	TTA	HC	SE	Muthanna	25-Jun-11	26-Jun-11	25	25	0
24	Orchard FFS	FFS	HC	C	Diyala	27-Jun-11	27-Jun-11	5	5	0
25	Greenhouse TTA	TTA	HC	SE	Basrah	27-Jun-11	27-Jun-11	16	16	0
26	Aquaculture Roundtbale	Roundtable	BD	S	Babil	27-Jun-11	27-Jun-11	22	22	0
27	Potato Demonstration Training	FFS	HC	N	Ninawa	27-Jun-11	27-Jun-11	17	17	0
28	Greenhouse FFS	FFS	HC	N	Sulaymaniah	28-Jun-11	28-Jun-11	5	5	0
29	Horticulture Roundtable	Roundtable	BD	S	Babil	29-Jun-11	29-Jun-11	13	13	0
30	Orchard FFS	FFS	HC	C	Diyala	30-Jun-11	30-Jun-11	5	5	0
31	Greenhouse FFS	FFS	HC	SE	Dhi Qar	3-Jul-11	3-Jul-11	8	8	0
32	Greenhouse FFS (Tuta Absoluta)	FFS	HC	N	Erbil	5-Jul-11	5-Jul-11	29	29	0
33	FBLC demonstration day	FBLC	HC	N	Sulaymaniah	7-Jul-11	7-Jul-11	22	19	3
34	Greenhouse FFS	FFS	HC	SE	Dhi Qar	10-Jul-11	10-Jul-11	10	10	0
35	Orchard FFS	FFS	HC	C	Diyala	11-Jul-11	11-Jul-11	7	7	0
36	Greenhouse FFS (Tuta Absoluta)	FFS	HC	N	Erbil	13-Jul-11	13-Jul-11	17	17	0
37	Greenhouse FFS	FFS	HC	SE	Dhi Qar	16-Jul-11	16-Jul-11	10	10	0
38	Potato Demonstration Training	FFS	HC	N	Ninawa	18-Jul-11	18-Jul-11	13	13	0

39	Greenhouse FFS (Tuta Absoluta)	FFS	HC	SE	Dhi Qar	19-Jul-11	19-Jul-11	11	11	0
40	Greenhouse FFS (Solarization)	FFS	HC	S	Najaf	20-Jul-11	20-Jul-11	20	8	12
41	Greenhouse FFS (Tuta Absoluta)	FFS	HC	SE	Dhi Qar	24-Jul-11	24-Jul-11	12	12	0
42	Greenhouse FFS (Tuta Absoluta)	FFS	HC	N	Sulaymaniah	3-Aug-11	3-Aug-11	19	19	0
43	Understanding MOA extension service in areas of cooperation between Inma and MOA	Conference	BD	N	Erbil	10-Aug-11	10-Aug-11	46	40	6
44	FBLC demonstration day	FBLC	HC	N	Ninawa	11-Aug-11	11-Aug-11	17	17	0
45	FBLC demonstration day	FBLC	HC	C	Diyala	12-Aug-11	12-Aug-11	10	10	0
46	Greenhouse FFS (Soil Preparation)	FFS	HC	SE	Maysan	15-Aug-11	15-Aug-11	7	7	0
47	Greenhouse Training (Tuta Absoluta Training in Inma Office)	FFS	HC	C	Baghdad	15-Aug-11	15-Aug-11	23	14	9
48	Greenhouse FFS (Soil Preparation)	FFS	HC	SE	Maysan	17-Aug-11	17-Aug-11	5	5	0
49	Greenhouse FFS (Tuta Absoluta)	FFS	HC	N	Erbil	17-Aug-11	17-Aug-11	25	25	0
50	FBLC demonstration day	FBLC	HC	N	Ninawa	19-Aug-11	19-Aug-11	11	11	0
51	FBLC demonstration day	FBLC	HC	N	Ninawa	22-Aug-11	22-Aug-11	10	9	1
52	Potato Demonstration Training	FFS	HC	N	Ninawa	6-Sep-11	6-Sep-11	15	15	0
53	FBLC demonstration day	FFS	HC	N	Ninawa	7-Sep-11	7-Sep-11	15	15	0
54	Greenhouse FFS (Soil Sterilization)	FFS	HC	N	Sulaymaniah	7-Sep-11	7-Sep-11	25	25	0
55	Orchard FFS	FFS	HC	N	Salah Ad Din	15-Sep-11	15-Sep-11	10	10	0
56	FBLC demonstration day	FBLC	HC	S	Diwanayah	18-Sep-11	18-Sep-11	16	15	1
57	FBLC demonstration day	FBLC	HC	SE	Muthanna	19-Sep-11	19-Sep-11	16	16	0
58	FBLC demonstration day	FBLC	HC	SE	Basrah	20-Sep-11	20-Sep-11	14	14	0
59	Greenhouse FFS	FFS	HC	N	Sulaymaniah	21-Sep-11	21-Sep-11	15	15	0

60	Greenhouse FFS	FFS	HC	SE	Muthanna	22-Sep-11	22-Sep-11	18	18	0	
61	FBLC demonstration day	FBLC	HC	C	Baghdad	22-Sep-11	22-Sep-11	19	19	0	
62	FBLC demonstration day	FBLC	HC	C	Diyala	24-Sep-11	24-Sep-11	15	15	0	
63	FBLC demonstration day	FBLC	HC	SE	Muthanna	26-Sep-11	26-Sep-11	21	21	0	
64	Greenhouse FFS	FFS	HC	N	Sulaymaniah	28-Sep-11	28-Sep-11	12	12	0	
								<b>Total</b>	<b>911</b>	<b>841</b>	<b>70</b>

## APPENDIX B: SUBCONTRACTS AND PURCHASED ORDERS

Value Chain	Activity Title	Activity Period	
		Start	End
Horticulture	Fruits & Vegetables -Basics of Greenhouse Production Training	12/15/2009	4/30/2010
Horticulture	Fruits & Vegetables - Irrigation Principles and Applications Training	12/10/2009	4/30/2010
Livestock	Beef & Lamb - Small Ruminants Production Management Training	3/3/2010	4/30/2010
Horticulture	Fruits & Vegetables - Purchase Order to provide Seeds	3/2/2010	4/30/2010
Business Development	Business Development – Business Management Technical Assistance North	10/29/2009	4/30/2010
Livestock	Beef & Lamb -Training on Vet Lab. Equipment	4/10/2010	6/5/2010
Horticulture	Fruits & Vegetables - Chinese Two-Wheel Tractor	3/25/2010	5/25/2010
Livestock	Fish and Poultry - Feed Lab Equipment	3/10/2009	5/31/2010
Horticulture	Fruits & Vegetables - Basic Open Field Production Training	1/5/2010	5/31/2010
Horticulture	Fruits & Vegetables - Basic Orchard/Vineyard Management Training	1/20/2010	5/31/2010
Business Development	Association Management Workshop	12/2/2009	6/3/2010
Horticulture	Fruits & Vegetables – Soil Labs	4/10/2010	6/10/2010
Livestock	Beef & Lamb - Basic Animal Health Management	4/24/2010	6/30/2010
Livestock	Beef & Lamb - Ruminants Animal Nutrition	5/22/2010	7/31/2010

Business Development	Business Development - Roundtable Meetings Service	7/16/2009	8/31/2010
Business Development	Business Management Technical Assistance Services – Central/South	5/20/2010	8/31/2010
Horticulture	Fruits & Vegetables - Irrigation Principles and Applications Training-Round Two	6/1/2010	8/31/2010
Horticulture	Fruits & Vegetables - Basics of Greenhouse Production Training-Round Two	5/10/2010	8/31/2010
Horticulture	Fruits & Vegetables - Advanced Greenhouse Production Training	5/2/2010	8/31/2010
Livestock	Fish & Poultry - Fingerlings fish for offspring from Hungarian Carp Broodstock	4/29/2010	8/31/2010
Livestock	Fish & Poultry - Adult Hungarian Carp Broodstock	4/29/2010	8/31/2010
Business Development	Business Development-Closeout Financial Audit	8/7/2010	10/31/2010
Horticulture	Fruits & Vegetables-Greenhouse Supplies and Drip Irrigation	9/12/2010	11/30/2010
Business Development	Business Development-Association Management Workshops (BD)	9/20/2010	2/28/2011
Business Development	Business Development-Basic Orchard/Vineyard Management Training	9/8/10	3/31/2011
Business Development	Business Development-Roundtable Meetings (BD)	8/21/2010	5/31/2011
Livestock	Beef & Lamb -Vet lab Equipment and training (additional)	8/7/2010	11/6/2010
Livestock	Fish & Poultry - Purchase of live fingerlings offspring of Hungarian Bloodstock (Two Packages)	8/19/2010	2/19/2011

Livestock	Fish & Poultry - Basic Aquaculture Training Program (Two Packages)	10/6/2010	4/30/2011
Horticulture	Fruits & Vegetables - Supply and Install greenhouses for grape nursery Program and Greenhouses	10/19/2010	2/8/2011
Horticulture	Greenhouse Services Subcontract (North GFA)	1/1/2010	8/31/2011
Horticulture	Fruits & Vegetables - Greenhouse Services Subcontract (Central GFA)	1/1/2010	8/31/2011
Horticulture	Fruits & Vegetables - Greenhouse Services Subcontract (South GFA)	1/1/2010	6/30/2011
Horticulture	Fruits & Vegetables - Orchard Service Subcontract, North GFA	2/15/2011	6/30/2011
Horticulture	Fruits & Vegetables - Orchard Service Subcontract, Central and South GFAs	2/15/2011	6/30/2011
Horticulture	Fruits & Vegetables - Drip Irrigation for Orchards	5/28/2011	7/28/2011
Business Development	Business Development-Roundtable meetings / Baghdad	2/1/2011	5/31/2011
Business Development	Business Development-Technical Assistance Agribusiness Mgmt, 240 days LOE, in the South and Central	1/15/2011	7/15/2011
Business Development	Business Development-Technical Assistance Agribusiness Mgmt, 120 days LOE in the North	1/15/2011	7/15/2011
Business Development	Business Development-Agribusiness Management Seminars (B.D.)	12/15/2010	06/31/2011
Business Development	Business Development-Animal Products Market Data Collection	2/19/2011	7/19/2011
Business Development	Business Development-Horticulture Products Market Data Collection	2/19/2011	7/19/2011
Horticulture	Fruits & Vegetables - Tractors for Greenhouse Demonstration Plots	10/12/2010	12/12/2010

Horticulture	Fruits & Vegetables -Olive Oil Washing Machine	10/19/2010	11/23/2010
Horticulture	Fruits & Vegetables -Iron Cutthroat Flumes	12/06/2010	12/25/2010
Livestock	Beef & Lamb -Dairy Heifers in support of Iraq 4-H Program	12/02/2010	12/21/2010
Horticulture	Fruits & Vegetables -Agriculture Equipment for Potato Demonstration Program in Fallujah and Ninawa, Iraq	3/15/2011	4/28/2011
Horticulture	Fruits & Vegetables – Supplying 2-Wheel Tractors	3/11/2011	5/31/2011
Horticulture	Fruits & Vegetables –Drip Irrigation with One day Training-Vineyards	10/24/2010	03/15/2011
Horticulture	Fruits & Vegetables – Greenhouse Supplies and Drip Irrigation	10/12/2010	02/08/2011
Horticulture	Fruits & Vegetables – Multi Span Greenhouses	2/09/2010	05/31/2011
Business Development	Roundtable Meetings at the SBDC in Thi Qar, Province	2/22/2011	05/31/2011
Business Development	Roundtable Meetings at the SBDC in Basra Province	2/22/2011	05/31/2011
Business Development	Roundtable meetings / Babil	02/01/2011	05/31/2011
Business Development	Roundtable meetings /Najaf	02/01/2011	05/31/2011
Business Development	Roundtable meetings / Anbar	12/3/2011	5/31/2011
Business Development	Business Development -Roundtable meetings / Erbil	02/01/2011	5/31/2011
Livestock	Beef & Lamb-Feed Lab Software and Additional Equipment	3/7/2011	4/7/2011
Livestock	Beef & Lamb-Feedlot	6/14/2009	4/30/2011

Livestock	Beef & Lamb-Millet seed	4/16/2011	5/15/2011
Livestock	Supplying Sheep	7/19/2011	9/05/2011
Livestock	Corral in Alqush Village in Ninawah	8/21/2011	09/05/2011
Livestock	Corral in Al-Hamadaniya/Qas Faqra Village in Ninawa.	8/21/2011	09/09/2011
Horticulture	Plastic Rolls	8/13/2011	29/9/2011
Horticulture	Tractor spreader	9/13/2011	09/14/2011
Horticulture	Greenhouse Service Subcontract-Central	01/01/2011	11/01/2011
Horticulture	Greenhouse Service Subcontract-North	01/01/2011	11/01/2011
Horticulture	Greenhouse Service Subcontract-South	01/01/2011	11/01/2011
Horticulture	Supplying 2 row Bedshapers	07/09/2011	08/30/2011
Horticulture	New Holland Tractors and Tractor Equipment	07/10/2011	10/30/2011
Horticulture	Supply and Installation of Drip Irrigation System for Orchards	05/28/2011	07/28/2011
Livestock	Purchasing Feed Grinders	07/25/2011	08/15/2011
Business Development	Technical Assistance Agribusiness Mgmt, 240 days LOE, in the South and Central	01/15/2011	07/15/2011
Business Development	Technical Assistance Agribusiness Mgmt, 120 days LOE in the North	01/15/2011	07/15/2011
Business Development	Animal Products Market Data Collection	2/19/2011	7/09/2011
Business Development	Horticulture Products Market Data Collection	2/19/2011	7/09/2011
Horticulture	Spring tooth harrow	9/12/2011	9/13/2011
Horticulture	Pheromones	9/21/2011	10/08/2011
Horticulture	Cabbage and Cauliflower Transplants	9/28/2011	10/01/2011
Horticulture	Drip irrigation system (5 FBLC locations)	9/25/2011	10/10/2011

## APPENDIX C: GRANTS (PROJECTS AWARDED)

Grant #	Name of Grantee	Project Title	Project Location	Project Period	
				Start	End
09-2008-FD800-G-1	Balad Canning Factory	Balad Canning Factory Revitalization Project	Salah Ad Din, Balad	17-Apr-08	31-Mar-09
09-2008-FD800-G-2	Hameedyah Mushroom Farm	Hameedyah Mushroom Farm Project	Ramadi, Anbar	17-Apr-08	1-Sep-09
09-2008-FD800-G-3	9 Nissan Market Agriculture Association (NINMA)	New Baghdad Market Revitalization Project	Baghdad	20-May-08	20-May-09
10-2008-FD800-G-4	ANKA Company for Agriculture Development	Monitoring Wholesale Prices of Agricultural Products and Inputs in Iraq	Iraq (Erbil)	1-Oct-08	31-Aug-10
10-2008-FD800-G-5	Women Empowerment Organization (WEO)	Voucher For Small Business Management	North of Iraq	15-Nov-08	15-Feb-10
10-2008-FD800-G-6	Al-Waqat Al Jadeed	Fresh Fruit & Vegetable Packing Sheds	Baghdad	1-Dec-08	30-Jun-09
10-2008-FD800-G-7	Al-Thiqa Organization	Micro-Finance	Iraq	1-Feb-09	30-Jun-10
01-2009-FD800-G-8	Al-Amal Al-Waeed Co.	Fresh Fruit & Vegetable Packing Sheds	Baghdad	15-Jan-09	30-Oct-09
01-2009-FD800-G-9	Izdiharona	Micro-Finance	Iraq	1-Feb-09	31-Jan-10
03-2009-FD-800-G-13	Shavin Co.	Feedlot Program	Dahuk	1-May-09	31-Aug-11
03-2009-FD-800-G-14	Farmer Association	Feedlot Program	Ninawa	1-May-09	31-Aug-11
03-2009-FD-800-G-15	Brotherhood Association	Feedlot Program	Ninawa	1-May-09	31-Aug-11
03-2009-FD-800-G-16	Al Nahreen Association	Feedlot Program	Ninawa	1-May-09	31-Aug-11
04-2009-FD800-G-17	Middle East Company	Aquaculture Training program	Babil	27-May-09	31-Aug-10
04-2009-FD800-G-18	Al Furat Fish Farm	Aquaculture Training program	Babil	27-May-09	31-Aug-10
04-2009-FD-800-G-19	Dejlat Alkair for General Trading & Contracting Co., Ltd	Feedlot Program	Wasit	14-Jun-09	30-April-11
04-2009-FD-800-G-20	Hawks of Iraq for General Contracting, Co.	Feedlot Program	Babil	14-Jun-09	31-Aug-11
04-2009-FD-800-G-21	Dheaa Al-Noor Association for Development	Feedlot Program	Baghdad	14-Jun-09	31-Aug-11
06-2009-FD800-G-22	Al Juboori Group	Feedlot Program	Kirkuk	8-Aug-09	31-Aug-11

06-2009-FD800-G-23	Nimar Al Jazeera Co.	Feedlot Program	Anbar	8-Aug-09	31-Aug-11
06-2009-FD800-G-24	Al Naiim Organization	Feedlot Program	Ninawa	8-Aug-09	31-Aug-11
07-2009-FD800-G-25	Mabain Al Nahreen	Packing shed Program	Baghdad	18-Aug-09	31-Jul-10
07-2009-FD800-G-26	Western Al Jazeera	Packing shed Program	Anbar	18-Aug-09	31-Jul-10
07-2009-FD800-G-27	Dejlat Al Kair	Packing shed Program	Karbala	18-Aug-09	31-Jul-10
08-2009-FD800-G-28	Iraq Grandparents	Feed Mill	Dyiala	19-Nov-09	30-April-11
08-2009-FD800-G-29	Al Furat Fish Farm	Feed Mill	South Babil	19-Nov-09	30-April-11
08-2009-FD800-G-30	Middle East Co.	Feed Mill	South Baghdad	19-Nov-09	30-April-11
08-2009-FD800-G-31	VANO Group	Feed Mill	Erbil	19-Nov-09	30-April-11
10-2009-FD800-G-32	ICF	Micro-Finance	Anbar	15-Dec-09	15-May-10
10-2009-FD800-G-33	Al Zaytoon Association	Olive Oil	Ninawa	16-Nov-09	30-Mar-10
11-2009-FD800-G-34	Najim Al Belad	Poultry Feed mill	South Baghdad	1-Feb-10	30-April-11
11-2009-FD800-G-35	Dur Al Furat	Poultry Feed mill	North Babil	1-Feb-10	30-April-11

## APPENDIX D: PERSONNEL

Expatriate Staff through September 30, 2011

### HQ

	Employee Name	Title		Location	Contract
1	Shehnaz Atcha	Program Manager	USA	HQ	LBG
2	David Czarnecki	Program Coordinator	USA	HQ	LBG
3	Dolores Bewley	Contracts Administrator	USA	HQ	LBG
4	Deborah Birch	Project Communications Director	USA	HQ	LBG

### Baghdad

1.	Gerald Turnbull	Chief of Party	USA	Baghdad	LBG
2.	Martin Connaughton	Greenhouse Specialist	USA	Baghdad	ARD
3.	Michael Greene	Financial Director	USA	Baghdad	LBG
4.	Timothy Kock	Deputy Chief of Party	USA	Baghdad	LBG
5.	Al Williams	Horticulture Team Leader	USA	Baghdad	Agland
6.	Juan Sevilla	Water & Irrigation Specialist	Peru	Baghdad	LBG
7.	Marc Anthony Barrera	Procurement manager	USA	Baghdad	LBG
8.	Sergio Albert Delgado	Associations Specialist	Bolivia	Baghdad	LBG
9.	Franco Scotti	Economist	Italy	Baghdad	LBG
10.	Vincent Nasir	Grants Manager	Pakistan	Baghdad	LBG
11.	Alexander Dahan	Technical Specialist-Horticulture	British	Baghdad	LBG
12.	Steven Earl Susens	Communications Specialist	USA	Baghdad	LBG
13.	Pradeep Kumar Patnaik	Senior Business Development Specialist	USA	Baghdad	ARD

### Short-Term Technical Assistance

1.	Alan Fredric Karnovitz	Environmental Specialist	USA	Erbil	LBG
2.	Edwin Price	Senior Extension Specialist	USA	Baghdad	LBG
3.	Andy David Hale	Agriculture Economist	USA	Baghdad	TAMU
4.	David Joseph Stanek	Food Systems Planner	USA	Baghdad	LBG

### Home Office Site Visits

1.	Shehnaz Atcha	Program Manager	USA	Baghdad	LBG
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## APPENDIX E: EXPATRIATE PERSONNEL – MOBILIZATION/DEMobilIZATION

**Mobilization** - The following staff arrived in the July-September quarter:

- Alan Fredric Karnovitz - Environmental Specialist ( July 5 ) Short term
- Edwin Price - Senior Extension Specialist ( August 4 ) Short term
- Steven Susens - Communications Specialist ( August 10 )
- Andy David Hale - Agriculture Economist ( August 17 ) Short term
- David Joseph Stanek - Food Systems Planner ( September 11 ) Short term
- Shehnaz Atcha - Program Manager ( September 18 ) HQ
- Pradeep Kumar Patnaik - Senior B.D. Specialist ( September 29 )

**Demobilization** - The following staff demobilized in the July-September quarter:

- Alan Fredric Karnovitz - Environmental Specialist ( July 11 ) Short term
- Graham Dale - Senior Technical Specialist ( July 15 )
- David Czarnecki - Program Coordinator ( July 21 ) HQ
- Craig Carlson - Technical Specialist-B. D. ( July 22 )
- Jeanne Lee Bartholomew – Agriculture Writing Specialist ( August 12 )
- Edwin Price - Senior Extension Specialist ( August 18 ) Short term
- Ludwig Schatz – Training Manager ( August 31 )
- Shehnaz Atcha – Program Manager ( September 28 ) HQ

**A mobilization for the following quarter - The following staff is** expected to arrive in the October – December:

- Dolores Elaine Bewley - Contracts Administrator ( October 1 ) HQ

## APPENDIX F: QUARTERLY GROSS SALES AND JOBS

The two program indicators, sales and jobs, can be found in the following table. Sales are provided in \$US millions. The information in the table is actual data and has not been adjusted with any correction factor.

<b>Program Total</b>	<b>Year IV 2011 Q3 (July-Sept)</b>	<b>Year IV 2011 Q2 (Apr-June)</b>	<b>Year IV 2011 Q1 (Jan-Mar)</b>	<b>Year III 2010</b>	<b>Year II 2009</b>	<b>Year I 2008</b>	<b>Indicator</b>
\$132.03	\$12.12	\$13.87	\$6.56	\$49.91	\$30.16	\$19.41	<b>Sales</b>
14,929	17	659	314	706	11,360	1,873	<b>Employment</b>

# APPENDIX G: PROGRAM DATA BASE MANAGEMENT AND DOCUMENTATION

## *Major Activities for the Quarter: July - Sept 2011*

- Sales and Jobs data collection for the quarter and preparing PSI forms to be verified by the business owners.
- Updating training component of the database and uploading final training reports for the quarter.
- Uploading of training reports to the database in addition to the attendance sheets relating to past years' training data.
- Updating the Trainet for training data as of September 30, 2011.
- Organizing the monitoring exercise of Inma Orchards & Vineyards and Transplant Nurseries by QED under PERFROM project
- Capturing and uploading Sales and Jobs forms for Livestock Value Chain to the database for the years 2007-2010.
- Circulating Projects list for Livestock, Horticulture and Business Development components to be used by field staff on their field visit reports.
- Finalizing Call Reports Module in the database and uploading of Call Reports to the database for the period April – September 2011 in progress
- Grants Processes set up to integrate Procurement, Finance and PMP data in order to implement Budgeted Activities in line with current year's approved work plan.
- Initiating close out audit of 15 grants including 8 Feedlots, 2 Packing Sheds and 5 Feed Mill grants.

# APPENDIX H: SITE SPECIFIC ENVIRONMENTAL COMPLIANCE

## Introduction

During the past quarter, (July 1, 2011- September. 30 , 2011) the USAID-*Inma* Environmental Team performed several screening assessments to ensure that all USAID-*Inma* projects fall within the nine categories of project types eligible for funding under USAID-*Inma* and that the implementation of those projects did not result in significant environmental impacts. The screening analyses were conducted in conformance with procedures developed for the USAID-*Inma* Program Environmental Assessment (EA), using the methodology and forms presented in the Environmental Management System (EMS). These procedures were approved by USAID in September 2009.

The site-specific environmental impact screening form, which scores the magnitude of impacts individually and cumulatively for all affected resource areas ensures that the proposed activity complies with thresholds and requirements as specified by the USAID-*Inma* EA and the 1990 Iraqi Environmental Law, was used as an evaluation guide. The site-specific environmental impact screening form quantitatively describes the impacts of the proposed project during both the construction and operational period and indicates whether a particular project could pose significant risk to the surrounding environment.

In addition to performing the environmental screening analyses, the USAID-*Inma* Environmental team visited a total of five sites USAID-*Inma* project sites to assess the overall environmental conditions and evaluate whether Best Management Practices (BMPs) prescribed in the USAID-*Inma* Program EA and detailed in the accompanying Environmental Management System (EMS) are properly implemented.

## Activities implemented July –September, 2011

The projects reviewed were as follows:

- I. Fallujah Packing shed

Radzwaniyah Packing shed;  
Karbala Packing shed  
Middle East Feed Mill  
Dur Al Furat Feed Mill

## Site Specific Environmental Impact Assessments

The Impact Assessments and Programmatic Environmental Assessment methodologies are based on a modified version of Conesa-Fernandez-Vitora [2003]. To improve the process only Intensity and Extension factors were calculated for each project site. The Environmental Assessment Team has deemed this as sufficient information for determining any differences in the significance of environmental impacts because it is believed that the factors of Manifestation, Persistence, Reversibility, Synergy, Accumulation, Effect, Periodicity and Recoverability are intrinsic characteristics of the previously analyzed impacts and therefore will not change from site to site.

**Project Title: AI- Fallujah Packing shed**  
**Date Visited: August /13/2011**  
**Assessor Name(s): Hassan Shaker Boadam**  
**Location: Anbar**  
**Type of Project: Packing House**  
**Project Status: Completed**  
**Impacts: Ongoing**

Operation Related Impacts		Nature (+/-)	Intensity					Extension					N/A
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical	
Process	Maintenance and Cleaning	-	√						√				
	Chemical Storage and Handling	-											√
Inputs	Water Use	-	√								√		
	Energy/Fuel Use	-	√						√				
Outputs	Solid Waste	-	√						√				
	Wastewater	-											√
	Human Waste	-	√					√					
	Fuel Emissions (e.g. generators)	-											√
	Vehicular Emissions	-											√
	Odors	-											√
	Noise	-											√
Social and Cultural	Health Risks (e.g. accidents)	-											√
	Daily Activity Interference (e.g. work)	-											√
	Cultural Changes	-											√
Environmental	Water Quality	-											√
	Attraction of Pests	-			√			√					
	Soil Quality	-											√
Positive Impacts		Nature (+/-)	Intensity					Extension					N/A
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical	
Operation	Lighting, Water Supply, Wastewater Conveyance	+		√								√	
	Employment	+	√						√				
	Demand for Goods and Services	+	√						√				

**Project Title:** Radzwaniyah Packing shed  
**Date Visited:** August /20/2011  
**Assessor Name(s):** Hassan Shaker Boadam  
**Location:** Baghdad  
**Type of Project:** Packing House  
**Project Status:** Completed  
**Impacts:** Ongoing

Operation Related Impacts		Nature (+/-)	Intensity					Extension					N/A	
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical		
Process	Maintenance and Cleaning	-	√					√						
	Chemical Storage and Handling	-												√
Inputs	Water Use	-	√									√		
	Energy/Fuel Use	-		√						√				
Outputs	Solid Waste	-	√							√				
	Wastewater	-												√
	Human Waste	-	√					√						
	Fuel Emissions (e.g. generators)	-												√
	Vehicular Emissions	-												√
	Odors	-												√
	Noise	-												√
Social and Cultural	Health Risks (e.g. accidents)	-												√
	Daily Activity Interference (e.g. work)	-												√
	Cultural Changes	-												√
Environmental	Water Quality	-												√
	Attraction of Pests	-			√			√						
	Soil Quality	-												√
Positive Impacts		Nature (+/-)	Intensity					Extension					N/A	
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical		
Operation	Lighting, Water Supply, Wastewater Conveyance	+		√								√		
	Employment	+	√						√					
	Demand for Goods and Services	+	√						√					

**Project Title:** Karbala Packing shed  
**Date Visited:** August /25/2011  
**Assessor Name(s):** Hassan Shaker Boadam  
**Location:** Karbala  
**Type of Project:** Packing House  
**Project Status:** Completed  
**Impacts:** Ongoing

Operation Related Impacts		Nature (+/-)	Intensity					Extension					N/A	
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical		
Process	Maintenance and Cleaning	-	√						√					
	Chemical Storage and Handling	-												√
Inputs	Water Use	-	√									√		
	Energy/Fuel Use	-		√					√					
Outputs	Solid Waste	-	√						√					
	Wastewater	-												√
	Human Waste	-	√					√						
	Fuel Emissions (e.g. generators)	-												√
	Vehicular Emissions	-												√
	Odors	-												√
	Noise	-												√
Social and Cultural	Health Risks (e.g. accidents)	-												√
	Daily Activity Interference (e.g. work)	-												√
	Cultural Changes	-												√
Environmental	Water Quality	-												√
	Attraction of Pests	-			√			√						
	Soil Quality	-												√
Positive Impacts		Nature (+/-)	Intensity					Extension					N/A	
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical		
Operation	Lighting, Water Supply, Wastewater Conveyance	+	√									√		
	Employment	+	√						√					
	Demand for Goods and Services	+	√						√					

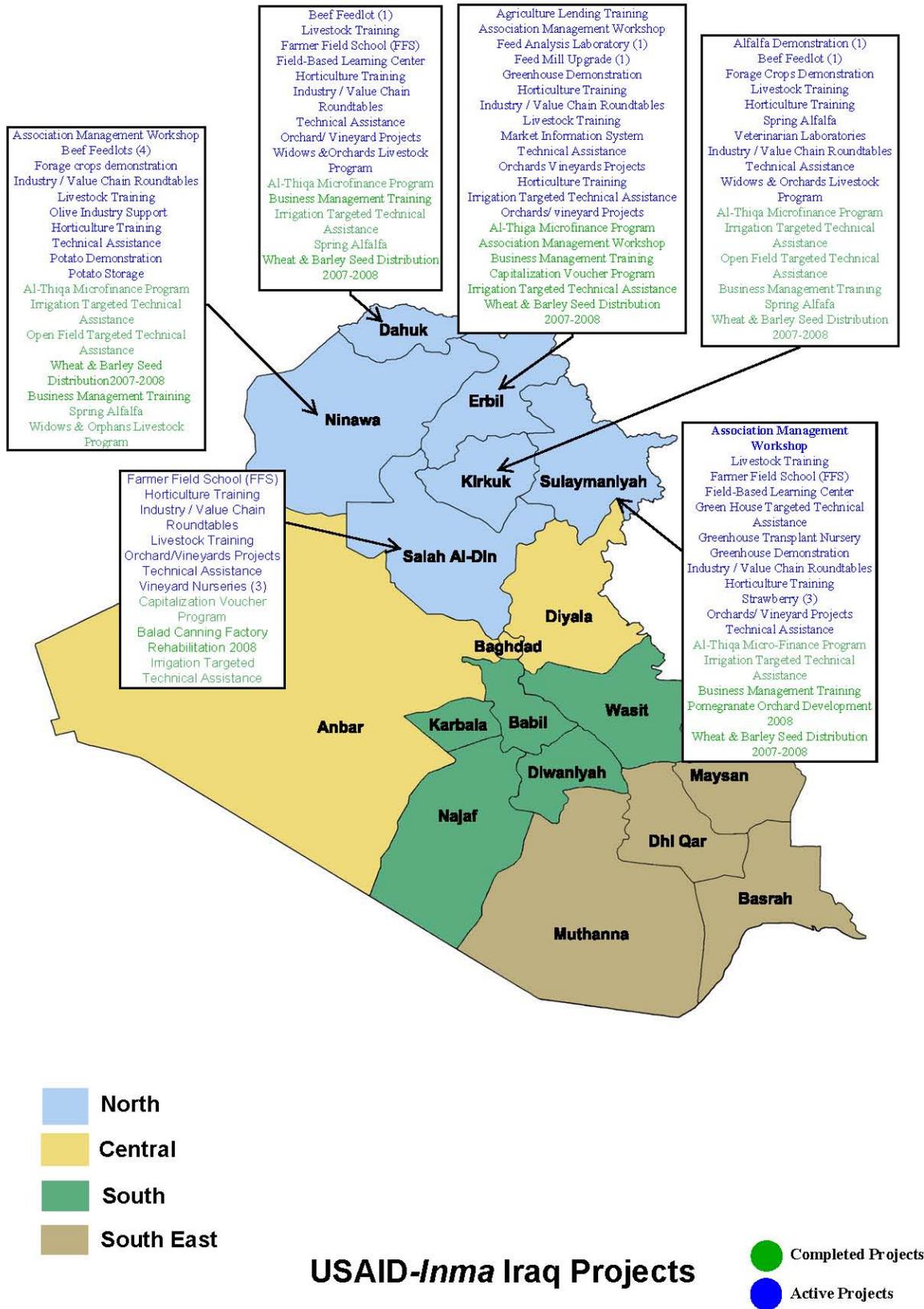
**Project Title: Middle East Feed Mill**  
**Date Visited: September /8/2011**  
**Assessor Name(s): Hassan shaker Boadam**  
**Location: Babil Province**  
**Type of Project: Feed Mills**  
**Project Status: Ongoing**  
**Impacts:**

Operation Related Impacts		Nature (+/-)	Intensity					Extension					N/A
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical	
Process	Maintenance and Cleaning	-		√					√				
	Chemical Storage and Handling	-											√
Inputs	Water Use	-		√							√		
	Energy/Fuel Use	-		√					√				
Outputs	Solid Waste	-		√					√				
	Wastewater	-	√										√
	Human Waste	-	√					√					
	Fuel Emissions (e.g. generators)	-											√
	Vehicular Emissions	-											√
	Odors	-											√
	Noise	-											√
Social and Cultural	Health Risks (e.g. accidents)	-											√
	Daily Activity Interference (e.g. work)	-											√
	Cultural Changes	-											√
Environmental	Water Quality	-											√
	Attraction of Pests	-			√			√					
	Soil Quality	-											√
Positive Impacts		Nature (+/-)	Intensity					Extension					N/A
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical	
Operation	Lighting, Water Supply, Wastewater Conveyance	+	√									√	
	Employment	+	√						√				
	Demand for Goods and Services	+	√						√				

**Project Title: Due Al Furat Feed Mill**  
**Date Visited: September /10/2011**  
**Assessor Name(s): Hassan shaker Boadam**  
**Location: Babil Province**  
**Type of Project: Feed Mills**  
**Project Status: Ongoing**  
**Impacts:**

Operation Related Impacts		Nature (+/-)	Intensity					Extension					N/A	
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical		
Process	Maintenance and Cleaning	-	√					√						
	Chemical Storage and Handling	-												√
Inputs	Water Use	-	√									√		
	Energy/Fuel Use	-		√						√				
Outputs	Solid Waste	-	√					√						
	Wastewater	-	√											√
	Human Waste	-	√					√						
	Fuel Emissions (e.g. generators)	-												√
	Vehicular Emissions	-												√
	Odors	-												√
	Noise	-												√
Social and Cultural	Health Risks (e.g. accidents)	-												√
	Daily Activity Interference (e.g. work)	-												√
	Cultural Changes	-												√
Environmental	Water Quality	-												√
	Attraction of Pests	-			√			√						
	Soil Quality	-												√
Positive Impacts		Nature (+/-)	Intensity					Extension					N/A	
			Low	Medium	High	Very High	Total	Punctual	Partial	Extended	Total	Critical		
Operation	Lighting, Water Supply, Wastewater Conveyance	+	√									√		
	Employment	+	√							√				
	Demand for Goods and Services	+	√							√				

# APPENDIX I: MAPS



- Association Management Workshop
- Economic Corrals (Planned)
- Farmer Field School (FFS)
- Field-Based Learning
- Feed Analysis Laboratory (1)
- Forage Crops Demonstration
- Greenhouse Demonstration
- Greenhouse Transplant Nursery
- Horticulture Training
- Industry / Value Chain Roundtables
- Lamb Feedlot (1)
- Livestock Training
- Orchards / Vineyards Projects
- Packing Houses (3)
- Technical Assistance
- Vineyard Nurseries (2)
- \*9\* Nissan Retail Market 2009
- Al-Ta'ae Greenhouse Project 2009
- Agricultural lending Training
- Business Management Training
- Capitalization Voucher Program
- Feed Mill Upgrade (1)
- Field Packing Trials
- Irrigation Targeted Technical Assistance
- Iran Horse Vegetable Project 2007
- Strawberry (2)
- Wheat & Barley Seed Distribution 2007-2008
- Winter Crop Program 2007
- Forge Crop Demonstration

- Agricultural Targeted Technical Assistance
- Farmer Field School (FFS)
- Greenhouse Demonstration
- Horticulture Training
- Industry / Value Chain Roundtables
- Capitalization Voucher Program
- Orchards/ Vineyard Projects
- Livestock Training
- Al-Thiqa Microfinance Program
- Feed Mill Upgrade (1)
- Irrigation Targeted Technical Assistance
- Open Field Demonstration
- Open Field Vegetables
- Wheat & Barley Seed Distribution 2007-2008
- Winter Crop Program 2007
- Forges Crops Demonstration

- Agriculture Targeted Technical Assistance
- Alfalfa Demonstration (1)
- Beef Feedlot (1)
- Farmer Field School (FFS)
- Feed Analysis Laboratory (1)
- Forage Crops Demonstration
- Horticulture Training
- Industry / Value Chain Roundtables
- Livestock Training
- Orchards / Vineyards Projects
- Packing House (1)
- Potato Demonstration
- SME Agricultural Credit - ICFSME
- Technical Assistance
- Widows & Orphans Livestock Program
- Business Management Training
- Capitalization Vouches Program
- Feed Grain Promotion Project 2007
- Hamediya Mushroom Farms
- Irrigation Targeted Technical Assistance
- Strawberry
- Wheat & Bareley Demonstration 2007-2008
- Winter Crop Program

- North
- Central
- South
- South East

## USAID-Inma Iraq Projects

- Completed Projects
- Active Projects

