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## *Inma* Agribusiness Program QUARTERLY REPORT January - March 2009



April, 2009

This report was produced for review by the U.S. Agency for International Development (USAID). It was prepared by Ana Pejcinova, PhD, for the Louis Berger Group, Inc. Contract No. 267-C-00-07-00500-00.

APRIL 15, 2009

# *Inma* Agribusiness Program

## QUARTERLY REPORT

### January - March 2009

FOR DISTRIBUTION



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## Acronyms and Abbreviations

BCF	Balad Canning Factory
CEFM	Central Euphrates Fish Farm
COP	Chief of Party
COTR	USAID Contracts Officer Technical Representative
DEC	USAID Development Experience Clearinghouse
EFF	Euphrates Fish Farm
ePRT	Embedded Provincial Reconstruction Team
FADO	Future Agriculture Development Organization
FAR	Federal Acquisition Regulations
FOB	Forward Operating Base
GOI	Government of Iraq
GFA	Geographic Focus Area
HMF	Hameediyah Mushroom Farm
IRs	Intermediate Results
ITAO	Iraq Transition Assistance Office
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
PO	Purchase Order
PRT	Provincial Reconstruction Team
RFA	Request for Applications
RFP	Request for Proposals
SME	Small and Medium Enterprises
TA	Technical Assistance
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government

## GENERAL INFORMATION

The USAID/*Inma* Agribusiness Program focuses on developing Iraq's private agribusinesses by facilitating the formation of fully-integrated value chains and improving agricultural quality and production. *Inma*, Arabic word for 'growth,' connects farmers to markets, increases the competitiveness of Iraqi agribusinesses, and facilitates domestic and foreign agricultural partnerships.

***This report covers the 7<sup>th</sup> Quarter (January – March 2009) of the USAID-funded 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).***

Project Name: *Inma* Agribusiness Program

Project 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

Contract End Date: April 30, 2010, two one-year options to extend to April 30, 2012

Project End Date: April 2012

Project Principals: Charles Bell, Senior Vice President, The Louis Berger Group Inc.

On-Site Leadership Ross Wherry, Chief of Party  
Shehnaz Atcha, Program Manager  
Tracy Atwood, Deputy Chief of Party - Technical Program  
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The Cost-Plus-Fixed-Fee (CPFF) contract (No. 267-C-00-07-00500-00) for the *Inma* Program was signed May 14, 2007. The period of performance of the contract is three years, May 14, 2007 through April 30, 2010, with two one year options to extend through April 30, 2012.



# EXECUTIVE SUMMARY

## **Inma to Benefit 20,000 Families by 2010**

USAID established the *Inma* Agribusiness project to increase the capacity of the Iraqi private sector. This capacity is measured in part by the number of jobs created. *Inma* expects to create approximately 20,000 jobs in production and supporting businesses between January 2009 and May 2010. Based on estimates of replication of *Inma*'s demonstrations, some additional 36,000 jobs will be created between 2010 and 2012, for a total of 56,000 jobs over the life of *Inma*.

Agribusiness partners with *Inma* contribute to economic growth in twelve provinces. As a result of *Inma* technical demonstrations and training in 2009 and 2010, gross income among these partners is anticipated to show an increase of \$123 million. This increased income will continue in the longer term due to genetic improvements and domestic market development, including improved transport and phyto-sanitary procedures.

## **New Industries Mobilize Iraqi Investment**

Commercial livestock production can significantly increase the amount of beef and lamb for Iraqi families. Yet to be successful, investors need data about animal growth, forage costs, and environmental consideration. *Inma* plans to sign agreements with ten investors – partnerships and associations – to demonstrate the practical application of commercial stock production in northern, central, and south central provinces of Iraq. Approximately 700 direct full-time jobs will come from the ten agreements.

Winter production of vegetables in greenhouses allows high quality fresh produce in Iraqi stores year-round. Cut flowers and ornamentals production in greenhouses and shade houses offer additional year-round jobs and income. *Inma* has inventoried existing and planned greenhouse investments and has designed a program to demonstrate improved technical approaches in seven provinces. The program will focus on getting two crops a year from each greenhouse, using drip irrigation, fertilization, and disease control. Approximately 600 direct full-time jobs will be created from this program.

Iraqis consume about 135,000 tons of fresh broiler chicken annually and 3.5 billion table eggs annually. Once heavily subsidized by the Iraqi government, the resurgent poultry industry is prepared to compete with imports in an open market, focusing on the live chicken added value niche. *Inma* has a supporting role to other agencies in poultry production, providing research on the growth of industry and access to the best of US experts for short consultations as requested.

Numerous Iraqi partners work with *Inma*, and have committed to invest nearly \$55 million in cash, labor, land, supplies, and equipment to complement the USAID assistance that flows through *Inma* for the creation of new industries.

## **Greater Production for Fresh Market**

Iraqi farmers compete in some of the most open and competitive markets in the world – with neighboring countries that subsidize electricity, fuels, fertilizers, and water delivery. In the near term, Iraq is most competitive in production for its domestic fresh market. Development

of food processing industries that sustain themselves without direct subsidy requires changes outside the agriculture sector. *Inma* presented cost factors of competitiveness in March and continues to monitor competitive factors. The discussion of potential solutions involves both producers and government.

Since 2007, the production of farmed fish, mostly in Babil Province, has doubled to 65,000 tons. Production is poised to double again by 2010 to 130,000 tons. This dramatic growth requires farmers to produce such an increase in the same pond surface, since water is the greatest constraint in this desert country. *Inma* created more than 4,000 full-time, part-time, and seasonal jobs in businesses that support fish production. In the longer term, production increases will be supported by the arrival of genetically superior fingerlings in 2009 to be crossbred with heat-tolerant Iraqi fish.

Iraqi farmers lose half their fruit harvest in marketing due to poor picking and packing practices. *Inma* is assisting Iraqi orchard farmers of stone fruits (e.g., apricot, peach), pomegranate, and table grapes, covering over 150 hectares in three provinces (Baghdad, Sulaymaniyah, and Karbala). *Inma* will work with producers to improve the timing and packaging of delicate fruits to get more of the harvest onto the grocery shelves. Along with potential job creation, \$9 million in additional gross revenue is expected for existing growers. As most of the Iraqi harvest arrives in one-month market windows, *Inma* provided new varieties of fruit and seedless grapes to allow farmers to harvest over a span of as many as four months. Improved apple trees and other fruits trees were planted in 2004-5 by a previous USAID project.

Under the desert sun, Iraqi farmers produce a wide variety of vegetables. In 2008, *Inma* demonstrated that the use of modern seed could increase vegetable yields by 75% (approximately 8,000 MT of fresh vegetables, valued at nearly \$2.5 million) on the same ground with the same effort. Due to the success of the demonstration, farmers clamored for new seeds, resulting in private companies increasing their stock to meet the heightened demand. The use of low plastic tunnels has increased sharply since 2008 when it was demonstrated by *Inma*, a PRT, and three military units. To reduce losses after picking, Iraqi partners with *Inma* assistance are demonstrating improved packaging of vegetables in the field and in commercial packing houses. *Inma* partners utilizing advanced production assistance (tunnels, greenhouses, hybrid seeds) are likely to increase their vegetable production to 70,000 MT per year. Concurrently, *Inma*'s packing house initiative is designed to process a minimum of 40 MT a day per location.

### **Shaking Off the Past**

Iraq was wrenched from its political and economic isolation in 2003. Businesses that once had a captive market and were heavily supported by government must now survive in a highly competitive environment. Food markets were suddenly flooded with imports from the world over, but especially from neighboring countries. Several *Inma* activities are designed to enhance the capacity of private agribusiness to compete in the new markets.

The Anka Company, with support from *Inma*, provides wholesale market prices in all provincial capitals to email and mobile phones of over 580 subscribers (comprised of commercial farmers, traders, processors, and marketers), while increasing dissemination of market analysis reports through newspapers.

*Inma* has developed a plan to provide its 60 cooperating investors with management counseling and business finance expertise, particularly on cost control.

Two microfinance institutions signed agreements with *Inma* to increase lending to reach 1600 farmers and small agribusinesses.

Before 2003, poultry and fish feed mills were highly subsidized by the Iraqi government. The cost of high quality protein concentrate feed constitutes two thirds of production costs for poultry and fish. *Inma* has completed the design of a program to give incentives for investments to improve feed mill capacity. The plan begins in May and, although modern milling is highly computerized and automated, it will create 50 direct full-time jobs. As with other agricultural processing industries, the costs and availability of electricity and fuel hampers the competitiveness of the feed industry.

Iraq depends on the flow of the Tigris and Euphrates for irrigation. Ironically, excessive flood irrigation is a cause of soil salinity in Iraqi farmlands. Drought and upstream dams for hydropower projects affect the river flow and militate for more sound use of irrigation water. *Inma* introduced a planning model that allows farmers and water authorities to estimate water demands for different cropping combinations. Together with other USAID projects, *Inma* is collecting baseline data in three irrigation districts to support the design of participatory management of irrigation water, assignment of farmer water allocations, and enforcement measures involving farmers and local water authorities.

*Inma*'s provincial representatives collaborate with provincial officials and representatives of the national Ministries of Agriculture and Water Resources. Their data collection and analyses support the United States Government's dialogue with the Government of Iraq on irrigation, agricultural production, and economic growth.

- Ross Wherry, Chief of Party

# VALUE CHAINS

*Inma* approaches Iraqi food markets through value chain analysis to address the binding constraints to profitability as product flows from farm through markets to the consumer. *Inma* supports three of the most needed and profitable agricultural value chains in Iraq:

- Perennial Fruits
- Annual Vegetables
- Aquaculture and Poultry
- Beef and Lamb

The activities address critical value chain constraints, increase productivity, lower production and marketing costs, increase the profitability of agricultural enterprises, and generate rural employment. In each of the value chains, *Inma* seeks to assist Iraqi enterprises to attain a critical mass of producers and marketers to convincingly demonstrate high-value businesses.

Specific *Inma* activities include field trials, demonstrations, and institutional support to catalyze the adoption of improved production, post-harvest, and marketing practices. These are complemented by agribusiness financing, market information systems, business consultation services, and training programs.

## PERENNIAL FRUITS

**COMMERCIAL ORCHARDS AND VINEYARDS** To develop price competitive commercial production from orchards and vineyards, and to improve the genetic material by introducing new commercial varieties, *Inma* supported the planting of over 61 thousand trees and table grapes, all certified and commercially tested varieties.

### Quarterly Progress

**South Rashidiya Orchard and Vineyard Development** *Inma's* partners in this activity are the South Rashidiya growers' association, the Future Agriculture Development Organization (FADO), the recipient of trees and vines, with support from ePRTs 3 and 5 in Camp Taji.



**Training on field preparation and planting** for the five members of the FADO Board of Directors was followed by training for FADO's farmer members. On January 12, FADO received 50,519 stone fruit trees and vines imported from California nurseries. Planting started immediately. The delivery included:

- 10,477 peach trees of eight different varieties which will extend the harvest season for peaches throughout the summer, rather than the current two or three weeks;
- 2,842 apricot trees selected specifically for the Baghdad area;
- 6,500 nectarine trees of four varieties, which introduces this variety to Iraq and allows an extended harvest season;
- 5,000 plum trees of three different varieties; and,
- 25,200 seedless grape rootings of four different varieties, which will provide red and white seedless grapes over an extended harvest season.

**Training in fruit and grape production** in South Rashidiya addressed 62 farmers, including one female farmer. The curriculum included orchard and vineyard establishment, layout, planting, and early care of trees and vines. A second horticulture course trained 43 growers, covering production technologies and early care appropriate for newly planted trees and vines.

On March 10, the USAID Mission Director Christopher Crowley and the FADO Chairman Sheikh Hyder Mohan cut a **ceremonial ribbon** to mark the beginning of this initiative which will gradually lead to restoration of Iraq's perennial agriculture. The ceremony took place in the open fields of a South Rashidiya vineyard, with influential sheiks, community leaders, FADO farmers, ePRT3, and US military attending. The event was documented by the *Al An* and *Al Afaq* Iraqi satellite stations, and the *Al Mada* daily newspaper.

**Karbala Pomegranate Orchards Development** Two thousand eight hundred and ninety-four pomegranate trees of the Wonderful variety were delivered to ten farmers in the Husseiniyah District of the Karbala Governorate and to the Ministry of Agriculture's Karbala Directorate. Each farmer received 280 pomegranate and 3 peach trees, while the Directorate received 200 pomegranate trees. *Inma* provided training for the pomegranate growers in orchard management before the trees were planted in late February. *Inma* is supervising the growth of the planted pomegranate trees and is providing assistance to farmers with knowledge transfer on appropriate irrigation methods.

A one-day **course in pomegranate planting** in Karbala presented fourteen male and one female growers with guidelines on pomegranate planting and care of newly transplanted trees. Growers from Karbala report that all planted pomegranate trees are progressing well, with near zero percent mortality. Having witnessed the first success of the pomegranate plantations, the farmers are requesting stone fruit trees, such as olive, apricot, orange and peach.

#### **Sulaymaniyah Pomegranate Orchards Development**

*Inma* established demonstration trials for production and pre-harvest cultural practices and techniques in existing orchards in Sulaymaniyah. Eight thousand one hundred ninety six pomegranate trees were delivered to the Halabja region of Sulaymaniyah. The colder climate in the north of the country delayed planting until March.

**Future Steps** To demonstrate **infrastructure for cultivating seedless table grapes** in South Rashidiya, *Inma* will purchase grape trellises for the 67 donums with planted vines and fencing for 21 donums of grape vineyard to prevent intrusion of livestock. Additionally, *Inma* will establish a 30-donum demonstration plot where drip irrigation systems will show the benefits of water management and increased yields when advanced irrigation techniques are applied.

At the end of March, *Inma* publicized the **Orchard & Vineyard Training RFA** for a year-round perennial horticulture training program with twenty one different one or two day curricula. The grant will fund production demonstration programs in both new and established production areas for the 650 donums in southern, central and northern Iraq. The courses will be available to both growers who have planted *Inma* introduced trees and vines as well as interested growers with existing orchards

**Salah Ai Hama Salah received 700 pomegranate trees for his orchard.**

**“Thanks to *Inma*, we now feel the potential of a new era for planting, planning, and marketing an emerging industry,” says Saleh while tenderly attending to his pomegranate orchard.**



**This diligent farmer emphasizes that training in irrigation and pre-harvest care will increase yields, allowing him to extend hiring plans to five full-time employees, seventeen seasonal workers, and 700 harvesters. “These baby trees are like an olive branch of peace and prosperity: one farmer took the cuttings from fifteen trees and has made 500 trees.” According to Saleh, *Inma* has inspired farmers with a “moral motivation” to strive for higher quality produce to one day take their rightful place as exporters of superior product.**

or vineyards. About 60 recipients of trees in the central region, as well as 30 recipients in the north and south are expected to attend. The trainees will be introduced to: Vine Trellising Systems and Tree Staking, and Pruning for Scaffold Development; Drip Irrigation in Vineyards and Orchards; Integrated Pest Management; Pre-harvest Preparation, Harvesting, and Field Packing of Soft Fruits and Grapes; Orchard Site Selection, Land Preparation, and Irrigation Needs; Orchard and Vineyard Care and Development; Over-winter Care, Pruning, and Training; Orchard Preparation, Layout and Planting; Irrigation in Trees and Vines; and Fruit Thinning.

*Inma* will continue monitoring the growth of the planted trees and vines, and provide assistance to the growers. The trees will begin to bear fruit in the fall 2011.

**Activity Extension** *Inma* is designing an extension of this activity for the 2009 and 2010 planting season to import 120,000 trees for planting in the three GFAs.

**Marketing** *Inma* is exploring market linkages to facilitate inter-regional trade in pomegranates. Karbala's early ripening varieties of pomegranate may be sold in central and northern markets with considerable profit. Northern pomegranates may be profitable in the Baghdad markets, where premium quality pomegranate is in short supply. A promising alternative is to market the black pomegranate in northern Iraq and the seedless variety in Anbar.

**Impact** *Inma* estimates that 2,500 farmers will be trained, 600 jobs will be created and over \$7 million income in gross revenue will be generated as a direct result of this activity by May 2010. However, the anticipated replication effect of commercially successful perennial horticulture practices is expected to be at least double.

A month after *Inma*'s importation of trees and vines, the Ministry of Agriculture (MOA), *Inma*'s partner in this activity, on its own accord imported 40,000 commercial varieties of fruit trees from Italy. The demonstration impact of the commercial orchards and vineyards activity is expected to have a ripple effect, motivating individual farmers, growers' association, and governmental agencies to improve the genetic quality of their trees, introduce a wide array of commercial varieties, and apply advanced orchard management techniques, as well as pre- and post-harvest practices.

**OLIVE PROCESSING** *Inma* and the Ninawa PRT started examining potential olive processing opportunities and various business models suitable for the olive orchards of the Bashiqa area, such as a centralized plant for bottling oil and mobile units for olive crushing. Instead of trying to compete with lower-cost imports, olive oil would be produced for local consumption.

**Future Steps** Further discussions with the Ninawa PRT will take place in April, when the course of action will be decided.

***The Iraqi economy suffers from weak domestic market linkages across ethnic and religious divides. As an act of good will and with Inma's assistance, Kurdish growers made a gift to their Arabic countrymen in the south sending them 2,200 pomegranate cuttings from a rare pomegranate variety.***

# ANNUAL VEGETABLES

## GREENHOUSES

### AL TAAE TRAINING & DEMONSTRATION GREENHOUSES

This commercial demonstration and training facility provides year-round high quality fresh produce to the Adhamiya and Baghdad markets. The greenhouses provide technical training to other greenhouse producers in the area by introducing best practices for greenhouse management.

**Impact** The greatest success of the greenhouse demonstration may lie in its indirect impact measured by the number of participants and farmers modeling *Inma's* example. Based on the demonstrated success of greenhouse production, 150 additional houses were funded by the U.S. Army in two PRTs near Baghdad. 100 greenhouses were purchased for the Radwaniya Farmers Association by the US Army in FOB Falcon, Baghdad ePRT1. Fifty greenhouses were purchased for a farmers' association near Abu Ghraib by Task Force Bowie. USAID's Community Stabilization Program provided 110 greenhouses equipped with drip irrigation systems. In the north and the south of Iraq, *Inma* Field Representatives mapped out 131 greenhouses in Diwaniyah, 1,200 in Karbala, 400 in Najaf, 118 greenhouses in Diyala, and 80 in Sulaymaniyah.

**GREENHOUSE TRAINING** The proper use of greenhouse production for early season crops will extend the harvest season in the fall and winter months. This activity will establish an Iraqi private sector training program for greenhouse production which will provide courses to farmers affiliated with *Inma's* packing house activities. *Inma* will provide the trainees with demonstration samples of seed, transplant trays, media, and fertilizer to provide inputs for 1,000 square meters of designated vegetable crop.

**Quarterly Progress** At the end of March, *Inma* publicized the **Greenhouse and Open Field Production Training RFA**. The three-day courses will be conducted once per week in Baghdad province, Fallujah, and Northern Babil province.

**Impact** The total number of trainees is estimated as 1,500, with a maximum 500 trainees in the greenhouse program, and 1,000 in the open field production. Over 4000 farms will benefit from the training. By May 2010, *Inma* estimates that 400 jobs will be generated by



***“After decades of degradation, war, and drought, I once again see a future for our farming communities,” says Sheik Faiq. With Inma support, he runs six demonstration greenhouses while providing greenhouse management training to local farmers. “I am demonstrating to my fellow farmers that utilizing such technology affords opportunity to earn extra money by selling higher valued vegetables while extending our growing season.”***

the Greenhouse and Open Field Production Training activity, 3,250 farmers will be trained, and \$5,250,000 in gross revenue will be accrued.

**Future Steps** Expressions of Interest and responses to the RFA will be evaluated after April 16 and the grant for the training program will be awarded in May. The training program is estimated to start in June and continue through May 2010.

**FLOWER PRODUCTION** Bedding plants and vegetable seedling production in containers offers considerable opportunity to develop Iraq's nascent flower and seedling production industry. Products will include vegetable seedlings for out-planting to farmers' fields of about 50,000 per month and bedding decorative flowers of about 100,000 per month. The pilot production and sales will be in and around Baghdad. Full production capacity by February 2010 may exceed 200,000 vegetable seedlings and 200,000 flower seedlings per month.

**Future Steps** This activity is in the design stage.

**RETAIL READY MARKETING** To create multiple marketing channels for Iraqi produce, *Inma* will utilize a combination of mobile farm-level packing units and commercial fresh fruit and vegetable packing house resources. This activity will add value to produce passed through traditional wholesale markets as well as alternative channels, such as direct sales, retail markets, and institutional buyers.

*Inma* intends to design and implement farm-level receiving, pre-cooling, sorting, grading, packing, branding and distribution network for selected fruit and vegetable products in advance of the opening of commercial packing houses.

Training programs for farmers will focus on proper harvest procedures, harvest maturity, and post harvest handling systems. Mobile packing units, consisting of pre-cooling systems, shade, as well as grading, sorting and packing equipment will be utilized to create a differentiated brand of high value produce for end point sale in addition to traditional wholesale markets.

**Future Steps** This activity is in the design stage.

***Inma's 2007 Abu Ghraib Improved Vegetable Production activity in Taji has already taken root, increasing crop yields and income. During the one year demonstration sales more than doubled from \$3 million in 2007 to \$6.6 million in 2008.***



**Sheik Sabah, chairman of the Taji Growers Association, is one of 900 beneficiaries who received samples of seven new varieties of high yielding hybrid seeds. "Participating farmers have increased yields by 100%," he enthuses. "I am on my third harvest and finding my footing to compete with foreign imports. Now we can fend off adamant shoppers who request Iraqi produce... we can say with pride once again, *this is an Iraqi cucumber.*"**

## OPEN FIELD VEGETABLE PRODUCTION

**TAJI – ABU GHRAIB VEGETABLE IMPROVEMENT ACTIVITY** *Inma* designed this activity in 2007 to provide approximately 900 growers in the area with new improved seed and to increase farm income. The program provided seven different new varieties of high yielding, hybrid seeds and plastic crop protection for four donums<sup>1</sup>, to demonstrate the potential of modern technology. In addition, *Inma* plans to extend this training to include the introduction of best practices in post harvesting handling techniques, processing and packaging, with the members of the Taji/Abu Ghraib Farmers Associations. Estimated direct beneficiaries number 540 men, 1,100 women and 2,700 youth.

**Impact** The total gross sales in the 2008 planting season is estimated to have been approximately \$1.2 million, while in the 2009 season *Inma's* field surveys project over \$1.6 million gross revenue generated by the 900 assisted farmers.

**FRESH FRUIT & VEGETABLE PACKING HOUSES** To demonstrate post-harvest handling technologies, *Inma* is establishing five packing houses. *Inma* funds the building construction and the equipment, and includes a share of initial working capital. The packing houses will perform hydro-cooling, sorting, grading and packaging of fruits and vegetables eight months in a year based on the seasonality of available produce. Each facility will have a capacity to meet post-harvest handling of 30 MT per day of tomato, eggplant, green chilies, okra, cucumber, citrus fruit, grapes, muskmelon and pomegranate.

**Quarterly Progress** With *Inma's* financial support, the construction of the **Rabee Packing House** in the Adhamiyah District of Baghdad started in December 2008. The grant for the **Taji Packing House** was signed on January 14 and construction started on February 1, 2009. At the end of the quarter, the steel structure, walls, windows and roof are already in place on both facilities.

In response to *Inma's* initiative to fund the construction of **three additional packing houses** near large urban markets in the Golden Crescent, eleven grant applications have been received from private Iraqi companies. It is estimated that the three grants will be awarded in May and the construction of the packing houses will begin in June.

A proposal for **Packing House Personnel Training Program** is under internal review. The training is planned to take place over six days in April or May, and will address the packing houses' management and technical personnel. Twelve persons from each packing house will attend. The curriculum will cover: produce handling; container use; boxes and bins; storage; psychometric chart use; food safety and personal hygiene; Hazard Analysis of Critical Control Points; Good Manufacturing Practices; Management of Quality



***“Farmers are already contracting with our packing house,” says Sheikh Ali, the CEO of the company that received Inma’s grant for the Rabee Packing House grant. “We are increasing employment opportunities and farmers see hope in their future.”***

<sup>1</sup> Donum – land surface measure, equivalent to 1/4 of a hectare.

Standards; and Product Grades and Quality. The training program will be offered to the personnel of each packing house after their completion.

**Future Steps** The construction of the Rabee Packing House is expected to finish in June, and the construction of the Taji Packing House in July 2009.

**Impact** The processed and packaged produce from each packing house will be sold to 150-200 retailers throughout Baghdad. *Inma* estimates that 400 farmers will be involved in supplying the produce and 70 direct employees will be involved in operations and management of each packing house. *Inma* anticipates that 250 jobs will be created by May 2010 with the operation of the five packing houses, creating \$6 million in gross revenue.

**REFRIGERATED TRANSPORTATION AND COLD CHAIN** In 2008, *Inma* conducted a **Cold Chain Survey** of the refrigerated facilities in Iraq. In follow up of the survey, the program started a country-wide assessment to discern potential course of action in support of cold chain development in Iraq.

**Quarterly Progress** Following a field tour throughout Iraq from January 25 to February 28, 2009, *Inma's* **Cold Chain Assessment** was completed. The report assessed the status of the existing cold chain for perishable foods in Iraq, as well as the known constraints to expansion of the cold chain in the short term. Absence of proper post-harvest handling, packaging, refrigerated storage and refrigerated transportation hamper Iraqi produce market competitiveness. When security improves and production increases, the supply of Iraqi produce may skyrocket during peak harvest seasons, which would flood the market, severely depress market prices and, in absence of cold storage, the produce overflow would turn to waste. The assessment observes lack of awareness of cold chain systems at all levels of the industry, as well as the lack of infrastructure and capacity necessary to support the cold chain.

**Impact** The assessment recommends against development of existent wholesale markets and large-scale long-term cold chain facilities. As an alternative, it recommends: training and awareness campaign on cold chain usage benefits; development of retail markets; establishment of small-scale mobile field packing units with short-term storage; their Integration with packing houses; and, establishment of a refrigerated distribution network and integrated distribution center within the packing houses.



**AL KUT PROCESSING TOMATO TRIALS** In 2008, *Inma* performed small scale trials where industrial varieties of tomatoes were planted in Wasit governorate. *Inma* introduced improved production methods, including: plastic covers, nitrogen and phosphate and foliar fertilizers, land preparation, plowing, planting rows, nurseries, transplanting, fungus and virus disease control, and harvesting. The purpose of the Trials was to test whether Iraqi processing tomato would be able to reduce their cost per metric ton to be competitive and

profitable in the market place. The tomatoes were harvested in December 2008.

**Quarterly Progress** Field surveys observe 600% increase in production per hectare in comparison to traditional technologies; 600% increase in farmers' income, with gross sales reaching \$215,385 from the baseline of \$35,897; and 50 jobs were created. The Trials induced wide acceptance of greenhouse technology in the area.

**Impact** With greenhouse technology, early-season fresh tomato production for the domestic market can be highly profitable and competitive with imported fresh tomatoes in both quality and price. Tomato production for industrial processing cannot compete with imported tomato paste, which dominates the domestic market. Unit costs would have to be reduced by 40% to become competitive.

**OPEN FIELD PRODUCTION TRAINING** This activity will establish an Iraqi private sector training program for open field production which will provide courses to farmers affiliated with *Inma's* field packing and packing house activities. A Field Day will be scheduled in each area to demonstrate the results of the training during the harvest season. Additionally, *Inma* will conduct one day theoretical courses in locations to be determined with the assistance of Provincial Reconstruction Teams in the vegetable producing areas throughout Iraq.

**Quarterly Progress** At the end of March, *Inma* publicized the Greenhouse and Open Field Production Training RFA.

**Future Steps** Expressions of Interest and responses to the RFA will be evaluated after April 16 and the grant for the training program will be awarded in May. The training program is estimated to start in June and continue through May 2010.



## IRRIGATION

**REVIVING IRRIGATION CONFERENCE** The *Reviving Irrigation* Conference took place in Baghdad on March 4. The Iraqi Minister of Water Resources Dr. Abdul Latif Rashid, the USAID Deputy Mission Director Thomas Delaney and *Inma* Chief of Party Ross Wherry marked the opening of the conference. The conference discussed: cropping models for irrigation districts; exploring agronomic and economic effect of alternative irrigation systems; estimating crop water requirements in terms of water use and economic returns; public-private partnerships in managing and operating irrigation systems; the possibility of private sector managing and operating irrigation systems; relative competitiveness of Iraqi agriculture in comparison to neighboring countries and the cost to Iraqi agriculture and food processing due to energy and monetary policy.

Sixty-one participants represented farm owners, irrigation and agriculture machinery companies, Iraqi Centre for Strategic Studies, Ministry of Water Resources (MOWR), Ministry of Agriculture, Ministry of Planning (MOP), College of Agriculture (Baghdad University), several ePRTs, USAID, USDA, ITAO, and USAID/*Tatweer*. This high profile event was transmitted by the Iraqi *Biladi*, *Sumaria*, *Afaq* and *Rashid* television news channels.

**Future Steps** *Inma's* analysts and technical experts have brought to light numerous policy issues which, if resolved, would be of benefit to the development of Iraq's nascent agribusiness sector. The following conference schedule is tentatively set for the next two

***“Facilitating [farmers’] participation will continue to be the focus of USAID’s Inma program, as we work together to mitigate the risks of agricultural production, through more secure access to water and better production practices,” said Thomas Delaney, the USAID/Iraq Deputy Mission Director at the inauguration of the conference.***

quarters: *Irrigation Economics and Regulation; The Future of Fish and Chicken Production, and the Feed Industry; Horticultural Prices, Volumes and Standards; The Future of Forage Crops; Export Framework for Agricultural Products; and Planting and Financial Budgets for Major Horticultural Crops.*

**Impact** MOWR and the Ministry of Electricity (MOE) agreed to install a dedicated electrical line to supply the pumping station with power 24 hours per day. At present, only 6% of the irrigation area has been receiving water through the Rashidiya pump station. The installation of the power line began in March and will be completed in the following quarter, allowing much of the 4,000 hectares to receive water for the first time since the late 1990s.

**AREA FRAME SAMPLING WORKSHOP** In collaboration with USAID/*Tatweer*, Inma held a workshop on Area Frame Sampling for officials from the Iraqi Ministries of Agriculture and Water Resources, private enterprises and farmers' associations to enable them to determine crop areas in irrigated districts in central Iraq. This statistical tool enabled the participants to determine agricultural production in a specific area. This training was attended by 19 male and 2 female technical personnel.

## AQUACULTURE AND POULTRY

### AQUACULTURE PRODUCTION

**FISH GROW-OUT VERIFICATION TRIALS** Fish consumption in Iraq is at meager 5 grams per capita per week due to inadequate supply and the high price of fish. To revive Iraqi aquaculture, *Inma* addresses four critical constraints to fish production and productivity. These include water aeration; genetic quality of fish stock; appropriate quality fish feed; and live haul transport.

On February 15, the Fish Grow-Out Verification Trials were completed. This large scale activity demonstrated five alternative technology packages including variations in the characteristics of fingerlings and stocking rates, quality and treatment of fish feed, and variations in water aeration, including use of paddlewheels. Supervision and reporting, performed by eighteen *Inma* monitors, included daily and weekly recordings of feed consumed and weight gained by fish.

**Quarterly Progress** Interviews with farmers were conducted, giving evidence of perceptible impact of *Inma's* 2008 carp production activities: market managers report about 40% increase in market availability of fish and higher carp quality. The trials convinced Iraqi fish producers that they can increase profits by purchasing higher quality feed, demonstrating that fish gains more weight at a much faster rate if appropriately nourished.

**Impact** Fish harvesting and marketing season started in February 2009. By the end of the quarter, sales of nearly \$130,000 have been recorded, a fraction of the upcoming marketing season when 15 million carp fish will be sold.

**CARP GENETIC IMPROVEMENT** To improve the growth rate and disease resistance of commercially grown carp in Iraq, 10,000 genetically improved carp fingerlings will be transported from Hungary to the Euphrates and the Middle East fish farms in Babil, in April 2009. The fingerlings will spend six months in quarantine, after which the new brood stock will be crossed with Iraqi heat-tolerant carp strains.

**Impact** Each imported fingerling that reaches maturity can produce an average 6,000 offspring, which could bring



**Amer Said Obaid has farmed fish for 15 years, struggling to keep his small farm economically viable with mounting feed costs and limited funding. In 2008, Amer received 32,000 carp fingerlings from the Euphrates Fish Farm Hatchery as a part of *Inma's* Fish Grow-Out Verification Trials. Amer also participated in *Inma's* series of feed and pond aeration training sessions. He is already applying technical skills that are significantly improving the growth ratio of the farmed delicacy. "Before the training, we were not breeding quality fish... but now I have increased the quality and quantity of my production." Amer says. "I am earning more money and investing back into my business."**

the first generation total of crossbred fish to 60 million carp in 2010. The crossbred variety will exhibit combined qualities of climate adaptability, increased longevity of brood fish, decreased mortality, faster growth rates, and higher reproduction rates.

**Quarterly Progress** *Inma* renewed its authorization from MOA to import 10,000 carp broodstock from Hungary. The authorization includes 2,000 grass carp fingerlings, additionally ordered at the request of MOA and the two receiving hatcheries in order to improve the genetic quality of the existent Iraqi grass carp. The long winter in Europe held the fish ponds in Hungary under ice for an extended period of time.

**Future Steps** The broodstock will be delivered to the two fish farms on May 1, where it will remain under observation until the end of October. Between February and May 2010, the new broodstock will be crossbred with Iraqi heat-tolerant carp. From April to June 2010, the crossbred offspring will be distributed to hatcheries and fish farms throughout Iraq, estimated at 25 million fingerlings.

**Impact** Introduction of high quality fish genes into the aquaculture industry can help Iraq meet local demand for fish by 2011, estimated to exceed 200,000 MT per year.

*Inma* estimates that 700 ha of ponds will have become operational by May 2010 in direct effect of the activities under the aquaculture value chain development. 250 jobs will be created, and 130,000 MT of live weight valued at \$30 million gross revenue, will be produced. 500 fish farmers will be trained and 250 jobs will be created. The replication ratio stemming from the demonstration effect of commercially successful practices is estimated as double.

**AQUACULTURE TRAINING** *Inma* will assist farmers to use their existing ponds more efficiently rather than promote an increase in the number of ponds and hence water use, which already amounts to at least 1,000 ha of ponds devoted to production of common carp. The aquaculture technology in Iraq is rudimentary and the system has limited supplemental feedstuff. There are no aquaculture focused training programs, aeration systems, water filters or facilities for preserving the catch and transporting it efficiently to market.

The aquaculture training program will establish ongoing training centers in the Babil area, propagating techniques that distinctly increase the production, the quality and growth rate of the commercially bred fish. *Inma* will provide training to 500 fish farmers in the Babil area by offering five-day monthly training for twelve consecutive months. The curriculum will include pond preparation, water management, aeration, feed management, live haul transportation, and marketing strategies. The curriculum includes hands-on techniques taught by certified Iraqi aquaculture specialists and will take place at the Euphrates and the Middle East fish farms. Two grants for aquaculture training centers will be awarded, one in the North Babil and one in South Babil.

**Quarterly Progress** The **Aquaculture Training Program** RFA was publicized in March.

**Future Steps** The technical evaluation report of the RFA will be completed in early April. Training will begin in mid-May.

**Impact** The courses will enable fish farmers to increase the number of fish their ponds can hold at once, to feed and care for the fish so that they grow faster and fatter, to introduce new genetics that increase disease resistance and promote growth, and to reduce the loss of live fish as they are taken to the market.



## POULTRY PRODUCTION

**POULTRY INDUSTRY CONFERENCE** On March 12, the *Inma*-initiated **Poultry Focus Meeting** took place at FOB Kalsu in Babil with area PRTs. This workshop discussed possible courses of action to develop the poultry industry in Iraq. *Inma* presented a model which showed the estimated consumption of eggs, meat, poultry, and fish in Iraq in 2012. The data enabled *Inma* to calculate demand for fish and poultry feed from 2009 to 2012, and thus the capacity of feed mills necessary to supply future feed production. The results of the Poultry Focus Meeting led *Inma* to organize a conference of much larger scope and with larger audience.

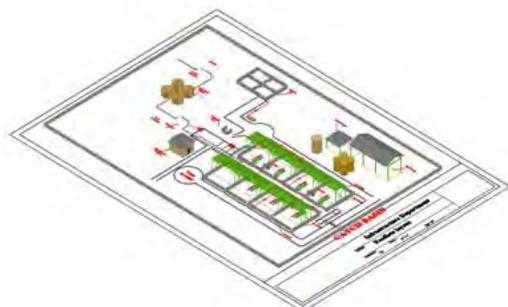
**Future Steps** On April 20, 2009, USAID/*Inma* Agribusiness Program will convene a national **Poultry Industry Conference** in Baghdad, which will gather together the main stakeholders and suppliers in the Iraq poultry industry, namely, major Iraqi poultry producers, feed producers and distributors, and relevant representatives of the Ministry of Agriculture.

## FISH AND POULTRY FEED

**PROTEIN CONCENTRATE FEEDS** *Inma* estimates that the poultry and fish industry in Iraq will require an estimated 680,000 MT of local or imported feed in 2009. To develop the full potential of both the poultry and aquaculture industries, *Inma* recommends development of an Iraqi feed production infrastructure capable of producing quality, high-protein and cost-efficient feed that serves both fish and poultry producers.

## BEEF AND LAMB

**FEEDLOTS** To perform a demonstration of a profitable agribusiness within the red meat value chain, *Inma* will build up to ten feedlots throughout Iraq. *Inma* will fund the actual construction cost, 85% of animal procurement and 66% of the animal feed.



**Quarterly Progress** *Inma* finalized grant agreements with four feedlot operators. On March 20, USAID granted consent to the grant agreements.

Feedlot applications from Babil, Wasit and Taji have been selected. Three additional applications will be selected in April, for a total of ten feedlots.

**Future Steps** The grant signing ceremony with the four grantees will take place in April, followed by grantee training in grant management, including financial and reporting requirements. The construction of the feedlots will start immediately thereafter and will complete in August. The feedlots will be operational and start stocking up in September.

Cost negotiations with the prospective grantees for the second batch of feedlot grants will commence about April 15. A consent package will be submitted to USAID thereafter, and the construction of the feedlot is expected to begin in June.

**Impact** The ten feedlots will create 250 permanent employments and allow for the controlled production of 3,000 head of beef and 6,000 head of sheep per year, which will produce 1,400MT of high quality red meat in value of \$14 million on the local markets. By May 2012, it is expected that the demonstration of profitable business model would lead to creation of at least 20 replicated feedlots, increase the accrued gross revenue to \$42 million from 4,200 MT of red meat produced, while creating 750 jobs.

**FORAGE TRIALS** *Inma* planned large-scale forage trials to demonstrate the productivity of numerous alfalfa varieties in four climatic locations as a cash crop. The trials were postponed when the Ministry of Agriculture could not arrange for importation permission of the alfalfa seeds in time to meet the planting schedule. *Inma* will evaluate the possibility of fall planting.

**Impact** The Trials will take place in September, on 700 ha of appropriately irrigated farmland producing 14,000 MT of forage, with tenfold replication potential over time. Farmers will acquire gross revenue of approximately \$24 million. The activity will create altogether 500 jobs. Development of guidelines for the production of hay from the new varieties will lead to staple feed supply for the proposed feedlots and the livestock market thus increasing the supply of good quality lamb and beef moving into the red meat marketing chain.

**FEED ANALYSIS LABORATORIES** *Inma* tests performed in U.S. laboratories confirm that the quality of domestically produced feed in Iraq is highly inconsistent. To respond to the absence of feed control facilities in the country, *Inma* will establish three feed analysis laboratories in the GFAs to enable farmers control the quality of the feed they purchase. Training courses on equipment usage will be given to at least five local feed technicians in each laboratory.

**Impact** The activity will stabilize the current variance in quality of feed, leading to correspondent adjustment of market price of feed, increase in feed quality, and improved nourishment of livestock, poultry and fish. The laboratories will create at least 15 new employments and will establish three businesses. In support of the farmers who will use the laboratory services, *Inma* will ensure that the three feed analysis laboratories charge nominal fee and are open to the public for a minimum of one year.

## SUPPORT ACTIVITIES



### **TISSA NISSAN (NEW BAGHDAD) RETAIL MARKET**

*Inma's* rehabilitation of this market began in May 2008 and ended on March 1, 2009. The remaining construction works were completed: installation and testing of four generators, thirteen cold storage units and two freezers. During the last stage of market renovation, the Iraqi governmental forces removed some 600 vendors from the adjacent street and the vendors have been gradually relocating to the market, with the help of the *Inma*-funded

NGO *NINMA* and the Baghdad District Manager.

**Future Steps** This activity has been completed.

**HAMEEDIYAH MUSHROOM FARM** The restoration of the Hameediyah Mushroom Farm, the only commercial mushroom production facility in Iraq, started in April 2008 and was completed in February 2009, when the first limited scale production of white button mushrooms was initiated.

**Quarterly Progress** The raw material necessary to start up the farm operations, 480m<sup>3</sup> of peat moss and 18,000 liters of spawns, were delivered from the Netherlands in mid-January. With all construction work completed, a Climate Control Expert visited the Farm on January 14-17 to recommend appropriate Environmental Control Units for the plant.

**Future Steps** This activity has been completed. However, *Inma's* technical support and production monitoring continue until May 2010. The first generation of mushrooms of limited scale is grown in two of the eight production cells. The mushrooms will be ready for marketing in May. *Inma* will facilitate the Farm's market linkages to wholesale markets in Baghdad and elsewhere.

**Marketing** *Inma's* market analysis shows that there is no possibility for profitable export of fresh mushrooms from Iraq. However, the existent Iraqi market demand can consume the entire annual production of the Hameediyah Mushroom Farm which is the sole commercial facility of this kind in the country. The target market is primarily within a radius of 100km of Baghdad. Distribution in this market area can reach at least 11 million potential customers.

**Impact** The Hameediyah Mushroom Farm in its initial stage is expected to produce some 1,000 tons of fresh mushrooms in its first year of operations, valued at the market at approximately \$715,000. Fresh mushrooms can be sold in the local retail market for \$6 per kilo, \$5 at wholesale level and \$3.5 directly at the Farm. The operation will generate a profit estimated at 20.4% on the net sales. *Inma* estimates that the first year net profit of the Farm will be approximately \$750,000 for a production of 1,000 tons of mushrooms. Within two or three years from the beginning of the operation, the Farm is expected to achieve annual production of 1,200 tons. The output of the Hameediyah Mushroom Farm will satisfy national consumer demand for fresh mushrooms. It will directly employ 135 men and women and will stimulate considerable indirect employment in surrounding communities through demand for production inputs.

**BALAD CANNING FACTORY (BCF)** *Inma* resumed cash advances under the grant, which had been temporarily discontinued due to a billing issue related to procurement of generators. Three new boilers were imported from Turkey. One was installed and tested, while the other two are in process of installation. Rehabilitation works are nearing completion at the end of the quarter: the activity will finish by mid-April.

The factory diversified its production during the quarter: the production lines are producing bottled water in four different types of packaging, four types of flavored drink juices, ten types of potato and maize chips, and three types of *kubba* meat pie products. In the last quarter, the factory processed 1.25 MT of raw milk for production of yogurt, cheese, and butter to test its new dairy line. Production of yoghurt started in March. The BCF gross profit reached over \$500,000 in market value in the last quarter, creating on average over 110 jobs for skilled and unskilled workers.



**Market** *Inma's* assistance to BCF not only led to the reopening of the factory but also facilitated domestic market contacts with buyers throughout Iraq: 36 new market contacts have been established so far with the provincial markets in Kirkuk, Diyala, Baghdad, Babil, Najaf and Karbala.

**Future Steps** This activity will close in mid-April.

## SPECIAL ACTIVITIES

**NINAWA CONGRESSIONAL EARMARK** The 2008 Foreign Operations Statement of Managers earmarked \$10 million for projects in the Ninawa Plain. Within the established value chains, *Inma* has programmed support for two beef feedlots, a dedicated microfinance line through the NGO Al Thiqa, and a grant to the olive growers association.

## CROSSCUTTING ACTIVITIES

**EMERGENCY WHEAT SEED DISTRIBUTION** This activity was an emergency response initiative proposed by USAID to address the severe shortage of quality seed in Iraq as a result of poor rainfall and water shortages in the past growing season. *Inma* delivered 900MT of wheat seed and 100MT of barley seed to Iraqi farmers for the 2008 planting season. 100MT of wheat seed were delivered to each of the PRTs in North Babil, South Babil, Mosul, Kirkuk, and Diyala, and 200MT each in Taji and in Erbil. In addition, 50MT of barley seed were distributed to the PRT in Fallujah and 50MT to the PRT in Diyala.

**Impact** Interviews conducted with a sample group of farmers show that three to five jobs were created on each farm receiving wheat seed, for farm preparation, planting and irrigation. The overall jobs created through this activity are estimated at about 5,400 for the total of 1,800 assisted farmers.

### BUSINESS DEVELOPMENT

**MARKET PRICE MONITORING** *Inma* supports the nationwide wholesale market price information program that the Anka Company for Agricultural Development has been implementing in Iraq since 2006. *Inma* awarded a grant to Anka, which provides full support for continuing price monitoring thru March 30, 2010. Anka price reports are the only publicly available market information source in Iraq. The price information activity covers approximately a hundred different agricultural products. Daily prices for fruits and vegetables are collected, processed, and disseminated by radio, email, leaflets, and mobile phone text messages. Wholesale markets in all eighteen provinces are surveyed, including two large markets in Baghdad.

**Quarterly Progress** On January 11 and 12, Anka held a workshop in Erbil for market monitors from all Iraqi provinces to review the expansion of clientele for price reports and to agree on improvements in data collection methods. The workshop concluded that a single standard procedure is unsuitable for use in the main markets. The market volume issue requires further analysis and consultation.

In February, Anka set up a branch office in Baghdad for easier access and interaction with *Inma*, the national government, farmers, traders and the general public. Separate Anka offices were established near markets in Samawa for southern Iraq and in

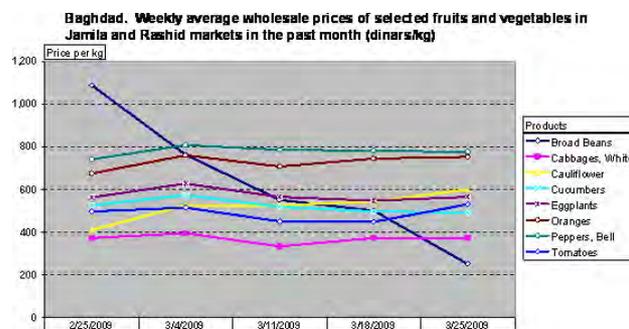


***“Information is power,” says Amal Shekhani, the owner of Anka. “In Samarra, farmers receiving the text messages realized they needed to diverge from producing solely wheat and barley, using the information to shift into more profitable business of growing cucumbers and tomatoes. When Iraqis want to make a business, they can use Anka to plan.”***

Sulaymaniyah for northern Iraq.

The number of subscribers receiving customized price reports via SMS text messages to mobile phone has reached 600. Anka also agreed with the *Free Trade*, a biweekly national commercial newspaper, to publish a regular article related to agricultural markets in exchange for printing an advertisement for Anka.

A new market analyst in Anka provides a weekly report detailing major price changes in the Baghdad market and factors that might account for those changes. A quarterly price charts compendium is now available from Anka, based on the accumulated time series database of market prices starting October 2006. Seasonality patterns for several fruit and vegetable products are clearly observed for the more perishable products such as eggplants, cucumbers and broad beans.



**Future Steps** In the next quarter, *Inma* will hire an international agricultural marketing consultant to advise Anka in data collection, data processing, and application of uniform criteria for market price reports. A quarterly compendium of price charts will become a regular part of the repertoire of price reports available from Anka.

A major effort will be made to customize mobile phone text messages to the specific needs of subscribers, as a way of expanding the number of subscribers. *Inma* will also address the issue of sustainability of the company.

#### HOUSEHOLD FOOD EXPENDITURE AND CONSUMPTION SURVEY – BAGHDAD

Instead of conducting a separate survey as considered in the previous quarter, in March 2009 *Inma* updated the World Bank/COSIT *Iraq Household Expenditure Survey 2007* to estimate food consumption adjustments to increase in household income. The survey finds that proteins consumption is led by poultry products, while red meat remains at a very low level of 2 kg of beef and 2 kg of mutton per capita per year. The study also shows that the current subsidies of the Iraqi Public Distribution System (PDS), including tomato paste, lentils, chickpeas and vegetable oil, are crowding out private sector products.

**BUSINESS DEVELOPMENT** *Inma* provides business development services to its portfolio companies including, but not limited to: feedlots, packing houses, orchards, greenhouses, Anka, mushroom farm, and selected growers, as well as other key agribusinesses. The objective of this assistance is to develop and improve management and operational capacity of these enterprises. Support is offered in the form of applied training through workshops and direct assistance in the areas of Financial Management, Operations Management and Business Planning and Analysis. Assistance will also be given to support agribusiness associations' management in such areas as membership development, general management and Board of Director development.

*Inma* is working to provide a forum for agribusinesses, allied companies and other interested parties to address key issues affecting the development of agribusiness in Iraq. *Inma*-supported Business Roundtables and Conferences provide a venue for agribusinesses to bring key issues to light, collaborate on solutions, and form the foundation from which public-private dialogue can occur.

**Quarterly Progress** The **Management and Business Development Services** RFP was publicized at the end of March, seeking prospective applicants to provide management consulting services, as well as logistical support for Conferences and Business Roundtables from April 2009 through March 2010. Approximately 60 businesses should benefit.

Planning began for an **Agricultural Finance Conference** in June to discuss the difficulties in obtaining agricultural finance and ways to improve access.

To reach out to both *Inma* supported and other vital agribusinesses, the program started an **Agribusiness Database** to be able to identify Iraqi agribusinesses that can benefit from program activities, such as the Business Roundtables and Conferences. Also, the database will provide an easy means to contact and disseminate pertinent information of interest to agribusinesses. The database specification was developed and company information is starting to be collected.

**Future Steps** The Business Management Support Services are estimated to begin with workshops in selected areas in June. The Association Management Support Services are planned to start with one-day workshops in Baghdad, Erbil and Babylon Provinces in June. Business Roundtables for fruit and vegetable value chain and fish value chain, in Baghdad and Hillah respectively, are planned to take place in May. The National Agricultural Finance Conference will take place on June 21 in Baghdad.

**MICROFINANCE (MFI)** The first microfinance grant disbursement to a Kirkuk-based MFI NGO was executed in mid-February. The full grant enables the NGO to provide approximately 440 short-term agribusiness loans between \$500 and \$25,000 with an interest rate of 16% to farmers and small agri-businesses of the minority communities in Ninawa.

The MFI NGO opened a branch office near Mosul to begin the agribusiness loan program in the Ninawa Plain. The branch received ten loan applications, of which three have been approved and will be disbursed in April. The approved loans are \$5,000 each: one is for calf fattening operation and two are for crop production.

A **cost extension to the microfinance grant** to this NGO is being finalized at the end of the quarter. This grant will enable the beneficiary to provide 960 agribusiness loans in Sulaymaniyah, Kirkuk, Erbil, Dahuk and Diyala. Al Thiqa estimates that 143 loans will be given in Dahuk, 143 in Erbil, 286 in Sulaymaniyah, 143 in Kirkuk, and 143 loans in Diyala.

The first microfinance grant disbursement to a Babil-based MFI NGO was executed in mid-March. In the first weeks, this NGO disbursed eleven loans with total amount of 21,500\$. The full grant is projected to provide approximately 495 micro-loans to farmers and small agribusinesses in the governorates of Babil, Wasit and Karbala.

**Future Steps** *Inma* will continue monitoring the activities of the two grantees. The cost extension to the NGO in northern Iraq will be in place in April.

**Impact** It is estimated that the microfinance grants will create 1,600 jobs by April 2010, generating gross revenue in value of \$3 million.

**SMALL AND MEDIUM ENTERPRISE LENDING** The *Inma* agribusiness loan program, formerly known as Grant to Loan program, was cancelled by USAID in early March.

## TRAINING

**AGRIBUSINESS TRAINING** *Inma* implements a complex training program transferring advanced agribusiness skills and knowledge to its beneficiaries, independent farmers and associations. The training program is implemented by *Inma* core experts, *Inma* grantees and contractors, and *Inma* field representatives. Training activities are reported as components of the main activities to which they relate.

**Quarterly Progress** *Inma* technical staff completed five training courses for 114 male and female farmers in horticulture and livestock production.

**Future Steps** Thirteen training packages are in preparation, to be delivered throughout 2009 and 2010. The curriculum addresses the following sectors: *orchards and vineyards* (20 different types of courses: altogether 125 courses, 25 participants in each course); *packing house operation* (21 courses for 25 participants each, and one study tour abroad for 12 participants); *cold chain development* (20 participants); *aquaculture* (24 fish production training courses for 20 participants each); *feedlot training* (40 courses, with 35 participants each); *microfinance training* (12 trainees); *agribusiness development* (four courses for 20 participants and one for ten participants); *market management* for the NGO NINMA at the *Tissa Nissan* (New Baghdad) Market, *field packing* (120 participants); *greenhouse operation* (52 courses for 25 participants each); *open field vegetable production* (155 courses for 15-18 participants each); *poultry and fish production management* (50 participants); and *feed analysis laboratories* (15 participants).

**Impact** About 9,000 trainees are estimated to complete *Inma*'s training courses by the end of the program.

**SMALL BUSINESS MANAGEMENT TRAINING** In November 2008, a grant agreement was signed between *Inma* and an Iraqi women's NGO to provide training for farmers in Small Business Management in northern Iraq in 2009. Technical agricultural training of one to two-day courses also will be presented as separate training programs under the grant. The curriculum of the technical training will be defined based on need and recommendations from the PRTs and *Inma* technical staff. 16 individuals received a one-week Train the Trainers course.

**Quarterly Progress** A three-day training course was planned and coordinated with the Mosul PRT for 25 farmers in Tal Afar. The course begins April 1.

**Future Steps** Training for farmers under this grant will continue throughout the five provinces of the Northern GFA. During the next quarter there will be similar courses planned and executed in Erbil and Sulaymaniyah. Approximately 30 courses for altogether 600 trainees will be held for the length of the program.

**CENTRAL EUPHRATES FARMER'S MARKET (CEFM) & AGRICULTURAL CENTER TRAINING** In support of the North Babil ePRT Agricultural Team's efforts to establish a large-scale wholesale market in the Province of Babil, *Inma* proposes to provide technical assistance and training focused on improving the overall functional performance and sustainability of CEFM. The training program will include Business Planning; Basic Warehouse Management; Food Safety; Facility Maintenance; and Association Development.

**Future Steps** *Inma* will consider executing procurement to cover training and basic equipment needs identified in consultation with the CEFM Board of Directors. Future

discussions on provision of operating capital support are pending and depend upon the successful opening of the CEFM.

## FIELD ACTIVITIES

**Golden Crescent** *Inma's* two Iraqi Field Representatives in Anbar province conducted eight meetings with area PRTs, provided technical assistance to 45 farmers and took part in 42 data collection and assessment activities. They participated in numerous technical workshops within *Inma* and with Iraqi organizations. Recruitment of additional Field Representatives started toward the end of the quarter.

**Two Rivers** *Inma's* five Iraqi Field Representatives in the governorates of Wasit, Najaf, Karbala and Diwaniyah performed about 350 training sessions with individuals, farmers and associations. The training topics included irrigation, NGO establishment, modern agricultural technologies, and orchard management and tree care. Three major surveys were conducted to map existent greenhouses, vegetable crops and orchards.

The Field Representatives also performed approximately 50 data collection activities on poultry farms and the status of poultry production in the provinces, as well as location and capacity of forage sites. They also provide continuous support and monitoring of the pomegranate trees distributed to the Karbala growers.

In February, *Inma* Field Representatives in Najaf trained thirty women farmers in buffalo breeding, in cooperation with an Iraqi women farmers association. The Najaf PRT provided the trainees with dairy equipment for milk processing, whereas the association will perform training on equipment operation.

**Northern Area** *Inma's* seven Iraqi Field Representatives performed training sessions with 98 individuals in the last quarter, training 114 farmers and food processors in the use of advanced agricultural technologies. They provided assistance to thirteen organizations in the provinces and trained 37 association representatives in improved farming and marketing skills. In support of large-scale program activities, they undertook 25 data collection activities, supplied 15 field assessment reports, and produced 14 baseline and feasibility studies. They also conducted sixteen meetings with the area PRTs and participated in eleven workshops.

**Wasit Fair** On February 27 – 28, the first Wasit fair, organized by the Iraqi Businessmen Union and the Wasit Center for Development and Economic Development, the local government and the Wasit PRT, took place in the governorate capital of Kut. *Inma* Field Representatives were granted a separate booth and introduced the dignitaries and the fair visitors with the program activities.



***In a remote village in Najaf province, buffalo breeding and dairy production is the sole livelihood of the internally displaced Marsh Arabs. Without electricity, veterinary services or access to markets, improper animal care results in weak animals and low milk quality. Inma trained 30 women farmers to use the resources already at hand to provide proper feed and health care for their buffaloes. Three hundred families will now enjoy better meat, milk, and improved income.***

## PUBLIC RELATIONS AND COMMUNICATIONS

**Website** For several months, the Iraqi development media engine “Iraqi Updates” has been systematically distributing *Inma* website material to its viewers. During the last quarter, the content and the structure of the *Inma* website ([www.inma-iraq.com](http://www.inma-iraq.com)) have been redesigned to reflect *Inma*'s Work Plan 2009 - 2010. Nine news stories have been added in the last quarter. A new photo gallery was added to offer a visual narrative to *Inma* activities. Eighteen economic studies and value chain analyses, as well as three progress reports were uploaded on the *Inma* website. Sixteen technical reports and three progress reports were submitted to USAID Development Experience Clearinghouse (DEC) for inclusion in the DEC online repository.

The bibliography of *Inma* publications is given in Appendix C. During this quarter, the following titles were added to the bibliography:

### Technical Reports

*Cold Chain Assessment*, USAID/*Inma*, March 2009  
*Reviving Irrigation Conference Report*, USAID/*Inma*, March 2009  
*Selecting Crops in Irrigated Land in Central Iraq*. USAID/*Inma*, March 2009  
*Energy Impact on Agriculture and Food Processing*. USAID/*Inma*, March 2009

### Success Stories and Updates

*Iraqi Civil Servants Gain Important Skills in Improving Irrigation*  
*USAID in Partnership with Iraqis Help Revitalize Orchards, Vineyards*  
*USAID Facilitates Forum to Advance Ideas on Water Management in Iraq*  
*Market Data by Mobile Phone Helps Farmers Sell Crops*  
*Microfinance Grant Boosts Spirit of Iraqi Entrepreneurship*  
*USAID Increasing Competitiveness of Iraqi Produce*  
*Inma Presents Crop Model at Seminar*  
*USAID Exports 62,000 High Producing Fruit Trees and Grape Vines to Iraq*  
*Bank Credit Training Set to Invigorate Iraqi Agribusiness*

Four one-page narratives on fruit and vegetable, fish and poultry, agribusiness development, and beef and lamb value chains were developed and are being distributed in English and Arabic to PRTs and domestic partners.

**Graphic Design, Branding & Marking** Banners were developed for the *Reviving Irrigation* Conference and for *Inma*'s booth at the Wasit Fair. Folders, PowerPoint templates, certificates and letterheads in accordance to USAID Branding & Marking standards were developed and distributed to *Inma* staff. *Inma* designed and printed a series of five folkloric agricultural posters.

**Handbooks** *Inma*'s third handbook, *Good Manufacturing Practices and Hazard Analysis for Critical Control Points for Fresh Fruit and Vegetable Packing in Iraq (GMP&HACCP)*, was published in English and in Arabic. The Kurdish version will be printed in early April. These handbooks will be used as a training material for the packing houses and will be distributed to agribusiness centers, associations, institutes, PRTs and other partners. In addition, the *Lamb* and *Beef Feedlot Management Guides* will be reprinted, after the program distributed 1,000 each during this quarter.

**Future Steps** The Kurdish translation of GMP&HACCP in Iraq will be published in April 2009.

## APPENDIX A: COMPLETED ACTIVITIES

Activity
Taji/Abu Ghraib Vegetable Improvement
New Baghdad ( <i>Tissa Nissan</i> ) Market
Al-Taee Greenhouses
Al Kut Processing Tomato Trials
Taji/Abu Ghraib Training Program
Orchard and Vineyard Demonstration
Date Workshop - Erbil
Feed Grain Promotion 2007
Taji/Abu Ghraib Corn Demonstration
Barley Demonstration in Fallujah and Diyala
Crop Land Area Survey
Emergency Wheat & Barley Seed Distribution 2008
Euphrates Fish Farm Rehabilitation
Fish Grow-Out Verification Trials
Balad Canning Factory
Hameediyah Mushroom Farm
Erbil Expo Training
Training Activity In Najaf
Bank Training Program
Diyala Butcher's Focus Group Survey
Ag-Expo Management
Poultry Industry Overview Update
Cold Chain Survey
Greenhouses/Wheat-Barley Training

## APPENDIX B: PERFORMANCE MONITORING

Significant accomplishments have been achieved during this quarter. The rehabilitation of the New Baghdad (*Tissa Nissan*) Market was completed. The renovation of the Hameediyah Mushroom Farm was finished, and the first batch of mushrooms will enter the market in May 2009. Two demonstration activities, namely, the Fish Grow-Out Verification Trials in Babil and the Processing Tomato Trials in Wasit, have been completed, inclusive of the follow-up evaluation components. The rehabilitation of the Balad Canning Factory will be completed and closed out in the beginning of the third quarter of FY09.

In this quarter, *Inma* began measuring the impact of several 2008 activities: surveys of assisted farmers have been conducted in Baghdad, Babil and Wasit provinces to evaluate the Taji/Abu Ghraib Vegetable Improvement Activity, the Fish Grow-Out Verification Trials and the Processing Tomato Trials respectively. The survey results are shown in SO8.2.4.3 and SO8.2.4.4 indicators.

One hundred and thirty farmers from Sulaymaniyah, Karbala and Baghdad were included in the Commercial Orchard and Vineyard Development activity in this quarter. With the feedlot program moving forward, the four approved grants to feedlot operators are expected to influence the program performance indicators in late 2009.

*Inma's* activities created over 10,000 full-time, part-time and seasonal jobs in this quarter, while the total gross sales of the program-assisted farmers and businesses are estimated to have exceeded \$3 million. Ninety percent of program-assisted farmers reported an increase in production. In addition, two microfinance loans provided through *Inma* grants are now being executed in the north and south of Iraq. The microfinance program is expected to accelerate in the next quarter, significantly influencing the performance indicators.

To ensure contractual compliance and provide a sound basis for performance management, *Inma* incorporates monitoring and evaluation components in all of its activities. The following Mission Level and Performance Indicators provide analysis of the *Inma* Program.

### PERFORMANCE INDICATORS

*Inma's* program objectives address the following intermediate results (IRs) as agreed with USAID:

- SO8.2 — Increased Capacity of the Private Sector**
- SO8.2.1—Increase perennial horticulture production and marketing**
- SO8.2.2—Increase annual horticultural production and marketing**
- SO8.2.3—Increase livestock and feed-grains production and marketing**
- SO8.2.4—Increase competitiveness of agribusiness enterprises and**
- SO8.2.5—Increase domestic and foreign partnerships**
- SO8.2.6—Increase agribusiness access to finance**

## QUARTERLY DEVELOPMENTS

### SO8.2—Increased Capacity of the Private Sector

#### Indicator 1—Increase in total gross sales of program assisted enterprises (given in US\$ millions)

The cumulative increase in sales value of program-assisted enterprises reached \$14,124,312 in March 2009. During this quarter, an additional \$3,071,685 of gross profit was generated by *Inma*-supported activities. This figure includes sales from the previous crop season and 60% of the current crop season under the Taji/Abu Ghraib Vegetable Improvement Activity, the Balad Canning Factory sales for the last three months, and a part of the monitored fish farms' sales under the Fish Grow-Out Verification Trials. For the next quarter, 15 million of fish fingerlings of Euphrates fish farms will be ready for sale.

#### Indicator 2—Increase in employment in the agriculture/agribusiness sectors attributable to program activities.

The number of jobs created in the second quarter of FY09 increased to 10,369, which represents the employment generated by the Balad Canning Factory, the Fish Grow-Out Verification Trials, the Processing Tomato Trials in Wasit, the Commercial Orchard and Vineyard Demonstration, the New Baghdad (*Tissa Nissan*) Market, the Emergency Wheat Seed Distribution, and the construction of the packing houses. In the next quarter, the employment will significantly decrease because of the completion of a number of activities, as well as the seasonality of agriculture products, such as fish and vegetables. The employment data for next quarter will report the harvesting of wheat, the construction of feedlots, the operation of packing houses and the full operational capacity of the Hameediyah Mushroom Farm, in addition to the microfinance programs in Ninawa and Babil.

### SO8.2.1—Increase perennial horticulture production and marketing

#### SO8.2.1.1—Increase in gross sales of perennial products in program assisted areas (in US\$ millions)

No data to report— awaiting for the packing houses to open in the Baghdad area and for the official opening of the New Baghdad (*Tissa Nissan*) market in the next quarter. Preliminary figures will be given in the third or the fourth quarter of FY09.

### SO8.2.2—Increase annual horticultural production and marketing

#### SO8.2.2.1—Increase in gross sales of targeted annual vegetables and fruit (tomato) in program assisted activities (in US\$ millions)

The increase in gross sales is due to the Taji/Abu Ghraib Vegetable Improvement Activity, involving over 900 farmers for two crop seasons in FY08 and FY09. In FY08, gross sales exceeded \$2,430,000. In FY09, 60% of the assisted farmers were surveyed: their produce generated \$960,000 in gross sales in the local markets. In addition, the Processing Tomato Trials in Wasit generated gross sales of about \$180,000.

### SO8.2.3—Increase livestock and feed-grains production and marketing

#### SO8.2.3.1— Increase in gross sales of local red meat from program assisted feedlots (in US\$ million)

Four feedlots were approved in the northern GFA. The first results are expected in the first quarter of 2010.

**SO8.2.3.2— Production of red meat by program assisted commercial feedlots by kilograms per year.**

The expected start up of operations is September 2009. The annual capacity of each beef feedlot is 240 tons of red meat produced, and the annual capacity of each sheep feedlot is 144 tons.

**SO8.2.3.3— Increase in gross sales of local fish by program assisted fish farms (in US\$ millions)**

Fish harvesting and marketing season started in February 2009 for the Fish Grow-Out Verification Trials. The figure reported refers to 100 out of 254 assisted fish farmers. Ten percent of the farmers reported increased gross sale of \$129,000. The fish sales will continue in the following quarters.

**SO8.2.3.4— Four program-assisted feed mills each produce 15,000 to 25,000 tons/year**

Feed mill activities are not yet in place.

**SO8.2.4—Increase competitiveness of agribusiness enterprises**

**SO8.2.4.1—Market Information System providing daily wholesale pricing of major agricultural commodities in 18 wholesale markets across Iraq**

The Market Information System price reports cover over 100 farm products and inputs in 19 different wholesale markets in 18 different capital cities (two markets in Baghdad). This data is used by farmers, livestock owners, traders, shopkeepers, consumers, banks and microfinance institutions, newspapers, radio stations, food processors, food importers, exporters of farm products, researchers, policy makers, USDA, World Bank, USAID, market intelligence agencies analysts, input suppliers, companies who want to monitor market prices for their products and those of their competitors, Ministry of Agriculture, Ministry of Trade, Ministry of Planning, provincial and district directors of agriculture, extension agents, etc. The Market Information System has been refined in this quarter in terms of data quality and will continue data improvement and analysis in the next quarters.

**SO8.2.4.2—Percentage of program-assisted businesses benefiting from cluster formation**

Too early to measure, as the clusters are not yet in place. A cluster means established linkages from farm gate through sorting/grading/packing facilities, proper storage, transportation, wholesale and retail markets, to the end customer. *Inma* is currently working on cluster formation under specific value chains. It is expected that the fourth quarter of FY2009 will affect this indicator.

**SO8.2.4.3:—Percentage of program-assisted association members trained to understand markets and farming profitability**

Trainees' survey has been conducted in the central areas of Baghdad, Babil and Wasit. The total number of program-assisted association members is 175. Twelve percent of them have been trained to understand markets and farming profitability.

**SO8.2.4.4—Percentage of program-assisted farmers who use improved technology and can document that they are getting more income from their crops.**

Farmer surveys were conducted in this quarter as part of the impact measurement for *Inma's* 2008 activities. The surveys were performed in the central areas of Baghdad, Babil and Wasit with a sample group of 5% of the total 1,190 farmers assisted under the Taji/Abu Ghraib Vegetable Improvement Activity, the Fish Grow-Out Verification Trials, and the Processing Tomato Trials. The survey results show that about 90% of program-assisted farmers increased their production and income due to *Inma*-provided assistance and they can indicate production increasing after the completion of *Inma's* direct engagement.

### **SO8.2.5—Increase domestic and foreign partnerships**

#### **SO8.2.5.1—Percentage change in the value of intra-regional exports of targeted agricultural commodities as a result of *Inma* assistance**

Too early to measure.

#### **SO8.2.5.2—Number of program-assisted businesses with Iraqi and/or international partners**

*Inma* will initiate discussion with USAID as to whether to retain or exclude this indicator in the next quarter due to its low usefulness.

#### **SO8.2.5.3—Number of program assisted contacts with new buyers in domestic and foreign markets**

*Inma* assisted the Balad Canning Factory to reopen production and generate new market linkages with new buyers in the domestic market in different provinces. The total number of new market contacts for BCF is 36 of which 26 are in the provincial markets in Kirkuk, Diyala, Baghdad, Babil, Najaf, and Karbala.

### **SO8.2.6—Increase agribusiness access to finance**

#### **SO8.2.6.1—Number and value of loans to agribusiness by private banks receiving *Inma* grant Assistance**

The SME Program (formerly Grant to Loan) was canceled by USAID in this quarter.

#### **SO8.2.6.2—Number and value of loans provided by micro-finance institutions receiving *Inma* grant assistance to SME agribusiness**

*Inma* awarded the first microfinance grants to Al Thiqa and Izdiharona which they recently started to process into loans to Iraqi agribusinesses. In this quarter, al-Thiqa approved seven loans in Ninawa province. In Babil province, Izdiharona disbursed eleven loans in total value of \$21,500\$. The loans from the two MFI NGOs support annual and perennial horticulture, and livestock businesses.

#### **SO8.2.6.3—Number of jobs created through *Inma* grant-supported private bank loans to agribusiness**

SME Program has been canceled by USAID in March 2009.

#### **SO8.2.6.4—Number of jobs created through *Inma* grant supported MFI loans to SME Agribusiness**

In this quarter, eleven jobs were directly created through *Inma's* microfinance program, which is implemented through grants to Al Thiqa and Izdiharona. The number of jobs created will increase in the next period with continuing disbursement of loans by Izdiharona and al-Thiqa. It is estimated that approximately 1,600 jobs will be created under this program from January 2009 to May 2010.

## PROGRAM INDICATORS

Mission Level Indicators											
Indicator	Measure	FY 2007	FY 2008	FY 2009				FY09 Target	FY 09 Actual	% Actual of Target	Comments
		Baseline		Q1	Q2	Q3	Q4				
Indicator 1—Increase of total gross sales of program assisted enterprises (given in US\$ millions)	Number	0	10.370611	0.810634	3.071685			200			
Indicator 2—Increase in employment in the agriculture/agribusiness sectors attributable to program activities.	Number	0	3251	510	10,369			10,000			

FOCUS 1—Annual											
Indicator	Measure	FY 2007	FY 2008	FY 2009				FY09 Target	FY 09 Actual	% Actual of Target	
		Baseline		Q1	Q2	Q3	Q4				
SO8.2.2.1—Increase in gross sales of targeted annual vegetables and fruit (tomato) in program assisted activities (in US\$ millions)	Number	0	2.43	0.002	2.425057			14			

FOCUS 2—Perennial												
Indicator	Measure	FY 2007	FY 2008	FY 2009								
		Baseline		Q1	Q2	Q3	Q4	FY09 Target	FY 09 Actual	% Actual of Target		
SO8.2.1.1—Increase in gross sales of perennial products in program assisted areas (in US\$ millions)	Number	0	0	0	0					10		

FOCUS 3—Livestock												
Indicator	Measure	FY 2007	FY 2008	FY 2009								
		Baseline		Q1	Q2	Q3	Q4	FY09 Target	FY 09 Actual	% Actual of Target		
SO8.2.3.1— Increase in gross sales of local red meat from program assisted feedlots (in US\$ million)	Number	\$3.50/kg	0	0	0					1.6		
SO8.2.3.2— Production of red meat by program assisted commercial feedlots by kilograms per year	Kg Lambs Steers	0 0	0	0 0	0					60,000 54,000		
SO8.2.3.3— Increase in gross sales of local fish by program assisted fish farms (in US\$ millions)		\$4.00/kg	5.14	0	0.128618					20		
SO8.2.3.4—Four program assisted feed mills each produce 15,000 to 25,000 tons/year	Number Number	0 0	0	0 0	0					2 40,000		

FOCUS 4 — Crosse cutting Activities												
Indicator	Measure	FY 2007	FY 2008	FY 2008								
		Baseline		Q1	Q2	Q3	Q4	FY09 Target	FY 09 Actual	% Actual of Target		
SO8.2.4.1—Market Information System providing daily wholesale pricing of major agricultural commodities in 18 wholesale markets across Iraq	Narrative	0	System working	System working	System working					System Refined		
SO8.2.4.2—Percentage of program-assisted businesses benefiting from cluster formation	Percentage	0	0	0%	0					20%		
SO8.2.4.3—Percentage of program-assisted association members trained to understand markets and farming profitability	Percentage	0	0.5%	0%	12%					10%		
SO8.2.4.4—Percentage of program-assisted farmers who use improved technology and can document that they are getting more income from their crops.	Percentage	0	12%	0%	90%					50%		
SO8.2.4.4.a— Total Program assisted farmers	Number	0	1,382*	2100	129							
SO8.2.5.1—Percentage change in the value of intra-regional exports of targeted agricultural commodities as a result of <i>Inma</i> assistance	Percentage	100 MT	0	0%	0					25%		

SO8.2.5.2—Number of program-assisted businesses with Iraqi and/or international partners	Number	0	0	0	0			0			
SO8.2.5.3—Number of program assisted contacts with new buyers in domestic and foreign markets	Number	0	0	0	26			12			
SO8.2.6.1—Number and value of loans to agribusiness by private banks receiving <i>Inma</i> grant assistance	Number Value	0 0	0	0	n/a*			7 \$20,000,000			
SO8.2.6.2—Number and value of loans provided by micro-finance institutions receiving <i>Inma</i> grant assistance to SME agribusiness	Number Value	0 0	0	0	11 \$21,700			1,200 \$6,000,000			
SO8.2.6.3—Number of jobs created through <i>Inma</i> grant supported private bank loans to agribusiness	Number	0	0	0	n/a*			600			
SO8.2.6.4—Number of jobs created through <i>Inma</i> grant supported MFI loans to SME agribusiness	Number	0	0	0	11			1,600			

\* Number updated retrospectively.

\*SME Program was canceled by USAID in March 2009; *Inma* is going to remove the indicators SO8.2.6.1 and SO8.2.6.3 in the next quarter.

# APPENDIX C: INMA BIBLIOGRAPHY 2007-2009

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*Beef Feedlot Management Guide. (EN/AR/KU) Inma: Dec 2008.*  
*Good Manufacturing Practices and Hazard Analysis for Critical Control Points. (EN/AR/KU) Inma: Mar 2009.*

## SUCCESS STORIES

*Iraqi Civil Servants Gain Important Skills in Improving Irrigation*  
*USAID in Partnership with Iraqis Help Revitalize Orchards, Vineyards*  
*USAID Facilitates Forum to Advance Ideas on Water Management in Iraq*  
*Market Data by Mobile Phone Helps Farmers Sell Crops*  
*Microfinance Grant Boosts Spirit of Iraqi Entrepreneurship*  
*USAID Increasing Competitiveness of Iraqi Produce*  
*Inma Presents Crop Model at Seminar*  
*USAID Exports 62,000 High Producing Fruit Trees and Grape Vines to Iraq*  
*Bank Credit Training Set to Invigorate Iraqi Agribusiness*  
*Balad Canning Factory Puts Iraqis Back to Work (multimedia)*

*Iraqi Produce Slated for Boost with Cutting Edge Packing House Technology*  
*Iraqi Farmers Gain Green Thumbs for Future Green House Work*  
*Erbil Agro-Food Expo 2008 Bears Fruitful Opportunities*  
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