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Inma Agribusiness Program

QUARTERLY REPORT
July – September 2008



Inma
AGRIBUSINESS PROGRAM

October, 2008

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Inma Agribusiness Program Quarterly Report July – September 2008



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Acronyms and Abbreviations

AMIS	Agriculture Market Information System
ARC	<i>Inma</i> Agricultural Review Committee
COP	Chief of Party
CSP	Community Stabilization Program
CTO	Cognizant Technical Officer
DAC	District Area Council
ePRT	Embedded Provincial Reconstruction Team
FAR	Federal Acquisition Regulations
FOB	Forward Operating Base
GOI	Government of Iraq
GFA	Geographic Focus Area
G2L	Grant to Loan
ICA	Irrigation Command Areas
ICBG	Iraq Company for Bank Guarantees
IPM	Integrated Pest Management
IRs	Intermediate Results
IT	Information Technology
JOS	Job Order System
LOP	Life of Project
LTTA	Long Term Technical Assistance
MFI	Microfinance Institution
M&E	Monitoring and Evaluation
MOA	Ministry of Agriculture
MoWR	Ministry of Water Resources
NCD	National Capacity Development Program
NGO	Non-Governmental Organization
PDS	Public Distribution System
PERSUAP	Pesticide Evaluation Report and Safe Use Action Plan
PO	Purchase Order
PRT	Provincial Reconstruction Team
RFA	Request for Applications
RFP	Request for Proposals
TA	Technical Assistance
TOEFL	Test of English as a Foreign Language
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government
VC	Value Chain
VSP	Veterinary Service Provider

GENERAL INFORMATION

The USAID *Inma* Agribusiness Program is focused on long term and sustainable results critical to building and maintaining stability, security, and prosperity in Iraq. Through capital and infrastructure investment, training, improved market systems and introduction of new technologies, the *Inma* vision is to establish the foundation for a viable and profitable commercial agribusiness sector.

This report covers the 5th Quarter (July - September 2008) activities and deliverables of the USAID-funded Inma Agribusiness Program in Iraq. The report is structured to provide an update on the planned activities set forth in the approved Annual Work Plan and outputs as approved 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 Herschel Weeks, Chief of Party
Shehnaz Atcha, Program Manager
Fred Mann, Deputy Chief of Party - Programs

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

The *Inma* Agribusiness Program is an integral part of the United States Government's National Economic Development (NED) Program with the overall goal to expand private sector economic opportunities in Iraq. *Inma* is supporting commercial agribusiness operations in production and marketing of high demand, high value-added agricultural products by focusing on strengthening value chains in three major agribusiness production and marketing product groups: perennial horticulture; annual horticulture; livestock and feed-grains. Activities are concentrated in three geographic focus areas: Golden Crescent, Two Rivers, and Northern Zone.

Pursuant to the Annual Work Plan 2008-2009, *Inma* supports agribusiness investments and activities that respond to the following criteria:

- Clear agribusiness opportunities for producers, processors and marketers throughout the product value chain;
- Strong and expanding potential for major increases in marketable value-added agricultural output and productivity;
- Targeted to products with high existing and potential market demand, especially within Iraq, but also to clearly demonstrated export opportunities; and,
- Strong prospects for participation by domestic and international investors clearly committed to assuming a significant share of commercial business and other risks under Iraqi conditions.

During this quarter, *Inma* sought to strengthen both its product and geographic focus on private sector anchor and associated cluster agribusiness revitalization and expansion interventions. These were complemented by trials, demonstrations and related institutional support to catalyze rapid adoption of production and marketing value chain best practices, thereby strengthening value chain segment interface linkages and reducing transaction costs.

Inma activities continued to be implemented through the following types of interventions:

- Activities implemented directly by *Inma* technical assistance teams with local collaborating partners and associates, including private sector entities, local communities, local government organizations, the NGO community, and other interested organizations.
- Grants and (expected in the near future) loans to the private sector, complemented with appropriate training and technical assistance, including individual private sector agribusinesses, farmer and marketing associations and groups, NGOs and others identified during design activities and feasibility determinations.
- Training and capacity building of Iraqis in workshops, special short-term courses, field demonstrations and formal classroom learning.

Inma is coordinating its efforts with a wide range of partners within each of the geographic focus areas (GFAs). These groups include, but are not limited to: USG partners such as the Military, ePRTs, and PRTs; provincial councils, local market councils, farmers associations, NGOs, the USAID-funded Community Stabilization Program (CSP) and other USAID funded projects, such as *Tatweer* and *Izdihar/Tijara*.

Inma's Achievements at Glance

\$10,370,611 increase of total gross sales of program assisted enterprises, with \$5,186,961 in the last quarter;

3251 jobs created in the agribusiness sector, with 350 in the last quarter;

\$2,473,650 increase in gross sales of targeted annual horticulture products, nearly all in the last quarter;

\$5,140,000 increase in gross sales of fish;

A functional Market Information System providing daily wholesale pricing of 100 major agricultural commodities in 19 wholesale markets in 18 cities of Iraq;

1,228 farmers directly assisted out of which 12% have documented increased income from their crops due to use of *Inma*-provided improved technology;

1,656 individuals received short-term agricultural training;

233 institutions/organizations undergoing capacity/competency assessments;

57 institutions/organizations undertaking capacity/competency strengthening;

32 new technologies or management practices introduced;

17,750 hectares under improved technologies or management practices;

1,232 farmers, processors, and others who have adopted new technologies or management practices;

50 producers' organizations, water users associations, trade and business associations, and community-based organizations (CBOs) assisted;

30 agriculture-related firms directly assisted;

17 baseline and feasibility studies produced, 30 monitoring plans, 8 sector assessments, 3 project evaluations, 8 special studies, 2 information gathering and research activities; and

74 people in monitoring and evaluation practices trained.

MAJOR QUARTERLY PROGRESS

During the past quarter, *Inma* has achieved significant progress on several fronts. Work has been completed or is nearly complete in developing documentation for funding approval of several major agribusiness activity proposals previously approved by the *Inma* Agribusiness Review Committee.

COMMERCIAL FEEDLOTS ESTABLISHMENT Technical Assistance (TA) sub-contract is ready for signature at the end of this quarter. Up to twenty feedlots for fattening feeder calves and feeder lambs will be established as anchor enterprises. The Feedlots RFA has been finalized and is pending issuance. This activity includes initiatives to fully integrate the feedstuffs supply system into the anchor enterprises being established.

VERTICALLY INTEGRATED PRODUCE PACKING SHEDS Documentation for first of five planned packing sheds is ready for final approval at the end of the quarter. The activity is assisting packing sheds to integrate with the raw materials supply chain back to the farm gate, and forward to retail markets and large institutional buyers. This activity is expected to be initiated by November 1, 2008 and to be completed by March 15, 2009.

ON-GOING FISH GROW-OUT IMPROVED PRACTICES VERIFICATION TRIALS Although still not completed, these trials are yielding invaluable information about improved production practices; participating farmers (and over the fence observers) are rapidly becoming convinced of the profitability of various improved practices. These fish will be at market weight in January 2009, when full evaluation of the Trials will be made available.

AGRICULTURAL WHOLESALE PRICE COLLECTION, COLLATION AND DISSEMINATION The *Anka* grant funding for continuing agricultural wholesale price collection and dissemination has been approved through March, 2010, and is awaiting signature at the end of this quarter.

FRESH POMEGRANATE EXPORT TRIAL This activity is in final stages of approval, and will initiate operations in late October. For the trial export, *Inma* identified a wholesale buyer in Dubai and arranged for improved packaging to enter this regional trade hub of the Middle East. The trial export will start with 200MT and it will take place in Suleimaniyah from October to December 2008. The pomegranates are contracted as first class in quality and will be sold on consignment. Full evaluation of the Pilot export will be available in early 2009.

PROGRAMATIC FOCUS Progress has continued toward achieving a programmatic geographic focus as mandated under the *Inma* contract. Three Geographic Focus Areas (GFAs) selected have been approved by USAID, and preliminary development plans have been drafted: Golden Crescent GFA and Two Rivers GFA, Preliminary development plans for a third GFA in the Northern Zone from Erbil to Suleimaniyah will be drafted in the ensuing quarter. These areas and the respective development plans are more fully described in a later section.

COOPERATION Along with increased concentration of activities within the selected GFAs, *Inma* nevertheless will provide assistance to other PRTs as follows: training and site visits to provide TA for agricultural development initiatives by PRTs, a range of training modules on agricultural topics and business development, Agribusiness credit (both large loans and micro lending) under the *Inma* Grant to Loan activity now being developed, and complementary

funding for anchor agribusiness enterprise assistance in special cases where most of the investment is from other sources.

This Report contains the following major sections: the Geographic Focus Areas Section describes the overall picture of the linkages among *Inma* activities by geographic proximity and value-adding relationships. The Quarterly Progress Section describes progress within *Inma*'s three clusters by product grouping (Annual Horticulture, Perennial Horticulture and Livestock & Feed). The Crosscutting Activities Section reports on progress for the Grant to Loan (G2L) and Microfinance activities, Agricultural Market Information Systems (AMIS), Training, Performance Monitoring, and other crosscutting activities. The Appendices contain data on Grants, Contracts and Finances, as well as listings of *Inma* personnel.

GEOGRAPHIC FOCUS AREAS

To comprehensively address the three product clusters (annual horticulture, perennial horticulture, and livestock & feed) within the limits of staff, funding, and implementation time frames, *Inma* continued to emphasize interventions within defined geographic areas. The identification of priority Geographic Focus Areas (GFAs) facilitates *Inma*'s strategic and market led value chain approach, ensuring that the various links in the value chain¹ are taken into consideration, and that benefits from strategic investments made in any one product value chain complement investments in other product value chains.

The purpose of this section is to describe how *Inma* is integrating supported activities within selected GFAs in order to stimulate significant and continuing economic development synergies and multipliers. This is being accomplished through both vertical and horizontal commercial linkages between and among the various *Inma* interventions along relevant value chains within the delineated GFA.

By focusing and synergizing activities in a defined geographic area, *Inma* and its collaborating partners have been able to more effectively and efficiently address numerous interrelated and co-productive clusters of activities. The market driven approach to development enables *Inma* to verify demand and assess market potential of Iraqi products and services, to identify tipping points that boost effective demand, to prioritize agribusiness opportunities, to detect and target ready markets, and to activate effective demand in previously untapped market niches.

Inma identified and selected three high-potential GFAs to concentrate its major interventions. Selection was based on the following criteria:

- Available resources identified, especially in terms of irrigation infrastructure;
- Proximity to production and processing agribusinesses and to markets;
- Access to transportation systems;
- Willingness of stakeholders to commit and actively participate;
- Adequate size of area with potential for large scale commercial production and market supply;
- Interrelated operations can be (and/or are being) developed and reinforced in the selected GFAs²; and,
- Products to be supported within these GFAs have solid market potential based on realistic demand estimates, and, with appropriate improved technology, have the potential to be produced at a price and of a quality that is fully competitive with currently imported products.

¹ A value chain (VC) is a chain of activities, including industry-wide supply chains, products, services, and distribution networks, forming a value system. Products pass through all activities of the chain in order and at each activity the product gains some value. The chain of activities gives the products more added value than the sum of added values of all activities. Its ultimate goal is to maximize value creation while minimizing costs.

² For example, reliable feed production using forward contracting with farmers, existence (or establishment) of feed mills and feed depots in the area, feedlot operations close to feed mills; farmers and producers associations formed to grow, process and sell feed, and a transportation hub for loading and shipping feed, animals and other products to markets.

The three GFAs selected are:

- *The Golden Crescent GFA*: encompassing the agricultural irrigation command areas located within Baghdad, Istaqlal, Taji, Abu Ghraib, and Tarmiya,
- *Two Rivers GFA*: in the Babel Governorate, from Iskandariya to Hilla, and,
- *The Northern Zone GFA*, within selected districts of Erbil, Tameem and Suleimaniyah provinces.

Based on results of preliminary value chain assessments and opportunity identification reviews, *Inma* carried out specific enterprise-focused feasibility analyses, and processed for funding (or is in the process of doing so) major agribusiness interventions within these GFAs. Assisted within each of the GFAs and within each of the three *Inma*-supported product groups, are associated, yet independent, agribusinesses that process, market, and distribute related value-added products. *Inma* assigns initial priority to enterprise clusters at the pre-harvest, harvest, post-harvest and wholesale marketing levels for each product or product group marketing value chain.³

The rationale behind grouping activities within a GFA is to direct *Inma* activities to interlinked supply and demand value chains that reinforce each other and enable Iraqi agribusinesses to achieve self-sufficiency and sustainability within wider value-added systems. In order to positively influence efficiencies and effectiveness throughout all segments of a given value chain, *Inma* first identifies an “anchor” enterprise. While this becomes the primary point of intervention, the support activity as a whole is designed to address multiple constraints identified along the entire value chain, by strengthening both backward and forward linkages to the anchor enterprise. This is because without raw materials and supporting services (e.g., the feedstuffs supply side of the feedlots value chain) of the required amounts and quality, the anchor enterprise cannot operate as intended, and thus cannot contribute the “anchor” value-added upon which other value-adding segments along the value chain rely.

For example, on the anchor enterprise output marketing side of the feedlots value chain, aspects that need to be examined include potential market demand for value-added quality meat, as well as marketing support services, such as adequate transport and cold chain services, and other marketing support system elements, as well as the linkages among these. The examination and the development of both input supply and output marketing sides of a given enterprise is a part of *Inma*'s review and design stage before an activity is recommended for implementation.⁴

Activities are interlinked in such ways as to add value in the production, processing and marketing process. In addition, increased demand in one segment of the value chain spurs increased supply in another segment, with mutually reinforcing effects. For example, improved seeds grown with improved agricultural practices both produce higher quality produce and yield, reduce unit costs of production, and command a higher market price, as well as activate effective demand for improved seeds.

³ It should also be noted that successful implementation of anchor agribusiness activities and improvements (value-added) in related value chains increase demand for ancillary enterprises, such as transport services, cold storage, and specialized marketing services, etc.

⁴ Activities within the same supply/demand value chain are grouped within the GFA so that *Activity A produces good X, which Activity B needs as raw materials input, while Activity C adds value to X before X+ reaches Activity D, and, thereafter, the end consumer.*

Cross-cluster: Although GFA-connected activities fit within one of the three *Inma* product clusters, they also are interlinked across these clusters. For example, both annual and perennial horticultural products may be processed at the Fresh Fruit & Vegetable Packing Houses or on the Balad Canning Factory processing lines, or they may supply the same wholesale and retail markets. Also, grains (within livestock & feed) and dates (within perennial horticulture) both may represent raw materials supply for feed mills, which in turn produce high quality feed for fish grow out and livestock fattening.

Nation-wide: Specific value chains, such as for Perennial Horticulture products, connect interrelated operations both within product groups and across product clusters. They may be engendered in particular GFAs but often spill over to a national level. In that case, a GFA can serve as a base for nation-wide operations. For example, pomegranates from various areas can be collected at major collection points, where sorting, grading and packaging in bulk can decrease processing cost and cost of transport to foreign markets or to advanced processing facilities.

Cross-cutting: In addition to GFA-specific activities, a number of crosscutting activities are either incorporated into area activities (e.g., Crop Land Area Survey, Packing Sheds, Agriculture Business Training and Modular & Custom Training, Feedlots and Feed Depots, Windmills, Public Markets Modernization, Export & Marketing) or function at a national level (Grant to Loan & Microfinance for Agriculture, Agricultural Market Information System - AMIS).

The following section briefly describes the initial *Inma* integrated development plans for the Golden Crescent and the Two Rivers GFAs. By the end of the next quarter, the Northern Zone GFA initial integrated development plan is expected to be operational. The following sections provide a more detailed description of these initial GFA development plans.

GOLDEN CRESCENT GEOGRAPHIC FOCUS AREA(GFA)

The Golden Crescent GFA encompasses the agricultural irrigation command areas located within Baghdad Province. It includes parts of Baghdad, Istaqlal, Taji, Abu Ghraib, and Tarmiya. The area covers 800 square miles of fertile and productive farmland in close proximity to major wholesale and retail markets. Geographically, the area is the closest to Baghdad, the largest market center in the country.

Current implementation partners include Baghdad ePRT 3, Baghdad ePRT 5, Baghdad ePRT 2, US Army Camp Taji, Baghdad Provincial Council, local market councils, farmers association, and entrepreneurs. *Inma* plans to expand the partnerships with local farmers associations, market councils, and entrepreneurs as planned programs expand across the area.

The Golden Crescent GFA houses the following activities:

- **Completed**
 - Greenhouse Demonstration in Taji
 - Farmers Training in Taji/Abu Ghraib
- **Ongoing:**
 - Al Tae Training & Demonstration Greenhouses Activity
 - Iron Horse – Taji/Abu Ghraib Vegetable Crop Improvement Activity

- New Baghdad Retail Market Revitalization
- Balad Canning Factory Revitalization

- **Recommended for implementation with activation in process**
 - Fresh Fruit & Vegetable Packing Houses
 - Date Product Development
 - Wind Mill
 - Feedlot for large and small ruminants
 - Orchard and Vineyard Demonstration

- **Review and design stage**
 - Feed Mill
 - Taji Feedlot and Taji Feed Depot Activity
 - Alwa Market Revitalization
 - Lower Rashidiya Irrigation Project Training in Water Management
 - Regional Refrigerated Transportation Enterprise
 - Hydroponic Activity
 - Marketing & Export
 - Household Food Consumption Survey

Value adding linkages:

- Improved seeds may increase quality and yield of produce, commanding higher prices at the market.
- Orchard, Vineyard & Nursery Activity may provide certified and commercially tested varieties of tree fruit and table grapes, supplying farmers-growers.
- Growers trained in improved agricultural practices and post-harvest techniques, such as post harvesting handling techniques, processing and packaging, increase agricultural production and quality of products.
- Agricultural products, both perennial and annual, may be graded and packed in future Fresh Fruit & Vegetable Packing Houses.
- Packing Houses may provide technical assistance to farmers on varieties, cultural practices (post harvest handling, grades and standards, farm gate prices, transport), and establish linkages with growers and the market.
- Farmers and Packing Houses may sell produce at rehabilitated and revitalized retail and wholesale Markets.
- Refrigerated transport may preserve value of fresh products and link Packing Houses with Markets.
- Higher prices for higher quality produce create demand for high quality seed. Markets sell certified and improved seed to farmers and Greenhouses.
- The packing house enterprises may arrange for production credit and loans to participating growers.
- Table quality produce from farmers, greenhouses and packing houses may supply markets with premium price fresh products.
- Industrial or lower quality produce (culled products or quantity that exceeds demand for fresh form) may supply the Balad Canning Factory. Industrial quality dates may supply the date syrup processing line. Tomatoes of suitable variety may supply the Balad Canning Factory tomato paste line.
- Low quality produce may supply the Feed Mill.

- Growers may sell their produce to traders/exporters.
- Traders/exporters may ensure quality control, export and transport of perennial produce to foreign markets.
- Dates and pomegranates, directly from growers or from packing houses, may be exported to Dubai and beyond. Forward contracting may follow.

TWO RIVERS GEOGRAPHIC FOCUS AREA (GFA)

The geographical area designated as the Two Rivers GFA is located south of Baghdad and between the Tigris and Euphrates Rivers. It is bounded on the south by the city of Najaf and includes the cities of Hillah and Karbala. Two Rivers includes the governorates of Babel and Karbala. Babel encompasses the rich agricultural bed lying between the Tigris and Euphrates Rivers, site of Iraq's most concentrated irrigation canal network.

The status of *Inma's* activities in the Two Rivers GFA is as follows:

- **Completed**
 - Euphrates Fish Farm Rehabilitation
 - Fingerlings Distribution
 - Initial training
- **Ongoing**
 - Babel Fish Grow Out Verification Trials
 - Wind Mill and Wheat Seed Distribution
- **Recommended for implementation with activation in process**
 - Feedlots and Feed Depots
 - Feed Mill
- **At review and design stage**
 - Fresh Fish Transport Improvements
 - Fish Marketing
 - Feed Analysis Laboratory
 - Veterinary Service Providers
 - Farmers' Input Supply System
 - Wholesale Fish Market
 - Dairy Production Improvement

Value adding linkages:

- Improved breeding stock and fingerling production, as well as lessons learned on proper use of fish feeds under Iraqi conditions, may increase fish production and productivity in the area.
- Feedlots may generate a steady demand in the marketplace for hay and grain, and for feeder lambs and feeder calves.
- Adequate feed for livestock, poultry and fish may increase quality production.
- Fish farmers may constitute the main source of demand for quality fish food produced by feed mills.

- Sanitary and reliable transport services for live market-size fish may decrease the mortality rate during transport, and generate value in the fish value chain.
- Decreased production cost and uninterrupted production may be achieved by the use of windmills.
- Feed mills and livestock farmers (ruminants, poultry, dairy farmers, fish farmers) may obtain reliable information on the quality of feed they use from the Feed Analysis Laboratory.
- Reliable water supply at low cost may be provided by windmills.
- Veterinary services may decrease mortality rates among livestock, increase weight gain efficiency for feedlot animals, ensure quality meet for the market and reduce unit production costs.

NORTHERN ZONE GEOGRAPHIC FOCUS AREA (GFA)

The Northern Zone GFA encompasses the border areas of the governorates of Tameem, Erbil, and Suleimaniyah. Within the perennial Nation-wide value chain, the pomegranate pilot export from Suleimaniyah to Dubai was initiated toward the end of the quarter, and results will be reported in *Inma's* sixth quarterly period.

Inma identified this area as promising for developmental investment and is in process of doing analyses and assessments of value chains and possible activities, with consideration given, inter alia, to: completion of the crop land areas survey, study of a potential Tomato Processing Plant (with Contract Farming Demonstration) in Mosul, feasibility analysis for establishing a private sector Agricultural Policy Institute, and an Irrigation Center Pivot Rehabilitation activity (for Alfalfa Hay production) in Kirkuk.

CROSSCUTTING VALUE-ADDED ACTIVITIES

Inma activities assist to add value along the respective value chains from production through processing and marketing to the consumer, regardless of geographical location or cluster category. These activities encompass:

- Private sector policy reform support (Agricultural Policy Institute),
- Credit support (Grant to Loan & Microfinance Activities),
- Knowledge transfer (Training) and knowledge generation (Surveys and other data generation activities, and Analyses),
- International promotion and marketing (regional and international agribusiness fairs, and export market penetration),
- Information dissemination (Agricultural Market Information System), and
- Product promotion (Agribusiness Fairs).

QUARTERLY PROGRESS

ANNUAL HORTICULTURE

3.1.1. IRON HORSE / TAJI – ABU GHRAIB VEGETABLE IMPROVEMENT ACTIVITY *Inma* designed this activity to provide growers in the area with new improved seed and to increase farm income. *Inma* provided 7 different new varieties of high yielding, hybrid seeds (wheat, onion, tomato, cucumber, pepper, eggplant, squash seed) and plastic crop protection for 29 donums⁵, as well as 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.

During previous quarters, the plan for improved seed varieties and greenhouse installation was completed and approved for funding. Seed and plastic sheeting were successfully delivered by three battalions from Camp Taji under the direction of Baghdad ePRT#5 to approximately 900 farmers and planting commenced in mid-December. Record setting cold temperatures delayed germination and damaged some crops under plastic. However, more seasonable temperatures later allowed normal growth to resume. An excellent crop was harvested with farmers claiming that the hybrid seeds and the new technology increase yields of eggplant, bell peppers, cucumbers, squash and tomatoes by a factor of up to 3X.

As a part of this activity, a Farmers' Training of Trainers was held in Erbil in April 2008 for the purpose of developing a cadre of trainers. The training included course work in Agribusiness Management, Cultural Practices in Vegetable Production (including post harvest grading and packaging), Marketing and Agricultural Safety. During May and June, the 49 new trainers visited over 1,000 farms to train farmers and their employees. The training continues, where *Inma*-trained farmers function as trainers and demonstrators of new technologies. The total number of people trained currently is estimated to be over 10,000 in this ongoing program.

Quarterly Achievements In July, approximately 100 farmers planted hybrid corn in the Kadhamiyah area as a part of *Inma's* demonstration planting activity. The activity included training regarding proper planting techniques and fertilization. Harvest will occur in the following quarter.

Status: Ongoing

3.1.2. NEW BAGHDAD (9 NISSAM) RETAIL MARKET The New Baghdad Market was constructed in 2004 by International Relief & Development (IRD), a USAID contractor, as a safe market where local vendors could sell their fresh fruit and vegetables acquired from local growers and/or wholesalers. For various reasons, the market was never occupied and has been in a state of disrepair.

⁵ Donum – land surface measure in Iraq, equivalent to 1/4 of a hectare.

Renovation work has been in progress since March, led by *Inma*, and includes inputs by the Baghdad Provincial Reconstruction Team 2 (ePRT#2), CSP (Community Stabilization Program/International Relief & Development), DAI, District Council of 9 Nissan, Representative of Baghdad Provincial Council, and the Civil Affairs Office of the U.S. Army. In addition, *Inma* assisted in the formation of the private NGO *NINMA* to manage the market, and to implement food safety management systems for ensuring safety and quality of produce in the Baghdad food chain.

The market, once fully operational, will directly create up to 700 new retail businesses. These businesses will create over 1,000 new jobs and several thousand indirect jobs by additional service enterprises. Market management, food safety, and produce quality will be ensured by the *Inma*-assisted NGO *NINMA*.

Quarterly Achievements A grant was awarded to *NINMA* for the market management. At the end of the quarter, cold storage room construction began and final stages of market renovation by IRD and DAI were in progress. Opening is anticipated in the following quarter.

Status: In implementation. This activity started in November 2007 and it will be complete by November 2008.

BAGHDAD 'ALWA WHOLESALE MARKET In addition to the New Baghdad Retail Market, *Inma* has identified this privately owned wholesale market with potential for modernization and on a location close to the vegetable production from the Golden Crescent area. This fruit and vegetable wholesale market includes 85 sales offices and 21 seed shops. In *Inma*'s estimate, the market restoration will increase sales from the actual 980MT to at least 1,835MT, number of direct employment from 50 to at least 94, and the number of indirect employment from the estimated present of 490 to at least 918, by year 2009.

Status: At review and design stage

HAMEEDIYAH MUSHROOM FARM The Hameediyah Mushroom Farm (HMF) is the only commercial mushroom production facility in Iraq. *Inma*'s grant to HMF was signed in April 2008, to be disbursed by December 31, 2008. *Inma*'s technical support and training, however, will continue until May 2010.

The rehabilitation work is in progress to restart production, with funds provided from HMF and the *Inma* Agribusiness Program.

Quarterly Achievements Machinery and damaged parts of the building have been repaired and related civil work is almost completed. Work on painting, both internal and external, is in progress. A water treatment plant for human consumption has been installed. Damaged steam and water pipelines have been replaced and painted. Two water boilers are arriving from Turkey by overland transportation through the Iraqi Kurdistan Region in the first week of October 2008. A chiller has been shipped from Malaysia and is expected at HMF by in October 2008. Overall 90% of the rehabilitation work has been completed. Procurement of new environmental control units for the eight growing cells and the pasteurization tunnels, which was not part of the original plan, has been initiated.

Procurement of locally available production inputs, including 268MT of wheat straw, is nearly complete. 480m³ of peat moss and 18,000 liters of spawns have been ordered from the

Netherlands. Production is expected to start by the end of this year to deliver the first product in March 2009.

Although domestic consumption is expected to account for the majority of sales, *Inma* is in process of establishing contacts with mushroom traders in Dubai to facilitate development of a potential export market for Iraqi mushrooms.

FRESH FRUIT & VEGETABLE PACKING HOUSE Current fresh fruit and vegetable packaging facilities in Iraq are inadequate and post-harvest losses are high (up to 40%). *Inma* will demonstrate advanced post harvest handling technologies by establishing five packing houses near farm production sources in the Baghdad and other governorates. One packing house will be in Al Taeer and another in Rabeer. The locations of the three other packing houses will be determined later in the project. *Inma* funds the building construction and the equipment, and grants initial working capital. The shed will have a capacity to meet post harvest handling of 30MT per day of tomato, eggplant, green chilies, okra, cucumber, citrus fruit, grapes, muskmelon and pomegranate.

The project is to be implemented using the contract-grower system. *Inma* will facilitate contracts to minimize farmer and investor risks. Additionally, the packing house enterprises are expected to arrange for production credit and loans to participating growers. The project and facility design has been completed, and the local partnership search is underway.

The adoption of modern post harvest handling technologies by local growers will not only address the strategic shortfall of quality fruits and vegetables, but also contribute to future job prospects for a large part of the rural workforce, as well as improved farm incomes. *Inma* estimates that 400 farmers will be involved in supplying the produce and 70 direct employees will be involved in operations and management. The packing house will distribute up to 150-200 retailers in the Baghdad market.

Quarterly Achievements The beneficiary for the first packing house in the Rabeer District in Kuwaiti Village has been identified. There will be 400 farmers who will supply the fruits and vegetables for hydro-cooling, sorting, grading and packaging of fruits and vegetables. The packing house is expected to operate for 8 months in a year based on the seasonality of available produce. The processed and packaged produce will be sold to the retailers throughout Baghdad. This activity commenced in spring 2008 and the packing house will also be used as a training facility for post harvest technology transfer for *Inma* activities until May 2010.

Status: Pre-implementation phase

RABEE - AL TAEER TRAINING & DEMONSTRATION GREENHOUSES This project is serving as a commercial demonstration and training facility in order to provide 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.

This project involves the construction of six greenhouses (approximately 2781 m² with drip irrigation). The initiator of this proposal owns the land on which the greenhouses will be constructed. Drip irrigation will be used. The markets have already been identified and are currently being supplied with seasonal produce. This project will be the foundation for development of sectors of greenhouses in the Rabi community. *Inma* plans to intervene in implementation of additional greenhouse operations in the area.

Additionally, *Inma* will provide technical training programs for greenhouse managers including commercial demonstrations utilizing new varieties, improved planting systems, harvest, sorting, grading and packing. Managers of the Rabee Greenhouses will provide technical training to other greenhouse operators throughout the Rabi/Adhamiya area.

The project started in the fall of 2007 and training will continue for the life of the project. While it will be a separate activity, the Taji packing house program will add value to the products produced under this program.

Quarterly Achievements At the end of the quarter, construction of the greenhouses has been completed and crops are being planted. Greenhouse configuration was changed to adjust to the dimensions of the construction site. Seven slightly smaller greenhouses were constructed with the material supplied for the original six. The total area covered remains the same.

Status: In implementation

BALAD CANNING FACTORY The Balad Canning Factory (BCF) is reportedly the second largest food processing factory in Iraq. *Inma* partnered with the US Military to renovate the factory infrastructure and equipment, and restore its former eleven product lines to full production capacity. This second largest food processing factory in Iraq used to directly employ more than 880 male and 220 female, both Sunni and Shia, workers. Indirectly, the factory generated demand for inputs that employed over 8,000 Iraqis from the entire region, including more than 100 wholesale buyers and 60 suppliers from various governorates. BCF can produce sesame paste, date syrup, jams, kubba, tomato paste, bottled water, juice and chips.

Quarterly Achievements Rehabilitation Phase I of BCF involves restoration of water, power and steam systems as well as related infrastructure a total financial assistance shared by U.S. Military and USAID. USAID has also approved additional working capital for running some of the product lines that require minimal inputs, power and steam in order to generate a business income flow.

The current status of progress achieved till the reporting period is summarized in the table below.

Task	Responsible Agency	Progress achieved
Clean-up, preparation and site refurbishment	U.S. Military	100%
Water treatment plant	U.S. Military	100%
Waste water treatment plant and sewerage	<i>Inma</i>	80%
Power supply system	<i>Inma</i>	69%
Steam supply system	<i>Inma</i>	31%
Working capital	<i>Inma</i>	78%
Total		76%

There is significant progress on all of the rehabilitation tasks, except the steam supply system. The major cause of slow progress in the rehabilitation of the steam plant has been the delay in procurement of the six water boilers, which is taking considerably more time than the original estimate. Without installation of water boilers, testing and replacement of damaged steam pipelines could not be started. Procurement of the six water boilers is expected to be completed by the end October 2008.

Four of the eleven BCF (Balad Canning Factory) lines are now in operation. The lines are producing bottled water, three types of flavored drink juices, five types of potato and maize chips and *kubba* meat pie. Product sales and labor employed for each line is given in the table below.

Production line	Sales Jul –Sep (USD)	Average daily employment
Chips	292,404	50
Bottled water	31,988	28
Juice drink	95,253	45
Kubba*		12
Other	-	50
Total	419,645	185

* Production in kubba line started only during last week of the reporting period

The four operating lines have generated employment and created financial support to initiate rehabilitation work for more production lines. Rehabilitation work on the tomato paste line was started during last week of the reporting period, while work on date processing line is expected to start in first week of October.

The disbursement of grant funds is to be completed by October 17, 2008, based on the achievement of milestones. The grantee has applied for an extension of this date until year end. Assuming that the full grant is disbursed, work will continue with *Inma* technical and training support until May 2010.

Status: In implementation

PROCESSING TOMATO TRIALS: AL KUT Iraq currently imports 60,000 tones of tomatoes per year. Fresh tomatoes, in terms of both area planted and value of production, represent the most important annual horticultural crop in Iraq. *Inma* will provide technical support for field testing of improved processing tomato varieties and yields under Iraqi conditions.

The testing is intended to verify that Iraqi processing tomato producers will be able to reduce their cost per unit of production to a point that both the farmer and the processing plant can be competitive in the market place. The tests will be conducted by 5 farmers in the Al Kut area. The prospective processor is the Al Numaniyah Tomato Paste Factory. 60 donums have been planted to demonstrate 50% higher and profitable yield.

The tomato paste plant in Numaniyah, Wassit Governorate, was established in 1989 by the government, it was acquired by the current ownership in 2005. It has capacity of 600MT of input per day. Their standard product is 28 Brix⁶ paste. The plant when fully operational employs 500 workers. The plant also fresh packs dates and processes the lower quality dates into vinegar. Additionally, they have a pickling plant, primarily for cucumbers.

Currently the tomato paste plant is not operating because of a lack of tomatoes for processing. Farmers in Iraq are accustomed to producing fresh market tomatoes and selling their surplus supply to the processor. There are significant differences in fresh market tomato varieties and processing tomato varieties in terms of their suitability for making tomato paste. Fresh market

⁶ Degrees Brix (symbol °Bx) is a measurement of the mass ratio of dissolved sucrose to water in a liquid. A 25 °Bx solution is 25% (w/w), with 25 grams of sucrose sugar per 100 grams of liquid. In other words, there are 25 grams of sucrose sugar and 75 grams of water in the 100 grams of solution.

tomatoes are juicy and tender, while tomatoes for paste have a much higher solids content and little juice.

The established 2008 price for processing tomatoes in the competitive industrialized countries is about \$80/MT harvested and loaded at the edge of the field. The growers, who anticipate a fresh market price of \$250 per MT or more, cannot see the value in producing tomatoes for a firm \$80 per MT, which the processor is offering. The purpose of the *Inma* demonstration/trials is to show that there are varieties which will produce yields of 50 tons or more per hectare, which makes the processing tomatoes more profitable than their current fresh market production. *Inma* believes that once the growers see the potential yields possible with processing varieties, they will be willing to contract with the processor for tomato production.

Quarterly Achievements Paste tomato demonstration trial fields in the Al Kut area, Wassit Governorate, are growing rapidly and making good progress. In addition, *Inma* is cooperating with the PRT at FOB Delta to support the development of a tomato growers' cooperative to assist the growers with technology and business training.

This activity was commenced in May 2008 with an estimated closure on December 31, 2008. *Inma* will examine the possibility to renew and expand this activity to the Balad area in 2009.

Status: In implementation

REGIONAL REFRIGERATED TRANSPORTATION ENTERPRISE Refrigerated transport is an essential element of the perishable products cold chain, linking the packing houses with the wholesale, institutional and retail markets. *Inma's* goal is to create or expand an existing business with trucks sized to handle transportation of fresh fruits and vegetable from packing houses to Baghdad markets.

Status: Pending initiation of the Packing House Activity

Annual Work Plan Activities Status

In addition to the above highlights, please find below a summary of the *Inma* program progress in achieving planned Annual Horticulture Sector activities set forth in *Inma's* Annual Work Plan matrix.

ANNUAL HORTICULTURE	
ANNUAL TARGETS 2008-2009	QUARTERLY ACHIEVEMENTS
Increase value of annual horticulture gross receipts at the farm gate by 100%. Baseline to be determined by the market surveys of selected high priority crops completed in the second quarter of the project.	Determination and data collection in progress.
Determine baseline and monitor value of fruit and vegetable sales.	Completed

Identify implementing partners, including subcontractors, grantees, investors, associations, collaborating farmers, and local experts.	Taji Market Council, four local Sheikhs
Actively seeking partners using intermediaries, PRTs, and other information sources.	Completed/On-going
Evaluate and perform preliminary selection of potential partners.	Completed/On-Going.
Issue subcontract to provide management analysis of potential partners, to meet contract requirements of USAID.	RFA undergoing completion.
MARKETING	
Conduct a value chain analysis of the market sector	Completed VC analyses: Fresh Tomatoes, Processing Tomatoes, Fresh Fruit, Mushrooms, Packing Houses. Other VSC analyses in process, to be finalized in the next quarter.
Complete description of the annual horticulture value chain.	Analysis in process
Monitor project assisted value chain for results of activities	
Require all partners to monitor and issue quarterly reports on results of activities upon the value chain.	Quarterly report required. Updates and reports are provided periodically (more frequently than quarterly) from implementing partners.
Implement Market Information System to provide daily pricing to market chain participants	In place.
Market information system being developed.	Anka daily price collection system in place. Nation-wide wholesale prices provided daily.
Undertake a full market assessment to determine quality requirements, prices, marketing channels, buyers, traders, transportation, and jobbers for domestic and export markets-updated yearly.	In progress
Issue subcontract to undertake market assessment.	USAID CTO and Contract Officer gave approval for Inma to award a grant to Anka company to continue the market price monitoring for fruits, vegetables, animals products and farm inputs. Grant agreement to begin October 1st, 2008.
Conduct an evaluation of the wholesale market infrastructure for post-harvest handling, transportation, processing, and storage to provide the baseline for improving product line quality and value of saleable products.	Internal and Military reports are available on all wholesale markets and deemed adequate for project identification and development purposes
Issue subcontract to undertake assessment of the wholesale market infrastructure.	No contracts will be issued; Inma staff is undertaking the assessment and survey.

Develop and implement a revitalization plan based upon market evaluation.	Completed
Select markets for revitalization demonstration. Select subcontractor and implement improvements in one market.	1st market selected; project is being implemented by NINMA (local association). Additional market, Al-Rasheed / Alwa wholesale Market, identified for rehabilitation to be implemented with a grant to a local association. Proposal now under review by Agriculture Review Committee.
Design and implement "Packing Shed" plan to demonstrate efficient methods of sorting, grading, packaging and post harvest care of fresh products.	Plan developed, awaiting final approval. Construction projected to start in January
Select site for first packing shed. Select subcontractor and build packing shed.	Site selected. Grantee (Corporation) selected who will build. Engineering plans completed internally by Inma engineer. Project awaiting USAID approval.
Management training programs focused on post harvest physiology, quality management, packaging, sales, and marketing.	To be implemented in coordination with Packing House activity.
Develop training program plan and materials. Identify training program partner.	Training program developed.
Create an inter-province produce transportation system	Partner identified, activity to proceed with packing house implementation
Develop plan for the creation of an inter-province produce transportation system.	Evaluation complete. Assessment and evaluation completed. Implementation plan under development.
Secure required capital through grants and leverage funds for enterprise startup	Grantee/Borrower tentatively identified.
Demonstrate the feasibility of a vertically integrated tomato enterprise in Basra	Not Started. Waiting for G2L program finalization
Develop a business plan and identify sources of capital for a vertically integrated tomato enterprise in Basra.	Feasibility study commences. Request for assistance received and on hold until GTL program in place.
Assist in the establishment of a tomato paste factory that has been identified as an important intervention by local grower cooperatives and government.	Balad Canning Factory project under implementation.
Assist in the selection and training of a management team for a tomato paste factory.	Assist in identifying enterprise management Team. Provide training in business development for management team.
Procure the necessary equipment and supplies.	In process as part of Balad Canning Factory project.
Demonstrate the feasibility of vertically integrated fruit and vegetable enterprises in selected areas.	Processing tomato trials underway in Wassit
Select area for a vertically integrated fruit and vegetable enterprise and conduct feasibility study.	Area selected. Processing tomato trials scheduled for spring 2009
PRODUCTION AND POST HARVEST	

Improve field cultivation of fruit and vegetables through demonstrations including planting, pollinating, and harvest demonstrated among commercial growers.	Taji Area Packing Shed project identified and potential grantee selected
Establish baseline of existing production based upon GOI reports. Establish demonstration plots and initiate training.	Demonstration Farms established and training initiated.
Renovate irrigation command areas including the evaluation of alternative irrigation systems which may include drip.	Water Users Association proposal under process of consideration. Would include training in alternative systems of irrigation.
Perform evaluation of current irrigation infrastructure, determine needs, and develop plan for alternative irrigation systems.	Irrigation renovation plans developed. Irrigation system in Lower Rashidiya surveyed in Inma supported activity with MoA and MoWR, results entered into computerized GIS program, and MoWR has agreed to move forward on repairing system. Inma is evaluating a proposal to support the development of a Water Users Association to maintain secondary and tertiary canal systems once they are repaired.
Technology transfer of improved post-harvest preparation of product, including packaging, sorting, quality standards, etc.	Will be implemented in coordination with upcoming packing house activity
Develop a training program and issue subcontract to conduct training.	Underway (carried out by Inma staff).
NEW PRODUCT DEVELOPMENT AND VALUE ADDED SERVICES	
Develop product development plans for the introduction of new fresh products and new processed products such as sun dried tomatoes.	Development is hindered by inability to legally introduce new varieties/species until tested and registered by MoA. A 3 year process.
Develop plans for the introduction, marketing, and distribution of new products. Introduce one new product.	Product development plan for the introduction of new processed products created.
Update grades and standards and develop training programs to ensure understanding of them.	Requires coordination with MoA, this process underway.
Update grades and standards in cooperation with processors.	Individual processors and processor associations identified for collaboration on grades and standards.
Develop and initiate training programs to ensure understanding of new grades and standards.	Being implemented at farm gate and at retail market.
INPUT SUPPLY SERVICES	
Identify and partner with established input supply and marketing enterprises.	Two established dealers identified.
Undertake input supply chain evaluation and assessment.	Not started due to security restrictions.
Provide financing and technical assistance to a wholesale supplier in a selected irrigation command area.	Not started.

TECHNICAL ASSISTANCE	
To implement this sector's program, a variety of technical assistance will be provided from local and expatriate experts, to include the following illustrative list of technical expertise: agricultural production, marketing, water management, post-harvest technology, business development.	
Hire Horticultural Production Expert.	Hired
Hire Horticulture Marketing Expert	Hired
Hire Water Management Expert.	Hired
Hire Post-Harvest Expert.	Being recruited.
Hire Business Development Expert.	Hired

PERENNIAL HORTICULTURE

Inma is currently involved in adding value throughout the perennial horticulture value chain, by improving perennial production, agricultural practices demonstration and training, product development, and, above all, support to marketing and export.

PERENNIAL PRODUCTION *Inma* identified the two most promising perennial products from Iraq, dates and pomegranates. The program works on improved perennial production and optimization of their respective value chains to increase their market value. *Inma* supports value adding activities such as improved pre-and post-harvest handling techniques, improved storage, processed product diversification, improved packaging and marketing, opening of new export markets.

Except for dates and pomegranates, perennial crops do not represent a major market segment, although these crops are important sources of farmer income. Perennial crops generate a substantial number of jobs and income for the farmers. The value chain can be improved with advanced technical assistance along with education in improving pre and post harvest technology. This will significantly increase quantity of marketable products, increasing profits at farm gates throughout the value chain.

Dates traditionally were a significant export product until the first Gulf War. Other crops, such as pomegranates, are in high demand in local and regional markets and have good export potential in the medium and long-term. Additionally, *Inma* will focus on developing potentially lucrative crops, such as stone fruits, table grapes, apples, and berries, primarily for the domestic market, at least until production can competitively meet quality standards suitable for export.

PERENNIAL PRODUCTS PROCESSING *Inma* is assessing and developing new added value products along the pomegranate and date value chain, such as diversified products, improved packaging and marketing. Development of new date syrup products is underway with additional flavors and ingredients. New packaging for date products and development of pomegranate juice is under examination.

MARKETING & EXPORT *Inma* collects market intelligence in order to match demand and supply between Iraqi exporters and foreign importers of agricultural products. The program analyzes the local, regional and international market in order to facilitate the entry of Iraqi produce on the global market, mainly by penetrating the regional market hub in Dubai with Iraqi products.

DATES

DATE INDUSTRY ASSESSMENT A Date Workshop took place in Erbil July 18-20, 2008, with the presence of thirty major Iraqi players in the industry. *Inma*, informed by the Workshop, its own field assessments and existent data sources and studies, identified the following weaknesses in Iraqi domestic production:

- Date supply in Iraq exceeds demand, even at present record low levels of production (estimated by *Inma* at 450,000MT/yr from ten million fruiting trees with 40-50kg yield per tree).
- Iraqi date production is largely of lower value industrial varieties, including the *Zahidi* variety which accounts for approximately 72% of total current production. Iraq produces very few of the high-value table varieties preferred in the US and Europe (e.g., *Deglet Noor and Madjool*), but do produce a sizeable quantity of fresh varieties (*Khastawi and Barhee*) that are difficult to export because of short shelf life in the absence of cold chain.
- Current Iraqi date exports are largely dominated by a small number of exporters who speculate in the market by making spot purchases when they perceive or anticipate temporary favorable price spread between farm gate price and Dubai wholesale prices.
- There is no functioning public or private sector organization in Iraq capable of representing the interests of the national date sector.
- The opportunity to export *Zahidi* dates to the world market is a “low margin-high volume” opportunity. Thus, to be profitable, the exporter must be able to handle large volumes efficiently, which requires adequate capital for purchasing raw materials and sufficient operating infrastructure (e.g., ready access to processing and storage facilities, transport, etc.) to quickly handle large volumes of product.
- Added value processing is quite low due to lack of:
 - efficient modern plants of appropriate scale,
 - adequate working capital, and
 - unrefined domestic demand.
- Continued isolation of Iraqi growers and exporters is a serious constraint; they are unable to establish direct links with traders in other countries due to limited mobility (difficulty for Iraqis to obtain travel visas, and fear of foreign traders to travel to Iraq for security reasons).
- Lack of vertical integration among growers, processors and exporters in order to reduce transaction costs.

Under current circumstances, growers have little incentive to improve quality, or to adopt improved pre/post-harvest techniques to meet international standards. Demand for marketing infrastructure, such as cold storage, re-hydrating chambers, specialized cleaning lines and fumigation chambers, is economically feasible only for high-value premium export dates (e.g., \$2,700/MT). Analysis by *Inma* staff suggests that cold storage facilities become feasible at a wholesale price of approximately \$2/kg.

The future of the Iraqi date sector largely depends on identification of unmet export demand, and/or on adding value to current supplies. *Inma* has identified possible low-cost value-adding opportunities, as well as apparent unmet export demand to which Iraqi producers and processors might respond. After July Date Workshop *Inma* concludes that the Iraqi date industry

can add value and increase volumes sold by pursuing date export and date product development.

DATE EXPORT The best opportunity for expanding Iraqi date exports is in the market of South East Asia (mainly India), initially targeted indirectly, via traders in Dubai. India is the only country with a sizeable growing demand for imported industrial dates, with an average annual growth rate of 15%. The India market currently is the main outlet for the low-priced Iraqi *Zahidi* variety of dates. *Zahidi* dates enter the India market via UAE wholesalers. Iraq dates currently occupy the “good value for money” segment of export demand, being the cheapest available in the market. India’s fast-growing middle class continues to generate increasing demand for quality processed dates, presently at 300,000MT annually. There may be short term potential (2008-09 season) for Iraq to export an additional 20-30,000MT/yr to India with significant added value, providing that direct links with Indian or UAE importers can be re-established.⁷

Iraqi growers and exporters lack direct links with traders in Dubai or India. Currently, Iraqi exporters sell dates in bulk (untreated) to consolidators exporting to Dubai. Small and medium growers sell to local consolidators or traders. Growers have no guarantee of being able to sell the crop even at a price as low as \$70/MT.

Quarterly Achievements

- For some time, *Inma* has been attempting to organize a matchmaking event between Iraqi date exporters and Dubai wholesale buyers. Visa barriers repeatedly prompted *Inma* to reschedule the event and attempt to hold the meeting at a different location: UAE, Turkey, Jordan and Lebanon were abandoned after traders were refused visas. At the end of this quarter, the matchmaking event was rescheduled for Baghdad to take place in mid October. This option was previously not considered due to security concerns of foreign traders. Four Iraqi date exporters are now scheduled to attend, short-listed from *Inma*'s original list of 122 traders and selected jointly with the UAE buyers according to a thorough market assessment conducted in Dubai by the *Inma* team.⁸
- Samples of added value dates (special pack, mix with nuts) have been submitted to potential UAE buyers from eight Iraqi companies, and two have been selected for the matchmaking event.
- An additional match-making event is under consideration with Indian date importers, it may take place in 2009 after conclusion of the similar event with UAE traders.. The idea is to select five Indian importers and five Iraqi traders with specific focus on *Zahidi* variety. The final selection of the Iraqi exporters is under way and will be finalized in collaboration with the Union of Iraqi Importers & Exporters Association and the Iraqi Date Company.
- An informal export association (network) has been created among the Iraqi traders attending the Date Workshop in Erbil effectively sharing market information and logistic data. *Inma* team will support the institutional strengthening of this association and the promotion of contract farming among Iraqi exporters and growers throughout the program’s duration.

⁷ Many Iraqi growers consider *Zahidi* sales as “windfall income” since *Zahidi* trees are intercropped to provide shade to other crops.

⁸ Iraqi date exporters have been selected based on their facilities, capacity to procure large quantities, reputation in the market, financial strength and willingness to promote contract system with growers.

DATES SYRUP The Date Workshop held in Erbil confirmed that dates syrup is a high added-value derivative of industrial dates, and a widely consumed product: it is currently sold in Iraq at a wholesale price of approximately \$3/kg, and utilizes low-grade industrial dates selling for approximately \$300/MT.

The *Inma* analysis, confirmed by the Erbil Date Workshop findings, suggests that syrup is the processed date product with the highest volume and potential. The developmental challenge is to transform syrup into a modern “spread” targeting young consumers through consistent marketing and convenient packaging. *Inma* analysis shows the ideal business model for syrup production relies on small-to-medium local factories with processing rate at 300-500kg/h. Current factories of syrup in Iraq are either too big (and multi-product) or of artisan-type (inconsistent quality).

Consumption is hampered by erratic and expensive production due to outdated factories that do not utilize modern extraction technologies (e.g. vacuum or double extraction) and by the lack of working capital. *Inma* is examining the feasibility of adding significant value by supporting one or more syrup production enterprises targeted initially to the domestic market, through:

- Establishment of medium-size highly efficient factories with capacity to process 500kg of dates per hour, using vacuum and double extraction technology.
- Improved packaging of the product with increased quality, appearance and taste (improved organoleptic characteristics).
- New packaging functions: e.g., single portion packs for consumption away from home.
- New formulations of date syrup (new flavors, new added ingredients), targeting young consumers (core target: children 3-12 years old).
- Promotion of a new image for dates syrup via advertising and packaging, associated with sports and healthy energy.

Quarterly Achievements

- *Inma's* Agricultural Review Committee (ARC) has been reluctant so far to support grants for syrup plants on ground of existing unutilized capacity and the impossibility of responding to a significantly high number of proposals for small-medium plants. *Inma* believes the process is usually best led by private investment. Thus, to date, *Inma* activities have concentrated on providing technical support, disseminating analysis and data on state-of-the-art technology based on vacuum production and double extraction among entrepreneurs in Iraq.⁹
- New product development of date syrup is now underway, with an RFP issued in Italy, Lebanon and Jordan, targeting a company specialized in innovative food formulations. The Scope of work is focused on the opportunity to develop new formulations based on date syrup with new innovative flavors (chocolate, vanilla) and ingredients-mix (cocoa powder, caramel, “doce de leche”). Results are expected in December 2008 and will be tested among Iraqi consumers. Product innovations will be presented to Iraqi date syrup manufacturers already in the market.
- The new packaging concept (single service/snack) for date syrup is underway to promote consumption away from home. Results are expected in the next quarter.

⁹ Data on vacuum technology and double extraction have been collected jointly to Bertuzzi Food Processing S.R.L. Viale Lombardia 298 Brugherio (MI) – Italy.

- New packaging development to identify alternatives to current glass jars and metal cans in the market is also under way. Results are expected by the end of the year.

POMEGRANATES

Three different studies on pomegranate value chains have been completed in the last quarter:

- Production of concentrated frozen pomegranate juice (65° Brix).
- Export of fresh table pomegranate to UAE.
- Production for the domestic and export markets of fresh pomegranate juice 15° Brix in aseptic packaging (shelf life 12 months).

Export of fresh pomegranate to UAE has emerged as a priority following these three studies.

FRESH POMEGRANATE EXPORT Iraq has a significant production of pomegranates in Diyala, Karbala, and Suleimaniyah governorates. Domestic consumption of pomegranate in Iraq is relatively low as compared to production, generating a surplus and low market prices at the farm gate during the peak harvest.

Inma believes that there is a viable potential for the export of fresh and added value pomegranates such as packaged pomegranate arils (seeds) and juice. The Dubai market, with its unique position as the logistic hub for the GCC, EU and Asian markets, has been targeted for Iraqi pomegranates fruits and derivatives export.

Currently Dubai imports over 23,000MT/yr driven by positive and growing consumption trends in Asia and Europe. The *Inma* team recently identified a large wholesale agent in Dubai who is committed to sourcing premium quality pomegranates from Iraq.

Inma has undertaken a Pilot Trial Export activity for the October-December 2008 harvest season to assess potential, competitiveness, and consumer acceptance of Iraqi premium quality class 1 pomegranates in Dubai. The projected Pilot Trial will export 200MT of pomegranates from the Suleimaniyah Governorate, where reportedly some 10,000MT are produced annually. The choice of the production area is based on security situation, presently deteriorated in Diyala.

Inma will expand during 2009 commercial exports from different locations, such as Karbala and Diyala, where early ripening varieties are grown, thereby entering into the world market earlier, when premium prices are being paid.

Quarterly Achievements

- *Inma* has identified and selected an Iraqi subcontractor with expert capability and personnel in the field that can assume responsibility for developing and implementing activities required for the Pilot Test. The subcontractor will be responsible for sourcing of the raw material, processing, packaging, transport, export regulations and export) to UAE. The final due diligence process is underway.
- In accordance with contractual obligations with the subcontractor, *Inma*, developed and procured cardboard boxes for the Pilot Export in UAE. Boxes will be available in

Suleimaniyah by October 20, 2008. Also, *Inma* also contracted airfreight transportation from Erbil international airport to Dubai.

- Training is under way with the subcontractor for the sorting, grading and packaging of the pomegranate in accordance with UAE import specification.
- Harvest in the Suleimaniyah orchards will start mid-October, first shipment to Dubai (approximately 15MT) is expected beginning of November, 2008.

POMEGRANATE JUICE The possibility of producing frozen pomegranate concentrated juice 65°Brix in Iraq has been finally discarded following the results of a comprehensive feasibility study conducted in collaboration with Bertuzzi Food Processing S.R.L., a leading manufacturer of food processing with dominant position in the Middle East.

Data showed that a pomegranate processing plant becomes viable at minimum production of 2,000MT (equal to 20,000MT of raw material), raw material at farm gate at \$360/MT, and export FOB price of \$4,800/MT. Firstly, the required quantity of raw material and target price at the farm gate are only matched in Diyala region which is out of bounds due to the high level of threat in the area. Secondly, the current international price for frozen concentrate plummeted to \$3,800/MT due to overproduction generated by significant expansion of capacity (7 new plants since 2006) in Iran, Azerbaijan and Uzbekistan.

Inma's current strategy on pomegranate juice is to focus on juice 15°Brix in aseptic container. *Inma* is examining the option of using a fruit processor machine which allows juice production in any location. The machine processes an average of 6,000kg of fresh fruit or vegetables per day, in eight hour shifts, producing an average of 4,000l of juice, depending on the fruit or vegetables. The machine pasteurizes the juice and fills it in aseptic bags of 5 liters (or in different size) with two years shelf life. The cost of aseptic packaging is \$0.20/kg. The real drawback of this project is, nevertheless, the necessity to deseed pomegranate before the crushing. Manual deseeding tested in the Halabja region has proven too slow (on average only 20kg/h) and industrial aril removers identified in California and Turkey are both too expensive and with low capacity (200kg/h). A semiautomatic inexpensive machine with capacity of deseeding 60-70kg/h has been identified in India and a final quotation will be available by mid October.

Quarterly Achievements

- Frozen concentrated juice 65°Brix feasibility study completed, project suspended due to low prices in the international market.¹⁰
- Identified manufacturers of fruit processor utilizing aseptic packaging technology, production test positively completed in Holland, proposal approved by *Inma* Agricultural Review Committee (ARC) subject to identification of semiautomatic aril-removal machine.
- Identified manufacturer of semiautomatic aril-removal machines abroad. Proposal will be resubmitted to *Inma's* ARC for review in October, 2008.

¹⁰ Capacity of frozen concentrate pomegranate juice production has increased considerably since 2006 with 11 new plants in Iran, Uzbekistan and Azerbaijan. Current FOB price is \$3,500/MT while *Inma* analysis shows a break-even point at \$4,000/MT.

STONE FRUITS AND TABLE GRAPES

SOUTH RASHIDIYA ORCHARD AND VINEYARD DEMONSTRATION ACTIVITY Iraqi orchard and vineyard businesses have been neglected and suffer from low quality genetic material. Projected demand for stone fruit in Iraq justifies the introduction of new varieties and modern production technology. Varieties with appropriate winter chill requirements have been identified and will be imported for demonstration purposes. This activity will establish demonstration plots with selected farmers and establish 25,000 trees each of stone fruit and table grapes of certified and commercially tested varieties.

Status: Approved for implementation

Annual Work Plan Activities Status

In addition to the above highlights, please find below a summary of the *Inma* program progress in achieving planned Perennial Horticulture Sector activities set forth in *Inma's* Annual Work Plan matrix.

PERENNIAL HORTICULTURE CLUSTER	
OVERALL RESULTS	QUARTERLY ACHIEVEMENTS
Increase gross sales of dates and other selected perennial fruit by 50%.	Sourcing contracts for dates expected to be arranged in Baghdad in October. Matchmaking event planned in UAE was canceled due to barriers. Visa barriers prevented trade missions in Turkey, Lebanon, and Jordan. First export shipment of pomegranate to UAE expected for November 2008.
Identify implementing partners, including subcontractors, grantees, investors, associations, collaborating farmers, and local experts.	Established informal Export Dates Board with representative of 3 areas (Basrah, Baghdad, Babel). Event in Beirut expected to consolidate the network. Identified and selected partner for export pilot test of pomegranate in Suleimaniyah. In process, identification of potential partner for pomegranate juice in aseptic packaging. Request for proposals for date syrup development under way.
Actively seeking partners using intermediaries, PRTs, and other information sources.	Completed. Partners have been identified, in particular four exporters able to negotiate significant quantity of <i>Zahidi</i> with UAE traders and to support contract with growers domestically.
MARKETING	
Conduct a value chain analysis of the market sector using implementing partners.	Value Chain Analysis of pomegranate (fresh, frozen juice) completed, arils under way. Value chain for dates syrup and dates export completed after Date Workshop in Erbil
Identify and contract implementing partner to conduct a value chain analysis of date sector and other perennial fruit specifically pomegranates and	Value Chain Analysis completed, action plan finalized

citrus. .	
Identify areas of focus, both in dates and in fruits.	Focus area for dates defined (Basrah, Babel and Baghdad) in accord to export opportunities and requirements. Selected focus area for pomegranate export and juice production. Possible extension to Diyala in 2009.
Determine baseline and Monitor project assisted value chain for results of activities.	Partners selected and baseline for dates and pomegranate completed
Develop a system to track value chain analysis in major target areas.	Process will be handled directly by <i>Inma</i> team
Conduct a full marketing study to determine quality requirements, phytosanitary requirements, prices, marketing channels, buyers, and traders for domestic and export markets. Update yearly.	Studies Completed and Plans developed for dates and pomegranate, focus on marketing rather than production. Plan to improve pomegranate production will be started in 2009
Assist producers to develop a marketing plan.	Completed: Export Marketing plans developed with four selected Iraqi traders.
Subcontract a partner to conduct and update a periodic marketing study for both dates and fruits including export markets.	Periodical marketing study will be conducted and updated by <i>Inma</i> complemented by data provided by traders in Dubai.
Develop Market Information System (MIS) to provide price data for dates and other fruit via multiple means of delivery.	Completed: Market Information will be focused on Export prices collected in Dubai by a selected trader.
Implementing Partner selected, initial format of pricing data determined and media selected for delivery of pricing information.	Completed. Anka data will be complemented by export price analysis conducted in cooperation with traders.
Develop an updated publication on date production, processing, and marketing.	Completed: A paper was circulated in September with the state-of-the-art situation in dates. Another update will be circulated in December with focus on the export market for <i>Zahidi</i> variety.
Contract a public relations advertising firm to conduct an advertising campaign for Iraqi dates and date products, in cooperation with date growers.	Canceled: <i>Inma</i> is currently assessing the opportunity of a campaign for date syrup consumption once new product development is completed.
Identify and contract a public relations advertising firm to propose several campaigns for marketing of Iraqi dates.	New Focus. An advertising agency will be considered by November with new focus on syrup consumption.
A selected implementing partner will develop multiple plans to facilitate the export of dates and date products to international buyers.	Export plans are being implemented directly by <i>Inma</i> , a Marketing Specialist has joined the team in June 2008
NEW PRODUCT DEVELOPMENT	
Promote the use of grades and standards to determine production practices and products to be marketed.	Completed: <i>Inma</i> has disseminated sorting and grading standards among selected Iraqi date exporters in accord with export requirement.
Define marketing grades and standards.	Marketing grades and standards have been defined and disseminated in the market according to traders indications and market (export) requirements
Identify date products that will add value to Iraqi dates . In particular flavored date syrup (chocolate, vanilla) new packaging, single service packaging.	Identified date syrup formulas (flavors, new packaging), <i>Zahidi</i> variety export, and possibly pomegranate arils in 2009.
Develop a range of products to meet demand of buyers and sellers.	Samples of date “special packs” have already been submitted to buyers. Other types of product development full under way.
Identify appropriate packaging technology and	Appropriate packaging technology and source of

source of packaging materials.	packaging materials identified for pomegranate (arils and juice) under way for dates syrup (RFP in progress)
Develop/rehabilitate modern grading, sorting and packaging plant system.	Development for pomegranate under way. Disseminated data of vacuum technology and double extraction among 11 producers for production line rehabilitation
Identify shortfalls in the grading, sorting and packing system.	Shortfall identified and addressed with the exception of date syrup (in progress)
Develop finance opportunities and products for business expansion.	Date syrup new formulation and packs, arils under consideration
Identify other sources of finance.	In progress (G2L Activity), with focus on working capital for date exporters and date syrup producers
Provide training that will include grades & standards, food processing, value chain analysis, branding, development of business plans, packaging, marketing, and finance.	In progress for pomegranate, little need detected for dates since Iraqi traders required almost exclusively market links
Issue subcontract to develop and implement training programs.	Under way for pomegranate, completed for dates in manual pollination and IPM
DISTRIBUTION	
Inventory and evaluate current production and processing equipment.	Inventory and evaluation completed.
Issue subcontract to inventory and evaluate current production and processing equipment.	Canceled: <i>Inma</i> will issue no subcontract. Direct evaluation with <i>Inma</i> staff.
Purchase equipment required.	Completed for pomegranate export pilot test (cardboard boxes)
Conduct an assessment of existing infrastructure, equipment, and capacities for harvesting, processing, and storage processes for date and other perennial fruit.	Assessment completed for dates and pomegranate
Regular monitoring that new equipment is being used and maintained as required. Each year a report on the status of the equipment and its use will be presented to the program managers and partners.	No new equipment.
Contract implementing partner to survey and report the status of project-assisted equipment.	Not required
PRODUCTION	
Assess current production practices and develop a plan for improving production.	Assessment completed for dates and pomegranate. Developed a specific plan with selected date exporters to improve production (via contracts setting improved quality standards). Plan for pomegranate will be developed in 2009
Issue subcontract to implementing partner to assess current production practices.	Not required, current production practices have been assessed jointly with exporters
Improve field cultivation of dates and other fruit. Commercial demonstrations utilizing contract farming on 5,000 ha (12,500 ac) located in selected irrigation command areas.	Abandoned for dates. Started with stone fruits and table grapes import, subject to MOA approval.
Demonstrate Integrated Pest Management (IPM) methods.	Completed (trunk injection), method not cleared yet by MOA.
Implementing partner prepares IPM plan for dates.	Plan completed (trunk injection) but on hold, pending MoA approval.

Demonstrate proper pruning, pollination, and harvesting of dates.	Completed for dates. Under way pomegranate
Demonstration program created and implemented by project partner.	Completed for dates. Under way pomegranate
Improve propagation techniques, including gathering off-sets (vegetative reproduction) from desired varieties on commercial nurseries operated by private sector entrepreneurs and producer associations.	Abandoned for dates. Started with stone fruits and table grapes import, subject to MOA approval.
Through an implementing partner, identify organizations or businesses with the capabilities to propagate perennials.	Identified two possible partners for pomegranates
Improve production through "hands on" infield technical assistance.	Planned for 2009 for pomegranates, abandoned for dates
Identify a process to sample/test soil and elicit recommendations to help farmers improve production.	Process to sample/test soil to improve production identified.
Development of an agricultural service business which offers a "pollen bank", field pollination, and other related services.	Canceled, out of <i>Inma</i> Marketing focus.
Identify implementing partners to identify the requirements in setting up a pollen bank to improve date production.	Abandoned
Training programs including propagation, water management, pruning, soil analysis, fertility, pollination, harvesting, infrastructure investment, farm business management, machinery, association management, IPM, post harvest processing.	Assessment of training needs completed. (Also LOP benchmark). Under way sorting and grading for pomegranate processing and improved farming methods (fertilization, irrigation, pruning, soil management, pre and post harvest handling of fruit)
Identify Implementing Partner to develop training plans and schedules for performing the training.	Completed: sorting, grading for pomegranates.
TECHNICAL	
To implement this sector's program a variety of technical assistance will be provided from local and expatriate experts, to include the following illustrative list of technical expertise: agricultural production, marketing, water management, post-harvest technology, and business development.	Completed transfer of technology to 8 date syrup producers on vacuum technology and double extraction, based on Bertuzzi technology. Completed sorting and grading standardization requirements for <i>Zahidi</i> dates with four leading exporters.

LIVESTOCK AND FEED

The Livestock & Feed Cluster is focused on pond fish production and marketing improvement, animal feedstuffs to supply value chain improvement, value chain assessment and economic feasibility analysis, and anchor enterprise rehabilitation and development

The end of project target is to have two feed mills operating at a capacity of 20,000 tons of feed each to reach *Inma* goals. Over 2000 hectares of fish ponds will be operating with low but adequate technology to produce at least 300% above the unit production of fish per pond over what it is today. Dairy and poultry operations will receive full attention in years 2-3 as electricity becomes more widely available and reliable. These operations require ready access to inexpensive reliable electric power, at present not available in most of the country, but expected to improve by the third year of the program.

FISH GROW-OUT DEMONSTRATION TRIALS After the success with the Euphrates Fish Farm Fingerlings Production of 6 million fingerlings, they were distributed to about 1,000 fish farmers in the Babel province in the spring and early summer of 2008. *Inma* followed up with Fish Grow-Out Trials in Babel province.

This large scale fish farming program will demonstrate five alternative technology packages, including fingerlings, pelletized and extruded fish feed, and water aeration with paddlewheels. One hundred medium size fish farms are participating in the demonstration program under the supervision of eighteen fish extension agents.

A fully functioning, efficient production and marketing chain will increase availability of superior quality fish in the market and provide increased employment opportunities for the fish production and associated industries (feed manufacturers, transporters, processors, retailers). Market improvements and assistance in understanding market standards, market pricing, and how to produce for those standards are the principal concepts to be applied through training and technical outreach efforts. This will help farmers to produce fish that are superior in quality and competitive in domestic markets.

Quarterly Achievements *Inma* contracted with a group of small feed mills in Babel province to provide the needed fish feed for the demonstration farms. The first few feed deliveries had great variation in nutrient content and pellet quality, but after a few weeks the quality and consistency greatly improved. *Inma* established a procedure for taking regular samples of feed deliveries and sending them for analysis to a laboratory in the United States, thus increasing the feed manufacturers' awareness of the results of their production methods.

Inma provided all the necessary inputs for farmers in the demonstration. Monitoring includes daily and weekly recordings of feed consumed and weight gained by fish. After a full year of operations will be covered by the demonstration program, *Inma* expects to have definitive empirical data on the performance of fish under different feeding, density, and aeration options.

These fish will be at market weight in January 2009. The results of this trial will provide valuable information for future fish production activities.

Status: In implementation

FEED GRAINS: WHEAT SEED In coordination with eight separate PRTs and ePRTs (Taji, North Babel, South Babel, Kirkuk, Mosul, Erbil, Diyala, and Fallujah), *Inma* is distributing 900MT of wheat seed (*Cham 6* variety) and 100MT of barley seed. This is an emergency program to address the severe shortage of quality seed currently faced by Iraqi farmers as a result of the poor rainfall during the past rainy season, when yields and quality were badly affected. *Inma* procured the required seed in country from private sources and made it available to the PRTs for subsequent distribution to farmers and farmer organizations in their respective areas of operation. Whenever necessary, *Inma* will also be involved in providing technical supervision to farmers. These programs are run in close cooperation with the provincial Directorates of Agriculture.

Cham 6 is a soft wheat bread variety that grows best well irrigated. In general, top quality grain (grade 1 and 2) can be sold to the Ministry of Trade at high official prices. However, much of the harvested wheat in Iraq is often of lower quality, unsuitable for flour making. Lower quality wheat is used for livestock, mainly in poultry and fish feed.

Status: In implementation

FORAGE PRODUCTION: ALFALFA Both the feedlots and fish production projects serve to demonstrate the value of utilizing better nutrition feed rations in general and of alfalfa in particular. The *Inma* project promotes alfalfa hay as a high value crop, and wants to stimulate local alfalfa production and marketing. The effectiveness of good nutrition along with proper management will be demonstrated.

The principal market for alfalfa hay initially will be provided by the feedlot program, but *Inma* expects that demand from other livestock owners will quickly expand to provide a self-sustaining forage market. There are already a few alfalfa hay dealers identified in the Taji area who are baling hay for export to Mosul and, reportedly, Syria.

The Iraqi Government currently enforces an export ban on alfalfa hay, imposed in 2004 to prevent exports of alfalfa to Saudi Arabia and other Gulf States. Lifting the export ban would raise the market for alfalfa hay and income for farmers.

Quarterly Achievements The subcontractor selected to provide technical services for the feedlot program will be used to provide technical supervision for the production and marketing of alfalfa hay.

Status: Approved for implementation

FEED MILLS AND FEED DEPOTS Feed mills and feed depots are an integral part of the feed grains, forage, feedlot, dairy, fish and poultry programs value chains. Feed mills produce balanced concentrate feeds mainly for poultry and fish farms. Feedlots need a large volume of forage (mainly alfalfa hay) complemented with smaller volume of feed grains (mainly barley, maize, or low grade wheat). Feed depots bring together in one spot forages, feed grains, feed supplements and equipment used in animal feeding. *Inma* wants to promote both types of feed enterprises. The priority for feedlots is to encourage the emergence and expansion of feed depots in region with surplus production of forage and feeds.

Quarterly Achievements Two hay dealers have been identified that can provide alfalfa hay for the feedlot project. They purchase green alfalfa from hundreds of small farmers, dry it, bale it and sell to traders and livestock farmers. Their businesses will be enlarged as part of the feedlot project, providing alfalfa markets for small farmers, and high quality alfalfa for the feedlots. Alfalfa will become a high value crop this quarter and the next for small and larger growers, and produce a lot of high quality lambs and steers.

Two large feed mills in Babel and Fallujah are being considered by *Inma* as possible candidates for rehabilitation and introduction of better feed manufacturing equipment. The magnitude of market demand for these feed mills remains a major unknown factor that needs to be resolved to decide on the scale of operation.

Another major factor is the presence and competition of small feed mills currently operating using low-tech equipments. *Inma* has contracted with a group of small feed mills in Babel for the provision of fish concentrate feed for the fish farming demonstrations. The reports about the quality and consistency of feed delivered have been very satisfactory.

Status: At Review & Design Stage

FEEDLOTS In 2009, the *Inma* project will initiate a number of beef and sheep feedlots in various locations of Iraq. *Inma* will demonstrate cattle and sheep feedlot fattening and management systems to produce premium quality meat at lower unit costs of production than under traditional methods. Feedlots will employ effective livestock production techniques to attain high feed conversion rates and rapid growth gains. In addition to consumers, beneficiaries in the value chain include the feedlot owners, local animal and feedstuffs producers, veterinarians, associated cluster enterprises such as feed mills, feed depots and local specialty butcher shops.

Feedlots for cattle and sheep fattening are core project activities and *Inma* has an ambitious program for expanding their number and regional coverage in the coming months. Poor rainfall during the winter growing season badly affected yields, production, and quality of the 2008 wheat and barley harvests. Pastures in natural rangelands have also been affected by the drought. Livestock owners face a shortage of feedstuffs and may be forced to sell animals before maturity and to reduce their breeding stock. That will increase meat production in the short run but at the expense of less production in the future. Feedlots provide an outlet for immature cattle and sheep where they can put on weight using forages and feed grains brought in from outside the immediate region. Higher oil prices in the world market has led to rapid increase in disposable income in Iraq, and this eventually leads of higher demand for high value foods such as meats, dairy, fruits and vegetables. Investments in feed lot operations offer profitable prospects at this time.

Quarterly Achievements *Inma* has selected a company, Zozik Agriculture Group, to provide technical and management assistance on feedlot design and operation for twenty feedlots (ten for cattle and ten for sheep) scattered throughout the country. Selection of feedlot locations has begun and awaits the publication of a Request for Applications (RFA) for grants to be awarded competitively by *Inma* to prospective feedlot operators. The RFA will be published in Arabic and English to ensure widespread participation. Once the winners of the feedlot grants are announced the implementation process will begin with supervision and assistance from the service provider. Several PRTs and ePRTs have independently suggested several candidate locations for feedlot operations. These will be evaluated either independently or along with other

forthcoming proposals in response to the RFA. Selection of feedlot grant awards is anticipated for the end of November and actual construction expected to begin in January 2009.

In anticipation of the feedlot program, *Inma* published two separate brochures on feedlot operations, one for cattle and one for sheep. These publications will be widely distributed in Arabic and in Kurdish beyond the area and farmers directly affected by the feedlot program.

WINDMILLS To respond to the lack of adequate electricity and water supply *Inma* will demonstrate, test and evaluate windmills as a source of water for small scale livestock and agriculture at a low maintenance cost in remote areas of Iraq. The successful demonstration will enable *Inma* to promote small agribusiness activities through the use of windmills in far off areas.

Quarterly Achievements Twelve windmills have been purchased from a manufacturer in Pakistan. The windmills will be erected at selected locations in Iraq, preferably to provide water for livestock in the cattle and sheep feedlots. At the end of this quarter, the ship containers with the windmills have arrived in port and are in the process of clearing customs. Final destination will be decided once the locations of the feedlots are determined.

Status: In implementation

DAIRY PRODUCTION AND MARKETING Milk from cows and ewes is a major source of cash income for farmers in the Baghdad region, in addition to the sale of feeder calves and lambs. Milk is sold to dairy processing plants, mainly to make cheese and yogurt. Smallholder dairy farm production is widespread in all irrigated areas of the country, but especially in the districts surrounding Baghdad. Most alfalfa fields are cultivated by farmers who own a few cows; they produce enough forage for their own animals but could expand production for sale if demand for hay became more evident. Improvements in the cooling system for transport and storage of milk could improve quality and expand the potential market for fluid milk, and with the profitability of milk production in the region.

Quarterly Achievements During this quarter, two large dairy farms, Al Eshaki and Bunnia, requested *Inma* to assist them in drafting plans for rehabilitating their installations and reestablishing their dairy herds to their former production levels. The Bunnia Dairy Farm in the Wassit Governorate is an operating dairy herd established originally over 20 years ago with imported heifers from the USA and Canada. Before the 2003 war it had 7,000 head, but at present there remain only 2,500 heads. Security and economic conditions are improving sufficiently that management is contemplating major investments to expand production in coming months. *Inma* did an in-depth analysis of the current situation and developed a plan for improving milk production and quality by raising the nutritional value of rations, more careful monitoring of individual cows performance, and introduction of artificial insemination to maintain and enhance the dairy genetic potential.

Inma produced the Large Dairy Farm Management Guide to assist other dairy farms that consider setup, expansion or development.

Status: Development plan for the Bunnia Dairy Farm completed

Annual Work Plan Activities Status

In addition to the above highlights, please find below a summary of the *Inma* program progress in achieving planned Livestock & Feed Sector activities set forth in *Inma's* Annual Work Plan matrix.

LIVESTOCK AND FEED CLUSTER	
ANNUAL TARGETS 2008-2009	QUARTERLY ACHIEVEMENTS
Strengthen Iraqi livestock and feed industries through improved production, value-added, and marketing.	Cattle and sheep feedlots are the main focus of interest. Alfalfa hay marketing and establishment of feed depots also receiving priority. Demonstration of alternative fish farming technical packages in Babel. Issue of two publications on feedlot management.
Identify five key urban centers. Identify project targeted feed mills and feedlots. Identify potential targets for fish farms. Preliminary value of gross sales of local red meat determined.	Baghdad and Erbil are the focus of initial interest for establishing feedlot operations for cattle and sheep as soon as feedlot grants are awarded.
Identify implementing partners, including subcontractors, grantees, investors, associations, collaborating farmers, and local experts.	Zozik company identified as provider of technical services for feedlot operations.
Implementing partners evaluated, selected, and assisted.	Request for grant applications from prospective feedlot operators issued and awaiting responses.
MARKETING	
Conduct an analysis of the end market, to understand the present infrastructure and what quality standards are used in the buyer-seller relationship, quantities sold and sources of supply, and range of products sold.	Completed: Meat VC, Fish VC, Dairy industry, Poultry, Red Meat Focus Group Study. Household food expenditure survey needed to determine what share of food expenses go for purchases of animal products. Scope of work for survey completed and ready for limited competition. Value chain analysis of specific products to follow this initial survey.
Complete description of the commercial livestock/feed markets, in the 5 targeted areas.	Scope of work for household food expenditures survey in Baghdad completed. Ready for limited competition bidding.
Identify existing standards for meat value chain.	No progress made this quarter
Establish and maintain a Market Information System that monitors wholesale prices and quantities sold of those factors that affect the livestock market.	USAID CTO and Contract Officer gave approval for <i>Inma</i> to award a grant to Anka company to continue the market price monitoring for fruits, vegetables, animals products and farm inputs. Grant agreement to begin October 1st, 2008.
Market information system being developed.	Grant agreement with Anka incorporates many new features to enhance the timeliness, quality, and coverage of the price information.
Provide training in quality standards, hygiene, marketing and packaging, and business management for meat processing.	Scope of work for market prices includes provisions for training in grades and standards for fruits, vegetables, and animals products.
Training program designed and testing program implemented.	No activity in this quarter
Modernize meat marketing based upon prior analysis.	No activity in this quarter
FEEDLOT OPERATIONS	

Support the establishment and operation of new feedlots and/or rehabilitate selected feedlots.	Contract with Zozik company for technical assistance and support for private sector feedlots receiving <i>Inma</i> grants is almost finalized.
Conduct an inventory of feedlot enterprises supplying the 5 selected urban areas.	Prepared Request for Applications (RFA) for feedlot grants to be released first week in October in English at <i>Inma</i> website. Arabic translation underway.
Support and assist the 5 selected feedlots with the best infrastructure, equipment, materials, and training.	Pending receipt of feedlot grant applications in response to RFA for grants.
Provide training to feedlot managers in feedlot operation and business management.	Two publications: <i>Inma</i> brochures on feedlot management for cattle and for sheep. These extension brochures provide basis for training program.
FEED MILL OPERATIONS	
Conduct an inventory of commercial feed mills which includes an assessment of engineering, current production, and capacity of feed mills (functional or not) throughout Iraq.	Scope of work for survey of feed mills in the districts surrounding Baghdad prepared and released for limited competition. Awaiting proposal.
Implement a contract to do an inventory of existing commercial feed mills operators in selected regions	Contract signature pending receipt and selection of winning proposal
Support the establishment and rehabilitation of 12-14 feed mills.	Several prospects under review: Rehabilitation of Fallujah feed mill; construction of modern modular automated large feed mill in Babel; establishment of feed analysis laboratory; support smaller feed mills.
Identify and assist six feed mills in key regions to increase their levels of operation and quality of feed.	Feed mills in Fallujah and Babel identified, but market and business prospects under review.
Marketing oil seed meal for livestock.	No progress made this quarter
Set up oilseed extraction processing facility. Make plans for oilseed extraction and meal processing for livestock feed.	No progress made this quarter
Train personnel in feed mill production, management, and technical skills.	Feed mills in Babel province contracted to produce high protein fish feed. Training personnel to achieve consistency in quality across feed mills; using US based laboratories to test for nutrient contents.
In-country training of key technical and management personnel of selected feed mills.	<i>Inma</i> trained two animal husbandry experts in formulation of feed rations using locally available ingredients, using software developed at Michigan State University
Establish a system for feed analysis and the provision of standardized ration formulations designed to meet feeder demands.	Results from test samples sent to local state-run feed analysis laboratory were not satisfactory. <i>Inma</i> using US based feed analysis laboratory, but exploring options for establishing private feed laboratory in Iraq.
Arrange for in-country feed analysis service from an established facility and capability to formulate livestock feed rations.	State feed laboratory in Baghdad has not operated in years; inconsistent quality of results. <i>Inma</i> looking into private options instead.
FEED PRODUCTION	
Identify potential feed production areas, focusing on irrigation command areas.	Districts in the area surrounding Baghdad are primary focus for improving production and quality of alfalfa hay and feed grains.
Implement systematic procedure for selecting six	Priority regions for establishing feedlots identified.

priority regions with high potential for livestock and feed production near the major urban centers	Request for grant applications from prospective feedlot operators in these regions to be issued early October.
Proceed with the rehabilitation of irrigation systems according to the irrigation work plan.	No activity in this quarter
Introduce seed for feed production, to include corn, sorghum, sugar beets, alfalfa, mixed grasses, clover, oilseeds, and feed grains. Contract farming will be principal instrument.	900 tons of wheat seed and 100 tons of barley seed distributed in eight different PRTs. Barley and lower grade wheat are used for livestock feed.
Hybrid corn - summer planting - Anbar	Last year's summer hybrid corn planting not replicated in 2008 due to questions regarding seed registration and certification.
Hybrid corn and sorghum - spring planting	No activity in this quarter
Fall planting - wheat and barley - Anbar and Diyala governorates	Nine hundred tons of wheat seed and one hundred tons of barley seed distributed by <i>Inma</i> to several PRT for planting in the fall of 2008.
Oilseed crops - spring planting	No activity in this quarter
Alfalfa and hay planting, production and harvesting.	<i>Inma</i> exploring several alternatives for encouraging existing alfalfa growers to increase production and quality of alfalfa hay by better timing harvesting
Provide training in field level post-harvest handling of above-mentioned feed products, operations management, production technology, input provider, farmer understanding of markets, and farm profitability.	<i>Inma</i> and Taji PRT are in contact with pilot alfalfa hay dealer making hay bales for export to other regions of the country. Model feed dealers to be encouraged whenever possible.
Provide training in the field level on time of cutting and post harvesting management.	Farmers currently harvest alfalfa at full bloom which results in lower protein content than when cutting is done earlier.
Issue subcontract and conduct field demonstrations and workshops to disseminate knowledge about improved cultural practices and better varieties of feed grains and forage crops.	Two publications on feedlot management for cattle and sheep issued by <i>Inma</i> . Better nutritional practices are main focus of the brochures. Actual training awaits signing of services contract for feedlots with Zozik company.
LIVESTOCK PRODUCTION	
Provide a minimum of 10 grants to Veterinary Service Providers (VSPs) based upon requests for proposals.	No progress made this quarter
Set up Veterinary Service Providers (VSP) in select districts	No progress made this quarter
Train VSPs in artificial insemination, and procure and distribute equipment and materials through them.	No progress made this quarter
Distribute basic animal health and nutrition supplies through VSPs	No progress made this quarter
Establish and rehabilitate 10 fish farms with commercial potential.	One hundred demonstration farms in Babel province were provided with fingerlings and different input packages to verify results of alternative fish farming technologies.
Assist fish farm owners with improved marketing.	Two fish markets in Baghdad under review for possible improvements in market infrastructure.
TECHNICAL ASSISTANCE	

<p>To implement this sector's program, a variety of technical assistance will be provided by local and expatriate experts to include the following illustrative list of technical expertise: marketing and market development, feed production, developing appropriate business models, animal nutrition and health, animal genetics, aquaculture, agribusiness management, irrigation management, meat processing, association development.</p>	<p>Technical assistant for fish farming provided to one hundred medium scale fish farmers to verify and demonstrate alternative technology packages in Babel province. Weekly visits to farms and close follow up of fish performance are part of the demonstration. Technical assistance to large dairy farms in Wassit to improve nutrition and milk production. Testing of extruded fish feed among a selected group of fish farmers. Testing of wheel aerators in fish ponds. Testing of wind mills for provision of steady water supply for livestock.</p>
<p>Baseline survey and monitoring experts in the following areas: 1 for slaughter houses, 1 for household food expenditures, livestock inventories, forage production, feed grain production</p>	<p>Scopes of work for surveys of feed mills, and food household expenditure surveys completed and opened for limited competition from several potential bidders.</p>

CROSSCUTTING ACTIVITIES

A range of *Inma* activities adds value to the process from production through processing and marketing to the consumer. National crosscutting activities support various aspects of agribusiness in Iraq:

- cooperation and security (JOS),
- financial support (Grant to Loan & Microfinance Activities),
- knowledge transfer (Training) and knowledge generation (Publications),
- international promotion and marketing (regional and international agribusiness fairs),
- information dissemination (Price Monitoring System and Agricultural Market Information System)
- agribusiness promotion (Agribusiness Fairs), and
- private sector support and policy (Agricultural Policy Institute).

JOB ORDER SYSTEM

In order to process project support requests from ePRTs/PRTs operating in Iraq's provinces, *Inma* had devised an online "Job Order System" (JOS) on the *Inma* website. The JOS served as a management tool for easy input of external proposals for *Inma's* rapid consideration and response.

During its fourth quarter, *Inma* began refining its operational approach. Experience with several key "anchor" agribusiness enterprises at the request of ePRTs and PRTs has permitted *Inma* to support key points on value chains that have resulted in the development of additional links and greater geographic focus for program interventions. As a result, *Inma* began to respond less to ad hoc, one-off job order requests from collaborating partners, and more on activities *Inma* proactively identifies through consultation with local community leaders, farmers associations, and other local partners consulted with in collaboration with ePRTs and PRTs. The activities selected for support are subject to a rigorous, systemic analysis of value chain constraints that must be addressed to realize optimum program investment results. The Geographic Focus Area development is a direct result of this strategic reorientation.

During this quarter, *Inma* proactively responded to its mandate to implement a geographic focus for major operations. This geographic focus permits synergistic impacts of multiple interventions throughout various value chain segments, and stimulates cross-cutting impacts on cluster enterprises. Resulting vertical and horizontal integration within and among various product value chains accelerates market modernization and overall economic impacts, reduces transaction costs and other efficiency improvements. The Geographic Focus Areas (GFAs) and their embedded value chains ensure sustainable long term businesses with synergetic effect on the overall economy of Iraq.

Quarterly Achievements From the spring/summer of 2008, the geographic focus approach has been *Inma's* preferred method of intervention opportunity identification. Nevertheless, close

collaboration with PRTs and other partners is continuing through increased number of *Inma* field visits to facilitate the change toward the new system focused on GFAs, through increased communications by *Inma* to PRTs about its actual and planned interventions and progress, and through solicitations by *Inma* to selected PRTs concerning interest in collaborating with ongoing or newly approved *Inma* interventions.

GRANT TO LOAN (G2L) AND MICROFINANCE ACTIVITY

In order to facilitate access to adequate financing for agribusinesses, *Inma* will use grant funds to assist selected private banks to finance commercial agribusiness capital investments and working capital. *Inma* also will provide farm production micro-finance opportunities. This activity will strengthen the private sector by providing services to build capacity and monitoring banks participating in the G2L program, and by inducing private agribusiness development of enterprises not directly identified by *Inma* but proposed as profitable investments by private Iraqi banks.

In March 2008, The USAID Director approved an amendment to *Inma*'s Implementation Plan, broadening the Grant Program to include provision of grants directly to private commercial banks prepared to extend loans to *Inma* approved agribusiness enterprises.

During this quarter, *Inma* has directed its efforts towards getting the G2L program up and running, by selecting the first participating banks. In addition, *Inma* has endeavored to establish a microfinance program for farms, through intermediary NGOs registered as Microfinance institutions (MFIs).

Inma held several meetings with bank representatives, both in Baghdad and in Amman, where executives of several Iraqi banks now reside. The G2L RFA, designed to select the participating banks has also been issued. The under-noted table reflects these activities:

Timetable	Description of Activity	Participants/Contacts	Comments
July 3 – 16	Completion of RFA for selection of banks.	<i>Inma</i> management and program staff. USAID CTO	Timed for release July 17.
July 17	Meeting with banks to launch RFA.	15 banks participated.	RFA issued immediately following meeting.
July 18 – 21	Meetings with some bank representatives in Amman	7 banks participated	Presentation focused on specifics of RFA
July 19	RFQ issued seeking accounting firms to verify certain information requested from the banks, and provide training on business plans	<i>Inma</i> management and program staff	Sent to 5 accounting firms
July 24	Question and Answer Meeting with banks	14 banks participated	Questions asked at meeting, and answers, circulated to all 29 banks.
August 6 – 7	RFA issued banks missed in original issue	14 banks	Clerical error caused by misunderstanding of instructions.
August 6	Modification to RFA issued	All 29 banks	Dates for responses

			amended.
August 9	Deadline for responses to RFQ	4 accounting firms responded	Training issue dropped and one firm selected for verification of banks' information.
August 28	RFA for microfinance program completed	<i>Inma</i> management and program staff	Awaiting final agreement
September 4	Deadline for RFA applications	9 banks responded	Only 2 banks provided sufficient information for preliminary evaluation.
September 10	Preliminary evaluation completed	<i>Inma</i> program staff	Evaluation shows that only 2 banks meet absolute minimum requirements.
September 13	EOI for Arabic bank trainers issued	<i>Inma</i> Program staff	4 responses received by deadline.
September 23	Draft new proposal on how to proceed after RFA failed to reach necessary minimum standard of responses from banks.	<i>Inma</i> program staff	Awaiting review of proposal.

At the beginning of this period, the Senior Expatriate Commercial Banker was mobilized and arrived in Baghdad. Working with the DCOP of *Inma* Operations, prior to his departure, and the Grants team, he participated in the final production of the RFA for the banks.

The G2L Program has now reached a critical stage. In October, it is now proposed to select up to five banks, from those which responded to the RFA, and provide them with credit training, having first conducted an assessment of their credit department competencies. Following satisfactory completion of the training, each successful bank will be eligible to receive proposals from *Inma* clients and to submit applications for their own clients.

It is planned to have the Microfinance RFA issued early in October.

AGRICULTURE INFORMATION TO FARMERS AND FOOD PROCESSORS

PRICE MONITORING SYSTEM Timely and transparent price information available to market participants is one of the requisite conditions for an efficient and fair agricultural market. Unequal access to market prices information enables those to have it to take advantage over those who don't. Rapid dissemination of market prices is thus an effective means to enhance the efficiency of agricultural markets. Farmers and traders constitute the primary audience for the price information system, but other stakeholders include consumers, processors, importers and exporters, policy makers at the Ministries of Agriculture, Trade, Finance, and Planning, donor organizations, academics and analysts at universities and research institutions.

Inma intends to continue supporting the nationwide wholesale market price information program that Anka Company implements in Iraq since 2006. The price information program covers approximately hundred different agricultural products, including vegetables, fruits, animal products, and farm inputs. 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 Achievements USAID approved *Inma's* grant award to the Anka Company, which will provide full support for Anka to continue the price monitoring over eighteen months, starting October 1, 2008 and ending March 30, 2010. The grant agreement is about to be signed in early October.

Status: Pre-implementation phase

AGRICULTURAL MARKET INFORMATION SYSTEM (AMIS): PHASE I In addition to market price monitoring, *Inma* plans to develop a more comprehensive Agricultural Market Information System (AMIS) for Iraq, covering not only prices, but also market volume flows, estimated supply, market news and developments, analysis of trends in consumption, production and trade, impact analysis of government policy affecting agricultural production and marketing, and other topics of interest to agribusiness in the country.

The purpose of developing a national agriculture marketing information system is to improve market efficiencies. Efficiency is improved through greater transparency throughout product value chains, which creates opportunities for spatial and temporal arbitrage and improved production planning. Pricing knowledge creates a competitive environment and encourages transactional and operational efficiencies. Farmers are then better able to plan their production – making informed decisions about which varieties to grow and when to grow them. Market information also will improve farmer's negotiation position vis-à-vis traders and aggregators at the farm-gate.

The AMIS Phase 1 objective is to restore a basic system of collection and dissemination of agricultural data. There are three primary points of data collection in agricultural markets along value chains: the farm-gate, wholesale level, and retail level. Price differentials between each of the levels carry important market information such as marginal costs for processing, marketing, distribution, transportation, and premium for value added. The Anka grant is collecting and collating wholesale prices. The AMIS activity will initiate data collection and capacity building at the three market levels, taking into account the initiative already under way through the Anka grant.

Quarterly Achievements At the end of this quarter, preparations were under way to present a proposal to *Inma's* ARC to carry out the AMIS Phase I activity, which will include sub-contracting a US Firm to manage development of the Iraq AMIS. Responsibilities will include

- Establishing criteria for a limited competition RFP for a US company to manage and undertake collection of market data.
- The US firm will be required to partner with a local Iraq institution to implement the work.
- The US firm will be required to maintain one long term person at the *Inma* offices in Baghdad and arrange for Short Term Technical Assistance (STTA) as needed.
- *Inma's* M&E data requirements will be implemented.

Status: In design stage

IRRIGATION, WATER MANAGEMENT AND SOIL RECLAMATION

Irrigation in Iraq is divided between the *main public sector surface irrigation systems* operating from river diversions and the much smaller and more isolated *individual irrigation systems* operating from well water.¹¹ The prior belongs to the public sector, and is owned and managed by the Ministry of Water Resources (MoWR). Responsibility for maintenance of the canal and drain network from the point of diversion from the rivers or reservoirs to the farm canals serving individual fields. At this point the responsibility shifts to the Ministry of Agriculture (MOA) and farmers.

Since *Inma's* objective is to foster the private agri-business sector, *Inma* will not normally become involved in maintenance of the public sector canal and drain network. The primary involvement of *Inma* in the surface irrigation areas, and its training programs envisioned for the irrigation management, will be mostly focused on farmers in support of communities identified for value chain enterprise support. In these areas, *Inma* will assist the farmers to optimize their irrigation management within the limits their delivery systems will allow. *Inma* will assist target communities with training on effective maintenance and operation of field canals and drains primarily through facilitated small group discussions. Training curricula will consist of themes such as water entitlements, rights of intervention, and recourse to overall irrigation authorities for dispute resolution. If the need occurs, some training will be provided government irrigation managers and technicians on what the project is doing and needs from these officials.

Within the small independent systems when individual farmers are involved with a value chain enterprise such as the proposed tomato processing enterprise, *Inma* will again assist them with their irrigation and water management. This could include an evaluation of the potential for *drip irrigation*, and when appropriate assist the farmers to obtain the necessary drip materials.

LOWER RASHIDIYA WATER MANAGEMENT TRAINING *Inma*, ePRT Baghdad 3, Army, Tatweer, MoWR and MoA team leaders have designed a pilot program for system restoration. As an integral part of the Golden Crescent Geographic Focus Area, *Inma's* role will be in the development of programs that support agribusiness activities in the pilot project area and provide technical support and training accordingly. The 150-member Rashidiya Market Council serves as a collective for wholesale marketing and packaging centers, farm related services, acts as a liaison with the Government of Iraq and may also assume responsibility for secondary and tertiary canal maintenance through development of a Water Users Association. Working through the Market Council, *Inma*, together with its international and domestic partners, will offer training for qualified labor, a grant for provision of tools and equipment, as well as funding for initial operations. *Inma's* Lower Rashidiya Water Management training is finding solutions for the delivery and maintenance of water supply to assist farmers starting up small agri-businesses that would provide fresh produce to the growing Baghdad market.

Status: Project proposal is under development. The activity is estimated to start January 1, 2009 and continue until May 2010.

¹¹ The independent irrigation systems are a combination of very small systems lifting water from wells to irrigate one or two donums often used for vegetables like tomatoes and using the locally manufactured drip irrigation equipment. While these systems are individually and very small, in total they represent a substantial amount of irrigated land and substantial share of the national vegetable production.

AGRIBUSINESS PROMOTION

ERBIL AGRI-FOOD EXPO *Inma* is the major sponsor of the forthcoming Erbil Agro-Food Expo a regional event that will take place at the Erbil International Fair Grounds on November 4-7. *Inma* will be present at the fair grounds with a promotional booth and with a series of workshops and seminars covering a range of agriculture/agribusiness topics. These workshops and seminars, along with vendors promoting agriculture products and services from Iraq and the Middle East, will provide an opportunity for Iraqis to get a first hand look at agriculture in the 21st century. *Inma* will utilize this event to promote Iraqi agriculture and trade, and will attempt to establish business to business contacts between buyers and suppliers.

Status: Pre-implementation phase

PRIVATE SECTOR SUPPORT AND POLICY

AGRICULTURAL POLICY INSTITUTE The transition from a command-and-control based to a market-led economy requires substantial policy analysis and policy reform work in the agriculture sector. While the public sector is responsible for enacting policy reforms and for monitoring implementation of these policies, the private sector has a role in informing and dialoguing the policy making process. *Inma* proposes to launch an initiative for an Agricultural Policy Institute, likely to be located in one of the Iraqi Universities. The Institute would be created by various private sector organizations representing a broad spectrum of agricultural interests in Iraq. The Institute would conduct analytical studies designed to examine all sides of various policy issues that its Advisory Board would place on its agenda.

Status: Under examination

TRAINING

Approximately 48,550 people will be trained by *Inma* by the end of the program, of which 7,400 will be in Perennial Horticulture, 17,000 in Annual Horticulture and 24,150 in Livestock and Feed activities. A training multiplier effect is achieved through Training of Trainers (ToT), Extension Training, and event seminars/workshops. Courses will include but not be limited to the following:

- Grades & standards, food processing, value chain analysis, branding, development of business plans, packaging, marketing & finance, propagation, water management, pruning, soil analysis, fertility, pollination, harvesting, infrastructure investment, farm business management, machinery, association management, IPM, post harvest processing in the Perennial Horticulture Activities Area;
- Planting, pollinating, harvesting, the evaluation of alternative irrigation systems, post harvest preparation of product (packaging, sorting, quality standards), management training programs focused on post harvest physiology, quality management, packaging, sales, marketing, grades and standards in the Annual Horticulture Activities Area; and
- Quality standards, hygiene, marketing and packaging, and business management for meat processing, feedlot operation, business management applied to feedlot management, feed mill production, management, and technical skills, field level post-harvest handling of feed

products, operations management, production technology, input provider, farmer understanding of markets and farm profitability in the Livestock and Feed Activities Area.

Status: Ongoing

WHEAT PRODUCTION TRAINING A Training in Best Practices in Wheat Production was held in Erbil in August 2008 with 18 agronomists and 13 Regional Field Staff to share lessons learned from *Inma's* 2007-2008 wheat projects. In follow up, *Inma* developed a Training Manual and trainers are ready for the 2008 fall planting and training of this season's farmers.

AGRICULTURE BUSINESS MANAGEMENT TRAINING Vouchers for a modular Agriculture Business Management Training Demonstration in cooperation with the USAID *Tijara* Program have been approved for implementation with a training of trainers to start in October, then the training of 600 farmers to be completed in the following six months. This training program will be piloted in northern Iraq through the Women Empowerment Organization with another 600 vouchers slated for the North Babel/Hilla area. This training program will compliment projects in *Inma's* cluster areas, allowing Iraqi farmers to up-grade their business management skills.

GREENHOUSE MANAGEMENT TRAINING A Training of Trainers program is under development for "Greenhouse Management" and is to be held in Erbil. The goal of this ToT is to develop a cadre of trainers to meet the needs of local training throughout Iraq covering all aspects of greenhouse management.

MASTER'S DEGREE PROGRAM The Master's Degree Program was launched in October 2007. Over 200 applications were received. A team consisting of representatives from the Texas A&M, the Iraqi Ministry of Agriculture and *Inma*, interviewed over fifty applicants and submitted the names of 35 candidates for approval in the first week of August 2008. However, several factors prompted USAID to reconsider the program: the lengthy US visa procedures (4 to 6 months) for Iraqi students would place the completion of a two-year Master's program into the last six months of *Inma's* contract base period. In addition, the applicants' scores at TOEFL test showed insufficient language proficiency to perform graduate level work at US Universities, which would have prompted at least six months additional language courses for the applicants. The activity was officially cancelled in this quarter.

Annual Work Plan Activities Status

In addition to the above, please find below a summary of the *Inma* program progress in achieving planned Crosscutting/Training activities set forth in *Inma's* Annual Work Plan matrix.

CROSSCUTTING TRAINING ACTIVITIES	
ANNUAL TARGETS 2008-2009	QUARTERLY ACHIEVEMENTS
Good Agricultural Practices and Management	
To strengthen the capacity of local Iraqis through skill building workshops in business management, farm, and financial management	Under development through the Small Business Development Centers (SBDC) with Training Vouchers.
Basic record keeping	Under development: SBDC with Vouchers
Developing and using budgets/ break-even	Under development: SBDC with Vouchers

analysis	
Whole farm planning and strategic planning	Under development: SBDC with Vouchers
Using balance sheets and income statements	Under development: SBDC with Vouchers
Farm performance and financial ratio analysis	Under development: SBDC with Vouchers
Investment analysis	Under development: SBDC with Vouchers
Computer applications in investment analysis	Under development: SBDC with Vouchers
Safety	Developed and training scheduled
Planting, pollinating, and harvesting	Developed and training scheduled
The evaluation of alternative irrigation systems	Developed and training scheduled
Post harvest preparation of product (packaging, sorting, quality standards)	Developed and training scheduled
TRAINING PERENNIAL CLUSTER	
Good Agricultural Practices and Management	
Basic record keeping	Under development: SBDC with Vouchers
Developing and using budgets/ break-even analysis	Under development: SBDC with Vouchers
Whole farm planning and strategic planning	Under development: SBDC with Vouchers
Using balance sheets and income statements	Under development: SBDC with Vouchers
Farm performance and financial ratio analysis	Under development: SBDC with Vouchers
Investment analysis	Under development: SBDC with Vouchers
Computer applications in investment analysis	Under development: SBDC with Vouchers
Safety	Developed and training scheduled
Grades and standards	Under Development
Food processing	Under Development
Value chain analysis	Under Development
Branding	Under Development
Developing of business plans, packaging, marketing, and finance	Under development through SBDC with "Vouchers"
Propagation	Developed and training scheduled
Water management	Under Development
Pruning	Under Development
Soil analysis	Under Development
Fertility	Under Development
Pollination	Under Development
Harvesting	Under Development
Infrastructure Investment	Under Development
Farm business management	Under Development
Machinery	Under Development
IPM	Under Development
TRAINING LIVESTOCK CLUSTER	
Meat Production	
To strengthen the capacity of local Iraqis through skill building workshops in business management, farm, and financial management	Under development through SBDC with "Vouchers"
Basic record keeping	Under development through SBDC with "Vouchers"
Developing and using budgets/ break-even analysis	Under development through SBDC with "Vouchers"
Whole farm planning and strategic planning	Under development through SBDC with "Vouchers"
Using balance sheets and income statements	Under development through SBDC with "Vouchers"
Farm performance and financial ratio analysis	Under development through SBDC with "Vouchers"

Investment analysis	Under development through SBDC with "Vouchers"
Computer applications in investment analysis	Under development through SBDC with "Vouchers"
Safety	Developed and training scheduled
Quality standards	Under Development
Hygiene	Under Development
Marketing and packaging	Under Development
Business management for meat	Under Development
Processing	Under Development
Feedlot operation	Developed and training scheduled
Feed mill production, management, and technical skills	Under Development
Field level post harvest handling of feed products	Under Development
Operations management	Under Development
Production technology.	Under Development
Input provider	Under Development
Farmer understanding of markets and farm profitability	Under Development
Aquaculture	
Pond Preparation	Developed. Training of Trainers (ToT) complete. Training of farmers ongoing.
Pond Stocking	Developed. ToT complete. Training of farmers ongoing.
Feed Management	Developed. ToT complete. Training of farmers ongoing.
Aeration	Developed. ToT complete. Training of farmers ongoing.
Harvesting	Developed. ToT complete. Training of farmers ongoing.
Live Haul	Developed. ToT complete. Training of farmers ongoing.
Marketing	Developed. ToT complete. Training of farmers ongoing.
Safety	Developed. ToT complete. Training of farmers ongoing.
Feedlot Operation	
Economic Considerations (i.e.: feed cost, buying quality, risk, capital)	Developed. Training scheduled.
Building a Feedlot (i.e.; site, size, water, equipment)	Under Development
Selecting	Under Development
Ration	Developed and training scheduled
Health & Disease	Under Development
MASTERS DEGREE PROGRAM	
A fellowship program for Iraqi university graduates who are GRE and TOEFEL certified	Cancelled

COMMUNICATIONS

BRANDING & MARKING USAID's rescinding of the Iraq-wide branding waiver has required significant rethinking of the way program materials are prepared and presented. Requests for a partial waiver and certain specific exceptions have been made but must undergo further refining before approval can be granted. *Inma* is requesting branding exception where human lives or program effectiveness might be compromised. In the meantime, *Inma* has been granted "grandfather" rights to continue using the *Inma* logo along with the USAID logo. Letterhead, PowerPoint templates and publications have been created using this dual branding. Re-branding of previously created materials is in process.

PUBLICATIONS The program continued with its efforts to disseminate agribusiness information and present USAID's *Inma* achievements to the public. The range of materials created covers themes aimed at a wide lay audience, as well as specialized agribusiness experts. The target groups of the PR & Communications Department include the American public and the US Senate, the Iraqi people and government, and the international community. A number of successful publications, ranging from technical reports, to educational and promotional materials, were finalized in the last quarter:

Inma's Arabic language calendars were so popular last year (going into double printing) that an 18-month calendar was produced to cover January 2009 – June 2010 (when the *Inma* Program will have completed its three year contract). The second edition, entitled "Iraqi Farmers' Guide," features Iraqi children's drawings for artwork. Though not fully translated, this year's edition features bilingual content, including the children's first names and ages. All young artists will soon receive a certificate of achievement and the winning drawing selected for the cover, wins the artist a prize of art supplies.

This quarter included experimenting with a new public relations product line in the form of slide shows set against radio-style narration. *Inma* has not posted the approved "mini doc" about the Balad Canning Factory as USAID is still considering exercising the option to post it themselves.

Under consideration is posting the 3-minute program on the most popular online video sharing network YouTube, where viewers can stream the video, viewing it in a higher quality format. The latter is in keeping with the ideas of the new US Undersecretary of State for Public Diplomacy and Public Affairs, James Glassman. In a recent *FrontLines* interview, he said, "We are very much pushing what are called Web 2.0 approaches: social networking, ideas, using YouTube, Facebook, and ideas like that to generate a conversation, to bring people into a global conversation, and again, with the hope and belief that they're going to end up choosing freedom and nonviolence."

Continuous updates of *Inma* website (www.inma-iraq.com) include new press releases, feature articles, new links, and photographs.

BIBLIOGRAPHY The bibliography of *Inma*'s quarterly publications is as follows:

TECHNICAL REPORTS

Large Dairy Farm Guidelines. Inma: September 2008.
Iraqi Dates: Production, Problems and Market Prospects. Inma: August 2008.
Inma Date Workshop: Erbil, Iraq, July 18-19. Inma: July 2008.
Dates Value Chain Analysis and Opportunities for Iraq. Inma: July 2008.
Central Iraq Poultry (Broiler) Production: Problems and Prospects. Inma: June 2008.
Competitiveness of Broiler Production in Central Iraq: An Update. Inma: July 2008.

SPECIAL REPORTS

Inma Program Overview. Inma: September 2008.
Iraqi Poultry Industry: An Overview. Inma: September 2008.
Inma Activities Overview. Inma: September 2008.
Inma Date Studies: An Overview. Inma: August 2008.

HANDBOOKS

Lamb Feedlot Management Guide. Inma: September 2008.

SUCCESS STORIES

Balad Canning Factory (BCF) Success Story. Inma: August 2008.
Fish Farmers Weigh Benefits of Aeration. Inma for USAID/Iraq Newsletter (August 2008).

CALENDARS

Inma 2009-2010 Iraqi Farmers' Guide.

PERFORMANCE MONITORING

To ensure contractual compliance and provide sound basis for performance management, *Inma* incorporates monitoring and evaluation components in all of its activities.

Inma, to date, has completed one post-winter crop project and a winter wheat and barley project. Projects in implementation are numerous. Prior to the completion of these activities, including training components within these projects, it is too early to measure some of the results associated with them. Many of the numbers for these Indicators will not be available until the first or second quarters of FY09 when some of these activities come to completion. Results from the introduction of feed mills and feedlots will come even later.

In addition, there is uncertainty as to what agribusiness uses the new *Inma* Grants to Loans Program will address. *Inma* intends to track this program closely and adjust targets as necessary when uses are determined.

The following Mission Level and Performance Indicators provide a high level analysis of the *Inma* Program. This section reports on the indicators as agreed with USAID/Iraq with the submission of a revised PMP in early October 2008. In this section, the fourth quarter of the FY2008 is equivalent to the fifth quarter of *Inma's* operations.

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)

Increase in sales for the fourth quarter of FY08 is \$5,186,961. This figure represents sales to date from the Taji/Iron Horse/Abu Ghraib vegetable project, the winter wheat and barley project, and the re-opening of the Balad Canning Factory. Sales from the vegetable project and the canning factory are expected to continue in the first quarter of

FY09. The total increase for FY08 is \$10,370,611 or a bit more than 21% of the \$50,000,000 target. *Inma* remains confident that the end of the program target remains achievable as more of the projects come on line and as projects grow and replicate leading to an increase in gross sales.

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

Increase in employment for the fourth quarter of FY08 is 350 representing employment in the Balad Canning Factory, the Babel demonstration fish farms, and the tomato trial demonstration project. Employment shall increase in the first quarter of FY09 with the dates and pomegranate export activities and the continued harvesting of the last of the summer vegetables. The total increase for FY08 is 3,251 or 65% of the target of 5,000.

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)

Too early to measure—awaiting the end of the growing and harvesting season for dates and pomegranates. It is likely that at least preliminary figures can be given in the first 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 from the Taji/Iron Horse/Abu Ghraib vegetable project involving over 900 farmers was \$2,430,000 for the quarter, well beyond the target of \$1,000,000. Take-up of the new seed varieties and planting and cultivation techniques were far more extensive than anticipated. Further sales are anticipated until the end of the vegetable season. Gross sales should also increase with the opening of new retail and wholesale markets in Baghdad by selling goods in better conditions, improving storage including cold storage, decreasing spoilage and improving quality which should lead to higher selling prices. Change in targets for this indicator was agreed in the revised PMP of October 2008.

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)

Too early to measure as *Inma* is awaiting the first feedlot production. The red meat value chain analysis determined sufficient consumer demand for red meat for sales to double if supply is available. To increase supply, feed lots are being introduced. Change in targets for this indicator was agreed in the revised PMP of October 2008. Production ready for sale to market is expected in

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

Too early to measure. Same as SO8.2.3.1. This is a new indicator agreed with USAID in the PMP revision of October 2008.

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

At the completion and analysis of the fish farmers' and fish breeder survey associations, *Inma* identified project participants from both farmers and associations. The project offers two types of assistance as follows:

- *Inma* Identified two associations in Babel, one in the north and the other in the center. These associations received about 4,800,000 fingerlings from 6,000,000 fingerlings that were supplied by the Euphrates Fish Farm (fingerlings sub-contractor). These fingerlings were distributed by the associations to their members.
- The remaining 1,200,000 fingerlings were delivered to 100 selected fish farmers through the Babel Demonstration Fish Farms Project who are assisting in a number of trials to determine the most judicious use of feed and technology for the best return on investment.

The increase in gross sales for fish was based upon last year's output of 2,000,000 fingerlings at \$0.43/fingerling. With *Inma* assistance, this year's output was 12,000,000 fingerlings at \$0.50/fingerling. The FY target of \$5,000,000 was exceeded by \$140,000 for the achievement of 103% of the target.

The fingerlings are still in the growth stage, too early and small for market.

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

Too early to measure—the mills have yet to be established. This was recognized in the October 2008 revision to the PMP with the target for FY 2008 set at zero.

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 markets 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 use 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.

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 to sorting/grading/packing shed, to proper storage, to proper transportation, to hygienic and modern wholesale markets to the retailer to the customer. *Inma* is currently working on all elements of the cluster formation. The target for FY2008 was thus deliberately set at zero in the knowledge that it would take more than one year to put the cluster in place.

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

To date, only 0.5% of association members have been trained rather than the 5% target. The first training, held in July was a pilot effort, used to test the curriculum and methodology employed. From comments received from the participants and observers, the curriculum is now being revised with training due to roll out in November.

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.

The percentage for the past quarter was 12%, 80% of the year end target of 15%. It is still early to measure the total percentage of farmers who can document an increased income from their crops.

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—The prime candidates for export are industrial grade dates and prime grade pomegranates. Iraq is currently in its harvest season for both crops. The percentage change will most likely be reported in the next quarter. This is a new indicator in the revised PMP.

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

Because of the low target set for this indicator, there is discussion between USAID and *Inma* as to its value. This is an indicator from the original contract and remained in the PMP revision. Because of lax banking standards and regulations and the current security situation—which continues to improve as per one of *Inma*'s founding assumptions—the chance of international partners is considered slight. Due to a general lack of trust between Iraqis, the chances of Iraqis partnerships are also seen as slight. Whether to retain or delete this indicator will be made before the next quarterly report is due.

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

The dates and pomegranate team have been tenacious in their pursuit of new buyers in the foreign market and assisted contacts with eight buyers and traders in Dubai in the

past quarter. The FY target was set at 5, so the 8 achieved is 160% of target.

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

Too early to measure—This is a new element to the *Inma* program. The first grant has yet to be made to a private bank, which is expected in the first quarter of FY09.

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

Too early to measure—This is a new element to the *Inma* program. The first grant has yet to be made to a MF, which is expected in the first quarter of FY09.

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

Too early to measure—This is a new element to the *Inma* program. The first grant has yet to be made to a private bank, which is expected in the first quarter of FY09. This is a new indicator within the revised PMP.

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

Too early to measure—This is a new element to the *Inma* program. The first grant has yet to be made to a MFI, which is expected in the first quarter of FY09. This is a new indicator within the revised PMP.

MISSION LEVEL INDICATORS									
		FY 2007	FY 2008						
Indicator	Measure	Baseline	Q1	Q2	Q3	Q4	FY08 Target	FY 08 Actual	% Actual of Target
Indicator 1—Increase in total gross sales of program assisted enterprises (given in US\$)	Number	0	43,650	0	5,140,000	5,186,961	50,000,000	10,370,611	21%
Indicator 2—Increase in employment in the agriculture/agribusiness sectors attributable to program activities.	Number	0	138	1494	1069	350	5000	3251	65%

FOCUS 1—ANNUAL									
		FY 2007	FY 2008						
Indicator	Measure	Baseline	Q1	Q2	Q3	Q4	FY08 Target	FY 08 Actual	% Actual of Target
SO8.2.2.1—Increase in gross sales of targeted annual vegetables and fruit (tomato) in program assisted activities (in US\$ millions)	Number	0	43,650	0	0	2,430,000	1,000,000	2,473,650	247%

FOCUS 2—PERENNIAL									
		FY 2007	FY 2008						
Indicator	Measure	Baseline	Q1	Q2	Q3	Q4	FY08 Target	FY 08 Actual	% Actual of Target
SO8.2.1.1—Increase in gross sales of perennial products in program assisted areas (in US\$)	Number	0	0	0	0	0	1,000,000	0	0

FOCUS 3—LIVESTOCK									
		FY 2007	FY 2008						
Indicator	Measure	Baseline	Q1	Q2	Q3	Q4	FY08 Target	FY 08 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	0	0	0	N/A
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	0 0	0 0	0 0	0 0	N/A
SO8.2.3.3— Increase in gross sales of local fish by program assisted fish farms (in US\$)		\$4.00/kg	0	0	5,140,000	0	5,000,000	5,140,000	103%
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	0 0	0 0	0 0	0 0	0

FOCUS 4 — CROSSCUTTING ACTIVITIES									
		FY 2007	FY 2008						
Indicator	Measure	Baseline	Q1	Q2	Q3	Q4	FY08 Target	FY 08 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	N/A	N/A	N/A	System working	System working	System working	
SO8.2.4.2—Percentage of program-assisted businesses benefiting from cluster formation	Percentage	0	0	0	0	0	0%		
SO8.2.4.3—Percentage of program-assisted association members trained to understand markets and farming profitability	Percentage	0	0	0	0	0	5%		
SO8.2.4.4—Percentage of program-assisted farmers who	Percentage	0	0	0	0	12%	15%	12%	80%

use improved technology and can document that they are getting more income from their crops.									
SO8.2.4.4.a— Total Program assisted farmers	Number	0	46	1052	100	30	N/A	1228	N/A
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	0	10%	0	N/A
SO8.2.5.2—Number of program-assisted businesses with Iraqi and/or international partners	Number	0	0	0	0	0	0	0	N/A
SO8.2.5.3—Number of program assisted contacts with new buyers in domestic and foreign markets	Number	0	0	0	0	8	5	8	160%
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	0 0	0 0	0 0	0 0	0	N/A
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	0 0	0 0	0 0	0 0	0	N/A
SO8.2.6.3—Number of jobs created through <i>Inma</i> grant supported private bank loans to agribusiness	Number	0	0	0	0	0	0	0	N/A
SO8.2.6.4—Number of jobs created through <i>Inma</i> grant supported MFI loans to SME agribusiness	Number	0	0	0	0	0	0	0	N/A